Infor CloudSuite Analytics User Guide

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Contents

About This Guide

Note: Worldship and Ship Manager integrations are not supported in the cloud. Contact Infor Consulting Services (ICS) for help with this integration.

Intended audience

This guide is for IT professionals and system administrators who are responsible for administering Infor CloudSuite Analytics.

Multi-site caution

The system is initially configured with a single site data source. In a multi-site deployment you can configure to load data from multiple site data sources to a single set of target Dimensions and Cubes recursively. Dimension data that gets loaded later from one site will always overwrite the record that was loaded earlier from another site if both records are regarded as the same. You must ensure data consistency across all sites. Fact data is consolidated through a pre-defined calculation rule which can add the values of one site to existing values of another site.

Related documents

- *Infor Xi Platform Administration Guide*
- *Infor Business Vault Administration Guide*
- *Infor BI Installation Guide*
- *Infor BI Hardware Recommendation Guide*
- *Infor BI Platform Support*
- *Infor ION Connect Administration Guide*

Contacting Infor

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If we update this document after the product release, we will post the new version on this Web site. We recommend that you check this Web site periodically for updated documentation.

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Chapter 1: Overview

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This chapter contains information about the components that make up Infor BI for Infor CloudSuite, a list of the domains and cubes, a list of common dimensions, and some general guidelines.

About Infor CloudSuite Analytics

Infor CloudSuite Analytics refers to the content of the Infor BI Application Studio package. The application collects the data from Infor CloudSuite Industrial/Business. Infor CloudSuite Analytics provides users with strategic and tactical business intelligence by generating this type of measures for analytic data or reports:

Key Performance Indicators (KPIs): Provide future-oriented measures, which direct you to critical areas of business performance that need improvement.

The reports generated by Infor CloudSuite Analytics may cover these topic areas:

- Sales: Customer, product, and sales organization, revenues and margins, revenue leakage, delivery performance, sales booking, and sales versus budget or forecast
- Finance: Customer payments and debt, financial key ratios, profit and loss, balance sheet, account receivable, and account payable
- Inventory & Purchasing: Inventory/warehouse cost, vendor received
- Production: Production efficiency, Inventory turnover, scrap and yield, resource utilization, and job efficiency
- Human Resource: Recruitment, employee salary, and employment
- Service: Incident and service order

Components

This section describes the basic components of Infor CloudSuite Analytics to help you search for and navigate to the information that you need.

Business Measurement Models (BMMs)

BMMs extract and transform the source data into an analytical data model that contains fact tables and dimension tables.

Online Analytical Processing (OLAP) cubes

The OLAP cubes summarize data along defined dimensions and hierarchies. The cubes also contain dimensions for time and time-series analysis, making it easy to compare years or periods on various levels.

The OLAP cubes contain a set of dimensions and hierarchies. These may need to be adjusted during implementation. To improve performance of the cubes, you can remove unnecessary dimensions and hierarchies.

Entities

Dashboards

Dashboards enable a single view of a number of KPIs that are relevant to a specific business process. They present varied information such as summaries, key trends, comparisons, and exceptions through charts and graphs with metrics.

The dashboards delivered in Infor CloudSuite Analytics are designed to cover a business process within a single domain in a company, as well as cover a specific topic within a domain in the company. Several dashboards in the Financials, Sales, Inventory, Service, and Production domains are designed based on this logic.

Each dashboard is built up by a number of widgets. Within the dashboard, all widgets are connected with each other through the widget communication. This means that if a user performs changes for one widget, for example changing a filter, that change is propagated through all widgets within the dashboard.

Links on the Home Page open each dashboard.

Category Link	Dashboard
CEO	Cash, Production &Demand, Sales Controlling
CFO	Finance, Sales
Finance	Finance and AR
HR	Human Resource
Production	Production Efficiency, Inventory, Job and Material
Inventory and Purchasing	Inventory and Vendor
Planning	Cash Flow Statement, Cash Flow Planning, Sales Planning

Category Link	Dashboard
Service	Service and Incident
Sales	CRM, Sales and Product, Sales Booking, Sales Controlling
Industrial	PP Pack Quote, Automotive

OLAP Server

OLAP Server contains a real-time and in-memory OLAP database for multidimensional analysis, planning and modeling.

Note: There is a restriction for Infor BI OLAP Server that the maximum number of basic cells to be filled with one splashing cannot be greater than 5000000. The default setting is 100000. In most customer scenarios, this default setting is not sufficient. You need to set this to 5000000. To modify the setting:

1 Run Infor BI OLAP Administration.

2 Change the setting in the right pane.

Infor BI Repository

Infor BI repository consists of the management of the users and user groups and the management of the permissions which are combined in roles. The settings and configurations defined in the Repository control access to the OLAP databases.

Business Vault

Infor BI Application Studio

A multi-source reporting solution for multidimensional and relational data sources. Reports can be shown using all main stream web browsers without the requirements of any client installation or programing efforts. Reports can be exported to PDF and Excel within the web on demand and/or in a scheduled fashion.

Infor BI Office Plus

A fully-integrated Excel interface for ad-hoc analysis or cell-based reporting.

Q&A

With DataLink technology, you can load data from the real tables of Infor CloudSuite Industrial/ Business through DataLink. With the Lookup, you can analyze business on services and sales domains. After DataLink is installed, the data can be queried via Microsoft Excel through a plugin.

Within Q&A DataLink, the static and transaction tables are defined for reporting and querying purpose.

Lookups

Lookups are used to provide descriptive and functional filtering capabilities within the Reporting Toolset. They allow you to select an individual value or a range of values to filter a report by, depending on additional descriptive filter information designed to assist the user in selecting the filter values.

Staging Tables

A series of real tables, called staging tables, which are used to store the fact data, are added into the Infor CloudSuite Industrial/Business database, so that the data loading performance can be improved significantly. Note that the fact data must be moved into the staging tables first, otherwise there will be no data when publishing a cube to the OLAP server. Here, there are two methods to move the fact data from Infor CloudSuite Industrial/Business tables to staging tables. One is through the BI Staging Schedule form in Infor CloudSuite Industrial/Business, and the other is through the Publications/ Publication Schedules in Business Vault.

BI Staging Schedule

On the BI Staging Schedule form, you can select one cube or select all cubes. Click **Run** to move the fact data from Infor CloudSuite Industrial/Business to staging tables at once, or you can select one cube or select all cubes, and set the schedule for those cubes with the Schedule button.

Publications/Publication schedules

Within Publications of Business Vault, you can select any prepare data links, for example D_Prepare_Booking, or select the D_Prepare_Data for all the prepare data links. Click **Publish** to move the fact data from Infor CloudSuite Industrial/Business to staging tables at once.

Within Publication Schedules in Business Vault, you can set a schedule for each prepare data link, through which system will move the fact data from Infor CloudSuite Industrial/Business to staging tables when the schedule time is reached.

Publish cubes

After the staging tables are populated with fact data, you can load the cube data to the OLAP server. Within Publications in Business Vault, you can select any cubes. Click Publish to load cube data into OLAP server.

Within Publication Schedules in Business Vault, you can set a schedule for each cube. When the schedule time is reached, the system will load cube data from staging tables into the OLAP server.

Domains and cubes

There are nine domains: Automotive, Finance, Inventory and Purchasing, Manufacturing, Sales, Service, CRM, HR, and Printing and Packaging. A total of 35 cubes are split among the nine domains as shown in this table:

Domain	Cubes
Automotive	FMEA_Analysis
Finance	Accounts_Receivable_Analysis, Accounts_Payable_Analysis, Accounts_Payable Periodical_Analysis, Financial_Income_Analysis,Bank_Account_Analysis, Cash_Flow_Analysis, Cash_Flow_Planning, Ledger_Analysis
Inventory and Purchasing	Inventory_Analysis, Inventory_Periodical_Analysis, Vendor_Received_Analysis
Manufacturing	Job_Efficiency_Analysis, Machine_Efficiency_Analysis, Material_Scrap_Analysis
Sales	Booking_Analysis, Business_Performance, Sale_and_Product_Contribution_Analysis, Sales_Controlling_Analysis, Sales_Delivery_Analysis, Sales_Planning, Sales_Planning_Allocation
Service	Service Order Analysis, Service Transaction Analysis, Incident Analysis
CRM	Sales_Forecast_Analysis, Sales_Campaign_Analysis, Sales_Lead_Analysis, Sales_Opportunity_Analysis
HR	Compensation_and_Benefit_Analysis, Employee_Retension_Analysis, Recruitment_Analysis
Printing and Packaging	PP_Quote_Analysis, PP_Quote_Factors_Analysis

Guidelines

Element uniqueness

Elements need to be unique across a dimension or facts will get rolled up incorrectly.

Run DATA VALIDATION job - Detect Invalid Dimension Elements to check if this rule is broken in any of the dimensions.

Maximum number of child elements

Infor BI allows a maximum of 65,530 child elements per parent. In the case that a dimension has a greater amount of child elements than the limit, additional parent elements need to be added to further categorize these child elements into different parent elements.

BI content upgrade

BI content upgrade is not supported by Infor BI. This means that if you make changes to example BI content (repository, OLAP DB, IMD, Report, Dashboard) provided in this release, you must redo such changes for the next release.

Multi site support

Multi Site is supported, but you must make sure your data is clean, well structured, and does not contain duplicated elements or the same elements with different definitions across different sites. Every site must share the same dimension definition. For example, the same customer id must have the same name and address.

NULL value in dimension

Null value in a dimension may cause an incorrect consolidation result in the cube measure. Therefore, NULL value should be cleaned in the Infor CloudSuite database before loading data into OLAP database.

Run DATA VALIDATION job - Detect Invalid Dimension Elements to check if this rule is broken in any of the dimensions.

Common dimensions

These dimensions are shared across multiple domains, so they are considered common dimensions.

Date

The date dimension contains both calendar and financial calendar information. The two hierarchies co-exist in the date dimension.

The financial year and period start and end date definition is retrieved from Infor CloudSuite to ensure Infor CloudSuite remains as the single place for maintaining such data.

In the case that there is no financial year and period information for the chosen calendar date configured by the user, the financial year and period information of the calendar date is filled with NULL. Since NULL in a dimension may cause an incorrect consolidation result in the cube measure, it should be avoided by selecting Start/End Date that fits the financial year range.

For the DateRangeType definition variable, you can choose a DateRangeType of 'Fixed' or 'Dynamic' to determine how the Date dimensions date range should be defined. If 'Fixed' DateRangeType is chosen, only those facts falling into the defined date range are loaded into OLAP.

If the Fiscal period date range doesn't match the calendar date range, the system fills in the data automatically. If this happens, a message will appear in the data loading log. In this case, you should consider filling in the missing fiscal period information in Infor CloudSuite.

Site

A site is any place where work is done. Thus, a site may correspond to company headquarters, a manufacturing plant, or a distribution center. Physically, a site contains an instance of an application database.

Sites may report to financial reporting units called entities. An entity is a site that contains an instance of the application database.

This dimension contains all sites without any entities.

Product

The product dimension is used to show the product hierarchy. It contains all items, except non-inventory items, with which an organization deals and all product codes.

Customer

The customer dimension is used to show the customer hierarchy. It contains customer and customer type information.

Family Code

Family code can group items that you wish to track in APS. It is optional and independent of product code.

Sales Channel

The sales channel dimension contains sales person information by channel. Direct sales are from sales persons who are employees. Indirect sales are from sales persons who are vendors.

Sales People

Sales people contains sales manager and salesperson information which is presented according to the reporting hierarchy.

Time Calculation

Time calculation presents different time calculation of a business measures such as YTD, QTD, and MTD, etc.

Version

The Version dimension presents different versions of the business measures such as Actual, Budget, etc.

Campaign Type

The campaign type dimension contains campaign type and campaign information.

Prospect

The prospect dimension contains prospect and its company information.

Territory

The territory dimension contains territory and its description information.

Create Date

The create date dimension is a role playing dimension of the date dimension and it shares the same source table as the Date dimension. This dimension shows the create date of a sales lead. It only includes the calendar date without any fiscal date.

Opportunity Status

The opportunity status dimension contains opportunity status and opportunity information.

Opportunity Close %

The opportunity close % dimension contains opportunity close % range information.

Age Distribution

The Age Distribution dimension contains a number of different age categories.

Department

The Department dimension contains department and its description information.

EEO Class

The EEO Class dimension contains EEO class and its description information.

Employee

The Employee dimension contains employee type and employee information.

Gender

The Gender dimension contains gender and its description information.

Estimate Line Status

The Estimate Line Status dimension contains estimate line status, estimate order, and estimate order line information.

Close Date

The Close Date dimension is a role-playing dimension of the Date dimension, and it shares the same source table as Date dimension. This dimension shows the close date of incident. It includes only the calendar date without any fiscal date.

SRO Type

With this dimension, you can analyze SRO by number and type. This dimension contains SRO number and SRO type information.

Partner

With this dimension, you can analyze SRO transaction by partner. This dimension contains partner and its type information.

Demo Infor CloudSuite BI Repository

A demo project comes with this installation. It can be seen in the Infor BI Repository Administration console.

1 On your server, select **Start > All Programs > Infor Business Intelligence > Repository Administration**. The Infor BI Repository Administration console is displayed.

2 In the left pane, expand **Infor BI Repository Administration** and then **Repository Registrations**.

3 Expand Infor CloudSuite BI 9.01.00.

4 Expand **Projects** and then **Infor CloudSuite BI**.

5 Under the Report Catalogs folder are two report catalogs:

Infor CloudSuite Ad-hoc - This report catalog is used to contain reports developed through Office Plus. There are no pre-defined ad-hoc reports provided in this release.

Infor CloudSuite BI - This report catalog contains all reports developed through Application Studio and used by Dashboard application.

Chapter 2: Cubes

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This chapter defines each cube, describes how derived fields are calculated, and defines each cube's dimensions and measures.

You can apply dimension security to any dimension and to any cube. Dimension security allows you to restrict or to grant access to dimension members to selected BI users and groups.

You can secure cubes in Access Control.

Securing dimensions and cubes in Business Vault requires editing the dimensions and cubes delivered with the Analytics.

Definition of terms

Cubes

A multi-dimensional accumulation of data. Data is organized into dimensions to provide faster retrieval and drill-down.

Dimensions

A broad grouping of descriptive data about a major aspect of a business, such as products, dates, or markets. Each dimension includes categories in one or more drill-down paths and an optional set of special categories.

Measures

The numbers used to gauge your company's performance. For example, the Actual Amount and Budget Amount could be measures.

Secure dimensions

You can apply dimension security to any dimension. Dimension security allows you to restrict or to grant access to dimension members to selected BI users and groups. Dimension security is a two-part setup process. The access cube is set up in the dimension definition in the Business Vault. After you publish the dimension, you can authorize users and groups to dimension members in OLAP Server.

The default security access for all users and groups is defined in Infor BI OLAP Server. You can set the default value Read, Write, or None.

To set up dimension security:

1 Set up the dimension access cube in Infor Business Vault.

2 After you publish the dimension, use Infor BI to authorize users, groups, and roles to the dimension.

Set up dimension security in Business Vault

You can add a security access cube to a dimension in the Business Vault. The security applies to all members in the dimension, regardless of the hierarchies in the dimension.

To add an access cube to a dimension:

1 In Infor Business Vault, edit the dimension definition.

2 Select More options.

3 Specify a name for the Access Cube for the dimension.

We recommend that you specify a # for the first character of the access cube name. For example, a customer dimension may have an access control cube named #Customers.

4 Save the definition and publish the dimension.

See the *Infor Business Vault Analytic Modeling User Guide* for more information on dimensions and publishing.

Authorize users and groups to dimensions in Infor BI [on-premises]

In Infor BI OLAP Server / Security Reports, set up authorization for users and groups to the secured dimension.

Secure cubes

You can apply access control to a cube. To apply access security for a cube:

1 Login to the Business Vault and edit the cube definition.

2 Select the Access Control option.

3 Save the cube definition and publish the cube.

See the *Infor Business Vault Analytic Modeling User Guide* for more information to edit cube definitions and to publish cubes.

Prebuild application roles

These are the pre-defined application roles:

- Report Designer
- Report Viewer
- SI_CEO
- SI_CFO
- SI_Finance
- SI_HR
- SI_Logistics
- SI_Production
- SI_Sales
- SI_Service

Cubes

There are 35 cubes. They are:

- Accounts Payable Analysis
- Accounts Payable Periodical Analysis
- Accounts Receivable Analysis

- Bank Account Analysis
- Booking Analysis
- Business Performance
- Cash Flow Analysis
- Cash Flow Planning
- Compensation and Benefit Analysis
- Employee Retension Analysis
- Financial Income Analysis
- FMEA Analysis
- Incident Analysis
- Inventory Analysis
- Inventory Periodical Analysis
- Job Efficiency Analysis
- Ledger Analysis
- Machine Efficiency Analysis
- Material Scrap Analysis
- Printing and Packaging Quote Analysis
- Printing and Packaging Quote Factors Analysis
- Recruitment Analysis
- Sale and Product Contribution Analysis
- Sales Controlling Analysis
- Sales Delivery Analysis
- Sales Planning
- Sales Planning Allocation
- Sales Forecast Analysis
- Sales Campaign Analysis
- Sales Lead Analysis
- Sales Opportunity Analysis
- Sales Pipeline Analysis
- Service Order Analysis
- Service Transaction Analysis
- Vendor Received Analysis

Cash Flow Analysis

The Cash Flow Analysis cube is used to analyze the movement of money into or out of a business, project, or financial product. It is usually measured during a specified, limited period of time.

Dimensions

Cash Version

The Cash Version dimension is a static dimension and contains elements of "Actual", "Budget", "Projected" and "Target".

Cash Type

The Cash Type dimension is a static dimension and contains these elements:

Top Level	Level 2	Level 3
Forecast	Purchasing	Purchasing Requisition
		Purchase Order
		PO Blanket Release
		AP Transaction
	Sales	CO Blanket Release
		Customer Order
		CO Progressive Billing
		AR Transaction
Cash Account		

Cash Account

The Cash Account dimension is an account hierarchy which contains cash accounts used to analyze cash flow. Before you load the cash account dimension, you must define cash accounts via cash flow on the Financial Statement Definition form properly.

Measures

Amount

The amount is a group of union values from different kinds of transactions, which will impact cash flow in the future. The amount is grouped by cash types such as AR Transaction, Customer Order, CO Blanket Release, Progressive Bill, AP Transaction, Purchase Order, PO Blanket Release, PO Requisitions and Cash Account.

Bank Account Analysis

The Bank Account Analysis cube is used to analyze bank account balances by different currency or account.

Dimensions

Bank Account

The Bank Account dimension is an account list which contains all bank accounts. This dimension is used to analyze cash amount in a bank.

Bank Cash Account

The Bank Cash Account dimension is an account list which contains all G/L cash accounts set on banks. This dimension is used to analyze the cash amount in different cash accounts.

Bank

The Bank dimension is a bank list which contains all banks. This dimension is used to analyze the cash amount in different banks.

Bank Currency

Bank Currency dimension is a currency list which contains all bank currencies. This dimension is used to analyze cash amount in bank currency.

Measures

Domestic Amount

Domestic Amount is the transaction amount in base currency when receive or pay cash. The voided payments should be excluded from the balance amount.

Calculation: Domestic Amount = glbank.dom_check_amt

Bank Amount

Bank Amount is the amount to be paid or received in terms of the payment currency. The voided payments should be excluded from the balance amount.

Calculation: Bank Amount = glbank.check_amt

Accounts Payable Periodical Analysis

The Accounts Payable Periodical Analysis cube is used to analyze how much money is owed by a business to its suppliers in the period end. The cube contains invoice vouched for payment and AP sub ledger outstanding amounts that has not been paid.

Dimension

AP Aging Bucket

The AP Aging Bucket dimension is used to show the aging buckets. Aging buckets are time periods with it you can report the open payables.

Measures

Measure Account Payable Analysis includes these static and calculated elements:

Outstanding Payable

Outstanding Payable indicates the total un-paid invoice amount. It is calculated from the sum of all invoice amount and adjust amount minus the sum of all payments and discount taken.

Calculation: Outstanding Payable = aptrxp.inv_amt - amt_paid - amt_disc

Invoice Amount

Invoice Amount indicates the total invoices value in base currency. It is composed of voucher and adjustment amounts. It is calculated from invoice amount of voucher plus invoice amount of adjustment by aging date. The reference field is aptrxp.inv_amt and aptrxp.type when type is 'V' - voucher and 'A' - adjustment.

Calculation: Invoice Amount = aptrxp.inv_amt when type is "V" or "A"

Payment Amount

Payment Amount is the total payment value in base currency. It is composed of all types of payments, e.g. P-payment, O - open check and N - Non-A/P payment. It is calculated from the sum of aptrxp.amt_paid.

Calculation: Payment Amount = aptrxp.amt_paid

Open Invoice Count

Open Invoice Count indicates the total number of un-fully paid invoices.

Outstanding Payable %

The percentage of outstanding payable, it's a rule created in BV.

Calculation: Outstanding Payable % = Outstanding Payable / Invoice Amount * 100

Machine Efficiency Analysis

The Machine Efficiency Analysis cube is used to provide the data necessary for analyzing the performance of work center or machine. The plant managers and production supervisors can use it to analyze the machine efficiency.

With the Machine Efficiency Analysis cube, enterprise can easily generate various reports, to help in the identification, classification and systematic elimination of common sources for productivity losses. OEE measures the losses from line downtime that affect equipment "availability", speed losses which affect "Performance" against designed speed, and defect losses which are the result of quality problems. Fully productive time is obtained after subtracting the time consumed by these losses from the original scheduled production time.

Dimension

Machine

The Machine dimension is used to show a machine list. Machine dimension contains all machines and their description.

Measures

Measure Machine Efficiency Analysis includes these static and calculated elements:

Count

This is the count of records. It is used to calculate the average of measures. Set to "1" for each fact view record.

Actual Setup Hours

Actual Setup Hours are the total hours recorded for setting up a job operation.

Calculation: Actual Setup Hours = jobtran.a_hrs when transaction type is "setup"

Available Hours

Available Hours is all planned production time in hours. This is accumulated by the group resources or resource. It is calculated from the sum of shift time. Holidays and exceptions should be removed from the shifts. Available Hours are calculated depending on whether resource or resource group used.

Operating Hours

Operating Hours is the total hours worked for the transaction.

Calculation: Operating Hours = jobtran.a_hrs when transaction type is "Run" and "Machine".

Planned Operating Hours

Planned Operating Hours is the total hours a machine / machine group will run on plan time. The planned operation hours is calculated when running schedule and plan. It is calculated from Machine Hours per Piece multiplied by the released quantity and divided by days for a specific date. The days is calculated from end date minus start date and plus "1" when "Use Fixed Schedule" is deselected. If "Use Fixed Schedule" is selected, the Planned Operating Hours is the "Fixed Schedule Hours.

Calculation:

Planned Operating Hours = Machine Hours per Piece * Released Quantity / Days (Days=End Date - Start Date +1) when "Use Fixed Schedule" is deselected.

Planned Operating Hours = Fixed Schedule Hours / Days (Days=End Date - Start Date +1) when "Use Fixed Schedule" is selected.

Availability %

The Availability portion of the OEE Metric represents the percentage of scheduled time that the operation is available to operate. The Availability Metric is a pure measurement of Uptime that is designed to exclude the effects of Quality, Performance, and Scheduled Downtime Events. The losses due to wasted availability are called availability losses. It is a rule element and should be defined within BV.

Calculation: Availability % = operating hours / available hours *100

Example: A given Work Center is scheduled to run for an 8-hour (480 minute) shift with a 30-minute scheduled break and experiences 60 minutes of unplanned (breakdown) time. In this case, the 30 minute break should be considered "scheduled time" although it is planned downtime.

Operating Time = 480 Min Sched - 30 Min Sched Downtime - 60 Min Unsched Downtime = 390 Minutes

Availability = 390 minutes / 480 minutes = 81.25%

Planned Availability %

Planned Availability % is the ratio of Planned Operating Hours to Available Hours. It is a rule element and should be defined within BV.

Calculation: Planned Availability % = Planned operating hours / available hours *100

Ideal Run Rate

Anything that keeps the process from running at its theoretical maximum speed / Ideal Run Rate. It is accumulated rates and is used for calculating performance.

Calculation: Ideal Run Rate = Pieces per Machine Hour (job operation)

Performance %

Performance means the process has been consistently running at its theoretical maximum speed. It is the ratio of Net Operating Time to Operating Time (Net Operating Time is Operating Time less Speed

Loss). Calculated as the ratio of Ideal Cycle Time to Actual Cycle Time, or alternately the ratio of Actual Run Rate to Ideal Run Rate. It is a rule element and should be defined within BV.

Calculation: Performance = (Total Pieces / Operating Hours) / (Ideal Run Rate / Count) *100

Good Pieces

Good Pieces is the total completed good quantity of products on the operation.

Calculation: Good Pieces = jobtran.qty_complete when transaction type is "Run" and "Machine".

Total Pieces

Total Pieces is the total produced quantity of products on the operation.

Calculation: Total Pieces = jobtran.qty_complete + jobtran.qty_scrapped when transaction type is "Run" and "Machine".

Quality %

Quality is the ratio of Good Pieces to Total Pieces. It's a rule element that requires the listed calculation to be defined on the BV. It is a rule element and should be defined within BV.

Calculation: Quality % = Goods Pieces / Total Pieces *100

OEE %

This is a rule element that requires the listed calculation to be defined on the BV. It is a rule element and should be defined within BV.

Calculation Rule: OEE % = Availability * Performance * Quality /10000.

Financial Income Analysis

The Financial Income Analysis Cube defines the data model for financial income analysis. The data in the Financial Income Analysis Model reflects a view of data at a specific point of time, normally the end of an accounting period. This cube is intended for use by executive level management.

Derived fields

Derived fields for this cube are calculated in this way:

Actual Amount

pertot.amt - pertot.summary

Budget Amount

chart_bp.budget

Budget Variance

Actual_Amount - Budget_Amount

Dimensions

Account

The account dimension contains account and account type information.

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Time Calculation

The Time Calculation dimension presents different time calculations of these business measures: YTD, and MTD.

Time_Calculation should be used with the Date dimension. Depending on which date element is selected, the Time_Calculation element might or might not make sense. For example, if a quarter element such as 2013/Q2 is selected, then the additional element YTD makes sense. If a month element such as 2013/03 is selected, then additional MTD makes sense.

Definitions of YTD and MTD:

YTD

Year-to-date (YTD) is a period, starting from the beginning of the current year and continuing up to the present day. The year usually starts on January 1 (calendar year), but depending on purpose, can start also on July 1, April 1 (UK corporation tax and government financial statements), and April 6 (UK fiscal year for personal tax and benefits). Year-to-date is used in many contexts, mainly for recording results of an activity in the time between a date (exclusive, since this day may not yet be "complete") and the beginning of either the calendar or fiscal year.

In the context of finance, YTD is often provided in financial statements detailing the performance of a business entity. Providing current YTD results, as well as YTD results for one or more past years as of the same date, allows owners, managers, investors, and other stakeholders to compare the company's current performance to that of past periods. Employees' income tax may be based on total earnings in the tax year to date.

Comparing YTD measures can be misleading if not much of the year has occurred, or the date is not clear. YTD measures are more sensitive to early changes than late changes. Contrast YTD with the concept of 12-months-ending (or Year-ending), which are more resistant to seasonal influences. For example YTD of September 16th 2011 means from January 1st 2011 to September 16th 2011.

MTD

Month-to-date (MTD) is a period starting at the beginning of the current month and ending at the current date. Month-to-date is used in many contexts, mainly for recording results of an activity in the time between a date (exclusive, since this day may not yet be "complete") and the beginning of the current month.

In the context of finance, MTD is often provided in financial statements detailing the performance of a business entity. Providing current MTD results, as well as MTD results for one or more past months as of the same date, allows owners, managers, investors, and other stakeholders to compare the company's current performance to that of past periods.

MTD describes the return so far this month. For example: the month to date return for the stock is 8%. This means from the beginning of the current month until the current date, stock has appreciated by 8%.

Comparing MTD measures can be misleading if not much of the month has occurred, or the date is not clear. MTD measures are more sensitive to early changes than late changes. For example YTD of September 16th 2011 means from September 1st 2011 to September 16th 2011.

Unit Code 1

The Unit_Code_1 dimension is used to show the Unit_Code_1 list. Unit_Code_1 dimension contains Unit_Code_1 information.

Unit Code 2

The Unit_Code_2 dimension is used to show the Unit_Code_2 list. Unit_Code_2 dimension contains Unit_Code_2 information.

Unit Code 3

The Unit_Code_3 dimension is used to show the Unit_Code_3 list. Unit_Code_3 dimension contains Unit_Code_3 information.

Unit Code 4

The Unit_Code_4 dimension is used to show the Unit_Code_4 list. Unit_Code_4 dimension contains Unit_Code_4 information.

Measures

The name of the measure dimension is Measure_Financial_Income_Analysis. It has the following static elements:

Actual Amount

The actual amount from the ledger period totals (pertot) file.

Budget Amount

The budget amount from the Chart of Accounts Budget and Plan file.

Budget Variance

The Budget Variance is derived: Actual Amount - Budget Amount.

Budget Variance %

The Budget Variance % is derived: [Budget Variance %] = [Budget Variance] / [Budget Amount] * 100

Accounts Receivable Analysis

The Accounts Receivable Analysis cube is used to measure Accounts Receivable aging data. You can analyze accounts receivable by aging date, site, customer, sales people, aging bucket, and sales channels.

Derived fields

Derived fields for this cube are calculated in this way:

Invoice

If inv_num = 'O' then 'Open' else if inv_num = '-1' then 'Finance Charge'

else inv_num

Amount

(artran.amount + artran.freight + artran.misc_charges + artran.sales_tax + artran.sales_tax_2) / artran.exch_rate

Total_Amt

Invoice_Amt + Payment_Amt + Credit_Amt + Debit_Amt + Fin_Chg_Amt

Fin_Chg_Amt

If artran.type = 'F'

(artran.amount + artran.freight + artran.misc_charges + artran.sales_tax + artran.sales_tax_2) / artran.exch_rate

Debit_Amt

If artran.type = 'D'

(artran.amount + artran.freight + artran.misc_charges + artran.sales_tax + artran.sales_tax_2) / artran.exch_rate

Credit_Amt

If artran.type = 'C'

(artran.amount + artran.freight + artran.misc_charges + artran.sales_tax + artran.sales_tax_2) / artran.exch_rate* -1

Payment_Amt

If artran.type = 'P'

(artran.amount + artran.freight + artran.misc_charges + artran.sales_tax + artran.sales_tax_2) / artran.exch_rate* -1

Invoice_Amt

If artran.type = 'I'

(artran.amount + artran.freight + artran.misc_charges + artran.sales_tax + artran.sales_tax_2) / artran.exch_rate

Aging_Date

If arparms.inv_due = 'D' then artran.inv_date

If arparms.inv_due = 'I' artran.due_date

Direct_Indirect

If slsman.outside = 1 then 'Indirect'

If slsman.outside = 0 then 'Direct'

Aging_Bucket

If Aging_Date > arparms.age_days##4 then arparms.age_desc##5

If Aging_Date > arparms.age_days##3 then arparms.age_desc##4

If Aging_Date > arparms.age_days##2 then arparms.age_desc##3

If Aging_Date > arparms.age_days##1 then arparms.age_desc##2

Else arparms.age_desc##1

Age

Current_Date() - Aging_Date

Dimensions

Aging Date

The Aging Date dimension shows the aging date of accounts receivable. It could be the invoice date or the due date of AR transactions. It only includes calendar date without any fiscal date.

Aging Bucket

The Aging Bucket dimension is used to show the aging buckets. Aging buckets are time periods with it you can report the open receivables.

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Time Calculation

The Time Calculation dimension presents different time calculations of these business measures: YTD, QTD, and MTD.

Time_Calculation should be used with the Aging_Date dimension. Depending on which date element is selected, the Time_Calculation element might or might not make sense. For example, if a quarter element such as 2013/Q2 is selected, then the additional element YTD, Prior YTD make sense. If a month element such as 2013/03 is selected, then additional MTD, makes sense.

Definitions of YTD, QTD, MTD:

YTD

Year-to-date (YTD) is a period, starting from the beginning of the current year and continuing up to the present day. The year usually starts on January 1 (calendar year), but depending on purpose, can start also on July 1, April 1 (UK corporation tax and government financial statements), and April 6 (UK fiscal year for personal tax and benefits). Year-to-date is used in many contexts, mainly for recording results of an activity in the time between a date (exclusive, since this day may not yet be "complete") and the beginning of either the calendar or fiscal year.

In the context of finance, YTD is often provided in financial statements detailing the performance of a business entity. Providing current YTD results, as well as YTD results for one or more past years as of the same date, allows owners, managers, investors, and other stakeholders to compare the company's current performance to that of past periods. Employees' income tax may be based on total earnings in the tax year to date.

Comparing YTD measures can be misleading if not much of the year has occurred, or the date is not clear. YTD measures are more sensitive to early changes than late changes. Contrast YTD with the concept of 12-months-ending (or Year-ending), which are more resistant to seasonal

influences. For example YTD of September 16th 2011 means from January 1st 2011 to September 16th 2011.

QTD

Quarter-to-date (QTD) is a period starting at the beginning of the current quarter and ending at the current date. Quarter-to-date is used in many contexts, mainly for recording results of an activity in the time between a date (exclusive, since this day may not yet be "complete") and the beginning of either the calendar or fiscal quarter.

In the context of finance, QTD is often provided in financial statements detailing the performance of a business entity. Providing current QTD results, as well as QTD results for one or more past quarters as of the same date, allows owners, managers, investors, and other stakeholders to compare the company's current performance to that of past periods.

QTD describes the return so far this quarter. For example: the quarter to date (quarter) return for the stock is 8%. This means from the beginning of the current quarter until the current date, stock has appreciated by 8%.

Comparing QTD measures can be misleading if not much of the quarter has occurred, or the date is not clear. QTD measures are more sensitive to early changes than late changes. For example QTD of September 16th 2011 means from July 1st 2011 to September 16th 2011.

MTD

Month-to-date (MTD) is a period starting at the beginning of the current month and ending at the current date. Month-to-date is used in many contexts, mainly for recording results of an activity in the time between a date (exclusive, since this day may not yet be "complete") and the beginning of the current month.

In the context of finance, MTD is often provided in financial statements detailing the performance of a business entity. Providing current MTD results, as well as MTD results for one or more past months as of the same date, allows owners, managers, investors, and other stakeholders to compare the company's current performance to that of past periods.

MTD describes the return so far this month. For example: the month to date return for the stock is 8%. This means from the beginning of the current month until the current date, stock has appreciated by 8%.

Comparing MTD measures can be misleading if not much of the month has occurred, or the date is not clear. MTD measures are more sensitive to early changes than late changes. For example YTD of September 16th 2011 means from September 1st 2011 to September 16th 2011.

Measures

Outstanding Receivables

This is the total outstanding receivable values on invoices, payments, credit memos, debit memos and finance charges in base currency.

Invoice Amount

This is the total value of invoices in base currency.

Payment Amount

This is the total value of payments in base currency.

Credit Amount

This is the total value of credit memos in base currency.

Debit Amount

This is the total value of debit memos in base currency.

Finance Charge Amount

This is the total value of financial charges in base currency.

Open Invoice Count

This is the total number of un-fully paid invoices.

Outstanding Receivables %

This is the percentage of outstanding receivables, it's an R element that requires following calculation rule to be defined on the measure.

Calculation rule: [Outstanding Receivables %] = [Outstanding Receivables] / [Invoice Amount] * 100

Inventory Analysis

The Inventory Analysis cube is used to analyze on-hand inventory. You can drill down to review data at several levels. Data can be analyzed by ABC code, warehouse, product code, item, buyer, etc.

Derived fields

Derived fields for this cube are calculated in this way:

Data_Loading_DateName

convert current date to format YYYY/MM/DD

Sum_Qty_Mrb

SUM(itemwhse.qty_mrb) group by item

Qty_On_Hand

itemwhse.qty_on_hand + Sum_Qty_Mrb

Cost_Type

'Actual' if item.cost_type = 'A'
else 'Standard' if item.cost_type = 'S'
else item.cost_type

Adjusted_Unit_Cost

item.unit_cost if item.cost_type = 'S'
else item.avg_u_cost

Total_On_Hand_Cost

(itemwhse.qty_on_hand + SUM(itemwhse.qty_mrb)) * Adjusted_Unit_Cost

Total_Wip_Cost

itemwhse.qty_wip * Adjusted_Unit_Cost

Total_Inventory_Item_Cost

(itemwhse.qty_on_hand + Sum_Qty_Mrb) * Adjusted_Unit_Cost + itemwhse.qty_wip * Adjusted_Unit_Cost

Source

'Purchased' if item.p_m_t_code = 'P'
else 'Manufactured' if item.p_m_t_code = 'M'
else 'Transferred' if item.p_m_t_code = 'T'
else item.p_m_t_code

Dimensions

ABC Code

The ABC Code lets you rank items according to annual domestic currency usage. Items with high unit cost and low annual usage could be classified the same as items with low unit cost and high annual usage. A typical breakdown of the categories might reflect that 20% of the items would fall into the A classification (highest annual domestic currency usage), 30% in B, and 50% in C (lowest annual domestic currency usage). This dimension is a static dimension and contains elements A, B and C.

Buyer

The buyer dimension contains information of buyers who buy items.

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Source

The source dimension contains information of source type, which is how the item is acquired for inventory. Value of this dimension isn't populated from View; instead it contains these static elements:

Purchased - to indicate that the item is primarily a purchased item.

Manufactured - to indicate that the item is primarily a manufactured item.

Transferred - to indicate that the item is primarily a transferred item.

Measures

Measure_Inventory_Analysis includes these static elements:

Quantity On Hand

This is the total quantity on hand in inventory (nettable plus non-nettable)

WIP Quantity

This is the total quantity of WIP (total quantity on open jobs)

On Hand Cost

If the item cost method is standard cost, this is the on-hand quantity multiplied by the item master standard unit cost. If the item cost method is actual cost, this is the on-hand quantity multiplied by the item's average unit cost.

WIP Cost

If the item cost method is standard cost, this is the WIP quantity multiplied by the item master standard unit cost. If the item cost method is actual cost, this is the WIP quantity multiplied by the item's average unit cost.

Total Item Cost

The total value of WIP Cost plus On-Hand Cost

Inventory Periodical Analysis

The Inventory Periodical Analysis cube is used to analyze history and on hand inventory.

This cube is similar to the Inventory Analysis cube except that:

- There is an extra dimension, Date.
- There are a number of extra measures to calculate KPI's like Average On Hand Cost / Quantity, Average WIP Cost / Quantity

Dimensions

Statistic Calculation

The Statistic Calculation dimension presents different statistic calculations of business measures; in this case, Average. Average 1 or 2 must be selected to be able to calculate Average Quantity On Hand / WIP Quantity / On Hand Cost / WIP Cost / Total Item Cost. Import is only used to hold raw data loaded from Infor CloudSuite. Average 1 and 2 calculate the final result for analysis based on data held in the Import element. The difference in the calculation for the two averages are:

Average 1 = SUM(value of selected measure over selected time period) / Count of Date within selected time period on which there is not zero measure recorded

Average 2 = SUM(value of selected measure over selected time period) / Count of Date within selected time period

See this table as an example (quantity and cost of item FA-10000):

Date	Quantity	Cost
01/01/2013	8	16
01/03/2013	19	38
01/10/2013	35	70
01/20/2013	7	14
Average 1	SUM(value of selected measure over selected time period) / Count of Date within selected time period on which there is not zero measure recorded	
	Average 1 Quantity for 2013 Jan.	Average 1 Cost for 2013 Jan.
	(8+9+35+7) / 4 = 14.75	(16+38+70+14) / 4 = 34.5
Average 2	SUM(value of selected measure over selected time period) / Count of Date within selected time period	
	Average 2 Quantity for 2013 Jan.	Average 2 Cost for 2013 Jan.
	(8+9+35+7) / 31 = 1.9	(16+38+70+14) / 31 = 3.8

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Measures

Measure Inventory Periodical Analysis

Note: The results for these measures only make sense if Average 1 / 2 element of Statistic_Calculation dimension is selected. If you select the Import element, the measure result makes no sense for analysis.

Measure_Inventory_Analysis includes these static elements:

Quantity On Hand

This is the total quantity on hand in inventory (nettable plus non-nettable)

WIP Quantity

This is the total quantity of WIP (total quantity on open jobs)

On Hand Cost

If the item cost method is standard cost, this is the on-hand quantity multiplied by the item master standard unit cost. If the item cost method is actual cost, this is the on-hand quantity multiplied by the item's average unit cost.

WIP Cost

If the item cost method is standard cost, this is the WIP quantity multiplied by the item master standard unit cost. If the item cost method is actual cost, this is the WIP quantity multiplied by the item's average unit cost.

Total Item Cost

This is the total value of WIP Cost plus On-Hand Cost.

Finished Goods Cost

This is the cost of finished goods that are ready for sale in inventory. It is calculated by summing quantity on hand and Non-Nettable quantity, and then multiplied by item cost for the manufactured product only.

Calculation: Finished Goods Cost = (Quantity on Hand + Non-Nettable Quantity) * Unit Cost when source is "Manufactured".

Unit cost decision reference: When cost type is standard choose standard cost, otherwise choose average cost (SELECT item, CASE WHEN cost_type = 'S' THEN unit_cost ELSE avg_u_cost END AS Unit_Cost FROM item) AS unit_cost).

Raw Material Cost

This is the cost of raw materials that are materials or substance used in the primary production or manufacturing of a good. It is calculated by summing quantity on hand and Non-Nettable quantity, and then multiplied by item cost for the not manufactured materials.

Calculation: Raw Material Cost = (Quantity on Hand + Non-Nettable Quantity) * Unit Cost when source is not "Manufactured".

Unit cost decision reference: When cost type is standard choose standard cost, otherwise choose average cost (SELECT item, CASE WHEN cost_type = 'S' THEN unit_cost ELSE avg_u_cost END AS Unit_Cost FROM item) AS unit_cost).

COGS

The Cost of Goods Sold is derived from Unit Cost multiplied by the quantity shipped within the period. It is calculated by summing all COGS for a specific period. If the cube is snapshotted at the loading date, the COGS should include all not loaded COGS in the period. In other words, the COGS should include all cost of goods sold within the period.

Calculation: COGS = Shipped Qty * Unit Cost (reference round(co_ship.cost * co_ship.qty_shipped, 4, 0))

Raw Material Begin Cost

Raw Material Begin Cost is the cost of materials or substance used in the primary production or manufacturing of a good, and the cost is calculated at beginning of a month. It is calculated by summing quantity on hand and Non-Nettable quantity, and then multiplied by item cost for the not manufactured materials.

Calculation: Raw Material Begin Cost = (Quantity on Hand + Non-Nettable Quantity) * Unit Cost when source is not "Manufactured" by the first day of a month.

Unit cost decision reference: When cost type is standard choose standard cost, otherwise choose average cost (SELECT item, CASE WHEN cost_type = 'S' THEN unit_cost ELSE avg_u_cost END AS Unit_Cost FROM item) AS unit_cost).

Finished Goods Begin Cost

This is the cost of finished goods that are ready for sale in inventory at the ending of a month. It is calculated by summing quantity on hand and Non-Nettable quantity, and then multiplied by item cost for the manufactured product only.

Calculation: Finished Goods Begin Cost = (Quantity on Hand + Non-Nettable Quantity) * Unit Cost when source is "Manufactured" by the first day of a month.

Unit cost decision reference: When cost type is standard choose standard cost, otherwise choose average cost (SELECT item, CASE WHEN cost_type = 'S' THEN unit_cost ELSE avg_u_cost END AS Unit_Cost FROM item) AS unit_cost).

WIP Begin Cost

Work-in-process inventory is materials that have been partially converted through the production process. These items are typically located in the production area. The cost of work-in-process typically includes all of the raw material cost related to the final product, since raw materials are usually added at the beginning of the conversion process. Also, a portion of the direct labor cost and factory overhead will also be assigned to work-in-process. The WIP Begin Cost is calculated from WIP Quantity multiplied by item cost at the beginning of a month.

Calculation: WIP Begin Cost = WIP Quantity * Unit Cost by the first day of a month.

Unit cost decision reference: When cost type is standard choose standard cost, otherwise choose average cost (SELECT item, CASE WHEN cost_type = 'S' THEN unit_cost ELSE avg_u_cost END AS Unit_Cost FROM item) AS unit_cost).

Total Item Begin Cost

Total Item Begin Cost is the total cost for the item which are located in both of inventory and production line. It is calculated by summing on hand cost and WIP cost at the beginning of a month.

Calculation: Total Item Begin Cost = (Quantity on Hand + Non-Nettable Quantity + WIP Quantity) * Unit Cost by the first day of a month.

Or Total Item Begin Cost = (Raw material cost + Finished Goods Cost + WIP Cost) by the first day of a month.

Unit cost decision reference: When cost type is standard choose standard cost, otherwise choose average cost (SELECT item, CASE WHEN cost_type = 'S' THEN unit_cost ELSE avg_u_cost END AS Unit_Cost FROM item) AS unit_cost).

Raw Material End Cost

Raw Material End Cost is the cost of materials or substance used in the primary production or manufacturing of a good, and the cost is calculated at end of a month. It is calculated by summing quantity on hand and Non-Nettable quantity, and then multiplied by item cost for the not manufactured materials.

Calculation: Raw Material End Cost = (Quantity on Hand + Non-Nettable Quantity) * Unit Cost when source is not "Manufactured" by the last day of a month.

Unit cost decision reference: When cost type is standard choose standard cost, otherwise choose average cost (SELECT item, CASE WHEN cost_type = 'S' THEN unit_cost ELSE avg_u_cost END AS Unit_Cost FROM item) AS unit_cost).

Finished Goods End Cost

This is the cost of finished goods that are ready for sale in inventory at the end of a month. It is calculated by summing quantity on hand and Non-Nettable quantity, and then multiplied by item cost for the manufactured product only.

Calculation: Finished Goods End Cost = (Quantity on Hand + Non-Nettable Quantity) * Unit Cost when source is "Manufactured" by the last day of a month.

Unit cost decision reference: When cost type is standard choose standard cost, otherwise choose average cost (SELECT item, CASE WHEN cost_type = 'S' THEN unit_cost ELSE avg_u_cost END AS Unit_Cost FROM item) AS unit_cost).

WIP End Cost

Work-in-process inventory is materials that have been partially converted through the production process. These items are typically located in the production area. The cost of work-in-process typically includes all of the raw material cost related to the final product, since raw materials are usually added at the beginning of the conversion process. Also, a portion of the direct labor cost and factory overhead will also be assigned to work-in-process. The WIP End Cost is calculated from WIP Quantity multiplied by item cost at the end of a month.

Calculation: WIP End Cost = WIP Quantity * Unit Cost by the last day of a month.

Unit cost decision reference: When cost type is standard choose standard cost, otherwise choose average cost (SELECT item, CASE WHEN cost_type = 'S' THEN unit_cost ELSE avg_u_cost END AS Unit_Cost FROM item) AS unit_cost).

Total Item End Cost

Total Item End Cost is the total cost for the item which are located in both of inventory and production line. It is calculated by summing on hand cost and WIP cost at the end of a month.

Calculation: Total Item End Cost = (Quantity on Hand + Non-Nettable Quantity + WIP Quantity) * Unit Cost by the last day of a month.

Or Total Item End Cost = (Raw material cost + Finished Goods Cost + WIP Cost) by the last day of a month.

Unit cost decision reference: When cost type is standard choose standard cost, otherwise choose average cost (SELECT item, CASE WHEN cost_type = 'S' THEN unit_cost ELSE avg_u_cost END AS Unit_Cost FROM item) AS unit_cost).

Inventory Turns

Inventory Turns is a ratio of how many times a company's inventory is sold and replaced over a period. It is a rule measure.

Calculation: Inventory Turns = COGS / Total Item Begin Cost

Sales Controlling Analysis

Sales Controlling Analysis cube is used to analyze sales revenue vs sales budget. Revenue is the amount of money that a company actually receives during a specific period, for its business activities. It is the "top line" or "gross income" figure from which costs are subtracted to determine net income. It is a measure of how much business the company is doing per period. More revenues are usually indicative of growth, assuming costs do not grow at a faster rate. (Revenues do not mean cash received, could go into A/R or other accounts).

Dimensions

Fiscal Period

The Fiscal Period dimension is a role playing dimension of the Date dimension, and it shares the same source table as the Date dimension. It only includes the fiscal period without any calendar date.

Sales Controlling

The Sales Controlling Account dimension is an account hierarchy which contains revenue accounts, sales administration accounts, cost of goods sold accounts, and other accounts. It is used to analyze sales revenue and sales costs. Before you load the sales controlling account dimension, you must properly define a BI_Sales via Financial Statement Definition.

Measures

Sales Controlling Analysis includes these static and calculated measures:

Actual Revenue

Actual Revenue is the amount of money that a company actually makes during a specific period for its business activities. Revenue is calculated from credit amount minus debit amount on revenue accounts (include discount accounts) in the period, and subtract the value from total. The actual revenue is a positive value.

Calculation: Actual Revenue = Credit Amount - Debit Amount

Example: Debit (5), Credit (-15), the actual revenue is 10 (=15-5).

Planned Revenue

Planned Revenue is the budget amount a company planned for sales for a specific period. The value is defined via budgeted change field of chart of accounts budget and plan form.

Calculation: Planned Revenue can be one of budget##1 to budget##13 depending on the selected period in chart_bp table.

Cost of Goods Sold

Cost of goods sold (COGS) are the direct costs attributable to the production of the goods sold by a company. This amount includes the cost of the materials used in creating the good along with the direct labor costs used to produce the good. It excludes indirect expenses such as distribution costs and sales force costs. It is calculated by summing the debit amount of COGS accounts in the period. For non-COGS accounts, this field will be set to zero.

SG&A Cost

SG&A Cost is sales general & administration costs related to marketing or selling goods. It is calculated by summing the debit amount of SG&A accounts in the period. For non-SG&A accounts, this field will be set to zero.

SG&A Cost (per $1000 revenue)

SG&A Cost (per $1000 revenue) is the ratio of sales general cost to the $1000 revenue. It is a rule measure.

Calculation: SG&A Cost (per $1000 revenue) = SG&A Cost / Actual Revenue * 1000

Planned SG&A

Planned SG&A cost is the budget amount a company planned for sales general & administration cost for a specific period. The value is defined via budgeted change field of chart of accounts budget and plan form.

Calculation: Planned SG&A can be one of budget##1 to budget##13 depending on the selected period in chart_bp table.

Other Cost

Other Cost is the cost which are unrelated to operations or sales marketing, e.g. cost to hold inventory. It is calculated by summing the debit amount of other cost accounts in the period. For non-other accounts, this field will be set to zero.

Gross Profit

Gross Profit is the difference between revenue and the cost of making a product or providing a service, before deducting overhead, payroll, taxation, and interest payments. Note that this is different from operating profit (earnings before interest and taxes). Note also that gross margin is the term normally used in the U.S.

Net sales = Gross sales - (Customer Discounts, Returns, Allowances)

Gross profit = Net sales - Cost of goods sold = Actual Revenue - Cost of Goods Sold

Planned Profit

Planned Profit is the profit planned in a given period.

Calculation: Planned Profit = Planned Revenue - Cost of Goods Sold

Total Sales Cost

Total Sales Cost is much money a company pays per period, broken down by COGS, SG&A, and Other.

Calculation: Total Sales Cost = COGS + SG&A + Other

Sales Pipeline Analysis

The Sales Pipeline Analysis cube is used to analyze sales order completion statuses. Company management use sales pipeline function to track sales performance. This information can be also used to make short or longer term adjustments to production capacity.

Dimension

Calendar Date

The Calendar Date dimension is a role playing dimension of the Date dimension, and it shares the same source table as Date dimension. It only includes the calendar date without any fiscal date.

Measures

Sales Pipeline Analysis includes these static and calculated measures:

Forecast Amount

Forecast Amount is an estimate of sales value that will be closed in a given time period. The forecast amount should include both of opportunities value and planned order value.

Order Quantity

Order Quantity is the quantity of ordered item on sales order that has been placed on order date. It is from the "Qty Ordered" field on customer order line when status is "Ordered/Complete/Stopped/History". For blanked order release, it is the "Ordered Release" on the release date.

Calculation: Order Quantity = "Qty Ordered" and "Ordered Release"

Order Amount

Order Amount is the net amount of order item on sales order that have been placed on order date. It is calculated from the Order Quantity multiplied by unit price and then minus discount amount when status is "Ordered/Complete/Stopped/History". For blanket order release, the amount is calculated from the ordered release multiplied by unit price on the release date.

Calculation: Order Amount = Order Quantity * (Unit Price - Price Discount) or Ordered Release * Unit Price

Shipped Quantity

Shipped Quantity is the quantity shipped of sales order in a given period when status is "Ordered/Complete/Stopped/History". Shipped quantity should be counted on shipped date.

Calculation: Shipped Quantity = "Qty Shipped"

Shipped Amount

Shipped Amount is the net value of shipped items for sales order in a given period. It is calculated from the Shipped Quantity multiplied by unit price and then minus discount amount when status is "Ordered/Complete/Stopped/History". Shipped amount should be counted on shipped date.

Calculation: Shipped Amount = Shipped Quantity * (Unit Price - Price Discount) or Shipped Quantity * Unit Price for release order

Backlog Amount

Backlog Amount is the value of unfinished customer orders that have been received but have not been completed. It is calculated from order amount minus shipped amount when status is "Ordered/Complete/Stopped/History" in the same period.

Calculation: Backlog Amount = Order Amount - Shipped Amount

Planned Production Quantity

Planned Production Quantity is the quantity of product which is planned to be produced in a given period. It includes the release quantity on both of job and production schedule.

Planned Production Amount

Planned Production Amount is the value of product which is planned to be produced in a given period. It is calculated from the release quantity multiplied by Unit Cost of the item.

Unit cost decision reference: When cost type is standard choose standard cost, otherwise choose average cost (SELECT item, CASE WHEN cost_type = 'S' THEN unit_cost ELSE avg_u_cost END AS Unit_Cost FROM item) AS unit_cost).

Order Count

Order Count is the number of orders with status of "Ordered/Complete/Stopped/History". If the fact view is on the order line level, you can put just count "1" on the first line, and all other lines are set to "0". For blanket order, one release order should count "1".

Average Order Value

Average Order Value is the average of order amounts. It is calculated from the sum of order amount divided by order count. It is a rule measure.

Calculation: Average Order Value = Order Amount / Order Count

Accounts Receivable Periodical Analysis

The Accounts Receivable Periodical Analysis cube is used to analyze the account receivables in the period end by different aging bucket.

Dimension

Month End

The Month End dimension is the role playing dimension of Date dimension, and it shares the same source table as Date dimension. It only includes calendar date without any fiscal date. The month end stands for the last date of a month.

Measures

The Accounts Receivable Periodical Analysis includes these static and calculated elements:

Outstanding Receivables

This is the total outstanding receivable values on invoices, payments, credit memos, debit memos and finance charges in base currency.

Invoice Amount

This is the total value of invoices in base currency.

Payment Amount

This is the total value of payments in base currency.

Credit Amount

This is the total value of credit memos in base currency.

Debit Amount

This is the total value of debit memos in base currency.

Finance Charge Amount

This is the total value of financial charges in base currency.

Discount Amount

The Discount Amount is the payment discount when invoice is paid before due date. It is a median measure used for calculating outstanding receivables.

Open Invoice Count

This is the total number of invoices that are not fully paid.

Outstanding Receivables %

This is the percentage of outstanding receivables. It is an R element that requires this calculation rule to be defined on the measure.

Calculation rule: [Outstanding Receivables %] = [Outstanding Receivables] / [Invoice Amount] * 100

Sales Process Capacity Analysis

The Sales Process Capacity Analysis cube is used to analyze how many customer orders have been shipped or are ready for shipping, and how long time it will take to prepare materials for a sales order, etc.

Dimension

Order Date

The Order Date dimension is a role playing dimension of the Date dimension, and it shares the same source table as Date dimension. It only includes the calendar date without any fiscal date.

Measures

The Sales Process Capacity Analysis measure includes these static and calculated elements:

On Time Shipped Orders

The On Time Shipped Orders is the total number of complete and on-time shipped orders. It is calculated by counting each fully shipped customer order on time or shipped early. All historical customer orders, regular orders and customer order blanket releases should be included in the counting.

Calculation reference on DIFOT of customer order lines:

Qty Shipped Under <= Ordered Qty Tolerance Under when Ordered Qty Tolerance Under is not blank

Qty Shipped Under < 100 % when Ordered Qty Tolerance Under is blank

Shipped After Due Date <= Shipped After Due Date Tolerance when Shipped After Due Date Tolerance is not blank

Shipped After Due Date >= 0 when Shipped After Due Date Tolerance is blank

Total Orders

The Total Orders is the total number of customer orders. It is calculated by counting all customer orders except planned orders. All historical customer orders, regular orders and customer order blanket releases should be included in the counting.

On Time Shipped %

On Time Shipped % is the percentage ratio of the complete and on time shipped orders count to the planned delivery orders count. It is a rule measure.

Calculation: On Time Shipped % = On Time Shipped Orders / Total Orders *100

Turnaround Days

Turnaround Days is the number of days from order placement to shipment of the order. It is calculated from the first shipping date on any order line minus the order date. Zero is used for not shipped orders. All historical customer orders, regular orders and customer order blanket releases are included in the counting.

Calculation: Turnaround Days = smallest date shipped - order date

Total Orders Shipped

Total Orders Shipped is the total number of orders shipped. It is calculated by counting the number of shipped orders. It includes history orders, on-time shipped orders, partial shipped orders and fully shipped orders. All historical customer orders, regular orders and customer order blanket releases are included in the counting.

Average Turnaround Days

Average Turnaround Days is the average order turnaround days in a period. It is a rule measure.

Calculation: Average Turnaround Days = Turnaround Days / Total Orders Shipped

Job Scheduling Analysis

The Job Scheduling Analysis cube is used to analyze production time and scheduling status for different products on different production lines.

Measures

These measures are part of the Job Scheduling Analysis cube:

Manufacturing Cycle Time

Manufacturing Cycle Time is the length of hours from the start of production and assembly operations for a particular (finished) product to the completion of all manufacturing, assembly, and testing for that product. It is calculated by summing Hours per Piece, Finish Hours, Move Time and Queue Time. Whether Machine Hours per Piece or Labor Hours per Piece is chosen depending on radio button selection. If Use Fixed Schedule is checked, the Fixed Schedule Hours is used as Hours per Piece. The jobs are selected by all status of released/stopped/complete/history. The start date is used as transaction date for no transaction data jobs.

Calculation: Manufacturing Cycle Time = Hours per Piece + Move Hours + Queue Hours Finish Hours for none molding pack.

Manufacturing Cycle Time = Seconds Per Cycle /3600 for molding pack.

Count

Count is set to "1" for each fact row. This means, for each job or each row in the fact view, the measure is set to one.

Average Manufacturing Cycle Time

Average Manufacturing Cycle Time is a rule measure. It is calculated from the Manufacturing Cycle Time divided by count.

Calculation: Average Manufacturing Cycle Time = Manufacturing Cycle Time / Count

Vendor Received Analysis

The Vendor Received Analysis cube is used to review purchasing data at various levels. Key points of analysis include: supplier volumes (in base currency), period to date receipts, suppliers by location, and materials received by type of supplier. The data in this cube is based on material receipt transactions for closed purchase orders. Open purchase orders are not considered in the calculations.

Derived fields

Derived fields for this cube are calculated in this way:

Delivery Intervals

Case when receipt date - due date
Between -1 and 1 then 'On Time'
Between 2 and 3 then '1 - 3 Days'
Between 4 and 7 then '4 - 7 Days'
> 7 then '7+ Days'
Else 'Received Early'

Early_Late

Case when receipt date - due date
<-1 then 'Received Early'
Between -1 and 1 then 'On Time'
> 1 then 'Received Late'

Quantity_Ordered_Cost

poitem.qty_ordered * po_rcpt.item_cost / po.exch_rate

Dimensions

This dimension shows the vendor address in hierarchy.

With the "Ignore empty level input" option enabled, vendors without part of the address information are placed under the closest available parent elements or placed under the 'All Vendor Locations' element if this Vendor doesn't have any address settings.

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Vendor_Location

This dimension shows vendor addresses in hierarchy. The "Ignore empty level input" option is enabled, which results in vendors without part of the address information to be placed under the closest available parent elements or placed under the “All Vendor Locations” element if the vendor doesn't have any address settings.

The “Vendor Not Assigned” element refers to a vendor that isn't assigned to a certain fact row.

Receive_Date

The Receive_Date dimension shares the same data source as Date dimension. This dimension shows receiving date of PO line. It includes calendar date without any fiscal date.

Vendor

Vendor dimension shows vendor information categorized by vendor type.

Receive_Delivery_Interval

The Receive_Delivery_Interval dimension show the delivery interval between the purchase order line receive date and the purchase order line due date.

Measures

Measure_Vendor_Received_Analysis includes following static elements:

Quantity Received

This is the Quantity Received for purchase order line.

Quantity Return

This is the Quantity Return to vendor for purchase order line.

Quantity Received Cost

This is the Quantity Received Cost for purchase order line in domestic currency. The Quantity Received Cost is equal to Quantity Received multiplied by Item Cost.

Quantity Returned Cost

This is the Quantity Returned Cost for purchase order line in domestic currency. Quantity Returned Cost is equal to Quantity Returned multiplied by Item Cost.

Material Scrap Analysis

The Material Scrap Analysis cube is used to review and analyze possible sources of scrap from manufacturing operations. The data is based on all transactions collected for jobs. Scrap costing is based on standard costs, where applicable. If actual costs are used, the scrap cost is calculated based on job actual costs. You can also drill down to identify the source of the scrap from site or division down through work center levels.

Derived fields

Derived fields for this cube are calculated in this way:

Job_Suffix

((SUBSTRING(Matscr.JobSuffix,1, 10))) + '-' + RIGHT('0000' +
CAST(SUBSTRING(Matscr.JobSuffix, 12, 4) AS VARCHAR(4)), 4)

Transaction_Date

AST(YEAR(Matscr.TransactionDate) AS CHAR(4)) + '/'
+ RIGHT('00' + RTRIM(CAST(DATEPART(mm, Matscr.TransactionDate) AS CHAR(2))), 2) + '/'
+ RIGHT('00' + RTRIM(CAST(DATEPART(dd, Matscr.TransactionDate) AS CHAR(2))), 2) AS
Transaction_Date,

Total_Scrap_Cost

Matscr.ScrapCostMaterial + Matscr.ScrapCostLabor + Matscr.ScrapCostFixedOH +
Matscr.ScrapCostVariableOH + Matscr.ScrapCostOutside AS Total_Scrap_Cost

Trans_Type_Employee_Number

ISNULL(Matscr.TransactionType,'') + '_' + ISNULL(Matscr.Employee,'')

Dimensions

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Item

The Item dimension is similar to the Product dimension with one extra level in the hierarchy - Cost Type. The Item dimension includes all items with which an organization deals, their associated cost type, and product codes.

Reason_Code

The Reason_Code dimension is used to show reason code hierarchy. It contains all reason codes that belong to the reason class of 'MFG SCRAP'.

Transaction_Date

The Transaction_Date dimension is shares the same source table as Date dimension. This dimension shows the transaction date of the job transaction line. It includes calendar date without any fiscal date.

Transaction_Type

The Transaction_Type dimension is used to show job transaction type hierarchy. It contains all transaction type and employees that exist in job transaction record.

Measures

Measure_Material_Scrap_Analysis includes these static and calculated elements:

Qty Scrapped

Qty Scrapped is the quantity scrapped from a job operation. For production schedule, it is the scrap quantity from an operation.

Total Scrap Cost

This is the total accumulated cost of scrap; the total accumulated costs from labor, machine, and material for all operations up to and including the operation where the scrap transaction occurred.

Oper Qty Complete

Oper Qty Complete is the quantity completed from an operation.

Operation Scrap %

This is the percentage scrapped for the operation. It's an R element that requires following calculation rule to be defined on the measure.

Calculation rule: [Operation Scrap %] = [Qty Scrapped] / {[Qty Scrapped] + [Oper Qty Complete]} * 100

Job Qty Complete

Job Qty Complete is the quantity completed on the job. For production schedule, it is the completed quantity for the whole production schedule.

Job Scrap %

The percentage scrapped for the job. It's an R element that requires following calculation rule to be defined on the measure.

Calculation rule: [Job Scrap %] = [Qty Scrapped] / {[Qty Scrapped] + [Job Qty Complete]} * 100

Scrap Hours Labor

This is the total accumulated hours of the scrapped part. The total labor hours (run + setup) accumulated for all operations up to and including the operation where the scrap transaction occurred.

For production schedule, the scrap hours labor is set to 0.

Scrap Hours Machine

The total accumulated machine hours of the scrapped part. The total machine hours accumulated for all operations up to and including the operation where the scrap transaction occurred.

For production schedule, the scrap hours labor is set to 0.

Scrap Cost / Piece

This is the scrap cost per piece. It's an R element that requires following calculation rule to be defined on the measure.

Calculation rule: [Scrap Cost / Piece] = [Total Scrap Cost] / [Qty Scrapped]

Total Job Cost

Total Job Cost is the total cost of all kinds of jobs including history jobs and rework jobs. It is calculated by summing all material cost, labor cost, variable overhead cost, outside cost and fixed overhead

Calculation: Total Job Cost = material cost + labor cost + fix overhead cost + variable overhead cost + outside cost

Total Actual Job Cost (on jobroute_mst) = setup_cost_t + run_cost_t_lbr + fixovhd_t_lbr + varovhd_t_lbr + fixovhd_t_mch + varovhd_t_mch

Total Actual Job Cost (on jobmatl_mst) = fixovhd_t + varovhd_t + a_cost (a_matl_cost + a_lbr_cost + a_fovhd_cost + a_vovhd_cost + a_out_cost)

The production schedule total cost is the total production costs, which includes completed item cost and scrapped material cost. The calculation is referred to production schedule earned cost report and production schedule scrap cost report.

Calculation: Total Cost = Material Cost + Labor Cost + Fixed Overhead Cost + Variable Overhead Cost + Outside Cost

Plus Total Scrap Cost (operation) = Total Job Cost (operation) * Scrap Quantity (operation) / (Completed Quantity (operation) + Scrap Quantity (operation))

Or Total Cost = (matltran.matl_cost + matltran.lbr_cost + matltran.fovhd_cost + matltran.vovhd_cost + matltran.out_cost) * matltran.qty when trans_type is "F"

Plus Total Scrap Cost = matltran_amt.matl_amt + matltran_amt.lbr_amt + matltran_amt.fovhd_amt + matltran_amt.vovhd_amt + matltran_amt.out_amt

Total Scrap Cost

This is the total accumulated cost of scrap. The total accumulated costs from labor, machine, and material for all operations up to and including the operation where the scrap transaction occurred.

Calculation: Total Scrap Cost (operation) = Total Job Cost (operation) * Scrap Quantity (operation) / (Completed Quantity (operation) + Scrap Quantity (operation))

The total scrap cost from production schedule can be referred to production schedule scrap cost report.

Calculation: Total Scrap Cost = matltran_amt.matl_amt + matltran_amt.lbr_amt + matltran_amt.fovhd_amt + matltran_amt.vovhd_amt + matltran_amt.out_amt

Total Rework Cost

Total Rework Cost is the total cost of rework jobs. It is calculated by summing all material cost, labor cost, variable overhead cost, outside cost and fixed overhead for rework jobs.

Calculation: Total Rework Cost = material cost + labor cost + fix overhead cost + variable overhead cost + outside cost when rework is selected.

Scrap Cost %

Scrap Cost % is the scrap cost accounts for how much percentage of the total job cost. It is a rule measure.

Calculation: Scrap % = (Total Scrap Cost)/Total Job Cost * 100

Rework %

Rework % is the rework cost accounts for how much percentage of the total job cost. It is a rule measure.

Calculation: Rework % = (Total Rework Cost)/Total Job Cost * 100

Scrap and Rework %

Scrap and Rework % is the scrap and rework cost accounts for how much percentage of the total job cost. It is a rule measure.

Calculation: Scrap and Rework % = (Total Scrap Cost + Total Rework Cost)/Total Job Cost * 100

Job Efficiency Analysis

The Job Efficiency Analysis cube provides the data necessary to review and analyze work center or job performance. Plant managers and production supervisors can use it to analyze job efficiency. This analysis cube deals with the information related to completed jobs only.

Derived fields

Derived fields for this cube are calculated in this way:

Job_Number

job.job + '-' + REPLICATE('0', 4 - LEN(CONVERT(CHAR(4), ROUND(job.suffix,0,0)))) + CONVERT(CHAR(4), ROUND(job.suffix,0,0))

Setup_Efficiency

CASE WHEN (jrt_sch.setup_hrs > 0) THEN (100 - ((jrt_sch.setup_hrs - jobroute.setup_hrs_t) / (jrt_sch.setup_hrs))) ELSE (0) END

Machine_Efficiency

CASE WHEN ((jrt_sch.pcs_per_mch_hr > 0) AND (jobroute.run_hrs_t_mch > 0)) THEN ((100 - ((((jrt_sch.pcs_per_mch_hr * jobroute.run_hrs_t_mch) - jobroute.qty_complete) * 100) / (jrt_sch.pcs_per_mch_hr * jobroute.run_hrs_t_mch)))) ELSE (0) END

Labor_Efficiency

CASE WHEN ((jrt_sch.pcs_per_lbr_hr > 0) AND (jobroute.run_hrs_t_lbr > 0)) THEN ((100 - ((((jrt_sch.pcs_per_lbr_hr * jobroute.run_hrs_t_lbr) - jobroute.qty_complete) * 100) / (jrt_sch.pcs_per_lbr_hr * jobroute.run_hrs_t_lbr)))) ELSE (0) END

Standard_Machine_Quantity

jobroute.run_hrs_t_mch * jrt_sch.pcs_per_mch_hr

Standard_Labor_Quantity

jobroute.run_hrs_t_lbr * jrt_sch.pcs_per_lbr_hr

Dimensions

Completed Job

The Job dimension is used to show the jobs related to manufactured products. Job information is extracted from job and item tables for completed jobs and historical jobs.

Currency Code

This dimension is used to support monetary value and multi-currency function. The transaction date will be used to get the exchange rate.

Measures

Measure_Job_Efficiency_Analysis includes these static and calculated elements:

Quantity Completed

This is the quantity completed on the job. It is from the job table.

Total Labor Run Hours

This is the total labor run hours applied to the job operation. It is from the job routing operation table.

Total Machine Run Hours

This is the total machine run hours applied to the job operation. It is from the job routing operation table.

Total Setup Hours

This is the total setup hours applied to the job operation. It is from the job routing operation table.

Standard Machine Quantity

This is the standard machine quantity defined for the job operation. It is derived from pieces per machine hour multiplied by total machine run hours.

Standard Labor Quantity

This is the standard labor quantity defined for the job operation. It is derived from pieces per labor hour multiplied by total labor run hours.

Standard Pieces per Labor Hour

This is the planned pieces per labor hour defined for the job operation. It is an ‘R’ element that requires this calculation rule to be defined on the measure:

> Calculation rule: [Standard Pieces per Labor Hour] = [Standard Labor Quantity] / [Total Labor Run Hours]

Standard Pieces per Machine Hour

This is the planned pieces per machine hour defined for the job operation. It is an ‘R’ element that requires this calculation rule to be defined on the measure:

> Calculation rule: [Standard Pieces per Machine Hour] = [Standard Machine Quantity] / [Total Machine Run Hours]

Standard Setup Hours

This is the planned setup hours defined for the job operation. It is from job routing schedule table.

Actual Pieces per Labor Hour

This is the actual pieces per labor hour calculated for the job operation. It is an ‘R’ element that requires this calculation rule to be defined on the measure:

Calculation rule: [Actual Pieces per Labor Hour] = [Quantity Completed] / [Total Labor Run Hours]

Actual Pieces per Machine Hour

This is the actual pieces per machine hour calculated for the job operation. It is an ‘R’ element that requires this calculation rule to be defined on the measure:

Calculation rule: [Actual Pieces per Machine Hour] = [Quantity Completed] / [Total Machine Run Hours]

Labor Efficiency %

This is the percent of labor efficiency calculated for the job. It is an ‘R’ element that requires this calculation rule to be defined on the measure:

Calculation rule: [Labor Efficiency %] = [Quantity Completed] / ([Total Labor Run Hours] * [Standard Pieces per Labor Hour]) * 100

Machine Efficiency %

This is the percent of machine efficiency calculated for the job. It is an ‘R’ element that requires this calculation rule to be defined on the measure:

Calculation rule: [Machine Efficiency %] = [Quantity Completed] / ([Total Machine Run Hours] * [Standard Pieces per Machine Hour]) * 100

Setup Efficiency %

This is the percent of setup efficiency calculated for the job. It is an ‘R’ element that requires this calculation rule to be defined on the measure:

Calculation rule: [Setup Efficiency %] = [Total Setup Hours] / [Standard Setup Hours] * 100

Total Value Completed

This is the total production value completed from a completed job. It is calculated by summing all material cost, labor cost, fix overhead cost, variable overhead cost and outside cost which are recorded actually. The total value will be set on the first operation only. All other operations will be set to zero.

Calculation: Total Value Completed = Material Cost + Labor Cost + Fix Cost + Variable Cost + Outside Cost logged actually

Below are formulas for calculating the total value completed. It should include the actual cost on operations and job materials.

Total Actual Job Cost (on job operation / accumulated values) = Total Setup Cost + Total Labor Run Cost + Total Fixed Overhead Cost (labor) + Total Variable Overhead Cost (labor) + Total Fixed Overhead (machine) + Total Variable Overhead (machine)

Total Actual Job Cost (on job material/accumulated values) = Total Cost (including material cost, labor cost, fix overhead cost, variable overhead cost and outside cost)+ Total Fixed Overhead + Total Variable Overhead

Or

Total Actual Job Cost (on jobroute_mst) = setup_cost_t + run_cost_t_lbr + fixovhd_t_lbr + varovhd_t_lbr + fixovhd_t_mch + varovhd_t_mch

Total Actual Job Cost (on jobmatl_mst) = fixovhd_t + varovhd_t + a_cost (a_matl_cost + a_lbr_cost + a_fovhd_cost + a_vovhd_cost + a_out_cost)

Production Value per Labor Unit

This is the production value of goods (potential revenue) per unit of labor measures how productive and profitable each labor unit is to the firm. A unit of labor is one hour of labor work. It is a rule measure that should be defined on the cube rule.

Calculation: Production Value per Labor Unit = Total Value Completed / Total Labor Run Hours

Total Value Planned

This is the total planned production value from a completed job. It is calculated by summing all material cost, labor cost, fix overhead cost, variable overhead cost, and outside cost on plan time. The total value planned will be set on the first operation only, all other operations will be set to zero.

Calculation: Total Value Planned = Material Cost + Labor Cost + Fix Cost + Variable Cost + Outside Cost on planned time

Here are the calculation details (refer to job costing report):

Material Cost

If material is Per Unit: (job qty Released * material qty per assembly / (1 - scrap factor)) *material unit cost

If material is Per Lot: (material qty per assembly / (1 - Scrap Factor)) * material unit cost

Material Overhead Cost

Material overhead is calculated the same regardless of the material's type.

Fixed Material Overhead: Material Cost * material Fixed Overhead rate

Variable Material Overhead: Material Cost * material Variable Overhead rate

Setup Cost and Overhead

For each operation, the system calculates the planned setup hours and then the planned setup cost and labor overhead associated with setup.

Setup Time: (Setup Hours / Efficiency)

Setup Cost: Setup Time * Setup Rate

Fixed Setup Overhead: Setup Time * operation Fixed Labor overhead rate

Variable Setup Overhead: Setup Time * operation Variable Labor overhead rate

Run (Labor) Cost and Overhead

For each operation, the system calculates the planned run time and then the planned run cost and run labor overhead.

Labor Time: job quantity Released * (operation Labor Hours Per Piece * Quantity Resources)

Run Cost: Labor Time * operation Run Rate

Fixed Overhead: Labor Time * operation Fixed Labor overhead rate

Variable Overhead: Labor Time * operation Variable Labor overhead rate

Machine Overhead

For each operation, the system calculates the planned machine time and then the planned machine overhead costs:

Machine Time: job quantity Released * (operation Machine Hours Per Piece / Efficiency)

Machine Fixed Overhead: Machine Time * operation Fixed Labor overhead rate

Machine Variable Overhead: Machine Time * operation Variable Labor overhead rate

Total Labor Hours Planned

Total Labor Hours Planned is calculated from Labor Hours per Piece multiplied by the released quantity.

Calculation: Total Labor Hours Planned = Labor Hours per Piece * Released Quantity

Planned Value per Labor Unit

Planned Value per Labor Unit is the planned production value of goods (potential revenue) per unit of labor measures how productive and profitable each labor unit to the firm. A unit of labor is one hour of labor work. It is a rule measure that should be defined on the cube rule.

Calculation: Planned Value per Labor Unit = Total Value Planned / Total Labor Hours Planned.

Total Labor Cost

Total Labor Cost is the total labor cost for a completed job or a historical job. It is calculated by summing all Total Run Cost (labor), Total Fixed Overhead (labor), Total Variable Overhead (labor), Total Setup Cost and Labor Cost of material. Total Run Cost (labor), Total Fixed Overhead (labor), Total Variable Overhead (labor) and Total Setup Cost are displayed on job operation form, and Labor Cost is displayed on job material form. All these cost should be collected onto the job operation level.

Calculation: Total Labor Cost = jobroute.run_cost_t_lbr + jobroute.fixovhd_t_lbr + jobroute.varovhd_t_lbr + jobroute.setup_cost_t + sum (jobmatl.a_lbr_cost) on job operation level

Total Payroll

Total Payroll is the sum of all employees' gross pay in a period. The total payroll is distributed among job operations by the weighted average value. It is calculated by the following rules (reference to the posted payroll transactions report):

Get each payroll transaction with its period start date and period end date (prtrxp table).

Get each completed job or historical job, if the job last transaction date is in the period of the payroll transaction, then the job will be counted.

Calculate each job duration in days by end date minus start date.

Distribute total payroll among the jobs by weighted average value. Then average out into each job operation.

Calculation: total payroll for a job operation = (total payroll (prtrxp.gross_pay)) * (job duration / sum(job duration)) / (the number of operations of a job)

Labor Cost %

Labor Cost % is the ratio of Total Labor Cost to Total Payroll in percentage. It is a rule measure.

Calculation: Labor Cost % = (Total Labor Cost) / (Total Payroll) * 100

Booking Analysis

The Booking Analysis cube includes the data necessary to perform high level order booking analysis and reflects additional data elements that must be calculated for order booking analysis. The data in the Bookings Analysis Cube reflects a view of order booking data at a specific point of time. This cube is intended for executive level and sales management teams.

Derived fields

Derived fields for this cube are calculated in this way:

Price_Change

coitem_log.price_chg / co.exch_rate

Amount_Change

coitem_log.trans_amt / co.exch_rate

Discount_Amount_Change

coitem_log.trans_disc / co.exch_rate

Net_Amount_Change

coitem_log.trans_amt / co.exch_rate - coitem_log.trans_disc / co.exch_rate

Dimensions

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Time Calculation

The Time Calculation dimension presents different time calculations of these business measures: YTD, and MTD.

Time_Calculation should be used with the Date dimension. Depending on which date element is selected, the Time_Calculation element might or might not make sense. For example, if a quarter element such as 2013/Q2 is selected, then the additional element YTD makes sense. If a month element such as 2013/03 is selected, then additional MTD makes sense.

Definitions of YTD and MTD:

YTD

Year-to-date (YTD) is a period, starting from the beginning of the current year and continuing up to the present day. The year usually starts on January 1 (calendar year), but depending on purpose, can start also on July 1, April 1 (UK corporation tax and government financial statements), and April 6 (UK fiscal year for personal tax and benefits). Year-to-date is used in

many contexts, mainly for recording results of an activity in the time between a date (exclusive, since this day may not yet be "complete") and the beginning of either the calendar or fiscal year.

In the context of finance, YTD is often provided in financial statements detailing the performance of a business entity. Providing current YTD results, as well as YTD results for one or more past years as of the same date, allows owners, managers, investors, and other stakeholders to compare the company's current performance to that of past periods. Employees' income tax may be based on total earnings in the tax year to date.

Comparing YTD measures can be misleading if not much of the year has occurred, or the date is not clear. YTD measures are more sensitive to early changes than late changes. Contrast YTD with the concept of 12-months-ending (or Year-ending), which are more resistant to seasonal influences. For example YTD of September 16th 2011 means from January 1st 2011 to September 16th 2011.

MTD

Month-to-date (MTD) is a period starting at the beginning of the current month and ending at the current date. Month-to-date is used in many contexts, mainly for recording results of an activity in the time between a date (exclusive, since this day may not yet be "complete") and the beginning of the current month.

In the context of finance, MTD is often provided in financial statements detailing the performance of a business entity. Providing current MTD results, as well as MTD results for one or more past months as of the same date, allows owners, managers, investors, and other stakeholders to compare the company's current performance to that of past periods.

MTD describes the return so far this month. For example: the month to date return for the stock is 8%. This means from the beginning of the current month until the current date, stock has appreciated by 8%.

Comparing MTD measures can be misleading if not much of the month has occurred, or the date is not clear. MTD measures are more sensitive to early changes than late changes. For example YTD of September 16th 2011 means from September 1st 2011 to September 16th 2011.

Measures

Measure_Booking_Analysis includes following static elements:

Quantity Ordered

This is the quantity ordered for item(s) of customer order(s). The quantity ordered is from the quantity change of the CO item log (coitem-log) file.

Gross Sales Amount

This is the gross sales amount for item(s) of customer order(s) divided by exchange rate of the customer order. The total transaction amount is from the CO item log (coitem-log) file.

Total Discount Amount

This is the total transaction discount amount for item of customer order divided by exchange rate of the customer order. The total discount amount is from the CO item log (coitem-log) file.

Net Sales Amount

This is the Net Sales Amount derived from gross sales amount minus total discount amount.

Count

Count is the total number of booking analysis fact view rows. It is used to count the number of fact view rows, and to calculate the average of the number of sales persons. This is a medium measure, and is used to calculate the number of sales person. So there is no need to test this measure.

Sales Person Count

Sales Person Count is the total number of sales persons multiplied by the number of rows. It is from the count of sales persons of "slsman" table. This is a medium measure, and is used to calculate the number of sales person. So there is no need to test this measure.

Total Sales Persons

Total Sales Persons is the total number of sales persons. It is a rule measure.

Calculation: Total Sales Persons = Sales Person Count / Count

Bookings per Sales FTE

Bookings per Sales FTE is the total order booking amount in a period per sales person. It is a rule measure.

Calculation: Bookings per Sales FTE = Gross Sales Amount / Sales Person Count * Count

Business Performance Analysis

The Business Performance Analysis cube is used to measure key metrics: delivery performance (year, quarter, and month) by due dates, product codes, customers, family codes, salesperson, and delivery intervals. The fact granularity is one row for every customer order line per shipment where customer order status is Complete.

Derived fields

Derived fields for this cube are calculated in this way:

Delivery Intervals

Case when receipt date - due date
Between -1 and 1 then 'On Time'
Between 2 and 3 then '1 - 3 Days'
Between 4 and 7 then '4 - 7 Days'
Between 8 and 20 then '8 - 20 Days'
> 20 then '20+ Days'
Else 'Received Early'

Unit_Price

(coitem.price_conv * ((100 - coitem.disc) / 100) * ((100 - co.disc) / 100)) / co.exch_rate

Quantity_Ordered_Cost

poitem.qty_ordered * po_rcpt.item_cost / po.exch_rate

EOL

receipt date - due date

Line_Item_Value

coitem.price_conv * coitem.qty_shipped / co.exch_rate

Dimensions

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Due_Date

The Due_Date dimension shares the same source table as Date dimension. This dimension shows Due date of customer order line. It only includes calendar date without any fiscal date.

Time Calculation

The Time Calculation dimension presents different time calculations of these business measures: YTD, QTD, and MTD.

Time_Calculation should be used with the Due_Date dimension. Depending on which date element is selected, the Time_Calculation element might or might not make sense. For example, if a quarter element such as 2013/Q2 is selected, then the additional element YTD make sense. If a month element such as 2013/03 is selected, then additional MTD makes sense.

Definitions of YTD, QTD, and MTD:

YTD

Year-to-date (YTD) is a period, starting from the beginning of the current year and continuing up to the present day. The year usually starts on January 1 (calendar year), but depending on purpose, can start also on July 1, April 1 (UK corporation tax and government financial statements), and April 6 (UK fiscal year for personal tax and benefits). Year-to-date is used in many contexts, mainly for recording results of an activity in the time between a date (exclusive, since this day may not yet be "complete") and the beginning of either the calendar or fiscal year.

In the context of finance, YTD is often provided in financial statements detailing the performance of a business entity. Providing current YTD results, as well as YTD results for one or more past years as of the same date, allows owners, managers, investors, and other stakeholders to compare the company's current performance to that of past periods. Employees' income tax may be based on total earnings in the tax year to date.

Comparing YTD measures can be misleading if not much of the year has occurred, or the date is not clear. YTD measures are more sensitive to early changes than late changes. Contrast YTD with the concept of 12-months-ending (or Year-ending), which are more resistant to seasonal influences. For example YTD of September 16th 2011 means from January 1st 2011 to September 16th 2011.

QTD

Quarter-to-date (QTD) is a period starting at the beginning of the current quarter and ending at the current date. Quarter-to-date is used in many contexts, mainly for recording results of an activity in the time between a date (exclusive, since this day may not yet be "complete") and the beginning of either the calendar or fiscal quarter.

In the context of finance, QTD is often provided in financial statements detailing the performance of a business entity. Providing current QTD results, as well as QTD results for one or more past quarters as of the same date, allows owners, managers, investors, and other stakeholders to compare the company's current performance to that of past periods.

QTD describes the return so far this quarter. For example: the quarter to date (quarter) return for the stock is 8%. This means from the beginning of the current quarter until the current date, stock has appreciated by 8%.

Comparing QTD measures can be misleading if not much of the quarter has occurred, or the date is not clear. QTD measures are more sensitive to early changes than late changes. For example QTD of September 16th 2011 means from July 1st 2011 to September 16th 2011.

MTD

Month-to-date (MTD) is a period starting at the beginning of the current month and ending at the current date. Month-to-date is used in many contexts, mainly for recording results of an activity in

the time between a date (exclusive, since this day may not yet be "complete") and the beginning of the current month.

In the context of finance, MTD is often provided in financial statements detailing the performance of a business entity. Providing current MTD results, as well as MTD results for one or more past months as of the same date, allows owners, managers, investors, and other stakeholders to compare the company's current performance to that of past periods.

MTD describes the return so far this month. For example: the month to date return for the stock is 8%. This means from the beginning of the current month until the current date, stock has appreciated by 8%.

Comparing MTD measures can be misleading if not much of the month has occurred, or the date is not clear. MTD measures are more sensitive to early changes than late changes. For example YTD of September 16th 2011 means from September 1st 2011 to September 16th 2011.

Measures

Measure_Business_Performance_Analysis includes these static elements:

Shipments per Interval

This is the number of shipments for a specific interval for customer order.

Line Item Value

This is the total value on customer order line. It is derived from quantity shipped multiplied by the unit price in base currency.

Sales and Product Contribution Analysis

The Sales and Product Contribution Analysis cube analyzes sales performance for executive, sales, and marketing teams. You can analyze sales and product contribution margins by products, customers, sales areas, and sales channels.

Derived fields

Derived fields for this cube are calculated in this way:

Ship_Date

convert co_ship.ship_date to format YYYY/MM/DD

Net_Unit_Price

(coitem.price_conv * (1 - coitem.disc/100) * (1 - co.disc / 100)) / co.exch_rate

Sales_Channel

'Indirect' if slsman.outside = 0
else 'direct'

Cost_of_Goods_Sold

round(co_ship.cost * co_ship.qty_shipped, 4, 0)

Gross_Sales

round((coitem.price_conv * co_ship.qty_shipped / co.exch_rate),4,0)

Total_Discount

((co_ship.price / co.exch_rate) - ((coitem.price_conv * (1 - coitem.disc / 100) * (1 - co.disc / 100)) / co.exch_rate)) * co_ship.qty_shipped

Net_Sales

((coitem.price_conv * (1 - coitem.disc / 100) * (1 - co.disc / 100)) / co.exch_rate) * co_ship.qty_shipped

Product_Contribution_Margin

(((coitem.price_conv * (1 - coitem.disc / 100) * (1 - co.disc / 100)) / co.exch_rate) * co_ship.qty_shipped) - ((round(co_ship.cost * co_ship.qty_shipped,4,0)))

Country

vendaddr.country if slsman.outside = 1 else employee.country

Prov/State

vendaddr.state if slsman.outside = 1 else employee.state

City

vendaddr.city if slsman.outside = 1 else employee.city

Post/Zip

vendaddr.zip if slsman.outside = 1 else employee.zip

Dimensions

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Sales_Area

The Sales_Area dimension contains information about sales region, salesperson location in country, prov/state, city, Post/Zip, and salesperson.

Time Calculation

The Time Calculation dimension presents different time calculations of these business measures: YTD, QTD, MTD, PP, NP, and PY.

Time_Calculation should be used with the Ship_Date dimension. Depending on which date element is selected, the Time_Calculation element might or might not make sense. For example, if a year element such as 2013 is selected, then only the selection of the time calculation element PP, NP, PY and Current Period would make sense. If a quarter element such as 2013/Q2 is selected, then the additional element YTD, Prior YTD make sense. If a month element such as 2013/03 is selected, then additional MTD, Prior MTD make sense. If a date element is selected such as 2013/03/07 then all elements make sense.

Definitions of YTD, QTD, MTD, Prior YTD, Prior QTD, Prior MTD, PP, NP, and PY:

YTD

Year-to-date (YTD) is a period, starting from the beginning of the current year and continuing up to the present day. The year usually starts on January 1 (calendar year), but depending on purpose, can start also on July 1, April 1 (UK corporation tax and government financial statements), and April 6 (UK fiscal year for personal tax and benefits). Year-to-date is used in many contexts, mainly for recording results of an activity in the time between a date (exclusive, since this day may not yet be "complete") and the beginning of either the calendar or fiscal year.

In the context of finance, YTD is often provided in financial statements detailing the performance of a business entity. Providing current YTD results, as well as YTD results for one or more past years as of the same date, allows owners, managers, investors, and other stakeholders to compare the company's current performance to that of past periods. Employees' income tax may be based on total earnings in the tax year to date.

Comparing YTD measures can be misleading if not much of the year has occurred, or the date is not clear. YTD measures are more sensitive to early changes than late changes. Contrast YTD with the concept of 12-months-ending (or Year-ending), which are more resistant to seasonal influences. For example YTD of September 16th 2011 means from January 1st 2011 to September 16th 2011.

QTD

Quarter-to-date (QTD) is a period starting at the beginning of the current quarter and ending at the current date. Quarter-to-date is used in many contexts, mainly for recording results of an activity in the time between a date (exclusive, since this day may not yet be "complete") and the beginning of either the calendar or fiscal quarter.

In the context of finance, QTD is often provided in financial statements detailing the performance of a business entity. Providing current QTD results, as well as QTD results for one or more past quarters as of the same date, allows owners, managers, investors, and other stakeholders to compare the company's current performance to that of past periods.

QTD describes the return so far this quarter. For example: the quarter to date (quarter) return for the stock is 8%. This means from the beginning of the current quarter until the current date, stock has appreciated by 8%.

Comparing QTD measures can be misleading if not much of the quarter has occurred, or the date is not clear. QTD measures are more sensitive to early changes than late changes. For example QTD of September 16th 2011 means from July 1st 2011 to September 16th 2011.

MTD

Month-to-date (MTD) is a period starting at the beginning of the current month and ending at the current date. Month-to-date is used in many contexts, mainly for recording results of an activity in the time between a date (exclusive, since this day may not yet be "complete") and the beginning of the current month.

In the context of finance, MTD is often provided in financial statements detailing the performance of a business entity. Providing current MTD results, as well as MTD results for one or more past months as of the same date, allows owners, managers, investors, and other stakeholders to compare the company's current performance to that of past periods.

MTD describes the return so far this month. For example: the month to date return for the stock is 8%. This means from the beginning of the current month until the current date, stock has appreciated by 8%.

Comparing MTD measures can be misleading if not much of the month has occurred, or the date is not clear. MTD measures are more sensitive to early changes than late changes. For example YTD of September 16th 2011 means from September 1st 2011 to September 16th 2011.

Prior YTD

Prior YTD is a period starting at the beginning of the prior year and ending at the same relative date as current date in prior year. For example prior YTD of September 16th 2011 means from January 1st 2010 to September 16th 2010.

Prior QTD

Prior QTD is a period starting at the beginning of the prior quarter and ending at the same relative date as current date in prior quarter. For example prior QTD of September 16th 2011 means from April 1st 2010 to June 16th 2010.

Prior MTD

Prior MTD is a period starting at the beginning of the prior month and ending at the same relative date as current date in prior month. For example prior MTD of September 16th 2011 means from August 1st 2011 to August16th 2011.

PP

Prior Period (PP) is a same relative time position as current one in prior time period. For example PP of Q1 2011 is Q4 2010, PP of January 1st 2011 is December 31st 2010 and PP of 2011 is 2010.

NP

Next Period (NP) is a same relative time position as current one in next time period.

PY

Previous Year (PY) is a same relative time position as current one in prior year. For example PY of Q1 2011 is Q1 2010, PY of January 1st 2011 is January 1st 2010 and PY of 2011 is 2010.

Measures

Measure_Sales_and_Product_Contribution_Analysis includes these static and calculated elements:

Quantity Shipped

This is the quantity shipped from the customer order shipments (co-ship) file.

Gross Sales

Gross Sales is the unit price of customer order multiplied by the quantity shipped.

Sales Discounts

Sales Discounts is the quantity shipped multiplied by the discounts given (customer order discounts plus customer order line item discounts).

Net Sales

Net Sales is Gross Sales minus Sales Discounts.

Cost of Goods Sold

Cost of Goods Sold is the Unit Cost multiplied by the quantity shipped.

Product Contribution Margin

Product Contribution Margin is the Net Sales minus Cost of Goods Sold.

Product Contribution Margin %

This is the Percent of product contribution margin over net sales. It is an ‘R’ element that requires this calculation rule to be defined on the measure:

Calculation rule: [Product Contribution Margin %] = [Product Contribution Margin] / [Net Sales] * 100

Sales Discounts %

Percent of sales discounts over gross sales. It is an ‘R’ element that requires this calculation rule to be defined on the measure:

Calculation rule: [Sales Discount %] = [Sales Discounts] / [Gross Sales] * 100

Unit Cost

This is an ‘R’ element that requires this calculation rule to be defined on the measure:

Calculation rule: [Unit Cost] = [Cost of Goods Sold] / [Quantity Shipped]

Unit Price

This is an ‘R’ element that requires this calculation rule to be defined on the measure:

Calculation rule: [Unit Price] = [Net Sales] / [Quantity Shipped]

Sales Delivery Analysis

The Sales Delivery Analysis cube is used to review customer shipment data, including delivery-by ship dates, customers, family codes, carriers, customer location, and shipping delivery interval.

Derived fields

Derived fields for this cube are calculated in this way:

Ship_Due_Date_Difference

co_ship.ship_date - coitem.due_date

Shp_Date

convert co_ship.ship_date to format YYYY/MM/DD

Due_Date

convert coitem.due_date to format YYYY/MM/DD

Delivery_Interval

'Early' if Ship_Due_Date_Difference > 1
else '1 - 3 Days' if Ship_Due_Date_Difference BETWEEN -3 AND -2
else '4 - 7 Days' if Ship_Due_Date_Difference BETWEEN -7 AND -4
else '8 - 20 Days' if Ship_Due_Date_Difference BETWEEN -20 AND -8

else '20+ Days' if Ship_Due_Date_Difference < -20

else 'On Time' if BETWEEN -1 AND 1

Promise_Date

convert coitem.promise_date to format YYYY/MM/DD

Order_Date

convert co.order_date to format YYYY/MM/DD

Dimensions

Carrier

The Carrier dimension contains information of shipping code and shipping description.

Customer_Location

The Customer_Location dimension shows the customer address in hierarchy. It includes the default address of customer but does not include any other shipping addresses.

Time Calculation

The Time Calculation dimension presents different time calculations of these business measures: YTD, QTD, and MTD.

Time_Calculation should be used with the Ship_Date dimension. Depending on which date element is selected, the Time_Calculation element might or might not make sense. For example, if a quarter element such as 2013/Q2 is selected, then the additional element YTD make sense. If a month element such as 2013/03 is selected, then additional MTD makes sense.

Definitions of YTD, QTD, and MTD:

YTD

Year-to-date (YTD) is a period, starting from the beginning of the current year and continuing up to the present day. The year usually starts on January 1 (calendar year), but depending on purpose, can start also on July 1, April 1 (UK corporation tax and government financial statements), and April 6 (UK fiscal year for personal tax and benefits). Year-to-date is used in many contexts, mainly for recording results of an activity in the time between a date (exclusive, since this day may not yet be "complete") and the beginning of either the calendar or fiscal year.

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Comparing YTD measures can be misleading if not much of the year has occurred, or the date is not clear. YTD measures are more sensitive to early changes than late changes. Contrast YTD with the concept of 12-months-ending (or Year-ending), which are more resistant to seasonal influences. For example YTD of September 16th 2011 means from January 1st 2011 to September 16th 2011.

QTD

Quarter-to-date (QTD) is a period starting at the beginning of the current quarter and ending at the current date. Quarter-to-date is used in many contexts, mainly for recording results of an activity in the time between a date (exclusive, since this day may not yet be "complete") and the beginning of either the calendar or fiscal quarter.

In the context of finance, QTD is often provided in financial statements detailing the performance of a business entity. Providing current QTD results, as well as QTD results for one or more past quarters as of the same date, allows owners, managers, investors, and other stakeholders to compare the company's current performance to that of past periods.

QTD describes the return so far this quarter. For example: the quarter to date (quarter) return for the stock is 8%. This means from the beginning of the current quarter until the current date, stock has appreciated by 8%.

Comparing QTD measures can be misleading if not much of the quarter has occurred, or the date is not clear. QTD measures are more sensitive to early changes than late changes. For example QTD of September 16th 2011 means from July 1st 2011 to September 16th 2011.

MTD

Month-to-date (MTD) is a period starting at the beginning of the current month and ending at the current date. Month-to-date is used in many contexts, mainly for recording results of an activity in the time between a date (exclusive, since this day may not yet be "complete") and the beginning of the current month.

In the context of finance, MTD is often provided in financial statements detailing the performance of a business entity. Providing current MTD results, as well as MTD results for one or more past months as of the same date, allows owners, managers, investors, and other stakeholders to compare the company's current performance to that of past periods.

MTD describes the return so far this month. For example: the month to date return for the stock is 8%. This means from the beginning of the current month until the current date, stock has appreciated by 8%.

Comparing MTD measures can be misleading if not much of the month has occurred, or the date is not clear. MTD measures are more sensitive to early changes than late changes. For example YTD of September 16th 2011 means from September 1st 2011 to September 16th 2011.

Measures

Measure_Sales_Delivery_Analysis includes these static elements:

Quantity Shipped

This is the quantity shipped from the customer order shipments (co-ship) file.

Quantity Returned

This is the quantity returned from the customer order shipments (co-ship) file. This measure holds only the quantity returned that has not had a credit memo printed. Once the credit memo is printed, the quantity returned goes to zero and the number is subtracted from the quantity shipped.

Sales Planning

The Sales Planning cube is used to perform sales planning and forecast based on actual sales and product contribution figures. This cube allows write back to OLAP DB for certain measures.

Dimensions

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Date Planning

The Date Planning dimension contains information similar to Date dimension but without Date level.

Version

The version dimension presents different versions of the business measures. The value of most elements in this dimension is not populated from View, instead you enter them through the planning and budgeting report.

Version (Top Level)	Element Type	Where the value gets populated
Actual	Static	Through data loading
Budget	Static	User entered
Forecast	Static	User entered
Target	Static	User entered

Sales Channel Planning

The Sales Channel Planning dimension contains information similar to Sales Channel dimension but without Salesperson level.

Measures

Measure Sales Planning contains the same measures as Measure Sales and Product Contribution Analysis that includes these static and calculated elements:

Quantity Shipped

This is the quantity shipped from the customer order shipments (co-ship) file.

For a planning and forecasting Version such as when Version = Budget / Forecasting, this measure is user enterable.

Gross Sales

Gross Sales is derived from the unit price multiplied by the quantity shipped.

For a planning and forecasting Version such as when Version = Budget / Forecasting, this measure is user enterable.

Sales Discounts

Sales Discounts is derived from the quantity shipped multiplied by the discounts given (customer order discounts plus customer order line item discounts).

For a planning and forecasting Version such as when Version = Budget / Forecasting, this measure is user enterable.

Net Sales

Net Sales is Gross Sales minus Sales Discounts.

The value of this measure is calculated through this cube rule:

['Measure_Sales_Planning':'Net Sales'] = ['Measure_Sales_Planning':'Gross Sales'] - ['Measure_Sales_Planning':'Sales Discounts']

Cost of Goods Sold

Cost of Goods Sold is derived from Unit Cost multiplied by the quantity shipped.

The value of this measure is calculated through this cube rule:

['Measure_Sales_Planning':'Cost of Goods Sold'] = ['Measure_Sales_Planning':'Net Sales'] - ['Measure_Sales_Planning':'Product Contribution Margin']

Product Contribution Margin

Product Contribution Margin is derived from Net Sales minus Cost of Goods Sold.

For a planning and forecasting Version such as when Version = Budget / Forecasting, this measure is user enterable.

Product Contribution Margin %

This is the percent of product contribution margin over net sales. It is an R element that requires this calculation rule to be defined on the measure:

Calculation rule: [Product Contribution Margin %] = [Product Contribution Margin] / [Net Sales] * 100

The value of this measure is calculated through this cube rule:

['Measure_Sales_Planning':'Product Contribution Margin %'] = ['Measure_Sales_Planning':'Product Contribution Margin']/['Measure_Sales_Planning':'Net Sales']*100

Sales Discounts %

This is the percent of sales discounts over gross sales. It is an R element that requires this calculation rule to be defined on the measure:

Calculation rule: [Sales Discount %] = [Sales Discounts] / [Gross Sales] * 100

The value of this measure is calculated through this cube rule:

['Measure_Sales_Planning':'Sales Discount %'] = ['Measure_Sales_Planning':'Sales Discounts']/ ['Measure_Sales_Planning':'Gross Sales']*100

Unit Cost

This is an R element that requires this calculation rule to be defined on the measure:

Calculation rule: [Unit Cost] = [Cost of Goods Sold] / [Quantity Shipped]

The value of this measure is calculated through this cube rule:

['Measure_Sales_Planning':'Unit Cost'] = ['Measure_Sales_Planning':'Cost of Goods Sold']/ ['Measure_Sales_Planning':'Quantity Shipped']

Unit Price

This is an R element that requires this calculation rule to be defined on the measure:

Calculation rule: [Unit Price] = [Net Sales] / [Quantity Shipped]

The value of this measure is calculated through this cube rule:

['Measure_Sales_Planning':'Unit Price'] = ['Measure_Sales_Planning':'Net Sales']/ ['Measure_Sales_Planning':'Quantity Shipped']

Sales Opportunity Analysis

The Sales Opportunity Analysis cube enables you to analyze sales opportunities and their related sales campaigns. The fact granularity is at the sales opportunities level.

Dimensions

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Opportunity Source

The Opportunity Source dimension contains the opportunity source and its description information.

Opportunity Stage

The Opportunity Stage dimension contains opportunity stages and their description information.

Opportunity Reason Code

The Opportunity Reason Code dimension contains reason type and reason code information.

Measures

Opportunity Count

Count of Opportunities.

Opportunity Estimated Value

Estimated Value of Opportunities.

Order Value

Estimated Total Price of each Customer Order that is converted from the Opportunities.

Order Value Variance

Variance between Actual Leads Count and Expected Lead Count. This is an R element that requires this calculation rule to be defined on the measure.

Calculation rule: [Order Value Variance] = [Order Value] - [Opportunity Estimated Value]

Pipeline Value (Un-weighted)

Estimated Value of all open Opportunities.

Pipeline Value (Weighted)

Estimated Value of all open Opportunities multiplied by Opportunity Close %.

Close Projection

Estimated Value of all open Opportunities Projected multiplied by Opportunity Close %.

Opportunity Lost Count

Count of Opportunities that were lost.

Opportunity Lost Percent %

Percentage of Opportunities that were lost. This is an R element that requires this calculation rule to be defined on the measure.

Calculation rule: [Opportunity Lost Percent %] = [Opportunity Lost Count] / [Opportunity Count] * 100

Opportunity Won Count

Count of Opportunities closed that were won.

Opportunity Won Percent %

Percentage of Opportunities that were won. This is an R element that requires this calculation rule to be defined on the measure.

Calculation rule: [Opportunity Won Percent %] = [Opportunity Won Count] / [Opportunity Count] * 100

Opportunity Neglected (Task Complete)

Count the Opportunities where the difference between the (AsOf Date+ OffsetDays) and the complete date is >= DaysNeglected

Opportunity Neglected (Task Create)

Count the Opportunities where the difference between the (AsOf Date+ OffsetDays) and the createdate is >= DaysNeglected

Opportunity Neglected Value

Estimated Value of Opportunities where the difference between the (AsOf Date + OffsetDays) and the most "recent interaction" is >= DaysNeglected

Estimates to Expire

Count of Estimates where the AsOfDate + DaysToInclude >= the Estimate Expiration Date

Estimates to Expire Value

Total Price of each Estimate where the AsOfDate + DaysToInclude >= the Estimate Expiration Date

Sales Forecast Analysis

The Sales Forecast Analysis cube enables users to analyze sales forecast and their related sales opportunities. The fact granularity is at the sales opportunities level.

Dimensions

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Forecast Status

The Forecast Status dimension contains forecast status and forecast Id information.

Sales Period

The Sales Period dimension contains sales period and their start/end date information.

Measures

Opportunity Count

Count of Opportunities.

Opportunity Committed Value

Count of Opportunities.

Opportunity Estimated Value

Estimated Value of Opportunities.

Order Value

Estimated Total Price of each Customer Order that is converted from the Opportunities.

Order Value Variance

Variance between Order Value and Opportunity Estimated Value. This is an R element that requires this calculation rule to be defined on the measure

Calculation rule: [Order Value Variance] = [Order Value] - [Opportunity Estimated Value]

Weighted Value

Weighted Value is derived from Opportunity Committed Value multiplied by Opportunity Close %.

Campaign Analysis

The Campaign Analysis cube enables users to analyze sales campaigns and their related sales leads, opportunities as well as customer order. The fact granularity is at the campaign level.

Dimensions

Campaign Status

The Campaign Status dimension contains campaign statuses and their description information.

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Start Date

The Start Date dimension shows the start date of the campaign. It includes the calendar date without any fiscal date.

End Date

The End Date dimension shows the end date of the campaign. It includes the calendar date without any fiscal date.

Measures

Expected Leads Count

Count of Leads expected to be generated from the campaign.

Actual Leads Count

Count of Leads actually generated from the campaign.

Leads Count Variance

Variance between Actual Leads Count and Expected Lead Count. This is an R element that requires this calculation rule to be defined on the measure.

Calculation rule: [Leads Count Variance] = [Actual Lead Count] - [Expected Leads Count]

Expected Revenue

Amount of revenue expected to be generated from the campaign.

Campaign Cost

Amount of cost resulted from the campaign.

Opportunity Count

Count of Opportunities generated from the campaign.

Opportunity Estimated Value

Estimated Value of Opportunities.

Order Value

Estimated Total Price of each Customer Order that is converted from the Opportunities.

Order Value Variance

Variance between Actual Leads Count and Expected Lead Count. This is an R element that requires this calculation rule to be defined on the measure.

Calculation Rule: [Order Value Variance] = [Order Value] - [Opportunity Estimated Value]

Sales Lead Analysis

The Sales Lead Analysis cube enables users to analyze sales leads and their related sales campaigns as well as sales opportunities. The fact granularity is at the lead level.

Dimensions

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Opportunity Source

The Opportunity Source dimension contains opportunity sources description information.

Assigned Date

The Assigned Date dimension shows assigned date of sales lead. It includes the calendar date without any fiscal date.

Lead Status

The Lead Status dimension contains the lead status and description information.

Lead Quality

The Lead Quality dimension contains lead quality and lead information.

Measures

Lead Count

Count of sales leads.

Total Lead Response Time (Assigned)

Count of days between the first Contact Date of the Lead Interaction and the Lead's Date Assigned.

Average Lead Response Time (Assigned)

Average count of days between the first Contact Date of the Lead Interaction and the Lead's Date Assigned. This is an R element that requires this calculation rule to be defined on the measure.

Calculation rule: [Average Lead Response Time (Assigned)] = [Total Lead Response Time (Assigned)] / [Lead Count]

Total Lead Response Time (Creation)

Count of days between the first Contact Date of the Lead Interaction and the Lead's Create Date.

Average Lead Response Time (Creation)

Average count of days between the first Contact Date of the Lead Interaction and the Lead's Create Date. This is an R element that requires this calculation rule to be defined on the measure.

Calculation rule: [Average Lead Response Time (Creation)] = [Total Lead Response Time (Creation)] / [Lead Count]

Campaign Expected Leads Count

Count of Leads based on the Campaign Expected Leads.

Converted Order Count (Campaign Expected Leads)

Count of Leads Converted to Customer Orders based on the Campaign Expected Leads.

Leads Expected to Convert Percent

Percentage of Leads converted to Customer Orders based on the Campaign Expected Leads. This is an R element that requires this calculation rule to be defined on the measure.

Calculation rule: [Leads Expected to Convert Percent] = [Converted Order Count (Campaign Expected Leads)] / [Campaign Expected Leads Count] * 100

Leads Converted to Opportunities Count

Count of Leads Converted to Opportunities.

Leads Converted to Opportunities Est Value

The Estimated Value of Opportunities that are converted from Leads.

Closed Lead Count

Closed Lead Count is the number of closed leads. It is calculated by summing the number of leads, from which customer orders or projects are generated. If orders or projects are generated from opportunities, and the opportunities are generated from leads, then the leads should be included in the counting.

Closed Leads %

Closed Lead % is the percent of leads closed to total leads. It is a rule measure.

Calculation: Closed Leads % = Closed Lead Count / Lead Count *100

Sales Planning Allocation

The Sales Planning Allocation cube contains information for user to re-distribute value of Sales Planning measures based on selected Date, Sales Area, Version and Sales Channel.

Dimensions

Distribution

The Distribution dimension contains distribution information that can be applied to re-distribute the value of Sales Planning measures. This dimension contains these static elements that allow user to set a few different versions of distribution:

Element	Description
Percentage 1 Percentage 2 Seasonal 1 Seasonal 2	These elements are just 4 different versions of distribution percentages entered by users. The name "Seasonal" indicates that you can enter the season related percentage against this element.

Measures

The Distribution dimension is used as measure of this cube.

FMEA_Analysis

FMEA_Analysis cube enables users to analyze FMEA based on each operation for which potential risk has been defined. The fact granularity is at current operation level.

Dimensions

FMEA_Classification

The FMEA_Classification dimension is used to show FMEA classification hierarchy.

FMEA_Failure_Mode

The FMEA_Failure_Mode dimension contains FMEA failure mode and description information.

Current_Operation

The Current Operation dimension is used to show current operation hierarchy. It contains the operation number.

Target_Date

The Target_Date dimension is a role playing dimension of Date dimension and it shares the same source table as the Date dimension. This dimension shows Target Date of action for_implementation. It only includes the calendar date without any fiscal date.

Measures

Total Occurrence

Occurrence rating.

Total Severity

This measure considers the worst potential consequence of a failure, determined by the degree of injury, property damage, system damage, and/or time lost to repair the failure.

Total Detection

This measure is the means of detection of the failure mode by maintainer, operator, or built-in detection system, including estimated dormancy period (if applicable).

Detection

Detection rating.

Count

Count of records.

Occurrence

This is an R element that requires this calculation rule to be defined on the measure:

Calculation rule: [Occurrence] = [Total Occurrence] / [Count]

Severity

It's an R element that requires this calculation rule to be defined on the measure:

Calculation rule: [Severity] = [Total Severity] / [Count].

Detection

This is an R element that requires this calculation rule to be defined on the measure:

Calculation rule: [Detection] = [Total Detection] / [Count]

Risk Priority Number

This is an R element that requires this calculation rule to be defined on the measure:

Calculation rule: [Risk Priority Number] = [Occurrence] * [Severity] * [Detection]

Total Action Occurrence

Occurrence rating after action taken.

Total Action Severity

Severity rating after action taken

Total Action Detection

Detection rating after action taken

Action Occurrence

This is an R element that requires this calculation rule to be defined on the measure:

Calculation rule: [Action Occurrence] = [Total Action Occurrence] / [Count]

Action Severity

This is an R element that requires this calculation rule to be defined on the measure:

Calculation rule: [Action Severity] = [Total Action Severity] / [Count]

Action Detection

This is an R element that requires this calculation rule to be defined on the measure:

Calculation rule: [Action Detection] = [Total Action Detection] / [Count]

Action Risk Priority Number

This represents the effect your actions had on the original RPN. It is a R element that requires this calculation rule to be defined on the measure:

Calculation rule: [Action Risk Priority Number] = [Action Occurrence] * [Action Severity] * [Action Detection]

OEE_Analysis

The OEE_Analysis cube enables you to analyze Overall Equipment Effectiveness and the related resource group, work center, and job operation. The fact granularity is at Job Operation and its Resource Groups level.

Dimensions

Job_Operation

The Job_Operation dimension is used to show job operation hierarchy. It contains job and operation and description information for each.

Resource_Group

The Resource_Group dimension is used to show resource group hierarchy. It contains type and resource group and description information for each.

Measures

OEE

Sum calculated ratio of Fully Productive Time to Planned Production Time.

Count

Count of records.

OEE %

This is an R element that requires this calculation rule to be defined on the measure:

Calculation Rule: [OEE %] = [Total OEE] / [Count].

Wasted %

This is an R element that requires this calculation rule to be defined on the measure:

Calculation Rule: [Wasted %] = 100 - [OEE %].

Cash_Flow_Planning

The Cash_Flow_Planning cube is used to perform cash flow planning and forecast based on actual cash flow and product contribution figures. This cube allows write back to the OLAP DB for certain measures.

Dimensions

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

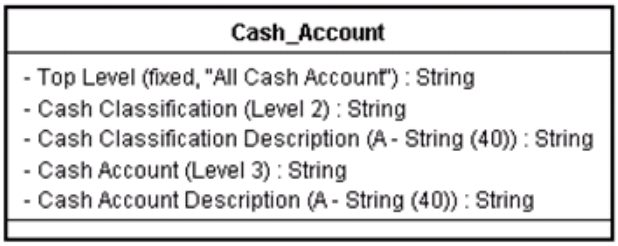
When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Date_Planning

The Date_Planning dimension contains information similar to the Date dimension but without Date level.

Cash_Account

The dimension hiearchy looks like this:



Measures

Measure Cash Flow Analysis

Measure Cash Flow Analysis contains the Cash Amount.

Cash Amount

Cash Amount is from the cash flow values including all cash types such as AR Transaction, Customer Order, CO Blanket Line, Progressive Bill, Estimate Order, AP Transaction, Purchase Order, PO

Blanket Line, PO Requisitions, Ledger, Journal and All cash accounts defined in cash flow definition Infor CloudSuite form.

Compensation_and_Benefit_Analysis

The Compensation_and_Benefit_Analysis cube enables users to analyze various employee pays. The fact granularity is at the employee payroll level.

Dimensions

Payroll Period

The Payroll Period dimension contains payroll period start and end date information.

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Measures

Award Pay

Award pay given to employee.

Gross Pay

Gross pay given to employee.

Total Pay

Total Pay including both Award Pay and Gross Pay. This is an R element that requires this calculation rule to be defined on the measure

Calculation rule: [Total Pay] = [Award Pay] + [Gross Pay]

Regular Pay

Regular pay given to employee.

Overtime Pay

Overtime pay given to employee.

Double Time Pay

Double time pay given to employee.

Sick Pay

Sick pay given to employee.

Vacation Pay

Vacation pay given to employee.

Holiday Pay

Holiday pay given to employee.

Other Pay

Other pay given to employee.

Supplemental Earnings

Supplemental earnings given to employee.

Employee_Retention_Analysis

The Employee Retention Analysis cube enables users to analyze employee recruitment rate, turnover rate, and employment rate.

Dimensions

Retention Period

The Retention Period dimension is a role playing dimension of the Date Planning dimension, and it shares the same source table as the Date Planning dimension. This dimension shows retention period of employee. Its base element is month instead of date.

Measures

Recruitment Count

Number of newly hired employees for selected period.

Employment Count

Number of currently employed employees for selected period.

Termination Count

Number of terminated employees for selected period

Average Employment Count

Average number of currently employed employees for selected period. This is a calculation element defined in Office Plus or Application Studio report builder. The MDX script is:

[Measure_Employee_Retention_Analysis].[Employment Count]/
Filter(Descendants([Retention_Period].CurrentMember,[Retention_Period].[Level 4],"Self"),
[Measure_Employee_Retention_Analysis].[Employment Count]<>0).Count()

Recruitment Rate

Recruitment rate for selected period. This is a calculation element defined in Office Plus or Application Studio report builder. The MDX script is:

[Measure_Employee_Retention_Analysis].[Recruitment Count]/
[Measure_Employee_Retention_Analysis].[Average Employment Count]

Turnover Rate

Turnover rate is a calculation of the number of employees who have left the company, and it is expressed as a percentage of the total number of employees. This is a calculation element defined in Office Plus or Application Studio report builder. The MDX script is:

[Measure_Employee_Retention_Analysis].[Ternimation Count]/
[Measure_Employee_Retention_Analysis].[Average Employment Count]

Recruitment_Analysis

The Recruitment_Analysis cube enables you to analyze recruitment effectiveness including hiring duration, hiring cost through different sources. The fact granularity is at applicant and want advertisement level.

Dimensions

Applicant

The Applicant dimension contains Ethnic and Applicant information.

Applicant Source

The Applicant Source dimension contains sources and their description information.

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Position

The Position dimension contains class and position information.

Received Date

The Received Date dimension is a role playing dimension of Date dimension, and it will share the same source table as Date dimension. This dimension shows Received Date of applicant resume. It only includes calendar date without any fiscal date.

Want Advertisement

Want Advertisement is used by the company to recruit applicants. The dimension contains IDs and can be used for different publications.

Measures

Applicant Count

Number of applicants for selected period.

Recruitment Cost

Total cost of recruitment for selected period.

Average Applicant Cost

Average cost of retrieving applicant for selected period. This is an R element that requires this calculation rule to be defined on the measure:

Calculation rule: [Average Applicant Cost] = [Applicant Cost] / [Applicant Count]

Employee Cost

Total hiring cost of employees for selected period.

Average Employee Cost

Average hiring cost of employees for selected period. This is an R element that requires this calculation rule to be defined on the measure.

Calculation rule:[Average Employee Cost] = [Employee Cost] / [Employee Count]

Recruitment Days

Number of days used for recruiting an employee for certain position.

Selection Rate %

A percentage of applicants who get hired as employees. This is an R element that requires this calculation rule to be defined on the measure.

Calculation rule:[Selection Rate %] = [Employee Count] / [Applicant Count] * 100

PP_Quote_Analysis (Printing and Packaging Quote Analysis)

The PP_Quote_Analysis cube enables you to analyze the quantity ordered, cost, price, and margin of estimate orders. The fact granularity is at estimate order line level.

Dimensions

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Measures

Quantity Ordered

The quantity ordered on an estimate order line.

Total Amount

The total amount on an estimate order line. This is derived from quantity ordered multiplied by estimate price.

Total Cost

The total cost on an estimate order line. This is derived from quantity ordered multiplied by estimate cost.

Print Quote Price

The print quote price on an estimate order line.

Job Count

Count of job of an estimate order line.

Cost Margin

This measure is derived from Print Quote Price - Total Cost. It is an R element that requires this calculation rule to be defined on the measure:

Calculation rule: [Cost Margin] = [Print Quote Price] - [Total Cost]

Price Margin

This measure is derived from Print Quote Price - Total Amount. It is an R element that requires this calculation rule to be defined on the measure:

Calculation rule: [Price Margin] = [Print Quote Price] - [Total Amount]

PP_Quote_Factors_Analysis (Printing and Packaging Quote Factors Analysis)

The PP_Quote_Factors_Analysis cube enables you to analyze those factors that have impact on a quote in the printing and packaging industry. The fact granularity is at the Printing and packaging job level. Information collected from the job operation level gets rolled up to the job level.

Dimensions

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Estimate Job

The Estimate Job dimension contains item and estimate job information.

Estimate Job Status

The Estimate Job Status dimension contains a number of estimate job statuses.

Measures

Min Sheet Count

Count of minimum number of sheets to print for the quote.

Print Quote Price

The print quote price is calculated using a printing industry formula and workbench data, rolled up for each successive section.

Material Usage Count

Count of the materials used for the operation.

Actual Job Count

Count of the jobs that are converted from estimate job.

Estimate Job count

Count of the estimate job.

Job Conversion Rate %

Percentage of estimate jobs that are converted to actual job. This is an R element that requires the calculation rule to be defined on the measure:

Calculation rule: [Job Conversion Rate %] = [Actual Job Count] / [Estimate Job count] * 100

Operation Count

Count of the operation.

Paper Consumption Quantity

Sum of the paper consumed for the operation.

Front Color Black Count

Count of black color used for the front.

Back Color Black Count

Count of black color used for the back.

Front Color Cyan Count

Count of cyan color used for the front.

Back Color Cyan Count

Count of cyan color used for the back.

Front Color Magenta Count

Count of magenta color used for the front.

Back Color Magenta Count

Count of magenta color used for the back.

Front Color Yellow Count

Count of yellow color used for the front.

Back Color Yellow Count

Count of yellow color used for the back.

Special Colors Count

Count of special color used.

Service Order Analysis

The purpose of this cube is to include the data necessary to perform Service Order level service analysis and to reflect additional data elements that must be calculated for service analysis. The data in the Service Order Analysis Cube reflects a view of SRO data at a specific point of time. The targeted audience of this cube is the executive level and service management team of the firm. The fact granularity is one row for every Service Order.

Dimensions

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Region

With this dimension, you can analyze SRO by region. Region dimension contains region information.

SRO Status

With this dimension, you can analyze SRO by status. This dimension contains SRO status information.

Bill Status

With this dimension, you can analyze SRO by bill status. This dimension contains bill status information.

Open_Date

Open Date dimension is a role playing dimension of Date dimension and it shares the same source table as Date dimension. This dimension shows open date of SRO. It includes only the calendar date without any fiscal date.

Start Date

Start Date dimension is a role playing dimension of Date dimension and it shares the same source table as Date dimension. This dimension shows start date of SRO. It includes only the calendar date without any fiscal date.

Working Status

The Working Status dimension is used to show SRO working status. With this dimension, you can analyze Service Order by working status. This dimension contains working status information.

Measures

Total Price

Total Price is derived from sum of total price of Service Order. It is an N element.

Total Labor Cost

Total Labor Cost is derived from sum of total labor cost of Service Order. It is an N element.

Total Material Cost

Total Material Cost is derived from sum of total Material cost of Service Order. It is an N element.

Total Misc Cost

Total Misc Cost is derived from sum of total Misc cost of Service Order. It is an N element.

Total Cost

Total Cost is derived from Sum of total cost of Service Order. It is an R element.

Calculation rule: [Total Cost] = [Total Labor Cost] + [Total Material Cost] + [Total Misc Cost]

SRO Margin

SRO margin is derived from Total Price minus Total Cost. It is an R element that requires this calculation rule to be defined on the measure.

Calculation rule: [SRO margin] = [Total Price] - [Total Cost]

SRO Margin %

SRO margin % is derived from percent of SRO Margin over Total Price. It is an R element that requires this calculation rule to be defined on the measure.

Calculation rule: [SRO margin %] = [SRO margin] / [Total Price] * 100

SRO Count

SRO Count is derived from count of Service Orders. It is an N element.

This measure is useful to further derive these KPI's in the BI reports:

- Number of SROs to be Started - Count of Service Orders that have a status of open for a given date range.
- Number of Estimate SROs Created - Count of Service Orders that have a status of estimate for a given date range.
- Number of Open Service Orders - Count of open Service Orders.
- Service Orders Closed - Count of Service Orders that have a Close Date (Not End Date) within a user definable date range for a set of SRO Types and service departments.
- Service Orders Opened - Count of Service Orders that have a Open Date (Not Start Date) within a user definable date range for a set of SRO Types and service departments.

SROs to be Scheduled

SROs to be Scheduled is derived from count of Service Orders whose to be scheduled flag is true. It is an N element.

Prior SRO Count

Prior SRO Count is derived from count of Service Orders that have prior SRO recorded. It is an N element.

This measure is useful to further derive this KPI in the BI reports:

First Time Fix Rate % - Percentage of Service Orders without a prior Service Order against the total count of Service Orders.

Calculation formula: (SRO Count - Prior SRO Count) / SRO Count * 100, SRO Status = Closed

SRO Awaiting Parts Count

SRO Awaiting Parts Count is derived from count of Service Orders that are awaiting parts. It's an N element.

Service Transaction Analysis

The purpose of this cube is to include the data necessary to perform SRO transaction level analysis, and to reflect additional data elements that must be calculated for service transaction analysis. The data in the Service Transaction Analysis Cube reflects a view of SRO transaction data at a specific point in time. The targeted audience of this cube is the service management team of the firm.

Dimensions

Currency

When currencies are set in Business Vault, the elements of the currency dimension are from the settings.

When currencies are set to blank in Business VaultWhen currencies are set to blank in Business Vault, the elements of the currency dimension are from the settings of sites. In this way, the currency dimension contains all the domestic currencies set on sites.

Service Department

With this dimension, you can analyze SRO by service department. This dimension contains service department, manager and division information.

Service Transaction Type

With this dimension, you can analyze SRO by transaction type. This dimension contains transaction type information.

Work Code

With this dimension, you can analyze labor cost by work code. Work Code dimension contains work code information.

MISC Code

With this dimension, you can analyze miscellaneous cost by miscellaneous code. MISC Code dimension contains miscellaneous code information.

Transaction Category

The Transaction Category dimension is used to separate or combine different transactions, for example; material, labor, miscellaneous, or transaction information. This dimension is a static dimension and contains the below listed values.

Transaction Category	Definition
Material	Used to show SRO material transaction data
Labor	Used to show SRO labor transaction data
Miscellaneous	Used to show SRO miscellaneous data
Line Material	Used to show SRO line material data
Transaction Category Not Assigned	Used to show SRO transaction with billing type 'Calculated/Time & Material' on operation.

Transaction Date

Transaction Date dimension is a role playing dimension of Date dimension and it shares the same source table as Date dimension. This dimension shows transaction date of SRO transaction. It includes only the calendar date without any fiscal date.

Measures

SRO Hours Billed

SRO Hours Billed is derived from sum of total number of hours billed on labor transactions. It is an N element.

SRO Hours Worked

SRO Hours Worked is derived from sum of hours worked on labor transactions. It is an N element.

SRO Hours Efficiency %

SRO Hours Efficiency % is derived from sum of hours billed/ Sum of hours worked for a user defined set of departments and/or work codes.

It is an R element that requires this calculation rule to be defined on the measure.

Calculation rule: [Sum of SRO Hours Billed] / [Sum of SRO Hours Worked] * 100

Total Price

Total Price is derived from sum of extprice of SRO transactions. It is an N element.

Total Cost

Total Cost is derived from Sum of extcost of SRO transactions. It's an N element.

SRO Margin

SRO margin is derived from Total Price minus Total Cost. It is an N element.

SRO Margin %

SRO margin % is derived from percent of SRO Margin over Total Price. It is an R element that requires following calculation rule to be defined on the measure.

Calculation rule: [SRO margin %] = [SRO margin] / [Total Price] * 100

Incident Analysis

The purpose of this cube is to include the data necessary to perform incident analysis and to reflect additional data elements that must be calculated for incident analysis. The data in the Incident Analysis Cube reflects a view of incident, incident event, as well as incident reasons at a specific point in time. The targeted audience of this cube is the executive level and customer service management team of the firm.

Dimensions

Incident Status

With this dimension, you can analyze customer issues by incident and status. This dimension contains incident and its status information.

Unit

With this dimension, you can analyze incident by the unit. This dimension contains unit and item information.

Incident Reason

The Incident Reason dimension is used to show reason hierarchy. With this dimension, you can analyze incident by reasons. This dimension only contains general reason information.

Incident Resolution

With this dimension, you can analyze incident by resolution. This dimension contains resolution information.

Incident Priority

With this dimension, you can analyze incident by priority. This dimension contains priority information.

SSR

This dimension has the same hierarchy and data source as the partner dimension. With this dimension, you can analyze incident by SSR. This dimension contains SSR information.

Due Date

Due Date dimension is a role playing dimension of Date dimension and it shares the same source table as Date dimension. This dimension shows due date of incident. It includes only the calendar date without any fiscal date.

Incident Date

The Incident Date dimension is a role playing dimension of Date dimension and it shares the same source table as Date dimension. This dimension shows log date of incident. It includes only the calendar date without any fiscal date.

Followup Date

The Followup Date dimension is a role playing dimension of Date dimension and it shares the same source table as Date dimension. This dimension shows followup date of incident. It includes only the calendar date without any fiscal date.

Measures

Incident Count

Incident Count is derived from count of incidents. It is an N element. This measure is useful to further derive these KPI's in the BI reports:

Incidents Closed - Count of incidents whose closed date fall in a given date range.

Incidents Logged - Count of Incidents whose incident date fall in a given date range

Incidents Logged vs. Closed - Count of incidents logged minus count of incident closed

Incidents Follow-up - Count of incidents whose follow up date fall in a given date range

Incidents Due - Count of incidents whose due date fall in a given date range

Closed Incident Count

Closed Incident Count is derived from count of incidents whose close date is not null. It is an N element.

Open Incident Count

Open Incident Count is derived from count of incidents whose stat code does not belong to closed category. It is an N element.

KB Incident Count

KB incident count is derived from count of incidents which is closed and has a Knowledge Base logged. It is an N element.

Days Late

Days Late is derived from incident date minus data loading date and minus Time Until Late defined on the corresponding incident status code where the incident status is not closed. It is an N element.

Late Incident Count

Late Incident Count is derived from count of incidents whose status doesn't belong to closed category and Days Late is greater than 0. It is an N element.

Event Count

Event Count is derived from count of all events logged to incident. It is an N element.

First Event Count

First Event Count is the incident count which has event on it. It is an N element.

Time to First Event

Time to First Event is derived from incident date minus first event date. It is an N element.

Incident Days to Resolve

Incident Days to Resolve is derived from closed date minus incident date. It is an N element.

KB Incident %

KB Incident % is derived from sum of KB Incident Count divided by sum of Closed Incident Count.

It is an R element that requires this calculation rule to be defined on the measure.

Calculation rule: [KB Incident Count] / [Closed Incident Count] * 100

Average Days Late

Average Days Late is derived from sum of Days Late divided by sum of Open Incident Count.

It is an R element that requires this calculation rule to be defined on the measure.

Calculation rule: [Days Late] / [Open Incident Count]

Average Incident Days to Resolve

Average Incident Days to Resolve is derived from sum of Incident Days to Resolve divided by sum of Closed Incident Count.

It is an R element that requires this calculation rule to be defined on the measure.

Calculation rule: [Incident Days to Resolve] / [Closed Incident Count]

Average Time to First Event

Average Time to First Event is derived from sum of Time to First Event divided by sum of Incident Count.

It is an R element that requires this calculation rule to be defined on the measure.

Calculation rule: [Time to First Event] / [First Event Count]

Ledger Analysis

The Ledger Analysis cube is used to analyze ledger transaction data.

Dimensions

Ledger_Dimension01

Ledger Dimension01 stands for the ledger analysis attribute01, which is linked by the dimension assigned to an account. The Ledger_Dimension01 dimension is used to show the ledger attribute01 list. The Ledger_Dimension01 dimension contains attribute01 information.

Ledger_Dimension02

Ledger Dimension02 stands for the ledger analysis attribute02, which is linked by the dimension assigned to an account. The Ledger_Dimension02 dimension is used to show the ledger attribute02 list. The Ledger_Dimension02 dimension contains attribute02 information.

Ledger_Dimension03

Ledger Dimension03 stands for the ledger analysis attribute03, which is linked by the dimension assigned to an account. The Ledger_Dimension03 dimension is used to show the ledger attribute03 list. The Ledger_Dimension03 dimension contains attribute03 information.

Ledger_Dimension04

Ledger Dimension04 stands for the ledger analysis attribute04, which is linked by the dimension assigned to an account. The Ledger_Dimension04 dimension is used to show the ledger attribute04 list. The Ledger_Dimension04 dimension contains attribute04 information.

Ledger_Dimension05

Ledger Dimension05 stands for the ledger analysis attribute05, which is linked by the dimension assigned to an account. The Ledger_Dimension05 dimension is used to show the ledger attribute05 list. The Ledger_Dimension05 dimension contains attribute05 information.

Ledger_Dimension06

Ledger Dimension06 stands for the ledger analysis attribute06, which is linked by the dimension assigned to an account. The Ledger_Dimension06 dimension is used to show the ledger attribute06 list. The Ledger_Dimension06 dimension contains attribute06 information.

Ledger_Dimension07

Ledger Dimension07 stands for the ledger analysis attribute07, which is linked by the dimension assigned to an account. The Ledger_Dimension07 dimension is used to show the ledger attribute07 list. The Ledger_Dimension07 dimension contains attribute07 information.

Ledger_Dimension08

Ledger Dimension08 stands for the ledger analysis attribute08, which is linked by the dimension assigned to an account. The Ledger_Dimension08 dimension is used to show the ledger attribute08 list. The Ledger_Dimension08 dimension contains attribute08 information.

Ledger_Dimension09

Ledger Dimension09 stands for the ledger analysis attribute09, which is linked by the dimension assigned to an account. The Ledger_Dimension09 dimension is used to show the ledger attribute09 list. The Ledger_Dimension09 dimension contains attribute09 information.

Ledger_Dimension10

Ledger Dimension10 stands for the ledger analysis attribute10, which is linked by the dimension assigned to an account. The Ledger_Dimension10 dimension is used to show the ledger attribute10 list. The Ledger_Dimension10 dimension contains attribute10 information.

Ledger_Dimension11

Ledger Dimension11 stands for the ledger analysis attribute11, which is linked by the dimension assigned to an account. The Ledger_Dimension11 dimension is used to show the ledger attribute11 list. The Ledger_Dimension11 dimension contains attribute11 information.

Ledger_Dimension12

Ledger Dimension12 stands for the ledger analysis attribute12, which is linked by the dimension assigned to an account. The Ledger_Dimension12 dimension is used to show the ledger attribute12 list. The Ledger_Dimension12 dimension contains attribute12 information.

Ledger_Dimension13

Ledger Dimension13 stands for the ledger analysis attribute13, which is linked by the dimension assigned to an account. The Ledger_Dimension13 dimension is used to show the ledger attribute13 list. The Ledger_Dimension13 dimension contains attribute13 information.

Ledger_Dimension14

Ledger Dimension14 stands for the ledger analysis attribute14, which is linked by the dimension assigned to an account. The Ledger_Dimension14 dimension is used to show the ledger attribute14 list. The Ledger_Dimension14 dimension contains attribute14 information.

Ledger_Dimension15

Ledger Dimension15 stands for the ledger analysis attribute15, which is linked by the dimension assigned to an account. The Ledger_Dimension15 dimension is used to show the ledger attribute15 list. The Ledger_Dimension15 dimension contains attribute15 information.

Measures

Base Amount

The base amount is the domestic amount from ledger table.

Transaction Amount

The transaction amount is the transaction amount from ledger table.

Chapter 3: Customize Content

3

Caution: Customizing content may cause errors or issues with the base analytics application. Use care when customizing the content. Use the instructions and information in this guide to understand what changes are allowed and prohibited for the content that you are customizing. Always specify a unique name for custom objects. We recommend starting each name with cust_ to indicate the object is custom.

Customize definitions

Infor CloudSuite Analytics provided application content for cubes, dimensions, and hierarchies in the Business Vault are designed to support the Infor BI dashboards, reports, and widgets for the application. To customize or extend the application for your organization, you can:

- Add or remove dimensions from cubes
- Add or remove hierarchy levels from dimensions
- Add or remove hierarchies from dimensions
- Add, remove, or edit attributes and values

Duplicate definitions

See the customization rules when duplicating and editing a definition. Changes to delivered content can cause issues in dashboards, reports, and widgets.

You can duplicate a hierarchy, dimension or cube to create a custom copy of the definition. A duplicate is independent of the original definition. Changes made to a duplicate definition are not copied or updated in the original definition. The duplicate definition is not overwritten if the Infor-provided definition is imported in the same application.

In the Business Vault, the definition name is unique within the Business Vault application. The application tag is in the upper right of the Business Vault page.

Note: In Infor BI OLAP Server, the Display Name is the unique name for the dimension or cube. If you duplicate a dimension or cube definition in Business Vault, and do not change the Display Name, then

OLAP Server will overwrite the original dimension or cube when you publish the duplicate dimension or cube.

See the *Infor Business Vault Analytic Modeling User Guide* for information on creating, duplicating, and editing hierarchies, dimensions and cubes and publishing dimensions and cubes.

Edit definitions

You can edit a hierarchy, dimension, or cube to customize the original definition delivered by Infor.

See the customization rules when duplicating and editing a definition. Changes to delivered content can cause issues in dashboards, reports, and widgets.

Note: You can change the properties of a hierarchy, dimension, or cube, or the data sourced for a hierarchy, dimension or cube.

If you edit a definition, you may overwrite the changes when you re-import the definition, for example, if you install an Infor patch release. Document any changes that you make to customize the definition.

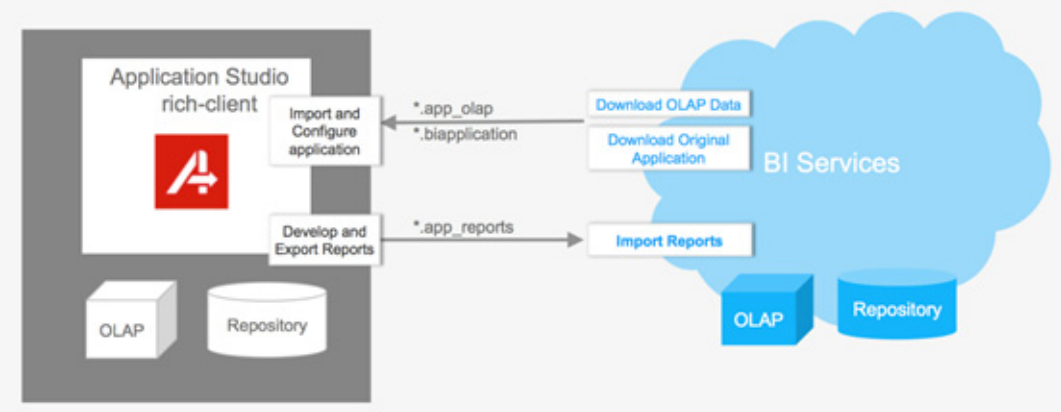
If you change the definition name, it does not change the identity of the object. If you change a definition name and import a newer version, the newer version reverts back to the definition name.

When you save a definition after editing, an additional version of the definition is saved. You can use the Version option to revert the definition back to an earlier version.

See the *Infor Business Vault Analytic Modeling User Guide* for information on editing hierarchies, dimensions and cubes and using definition versions.

Customize Application Studio reports

An Application Studio rich client cannot connect to BI Services, the BI repository, or the BI OLAP database running in the cloud. You must maintain a local environment with a classic BI installation.



Download content from the cloud and configure locally

1 Download the original application.

You can download the *.BIApplication file, that was used to install the application from the cloud using Application Manager. This file can then be imported to Application Studio, to have the same reports available locally.

You cannot download customized versions of the application from BI Services, your local system will be leading development system.

2 Import *.BIApplication file in repository administration.

This will produce a project with report catalog, OPM, dashboard catalog, and roles.

3 Download OLAP Data.

You can download productive OLAP data from the cloud, using the Application Manager. You will receive an *.app_olap file with the OLAP data, which are currently in the cloud

4 Import OLAP Data in OLAP Administration.

These OLAP data can then be imported in OLAP Administration. Go to Local computer > right-click > Deploy Data Model and import *.app_olap file

Check the correct OPM is configured for the database and start the database

5 Import *.BIApplication file in Application Studio using Import Application Component… command.

Check that the BI OLAP database alias can be connected.

Optional

If you want to create new widgets for BI Dashboards, you can download dashboards from BI Services cloud and import them into a local Dashboards installation. Then you can test combining Infor widgets with custom widgets.

Develop reports

You can develop new reports, which shall extend the Infor application. Do not use any of the unsupported features, as listed in the Installation Guide.

In this version, you cannot manage permissions in BI Services Application Manager. Manage permissions on custom reports before exporting them. Use only the roles that you downloaded with the original application for securing the reports.

Note: Protection does not work in classic BI. You have to make sure yourself that you always work on copies of Infor content.

Note: We recommend that you maintain the unique names of the reports you created with cust_. This will make future application updates easier.

Export reports

Application Studio provides a special export method to produce a file, which can be uploaded to applications in the cloud.

1 In Application Studio, right-click **Report Catalog > Export > Export Application Component**.

2 Select the upper option.

3 Export only the custom reports that you created.

The result of the export is an app_reports file.

Import customized reports in BI Services

In Application Manager, take the application which you want to extend with new reports offline.

Use Import Reports option to import the app_reports file to the application.

- The reports you import might have the same name as other custom reports you imported previously. A wizard will help you solving conflicts
- The wizard will not allow overwriting Infor content.

Protection does not work in BI, so, you may not be able to import and Infor report that you have edited. The import wizard prevents this.

Update Infor applications

You can update BI Applications with new content. For example, you can provide new reports or fix delivered reports. Additionally, you can extend the application with new content.

To update an application, you must take it offline in Manage Applications widget of Application Manager. After all users are disconnected, you can update an application with a new version.

Note: You can update an application only with new versions of the same application; it is not possible to import content from a different application. The application update has to come from the same vendor and author.

You may have new Infor content collide with content you created. For example, the new version might provide a dashboard with the same Unique Name as you used for a custom dashboard.

The update wizard displays all such conflicts and asks you how you want to solve them:

- Rename: For the custom content you created the unique name will be changed. The Infor content will be imported.
- Replace: The Infor content will overwrite your custom content.

If you maintained all unique names of your custom content with cust_ prefix, the update wizard imports new content without any conflicts.

If a new DataLink is included in an application update, it replaces the previous version.

OLAP Databases are never touched by application updates. In this case, updates to the OLAP structure happen by updates of the used data model, not the database.

Chapter 4: Scripts

4

General Scripts

Global Script

There are five procedures contained in Global Script that can be called by other general scripts just like built-in functions. They are:

- RunJobMultiSite
- RunJobSingleSite
- DeleteAllDimensions
- DeleteAllCubes
- DeleteCubeByName

Full_Load_Site_Specific_Data_through_Sites_Looping

This script executes job "Execute Dimension Mappings " and "Execute Dimension Mappings.

Load_Data_without_Sites_Looping

This script is for loading dimension and cube data from a single relational database configured in database alias Infor_CloudSuite_DataStore. This script is used for testing and is not called in production.

Incremental_Load_Site_Specific_Data_through_Sites_Looping

This script is similar to Full_Load_Site_Specific_Data_through_Sites_Looping. It is for full loading dimension and incremental loading cube data across all sites configured in SysInitialization.xls. Indirectly, it can be used for single site as well by just providing one row of Site ID, Database Server and Database.

Delete_All_Dimensions

This script deletes all dimensions.

Detect_Duplicated_Dimension_Elements

This script is for checking duplicated elements in dimension data. Duplicated elements cause measure data to be duplicated. This also happens when parent and child elements have the same name. The dimension data should be fixed according to the duplicated log, and then you must rebuild the OLAP database. Before the system goes live, you should run this script to prevent duplicated elements.

Destroy_All_Cubes_Only

This script destroys all cubes currently existing in the target OLAP database. This script is used for testing before the system goes live. You must be very careful when using this script as it could cause unrecoverable data loss in the production OLAP database.

Create_All_Cubes

This script creates all cubes in the target OLAP database.

Create_All_Dimensions

This script executes all dimension mappings and creates all dimensions for all sites.

Detect_NULL_Dimension_Elements

This script checks NULL elements in dimension data.

Execute_Dimension_Mappings

This script executes all dimension mappings for current site.

Execute_Cube_Mappings

This script executes all cube mappings, creates rule for sales planning, and creates cube for Sales_Planning_Allocation.

MDX Scripts

The Time_Calculation elements are defined as calculation elements using MDX SQL at database alias level in the repository through either Office Plus or Application Studio. You can add calculations you need on a report without having to mess with the data model. They are stored in Repository rather than OLAP Server.

One drawback with this approach is that the deletion of the database alias or change of dimension structure (rename or deletion) that the calculation refers to will cause the calculation elements to be deleted permanently. You must be careful when taking such action.

Another drawback is such calculation elements are defined at the cube level in the database alias, which means same settings of a dimension (add calculation element, define MDX) need to be repeated for every cube that needs to refer to this dimension; however, the element name must be unique within the whole database alias.

Multidimensional Expressions (MDX) scripts are used for some calculations. These tables show the scipts used:

Statistic_Calculation (Top Level)	Element Type	MDX Script	Where to Define
Average 1	Calculation	[Statistic_Calculation].[Import]/ Filter(Descendants([Date].CurrentMember,[Date].[Level 5],"Self"),[Statistic_Calculation].[Import]<>0).Count()	Office Plus/Application Studio
Average 2	Calculation	[Statistic_Calculation].[Import]/ Descendants([Date].CurrentMember,[Date].[Level 5],"Self").Count()	Office Plus/Application Studio

Time_Calculation (Top Level)	Element Type	MDX Script	Where to Define
YTD	Calculation	SUM(PERIODSTODATE([Due_Date].[Level 2],[Due_Date].CurrentMember),[Time Calculation].[Current Period])	Office Plus/Application Studio
QTD	Calculation	SUM(PERIODSTODATE([Due_Date].[Level 3],[Due_Date].CurrentMember),[TIME CALCULATION].[Current Period])	Office Plus/Application Studio

Time_Calculation (Top Level)	Element Type	MDX Script	Where to Define
MTD	Calculation	SUM(PERIODSTODATE([Due_Date].[Level 4],[Due_Date].CurrentMember),[TIMECALCULATION].[Current Period])	Office Plus/Application Studio
Prior YTD	Calculation	SUM(PERIODSTODATE([Due_Date].[Level 2], PARALLELPERIOD([Due_Date].[Level 2],1,[Due_Date].CurrentMember)),[TIMECALCULATION].[Current Period])	Office Plus/Application Studio
Prior QTD	Calculation	SUM(PERIODSTODATE([Due_Date].[Level 3],PARALLELPERIOD([Due_Date].[Level 3],1,[Due_Date].CurrentMember)),[TIMECALCULATION].[Current Period])	Office Plus/Application Studio
Prior MTD	Calculation	SUM(PERIODSTODATE([Due_Date].[Level 4],PARALLELPERIOD([Due_Date].[Level 4],1,[Due_Date].CurrentMember)),[TIMECALCULATION].[Current Period])	Office Plus/Application Studio
PY	Calculation	PARALLELPERIOD([Due_Date].[Level 2],1,[Due_Date].CurrentMember)	Office Plus/Application Studio
PP	Calculation	[Due_Date].CurrentMember.Lag(1)	Office Plus/Application Studio
NP	Calculation	[Due_Date].CurrentMember.Lead(1)	Office Plus/Application Studio

Jobs

A list of jobs are provided for executing data loading from your Infor CloudSuite application database to the OLAP database.

You can expand any of the jobs to see what sub jobs, etc. that are called.

Note: For Full Data Load and Incremental Data Load, it is recommended to put the IMD and System Initialization file on the OLAP server or SQL Server machine. This can speed up data loading. Also, you should put IMD and System Initialization file on the same server. If they are not on same server, make sure you have the sufficient permission to access the System Initialization file. You should not put the Initialization file on a client machine.

Data Load Section

Note: To load data, ensure that you use the jobs under the Data Load section and not the Others section. If you attempt to load data with jobs in the Others section, loading will fail.

Full Data Load

This is the master job that calls the sub job Create All Domains through the General script Full_Load_Site_Specific_Data_through_Sites_Looping to import data from the Infor CloudSuite application databases to the OLAP database.

Note: After each full data loading you must restart the OLAP Service.

Note: Do not manually modify SysInitialization.xls. To delete the history data loading log, you must delete the entire rows where the log records are instead of just removing the part where there is text.

Note: We recommend that you backup your OLAP database before you run the Full Data Load.

A full data load is required everytime the existing cube and dimension get removed completely from OLAP before new data gets loaded. Please note the newly loaded data isn't added to the existing data as the new data contains a complete copy of full transactions instead of just those transaction changes that occured between this and last data loading.

A full data load will:

- Retrieve the last data loading log from SysInitialization.xls through RDB2 configuration
- Write the inital value for this time data loading log to SysInitialization.xls. An error displays if it fails.

  ID = Last data loading ID + 1

  Date = Current Date

  Type = F

  Status = Ongoing
- Start the full data loading transaction, which means if any of the steps below encounter an error then the entire data loading procedure is terminated

- Check if Sales_Planning cube exists in OLAP. If yes, set measures of "Sales_Planning" cube for Version "Actual" to 0.0 (which is equal to remove those measure values). Keep measures of all the other Versions unchanged.
- Check if Inventory_Periodical_Analysis cube exists in OLAP. If yes, set the measure of "Inventory_Periodical_Analysis" cube for Date equal to last data loading Date to 0.0 (which is equal to remove those measure values). Keep measures of all the other Dates unchanged if last data loading Date is equal to Current Date or if last data loading status is not equal to Success.
- Delete all cubes except for these non-transaction cubes which contains user entered data. An error is displayed if any of the cubes is not successfully deleted.

  Sales_Planning

  Sales_Planning_Allocation

  Inventory_Periodical_Analysis

  Cash_Flow_Analysis
- Delete all dimensions. An error is displayed if any of the dimensions is not successfully deleted.
- Read multi site db connection information from SysInitialization.xls. An error is dispayed if db connection information can not be read.
- Connect each site db according to the sequence configured in SysInitialization.xls. An error is displayed if any of the site db can not be connected.

  Call stored procedure to set Site ID in this db to support multi-site in one db for Infor CloudSuite 9.00.31. An error is displayed if it fails.

  Call stored procedure to populate BI_dim_date table. An error is dispayed if it fails.

  Execute job Execute Dimension Mappings to populate all dimensions with data from this site.
- Connect each site db according to the sequence configured in SysInitialization.xls. An error is displayed if any of the site db can not be connected.

  Call sp to set Site ID in this db to support multi-site in one db for Infor CloudSuite 9.00.31, throw error if it fails

  Execute job Execute Cube Mappings to populate all cubes with data from this site
- Update this time data loading log to SysInitialization.xls. An error is displayed if it fails.

  Status = Success
- Display error messages if there are any
- Update this time data loading log to SysInitialization.xls. An error is displayed if it fails.
  - Status = Fail

Incremental Data Load

You should run at least one full data load before you run incremental data load. It will not clear up the target OLAP data and it only loads the changed data and populates it into OLAP DB. Incremental Data Load performs these tasks:

- Reads last time's data loading status

- Writes this time's initial data loading status
- Reads latest fact data from transaction table
- Reads last time's fact data from archive table
- Compares the difference between the two tables
- Gets changed fact data
- Loads changed fact data into OLAP DB
- Clears archive table
- Re-populates archive table with latest fact data
- Writes this time's final data loading status

Data validation section

The data validation section contains these jobs:

- Detect Invalid Dimension Elements
- Re-Create All Dimensions

Others section

- Test with Single Site Data
- Execute Create Dimensions
- Execute Dimension Mappings
- Detect NULL Dimenision Elements
- Re-Create All Dimensions and Cubes
- Re-Create All Cubes
- Delete All Dimensions and Cubes

Example Error

Exceptions during data loading are caught and added to the error log.

Here is an example error:

```
'Runtime error in object 'Transaction_Date': Error saving dimension
'Transaction_Date'. Error: Unable to save dimension 'Transaction_Date'.
Dimension hasn't any element;14:47:26; 0:00,0; 1:15,5;117'
```

As a result of the example error, you must investigate why there is no data contained in the source table.

Chapter 5: Reports and Dashboards

5

The detail reports in this chapter provide typical OLAP operations such as slicing and dicing, drilling up and drilling down as well as query abilities like sorting, ranking, and suppressing zero.

To use these reports, you must be logged in to Infor Dashboards.

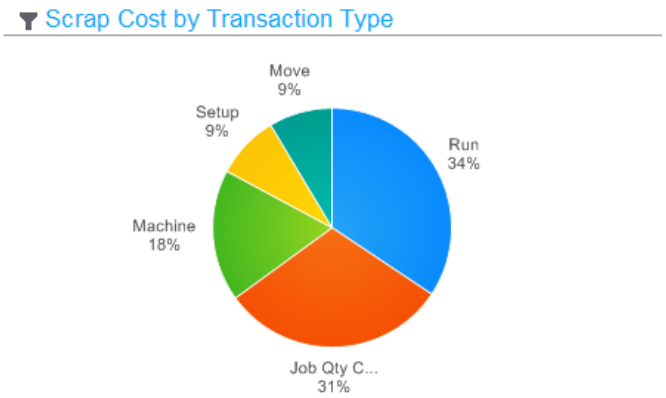
Definition of terms

Dashboard

A Dashboard is a collection of reports, presented to you on the screen at the same time.

Report

A report is a named chart or graph that appears on a dashboard. This is an example of a report:



OLAP slicing

Slice is the act of picking a rectangular subset of a cube by choosing a single value for one of its dimensions, creating a new cube with one fewer dimension.

OLAP dicing

The dice operation produces a subcube by allowing you to pick specific values of multiple dimensions.

OLAP Drill-up and drill-down

Drill Down/Up allows you to navigate among levels of data ranging from the most summarized (up) to the most detailed (down).

Roll-up

A roll-up involves summarizing the data along a dimension. The summarization rule might be computing totals along a hierarchy or applying a set of formulas such as "profit = sales - expenses".

OLAP pivoting

Pivot allows you to rotate the cube in space to see its various faces. For example, cities could be arranged vertically and products horizontally while viewing data for a particular quarter. Pivoting could replace products with time periods to see data across time for a single product.

Detail reports

There are three detail reports.

Detail table report

This report presents measure details based on selected filter dimension and slicer dimensions as well as other report variables passed over by the source report. It provides typical OLAP operations such as slicing and dicing, drilling up and drilling down as well as query abilities like sorting, ranking, and

suppressing zero. See “Detail table report” on page 166 for more information about the Detail Table Report.

Detail trend report

See “Detail trend report” on page 171 for information on this report.

Detail comparison report

See “Detail comparison report” on page 172 for information on this report.

Update dashboard report

Here are the steps used to update a dashboard drill down report. The steps use Sales and Product Contribution Analysis as an example.

1 For Sales and Product Contribution Analysis dashboard, select report "Sales by Product Code".

2 Click the chart (Gross Sales for Product Code= FG-100). Detail report is opened as a popup dialog.

3 Close the popup dialog to get back to original dashboard.

Dashboard widget reports

Report Name	Cube	Group by Dimension	Filter Dimension	Measure	Chart Type
Report Folder: Reports \ Dashboard \ Finance \ Finance and AR					
Profit and Loss Statement	Financial_Income_Analysis	**Date = direct children of selected Date**	Site Unit_Code_1 Unit_Code_2 Unit_Code_3 Unit_Code_4 **Date**	Revenues – the actual amount by account type of “R” Expenses – the actual amount by account type of “E” Profit or Loss – the value equals to Revenues minas Expenses	PolySeries
Top 10 Customers by Open Invoice	Accounts_Receivable_Analysis	Customer	Site Aging_Date Sales_People Sales_Channel Aging_Bucket	Open Invoice Count	Bar
Actual / Budget Amount	Financial_Income_Analysis	Site	Date Account Unit_Code_1 Unit_Code_2 Unit_Code_3 Unit_Code_4	Actual Amount Budget Amount	Bars
Business Expense Trend	Financial_Income_Analysis	**Date = direct children of selected Date**	Site Unit_Code_1 Unit_Code_2 Unit_Code_3 Unit_Code_4 **Date**	Actual Amount Budget Amount	PolySeries
Business Revenue Trend	Financial_Income_Analysis	**Date = direct children of selected Date**	Site Unit_Code_1 Unit_Code_2 Unit_Code_3 Unit_Code_4 **Date**	Actual Amount Budget Amount	PolySeries

Balance Chart by Site	Financial_Income_Analysis	Site	Date Unit_Code_1 Unit_Code_2 Unit_Code_3 Unit_Code_4	Assets – the actual value by account type of “A” Liabilities – the actual value by account type of “L” Owner’s Equities – the actual value by account type of “O”	Bars
Aging Bucket Analysis	Accounts_Receivable_Analysis	Aging_Bucket	Site Aging_Date Sales_People Sales_Channel Customer Measure	Measure selectable Outstanding Receivables as Default	Pies
Report Folder: Reports \ Dashboard \ Inventory and Purchasing / Inventory and Vendor Analysis					
Product Received and Returned Cost	Vendor_Received_Analysis	Product	Warehouse Site Receive_Delivery_Interval Receive_Date Vender Vender_Location	Quantity Received Cost Quantity Returned Cost	Sparklines + Chart
Cost by ABC Code	**Inventory_Periodical_Analysis**	ABC_Code	Buyer Family_Code Planner_Code Product Site Source Warehouse Date **Statistic_Calculation = Average 1**	**On Hand Cost**	Pies

Cost by Planner Code	**Inventory_Periodical_Analysis**	Planner_Code	Buyer Family_Code ABC_Code Product Site Source Warehouse Date **Statistic_Calculation = Average 1**	**On Hand Cost** **WIP Cost**	Columns
Top 10 Family Codes by Quantity	**Inventory_Periodical_Analysis**	Family_Code	Buyer Planner_Code ABC_Code Product Site Source Warehouse Date **Statistic_Calculation = Average 1**	**On Hand Quantity** **WIP Quantity**	Columns
Top 10 Vendor Received	Vendor_Received_Analysis	Vendor	Product Receive_Delivery_Interval Site Warehouse Receive_Date Vender_Location	Quantity Returned Cost Quantity Received Cost	Columns
Top 10 Products by Inventory Cost	**Inventory_Periodical_Analysis**	Product	Buyer Planner_Code ABC_Code Family_Code Site Source Warehouse Date **Statistic_Calculation = Average 1**	**Total Item Cost**	Bars

Top 10 Warehouses Analysis	**Inventory_Periodical_Analysis**	Warehouse	Buyer Planner_Code ABC_Code Family_Code Site Source Product **Year A = [Year A]** **Year B = [Year B]** **Statistic_Calculation = Average 1** **Measure**	**Measure(Default Value) = Quantity On Hand**	PolySeries
Inventory Cost Analysis	Inventory_Periodical_Analysis	Date = Direct children of selected Date	Buyer Planner_Code ABC_Code Family_Code Site Source Product Warehouse Date **Statistic_Calculation = Average 1**	Total Item Cost On Hand Cost WIP Cost	PolySeries
Report Folder: Reports \ Dashboard \ Manufacturing / Job and Material Analysis					
Top 10 Work Centers by Scrap Cost	Material_Scrap_Analysis	Work_Center=Level 3	Site Transaction_Date Item Reason_Code Transaction_Type	Total Scrap Cost	Bars
Top 10 Work Centers by Scrap Quantity	Material_Scrap_Analysis	Work_Center=Level 3	Site Transaction_Date Item Reason_Code Transaction_Type	Qty Scrapped	Bars
Scrap Cost by Transaction Type	Material_Scrap_Analysis	Transaction_Type=Level 2	Site Transaction_Date Work_Center Reason_Code Item	Total Scrap Cost	Pie

Scrap Quantity Analysis	Material_Scrap_Analysis	**Transaction_Date = direct children of selected Transaction_Date**	Site Work_Center Item Reason_Code Transaction_Type **Transaction_Date**	Qty Scrapped Job Quantity Complete	Columns
Scrap Cost by Reason Code	Material_Scrap_Analysis	Reason_Code=level 2	Site Transaction_Date Work_Center Item Transaction_Type	Total Scrap Cost	Column
Job Efficiency Analysis	Job_Efficiency_Analysis	**Transaction_Date= direct children of selected Transaction_Date**	Site Work_Center Job **Transaction_Date**	Actual Pieces per Labor Hour Actual Pieces per Machine Hour Standard Pieces per Labor Hour Standard Pieces per Machine Hour	Column
Report Folder: Reports \ Dashboard \ Sales\ Sales and Product Contribution Analysis					
Sales by Sales Channel	Sales_and_Product_Contribution_Analysis	Sales_Channel=level 2	Customer Product Sales_Area Ship_Date Site **Time_Calculation**	Gross Sales Net Sales	PolySeries
Product Contribution Margin	Sales_and_Product_Contribution_Analysis	Product=level 2	Customer Sales_Area Sales_Chanel Site Ship_Date (only year) **Time_Calculation**	Total Quantity Shipped Total Contribution Margin	Sparklines Chart
Top 10 Sales	Sales_and_Product_Contribution_Analysis	Sales_Channel=level 3	Customer Sales_Area Product Site Ship_Date **Time_Calculation**	Net Sales Sales Discounts	Bars

Sales by Product Code	Sales_and_Product_Contribution_Analysis	Product=level 2	Customer Sales_Area Sales_Channel Ship_Date Site **Time_Calculation**	Cost of Goods Sold Gross Sales	PolySeries
Top 10 Customers	Sales_and_Product_Contribution_Analysis	Customer=level 3	Product Sales_Area Sales_Chanel Ship_Date Site **Time_Calculation**	Net Sales	Bars
Quantity Shipped by Sales Area	Sales_and_Product_Contribution_Analysis	Sales_Area=level 3	Customer Product Sales_Channel Ship_Date Site **Time_Calculation**	Quantity Shipped	Pie
Sales Contribution Analysis	Sales_and_Product_Contribution_Analysis	**Ship_Date = direct children of selected Ship_Date**	Ship_Date Customer Product Sales_Channel Sales_Area Site **Time_Calculation**	Gross Sales Net Sales Product Contribution Margin	PolySeries
Sales Margin by Sales Area	Sales_and_Product_Contribution_Analysis	Sales_Area = level 2	Ship_Date Customer Product Sales_Channel Sales_Area Site Time_Calculation (Default Value = Current Period)	Gross Sales Cost of Goods Sold Product Contribution Margin	PolySeries
Report Folder: Reports \ Dashboard \ Sales\ CRM Analysis					
Sales Forecast Analysis	Sales_Forecast_Analysis	Sales_Period = Level 2	Forecast_Status Sales_Channel Opportunity_Close_%	Opportunity Estimated Value Order Value Order Value Variance	PolySeries

Lead Count by Status	Sales_Lead_Analysis	Lead_Status = level 2	Assigned_Date Create_Date Customer Campaign_Type Sales_Channel Territory Lead_Quality Opportunity_Source Prospect Site	Lead Count	Pie Chart
Opportunity Value by Close Percent	Sales_Opportunity_Analysis	Opportunity_Close_% = level 2	Opportunity Estimated Value Pipeline Value (Un-Weighted)	Lead Count	Multi Column
Top 10 Sales by Estimated Value	Sales_Opportunity_Analysis	Sales_Channel = Level 3, ranking = Top Count 10	Customer Prospect Campaign_Type Opportunity_Source Territory Site Create_Date Opportunity_Stage Opportunity_Reason_Code Opportunity_Status Opportunity_Close_%	Opportunity Estimated Value	Bar Chart
Campaign Analysis	Campaign_Analysis	Site = Level 2	Campaign_Status Campaign_Type Start_Date End_Date	Expected Revenue Campaign Cost Opportunity Estimated Value	Multi Column
Pipeline Analysis	Sales_Opportunity_Analysis	Opportunity_Stage = Level 2	Customer Prospect Campaign_Type Opportunity_Source Territory Site Create_Date Sales_Channel Opportunity_Reason_Code Opportunity_Status Opportunity_Close_%	Pipeline Value (Un-weighted) Pipeline Value (Weighted)	Multi Bar

Report Folder: Reports \ Dashboard \ Service\ Service and Incident Analysis					
Service Order Closed	Service_Order_Analysis	Close_Date = Level 2	Site SRO_Type SRO_Status Partner Region Bill_Status Open_Date Start_Date Customer Incident_Status	SRO Count	Single Bar
Open Incident Analysis	Incident_Analysis	Incident_Priorirty = Level 2	Site Product Customer SSR Incident_Status Incident_Reason Incident_Resolution Due_Date Close_Date Incident_Date Region	Incident_Count	Pie
Service Order Price Analysis	Service_Order_Analysis	Region = Level 2	Site SRO_Type SRO_Status Close_Date Partner Bill_Status Open_Date Start_Date Customer Incident_Status	Total Price	Service Order Price Analysis

Closed Incident by Region	Incident_Analysis	Region = Level 2	Site Product Customer SSR Incident_Status Incident_Reason Incident_Resolution Due_Date Close_Date Incident_Date Incident_Priorirty	Closed Incident Count	Single Bar
Top 10 Partners	Service_Order_Analysis	Partner = Level 3	Site SRO_Type SRO_Status Close_Date Region Bill_Status Open_Date Start_Date Customer Incident_Status	SRO Margin	Single Column
SRO Transaction Analysis	Service_Transaction_Analysis	SRO_Type = Level 2	Site Transaction_Category Partner Transaction_Date Service_Transaction_Type Service_Department Customer Product Work_Code MISC_Code	SRO Margin Total Cost	Stacked Column
Report Folder: Reports \ Dashboard \ HR\ HR Analysis					
Employee Compensation Distribution	Compensation_and_Benefit_Analysis	Site = level 1	Site Employee Payroll_Period Position Department EEO_Class Gender Age_Distribution	All measures	Single Bar

Employee Total Pay by Age	Compensation_and_Benefit_Analysis	Age_Distribution = level 2	Site Employee Payroll_Period Position Department EEO_Class Gender	Total Pay	Pie Chart
Recruitment Cost by Source	Recruitment_Analysis	Applicant_Source = level 2	Site Received_Date Applicant Want_Advertisement Position EEO_Class Gender Age_Distribution	Average Applicant Cost Average Employee Cost	Multi Columns
Top 10 Recruitment Cost by Position	Recruitment_Analysis	Position = level 2	Site Received_Date Applicant_Source Applicant Want_Advertisement EEO_Class Gender Age_Distribution	Recruitment Cost	Single Bar
Employment Count by Age	Employee_Retention_Analysis	Age_Distribution = level 2	Site Retention_Period Employee Position Department EEO_Class Gender Age_Distribution	Average Employment Count	Single Column

Turnover Rate by Position	Employee_Retention_Analysis	Position = level 2	Site Retention_Period Employee Department EEO_Class Gender Age_Distribution	Turnover Rate %	Single Column
Report Folder: Reports \ Dashboard \ Automotive\ Automotive Analysis					
Bottom 10 Resource Groups by OEE	OEE_Analysis	Resource_Group = Level 3, ranking = Bottom Count 10	Family_Code Product Start_Date Work_Center Job_Operation	OEE %	Bar Chart
Top 10 Operations by RPN	FMEA_Analysis	Current Operations = Level 2, ranking = Top Count 10	FMEA_Classification FMEA_Failure_Mode Work_Center Family_Code Product Target_Date	Risk Priority Number	Bar Chart
Quantity Shipped by Sales Area	FMEA_Analysis	Work Centers = level 2, ranking = Top Count 10	FMEA_Classification FMEA_Failure_Mode Current_Operation Family_Code Product Target_Date	Risk Priority Number	Bar Chart

RPN Analysis	FMEA_Analysis	Current Operation = Level 2	FMEA_Classification FMEA_Failure_Mode Work_Center Family_Code Product Target_Date	Risk Priority Number Action Risk Priority Number	Multi Column
Top 10 Failure Modes	FMEA_Analysis	Failure Modes = level 2, ranking = Top Count 10	FMEA_Classification Current_Operation Work_Center Family_Code Product Target_Date	Risk Priority Number	Bar Chart
RPN By Operations	FMEA_Analysis	Current Operation = Level 2	FMEA_Classification FMEA_Failure_Mode Work_Center Family_Code Product Target_Date	Risk Priority Number	Pie Chart

Detail reports

Report Name	Unique Name	Description	Report Variables (Default Value)
Report Folder: Reports \ Detail Reports \ Dialogs			

Element Browser	sl_Dialog_ElementBrowser	This report presents all children element of selected parent element for users to choose report filter criteria.	Alias Caller Cube DefaultSelection Dimension DrillDown Hierarchy HierarchyUN Selection SelectionResult SelectionXML VisualSelectionXML
Slicers	sl_Dialog_Slicers	This report presents slicer dimensions for users to choose report filter criteria.	AliasUN Clipboard ClipboardType CubeUN SelectionResult SkipDimension1 SkipDimension2 SkipDimension3 SkipDimension4 SlicersXML

Ranking	sl_Dialog_Ranking	This report presents ranking type and ranking value for users to choose ranking criteria. Ranking Type Description Ranking Value Example Top Count Order the list of elements in descending order, display the number of top elements specified in Ranking Value Specify how many elements with top values are displayed. Show the top 5 products. Bottom Count Order the list of elements in ascending order, display the number of top elements specified in Ranking Value Specify how many elements with bottom values are displayed. Show the top 5 products. Top Sum Order the list of elements in descending order, display the top elements whose sum value is equal to or greater than value specified in Ranking Value Specify the sum of the elements that is displayed. Show products, whose total turnover is at least 50.000. Bottom Sum Order the list of elements in ascending order, display the top elements whose sum value is equal to or greater than value specified in Ranking Value Specify the sum of the elements that is displayed. Show products, whose total turnover is at least 50.000. Top Percent Order the list of elements in descending order, display the top elements whose sum value divided by sum of all element is equal to or greater than the percentage specified in Ranking Value Enter a percentage. Show the products that make up 30% of the total turnover. Bottom Percent Order the list of elements in ascending order, display the top elements whose sum value divided by sum of all element is equal to or greater than the percentage specified in Ranking Value Enter a percentage. Show the products that make up 30% of the total turnover.	Value (10)
Report Folder: Reports \ Detail Reports \ Templates			

Details Trend Analysis	sl_DetailsTrendAnalysis	This report presents measure trend details based on selected filter dimension, slicer dimensions as well as other report variables passed over by source report. It provides typical OLAP operations such as slicing and dicing, drilling up and drilling down as well as query abilities like sorting, ranking, suppressing zero, and so on.	AliasUN Clipboard ClipboardType CubeUN Description HorizontalDimensionUN HorizontalHierarchyUN HorizontalSelection HorizontalSuppress ShowDescription SlicersXML Title VerticalDimensionUN VerticalElementXML VerticalHierarchyUN VerticalSelection VerticalSelectionAll VerticalSort VerticalSuppress
Details Table	sl_DetailsTable	This report presents measure details based on selected filter dimension and slicer dimensions as well as other report variables passed over by source report. It provides typical OLAP operations such as slicing and dicing, drilling up and drilling down as well as query abilities like sorting, ranking, suppressing zero, and so on.	AliasUN Clipboard ClipboardType CubeUN Description HorizontalDimensionUN HorizontalHierarchyUN HorizontalSelection HorizontalSuppress ShowDescription SlicersXML Title VerticalDimensionUN VerticalElementXML VerticalHierarchyUN VerticalSelection VerticalSelectionAll VerticalSort VerticalSuppress

Details Comparison Analysis	sl_DetailsComparisonAnalysis	This report presents two selected measures and their variance in absolute value or percent based on selected filter dimension and slicer dimensions as well as other report variables passed over by source report. It provides typical OLAP operations such as slicing and dicing, drilling up and drilling down as well as query abilities like sorting, ranking, suppressing zero, and so on. Variance (Absolute) = right measure – left measure Variance (In Percent) = (right measure – left measure)/left measure	AliasUN Clipboard ClipboardType CubeUN Description DisplayVariance HorizontalDimensionUN HorizontalHierarchyUN HorizontalSelection HorizontalSelection2 HorizontalSuppress ShowDescription SlicersXML Title VerticalDimensionUN VerticalElementXML VerticalHierarchyUN VerticalSelection VerticalSelectionAll VerticalSort VerticalSuppress

Dashboards

There are 21 dashboards, each containing the reports listed

Folder	Dashboard Name	Widget Communication	Report
Finance	Finance and AR Analysis	Date Site Account Unit_Code_1 Unit_Code_2 Unit_Code_3 Unit_Code_4 Aging_Date Customer Sales_People Sales_Channel	Top 10 Customers by Open Invoice Aging Bucket Analysis Actual / Budget Amount by Site Balance Chart by Site Profit and Loss Statement Business Revenue Trend
Inventory and Purchasing	Inventory and Vendor Analysis	Site Product ABC_Code Warehouse Family_Code Buyer Planner_Code Source Static_Calculation	Top 10 Vendor Received On Hand Cost by ABC Code Top 10 Products by Inventory Cost Inventory Cost Analysis Cost by Planner Code Top 10 Warehouse Analysis
Manufacturing	Job and Material Analysis	Site Transaction_Date Item Reason_Code Transaction_Type Work_Center	Scrap Cost by Transaction Type Top 10 Work Centers by Scrap Quantity Scrap Cost by Reason Code Scrap Quantity Analysis Job Efficiency Analysis Top 10 Work Centers by Scrap Cost
Sales	CRM Analysis	Prospect Sales_Channel Opportunity_Stage Site Territory Opportunity_Source Campaign_Type Customer Create_Date Opportunity_Reason_Code Opportunity_Status Opportunity_Close_%	Sales Forecast Analysis Lead Count by Status Opportunity Value by Close Percent Top 10 Sales by Estimated Value Campaign Analysis Pipeline Analysis

Sales	Sales and Product Contribution Analysis	Customer Product Sales_Area Sales_Channel Ship_Date Site Time_Calculation	Quantity Shipped by Sales Area Top 10 Sales Sales by Sales Channel Top 10 Customers Sales Margin by Sales Area Sales by Product Code
Sales	Sales Controlling		Cost Over Time Percentage of Margin by Product Sales Margin Percentage Analysis Gross Margins by Product Analysis Revenue Over Time SG&A Cost (per $1000 revenue)
Sales	Sales Booking		Bookings per Sales FTE Total Sales Bookings Percent of Leads Closed Average Order Value
Service	Service and Incident Analysis	Bill_Status Close_Date Customer Open_Date Partner SRO_Status SRO_Type Region Site Product SSR Incident_Resolution Incident_Reason Incident_Date Due_Date Customer Close_Date Incident_Status Start_Date	Service Order Closed Open Incident Analysis Service Order Price Analysis Closed Incident by Region SRO Transaction Analysis Top 10 Partners

HR	HR Analysis	Employee Gender Department EEO_Class Received_Date Payroll_Period Retention_Period Site Age_Distribution Applicant Want_Advertisement Position	Employee Compensation Distribution Employee Total Pay by Age Recruitment Cost by Source Top 10 Recruitment Cost by Position Employment Count by Age Turnover Rate by Position
Planning > Cash Flow	Cash Flow Statement	None	Cash Flow Statement
Planning > Cash Flow	Cash Flow Planning	None	Cash Flow Planning
Planning > Sales	Sales Planning	None	Sales Planning/Forecasting

Printing and Packaging	Quote Analysis	Customer_Location Estimate_Line_Status Item Customer Due_date Site Sales_People Estimate_Job Start_Date Estimate_Job_Status	Top 10 Customers by Print Quote Price Price Margin by Site Top 10 Estimate Jobs Job Count Comparison Color Consumption Analysis Quote Price by Site
CEO	Cash Analysis		Cash Flow by Fiscal Period Accounts Receivable Balances Accounts Payable Balances Balances
CEO	Production and Demand Capacity Analysis		Production Value of Goods per Unit of Labor Backlog Value of Raw Materials, WIP and Finished Goods Machine Efficiency Analysis Sales Pipeline vs Backlog
CEO	Sales Controlling Analysis		Sales by Customer Analysis Revenue from Sale of Goods vs Cost of Goods Sold Sales Margin Percentage Analysis Revenue Over Time Cost Over Time Gross Margins by Product Analysis
CFO	Finance Analysis		AR by Age Accounts Receivable Balances Top Customers by AR Age Accounts Payable Balances

CFO	Sales Analysis		Revenue Gross Profit COGS Report Revenue Over Time Sales General and Administration Cost Over Time
Production	Production Efficiency Analysis		Utilization % OEE (Overall Equipment Effectiveness) Scrap and Rework % Labor Utilization Top 5 Products by Manufacturing cycle time in hours WIP Value (Inventory)
Production	Inventory Analysis		Purchased Item Inventory Manufactured Goods Inventory Total Inventory Total Inventory Turns Average Order Turnaround Days Complete and On-Time Shipment
Automotive	Automotive Analysis	Sales_Channel Site Target_Date Familly_Code Work_Center Time_Calculation Product Ship_Date FMEA_Failure_Mode Origin_Date FMEA_Classification Customer	Bottom 10 Resource Groups by OEE Sales by Product Code Quantity Shipped by Sales Area Top 10 Work Centers by RPN RPN by Operations RPN Analysis

Q&A Reports

Infor CloudSuite Analytics Q&A provides some template reports. The reports are opened through excel with an add on component. The following reports are added to Q&A

Report Name	Description	Filter Field
Estimate Order Lines by Status	Simple Estimate order line report that extracts order lines by order number, customer and date. Report filter line uses Excel formulas to display the selection criteria and the extraction time.	Site Order No from Order No to Customer from Customer to Order Date from Order date to Status
Customer Order Lines by Status	Simple customer order line report that extracts order lines by order number, customer and date. Report filter line uses Excel formulas to display the selection criteria and the extraction time.	Site Order No from Order No to Customer from Customer to Order Date from Order date to Status Type
Sales Value Analysis	The simple sales value analysis report that extracts customer order lines by order date and items. Report filter line uses Excel formulas to display the selection criteria and the extraction time. The report summarizes sales values for both regular and blanket orders. Use summary report, select from order line level.	Site Order Date from Order Date to Customer from Customer to Item from Item to
Incident Escalation Tasks	Simple Incident Escalation Tasks report that extracts escalation tasks by incident number, customer and priority. Report filter line uses Excel formulas to display the selection criteria and the extraction time.	Site Incident No from Incident No to Customer from Customer to Priority Code
Service Order Status	The simple Service Order Status report that extracts SRO status information by SRO, SRO Line, Lead Partner, SRO Type. Report filter line uses Excel formulas to display the selection criteria and the extraction time.	Site SRO No from SRO No to Customer from Customer to SRO Type
Incident Time Analysis	The simple Incident Time Analysis that extracts Incidents by incident customer. Report filter line uses Excel formulas to display the selection criteria and the extraction time. Use detail report, select from incidents table.	Site Close Date from Close Date to Customer from Customer to Item from Item to

Report Name	Description	Filter Field
Service Contract Billing Status	The simple service contract billing status that extracts Service Contract Lines by customer. Report filter line uses Excel formulas to display the selection criteria and the extraction time. Use detail report, select from service contract lines table.	Site Contract Number from Contract Number to Service Type from Service Type to Customer from Customer to Item from Item to

Chapter 6: Use Cases

6

Use cases

This chapter provides step-by-step instructions as examples on how to perform certain tasks.

Run full data loading job

Note: There are recommendations and cautions you should be aware of before running a full data load. See “Full Data Load” on page 127 before running a full data load.

1 Open **Infor CloudSuite BI 9.00.31.imd**.

2 Execute job - **Full Data Load**.

3 Read the log from SysInitialization.xls.

4 Execute job - **Detect Invalid Dimension Elements** from **DATA VALIDATION** section.

5 Read the log and correct any invalid dimension elements.

Correct invalid dimension element

1 Print out the logs that indicate there is invalid data in dimension elements.

2 Log into Infor CloudSuite.

3 Fill the dimension element data which was NULL..

4 Corrects the duplicated dimension element data. For example, there are two salespersons with same name but different address in two sites. If they are the same salesperson, then both need to have the same address, or if they are different salespersons, then both of them must have different names.

Note: Changing salesperson name is more tricky as that means all referential fact data needs to be changed as well.

5 Open **Infor CloudSuite BI 9.00.31.imd**.

6 Navigate to **DATA VALIDATION** job section.

7 Execute job **Re-Create All Dimensions**.

8 Run job **Detect Invalid Dimension Elements** in **DATA VALIDATION** job section

9 Read log.

10 User closes **Infor CloudSuite BI 9.00.31.imd**.

Sales planning

This section contains various use case scenarios to help you understand how to use Sales Planning.

Open sales planning

1 Navigate to the Sales Planning report in Application Studio web service or Sales Planning dashboard. A read-only Sales Planning page is displayed with these sections:

- Filter section contains dimension filters - Forecasting Year, Measure, Sales Area, Site, Sales Channel and Workflow
- Chart section contains a line chart with Actual, Target and Forecast sales measures based on past 3 years and the forecasting year.
- History section - from left to right shows comments, product list, actual sales measures overview during past 3 years based on selected forecasting year
- Planning section -from left to right shows Copy from column, forecasting sales measures for forecasting year and its 12 forecasting month. In this section it also contains 2 other sub sections for configuring management target and negative/positive percent. System highlights any forecasting month cell in yellow if those cells contain value less than n percent of history monthly average or in green if those cells contain value greater than m percent of history monthly average

2 Click the Workflow check box in the F.lter section. The **Open planning step** shortcut menu is displayed.

3 Select **Open planning step**. The system refreshes the Sales Planning page. All writable cells are changed to blue which indicates all these highlighted cells are write-back enabled now.

Finish sales planning

1 Click the Workflow checkbox in the Filter section. The **Finish planning step** shortcut menu is displayed.

2 Select **Finish planning step**. The system refreshes the Sales Planning page. All writable cells are changed back to white which indicates all these cells become wirte-back disabled now.

Select filters for for sales planning

1 Select forecasting Year in the Filter section. The Chart section is refreshed based on recalculated sales measure data. The report label "n - n (average of 36 months)" in the History section is updated to present the updated beginning and ending year of past 3 years based on selected forecasting year. Sparkline in the History section is updated with recalculated sales measure data of the past three years based on selected forecasting year. Year list box is updated in the Planning section to only provide year options between past three years based on selected forecasting year.

2 Select forecasting Measure. The Chart, History, and Planning are refreshed with recalculated sales measures based on the selected forecasting measure.

3 Select forecasting Sales Area. The Chart, History, and Planning are refreshed with recalculated sales measures based on selected Sales Area

4 Select forecasting Site. The Chart, History, and Planning are refreshed with recalculated sales measures based on selected forecasting site

5 Select forecasting Sales Channel. The Chart, History, and Planning are refreshed with recalculated sales measures based on selected Sales Channel.

Copy sales measures from selected history year to forecast year

1 Select a preferred version from the Version list box in the Planning section. Measure data is refreshed on **Copy from** column based on selected version.

2 Select a preferred Year from the Year list box. Measure data is refreshed on **Copy from** column based on selected year.

3 Click a right arrow on a certain product row to copy the measure data from selected version and year to forecast version of target year. The product row is refreshed of forecasting year and month in Planning section and Chart section with recalculated measure data. Note: the corresponding parent / children of selected product will be recalculated as well if there is any.

Enter sales planning measures directly

Enter value directly to the forecasting year or month in Planning section. The Planning section and Chart section is refreshed with recalculated measure data.

Redistribute the sales planning measures

1 Right-click any product row on forecasting year column in Planning section.

2 Select **Redistribute**. Redistribute dialogue is displayed with these sections:

- Chart section where the original distribution over 12 forecasting months are displayed in grey column chart and selected distribution in blue column chart
- Redistribution section where four pre-defined distribution options are displayed in four rows.

3 Choose which distribution option to take effect and modify the distribution figure. The chart section is updated based on selected distribution option.

4 Click the **Distribute** button. The Redistribute dialogue is closed and the Planning section and chart section are refreshed with recalculated measure data based on selected distribution.

Increase or decreases n percent of forecasting sales measures

1 Right clicks any product row on forecasting year column in Planning section

2 Select **Increase by n%** or **Decrease by n%**. The planning section and chart section are refreshed with recalculated measure data that is multiplied by (1+n)% or (1-n)%.

Reset sales planning measures to previous values

1 Right click any product row on forecasting year column in the Planning section.

2 Select **Reset to previous value**. The planning section and chart section are refreshed with recalculated measure data that is equal to previous value

Modify negative or positive highlight percentage

1 User enters a percentage n in negative percent cell that is highlighted in yellow in Planning section. Any cells in the Planning section that contain value less than n percent of history monthly average are highlighted in yellow.

2 Enter a percentage m in positive percent cell that is highlighted in green in Planning section. Any cells in Planning section that contain value greater than m percent of history monthly average are highlighted in yellow.

Perform detail sales planning

1 Right click any item on product row.

2 Select **Detailed Planning**. Details Planning dialogue is displayed with these main sections:

- Discount and Margin Planning section - cells in this section are write-back enabled
- Price and Cost Overview section - cells is this section are view only

3 Enter sales forecasting data directly to Discount and Margin Planning section. Price and Cost Overview section is refreshed with recalculated measure data.

4 Click the **Close** button. The Details Planning dialogue is closed and refreshes the Planning section and Chart section with recalculated measure data based on detailed planning result.

Set sales target measures

Enter management target for selected forecasting year and other dimensions. The chart section is refreshed with recalculated target measure data.

Add or remove comment

1 Click the comment icon on any product row in the History section. The Comment dialogue is displayed.

2 Enter or remove comments and click the **Close** button. The Comment dialogue is closed and the comment icon is updated to indicate whether there is a comment for the product row.

Cash flow planning

1 Navigate to the Cash Flow Planning report in Application Studio web service or Cash Flow Planning dashboard in Dashboard. Only the fiscal year is displayed in the field of Forecasting Year for all Cash Flow reports.

2 The system displays a read-only Cash Flow Planning page with these sections:

   a Filter section contains dimension filters - Forecasting Year, Version, Measure, Site, Cash Type, Product, Customer, Vendor and Time Calculation.

   b Chart section contains a line chart with Actual, Target cash flow measures based on past three years and the forecasting year.

   c History section - from left to right shows comments, product list, actual cash flow measures overview during past years based on selected forecasting year.

   d Planning section - from left to right shows copy from column, forecasting cash flow measures for forecasting year and its 12 forecasting months. In this section it also contains two other sub sections for configuring management target and negative/positive percent. The system highlights any forecasting month cell in yellow if those cells contain values less than n percent of history monthly average or in green if those cells contain value greater than m percent of history monthly average

   e Summary - Shows the target value of cash flow planning year and calculate the variance and percentage value in order to inform the user how the cash flow currently look like and achievable.

   f Action - Click the button on the action pane to perform some actions such as refresh, print to pdf, export to excel file, and redirect to home page. The system refreshes the Cash Flow Planning page by changing the color of all writable cells to blue which indicates all these highlighted cells are now write-back enabled.

Select the filters for cash flow planning

1 Select the forecasting Year in Filter section. The system refreshes Chart section based on recalculated cash flow measure data. The system updates report label "n - n (average of 36 months)" in History section to present the updated beginning and ending year of past three years based on selected forecasting year. The system updates sparkline in History section with recalculated cashflow measure data of past three years based on selected forecasting year. The system updates year list box in the Planning section to only provide year options between past three years based on selected forecasting year.

2 Select forecasting Measure. The system refreshes the Chart, History, and Planning with recalculated cash flow measures based on selected forecasting measure.

3 Select forecasting Cash Type Area. The system refreshes the Chart, History, and Planning with recalculated cash flow measures based on selected Cash Type Area

4 Select forecasting Site. The system refreshes the Chart, History, and Planning with recalculated cash flow measures based on the selected forecasting site.

5 Select forecasting Product. The system refreshes the Chart, History, and Planning with recalculated cash flow measures based on selected Product.

6 Select forecasting Customer. The system refreshes the Chart, History, and Planning with recalculated cash flow measures based on selected Customer.

7 Select forecasting Vendor. The system refreshes the Chart, History, and Planning with recalculated cash flow measures based on selected Vendor.

8 Select Time Calculation. The system refreshes the Chart based on the selected Time Calculation.

Copy cash flow measures from selected history year to forecast year

1 Select a preferred version from the Version list box in the Planning section. The system refreshes measure data in the ‘Copy from’ column based on selected version.

2 Select a preferred Year from the Year list box. The system refreshes measure data in the ‘Copy from’ column based on selected year.

3 Click a right arrow on a certain product row to copy the measure data from the selected version and year to the forecast version of target year. The system refreshes the product row of the forecasting year and month in the Planning section and Chart section with recalculated measure data. Any corresponding parent/children of selected product are recalculated as well.

Enter cash flow planning measures directly

Enters a value directly to the forecasting year or month in the Planning section. The system refreshes the Planning section and Chart section with recalculated measure data.

Use cash flow details to show the cash flow planning measures

1 Click the column chart above the month field. The system pops up the cash flow details form to let user check the detail value of selected month.

2 Select the **Comparison and Trend** button to see more details of filtered month or year.

3 Click the appropriate button on the action panel to refresh, print to pdf, export to excel file, and redirect to home page.

Increase or decrease n percent of forecasting cash flow measures

1 Right click any product row on the forecasting year column in the Planning section or click the -> button beside the forecasting year column in Planning section. The system displays a shortcut menu.

2 Select either **Increase by n%** or **Decrease by n%**. The system refreshes the planning section and chart section with recalculated measure data that is multiplied by (1+n)% or (1-n)%.

Reset cash flow planning measures to previous values

1 Right click any product row on the forecasting year column in the Planning section or click the -> button beside the forecasting year column in Planning section. The system displays a shortcut menu.

2 Select **Reset to previous value**. The system refreshes the planning section and chart section with recalculated measure data that is equal to previous value.

Modify negative or positive highlight percentage

1 Enter a percentage n in negative percent cell that is highlighted in yellow in the Planning section. The system highlights any cells in the Planning section in yellow that contain value less than n percent of history monthly average.

2 Enter a percentage m in positive percent cell that is highlighted in light green in the Planning section. The system highlights any cells in Planning section in yellow that contain value greater than m percent of history monthly average.

Detail cash flow statement

Select **cash flow statement** on the dashboards menu. The system displays the cash flow statement page.

Filter section contains dimension filters - Site, Customer, Vendor, Cash Type, Product, Version and Time Calculation.

Detail section - Shows the detail value for the selected filter by account.

Action - Click the appropriate button on the action panel to refresh, print to pdf, export to excel file and redirect to home page.

Site Measure

1 Select **Site Measure**. The system refreshes the detail panel with recalculated cash flow measures based on the selected site measure.

2 Select **Customer Measure**. The system refreshes the detail panel with recalculated cash flow measures based on the selected customer measure.

3 Select **Cash Type Measure**. The system refreshes the detail panel with recalculated cash flow measures based on the selected cash type measure.

4 Select **Product Measure**. The system refreshes the detail panel with recalculated cash flow measures based on the selected product customer.

5 Select **Version Measure**. The system refreshes the detail panel with recalculated cash flow measures based on the selected version measure.

6 Select **Time Calculation Measure**. The system refreshes the detail panel with recalculated cash flow measures based on the selected time calculation measure.

7 Click the go to detail button. A dialog is displayed which lets you select the appropriate report (Trend Report, Comparison Report, or Product Detail Report).

8 Select one type of report from the dialog. The page goes to that report. You can refer to the column chart to have a better understanding about the account value. The column chart rule: There are three colors in the chart. Blue is the total value of all accounts. Green is the positive value. Red is the negative value.

Detail trend cash flow statement

Click **detail report** and then click **Trend** on the pop up dialog in the cash flow statement page. The system displays the detail trend cash flow statement page.

Filter section contains dimension filters - Site, Customer, Vendor, Cash Type, Product, Version and Time Calculation.

Detail section - Shows the detail value for the selected filter by account.

Action - You can perform some actions such as refresh, print to pdf, export to excel file and redirect to home page by click the button on the action panel.

Site Measure

1 Select **Site Measure**. The system refreshes the detail panel with recalculated cash flow measures based on the selected site measure.

2 Select **Customer Measure**. The system refreshes the detail panel with recalculated cash flow measures based on selected the customer measure.

3 Select **Cash Type Measure**. The system refreshes the detail panel with recalculated cash flow measures based on the selected cash type measure.

4 Select **Product Measure**. The system refreshes the detail panel with recalculated cash flow measures based on the selected product measure.

5 Select **Version Measure**. The system refreshes the detail panel with recalculated cash flow measures based on the selected version measure.

6 Select **Time Calculation Measure**. The system refreshes the detail panel with recalculated cash flow measures based on the selected time calculation measure.

7 Click **Comparison** or **Product Detail**. The comparison page or product detail page is displayed.

8 Select year or quarter or month in the Time field and select a number in number of periods field. The system refreshes the detail panel with recalculated cash flow measures based on the selected time measure and number of periods measure.

Cash flow product details

Click **detail report** and then click **product detail** on the pop up dialog in the cash flow statement page. The system displays detail cash flow page.

Filter section contains dimension filters - Site, Customer, Vendor, Date Planning, Product, Version and Group By.

Detail section - Shows the detail value for the selected filter by account.

Action - You can perform some actions such as refresh, print to pdf, export to excel file and redirect to home page by click the button on the action panel.

Site Measure

1 Select **Site Measure**. The system refreshes the detail panel with recalculated cash flow measures based on the selected site measure.

2 Select **Customer Measure**. The system refreshes the detail panel with recalculated cash flow measures based on the selected customer measure.

3 Select Vendor Measure. The system refreshes the detail panel with recalculated cash flow measures based on the selected vendor measure.

4 Select **Date Planning Measure**. The system refreshes the detail panel with recalculated cash flow measures based on the selected date planning measure.

5 Select **Cash Account Measure**. The system refreshes the detail panel with recalculated cash flow measures based on the selected cash account measure

6 Select **Product Measure**. The system refreshes the detail panel with recalculated cash flow measures based on the selected product measure.

7 Select **Version Measure**. The system refreshes the detail panel with recalculated cash flow measures based on the selected time version measure.

8 Select **Group By Measure**. The system refreshes the detail panel with recalculated cash flow measures based on the selected time group by measure.

9 Select **Product in Group By Measure**. The dimension Cash Account is shown and the Product dimension is hidden.

10 Select **Cash Account in Group By Measure**. The dimension Cash Account is hidden and the Product dimension is shown.

11 Click **Comparison** or **Trend**. The comparison page or Trend detail page is displayed.

12 Select the Cash Version Actual in Statement report and then click go to detail level to product detail report. The Group By field display Cash Account by default.

Colors in total planning row

The total planning row (the row of All Cash Account) has three different colors.

Green indicates the target value can be achieved. (The actual value + all the customer order and purchase order for projected except estimate orders and PO requisitions> planning value). Light yellow indicates the target value may be able to be achieved. (The actual value + all the customer order and purchase order for projected < planning value but The actual value + all the customer order and purchase order for projected + all the estimate value and PO requisitions > planning value). Orange indicates the target value cannot be achieved (The actual value + all the customer order and purchase order for projected + all the estimate value and PO requisitions < planning value).

The basic blue line indicates actual value + projected value. Gray indicates the lowest value in a year. When the section of the column above the blue line is red, that indicates the value > actual value + projected value.

Drill down reports

Detail table report

These steps detail how to navigate from a Dashboard Widget to a Detail Table Report.

1 Login to Dashboard.

2 Click one column on the Sales by Sales Channel widget. You are redirected to Sales Details of *XXX* Sales Channel which contains these sections:

   a. **Filter** - You can slice and dice the cube through selecting filter condition
   b. **Drill down dimension** - You can drill down / up in the dimension.
   c. **Zoom In / Out elements** - You can zoom in / out from selected element
   d. **Measure** - You can sort or rank measure values
   e. **Measure selection** - You can select which measure elements to display

Here is an example of a detail table report:

Change filter

1 Click the Filter icon. The Filter dialog is displayed.

2 Select one of the dimension elements; for example, All Sites. The element browser dialog is displayed.

3 Enter a value in 'Search for' textbox and click the Find icon. Search results that match search criteria are displayed.

4 Click **Clear Search Results**. The top level elements are displayed again in the search result area.

5 Expand the top level element. The child elements of this parent element are displayed.

6 Select one of the elements.

7 Click **OK**. The element browser dialog is closed, and this new selection is displayed on the Filter dialog.

8 Click **OK**. The dialog is closed and details report is refreshed with recalculated measure data based on new filter selection.

Drill down dimension

Click a drill down dimension; for example, Ship_Date. A shortcut menu is displayed.

Select element

1 Click **Select elements…**. An element browser is displayed.

2 Select the **Select all** icon.

3 Select the **Unselect all** icon.

4 Select an individual checkbox.

5 Click **OK**. The dialog is closed and the the details report refreshes and only presents the selected elements of drill down dimension.

Select show top level

Click **Show top level elements**. The details report refreshes by only presenting the top level elements of drill down dimension.

Select level of drill down dimension

1 Select **Level…**.The Level browser dialog is displayed.

2 Select one level. You can also search, find next, or find previous element.

3 Double-click any level as the final selection. The Level browser dialog is closed and the details report refreshes and presents all elements on the selected level.

Sort elements of drill down dimension in ascending order

Click **Sort ascending**. The details report refreshes and sorts the element name in alphabetic ascending order.

Sort elements of drill down dimension in descending order

Click **Sort descending**. The details report refreshes and sorts the element name in alphabetic descending order.

Suppress empty rows of drill down dimension

Click **Suppress empty rows**. The details report refreshes and hidee any rows without any data or with only Zero.

Zoom in/out element

Use zoom in/out element

1 Click one of the Zoom In/Out elements.

2 Click **Select**. The selected row is highlighted.

Zoom in

Click **Zoom in.** The details report refreshes and displays the dimension elements that are direct children of the zoom in element.

Zoom out

Click **Zoom out**. The details report refreshes and displays the dimension elements that are direct parents of the zoom in element and all of the sibling elements of the parent element.

Select decendants on level

1 Click **Descendants on Level...**. The level browser dialog is displayed.

2 Double-click a level. The level browser dialog is closed, and the details report refreshes and displays descendants of the selected Zoom In/Out element on the selected level.

Measure

Select Measure element

1 Click the measure element.

2 Click one of the measure elements.

Zoom out from a measure

Click **Zoom out**. The report is refreshed and displays the measure elements that are direct parents of the selected measure element and all of the sibling elements of the parent element.

Select decendants on level

1 Click **Descendants on Level...**. The level browser dialog is displayed.

2 Double-click a level. The level browser dialog is closed and the details report refreshes and displays descendants of the selected measure element on the selected level

Sort value in ascending order

Click **Sort ascending**. The details report is refreshed and sorts the value of the selected measure in ascending order.

Sort value in descending order

Click **Sort descending**. The details report is refreshed and sorts the value of the selected measure in descending order.

Rank value of a measure

1 Click **Ranking…**. The Ranking dialog is displayed.

2 Select ranking type.

3 Enter ranking value.

4 Click **OK**. The Ranking dialog is closed and the details report is refreshed and only presents the record with the value of selected measure that meet the ranking criteria.

Select measure selection

Click the measure selection icon. A shortcut menu displays.

Select elements

1 Click **Select elements...**. The Element Browser dialog is displayed.

2 Select the **Select all** icon and then select the **Unselect all** icon.

3 Selet an individual check box.

4 Click **OK**. The dialog closes and the details report is refreshed and only presents the selected measure elements

Select show top level elements

User clicks Show top level elements

System refreshes the details report by only presenting the top level elements of measure dimension

Select level

1 Click **Level…**. The Level browser dialog is displayed.

2 Click one level. You can also search, find next, or find previous element.

3 Double-click any level as the final selection. The Level browser dialog is closed and the details report is refreshed and presents all elements on the selected measure level.

Suppress empty rows

Click **Suppress empty rows**. The details report is refreshed and hides any rows without any data.

Suppress empty columns

Click **Suppress empty columns**. The details report is refreshed and hides any columns without any data.

Detail trend report

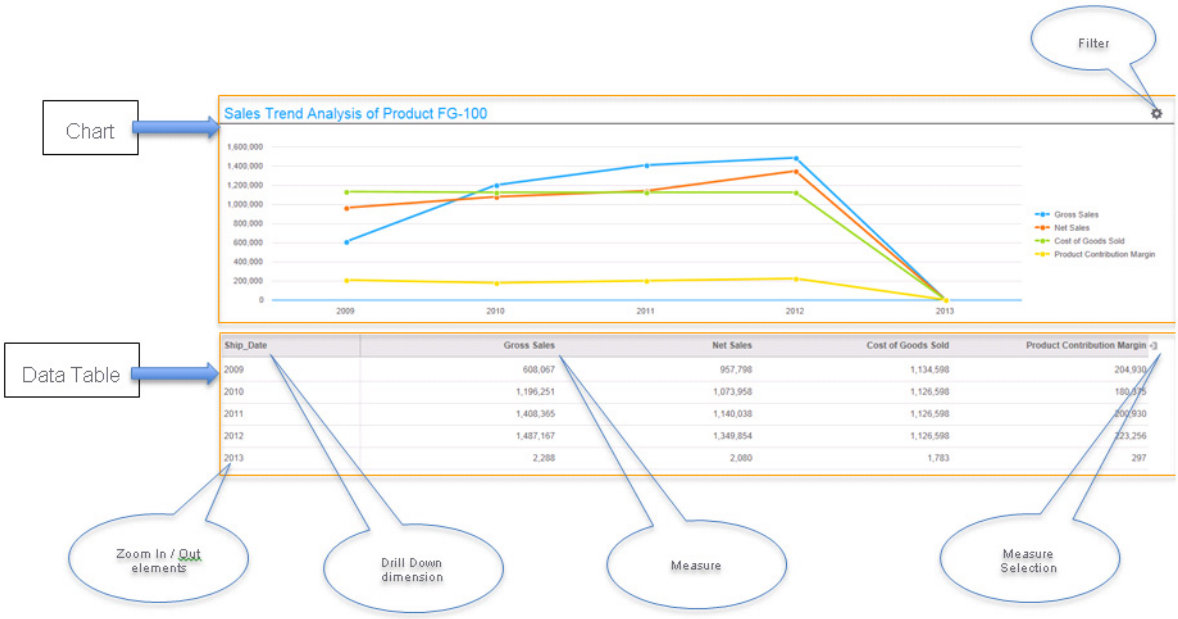
Navigate from Dashboard Widget to Detail Trend Report

1 Logon to Dashboard.

2 Click one column on the Sales by Product widget. You are redirected to Sales Trend Analysis of Product *XXX* which contains two sections:

- The Chart section contains a line chart and Filter.
- The Data Table contains the drill down dimension, zoom in / out element, measure, measure selection and data details.

All features are the same as mentioned in the Detail Table Report except that some of the shortcut menus are disabled as they are not needed.



Detail comparison report

Navigate from Dashboard Widget to Detail Comparison Report

1 Logon to Dashboard.

2 Click one column on Top 10 Sales. You are redirected to Sales Details of Sales Person *XXX* which contains two sections:

- The Chart section contains a column chart and Filter.
- The Data Table contains the drill down dimension, zoom in / out element, measures, variance, and measure selection.

Most features are the same as mentioned in the Detail Table Report. Only some of the shortcut menus are disabled as they are not needed. Here is some supplementary information:

Measure

In this shortcut menu, **Zoom Out** and **Descendants on Level** are disabled.

Measure selection

In this shortcut menu, **Select element**, **Show top level element**, **Level** and **Suppress empty columns** are disabled.

Variance

1 Click **Variance**.

2 System displays a shortcut menu as below

3 Select **Absolute**. Report is refreshed and displays the variance in absolute value.

4 Clicks **Variance** again.

5 Select In-Percent. The report is refreshed and displays the variance in percentage.

Appendix A: yySelf Service

A

Self-Service is an application built in Application Studio; a set of reports which enable you to create widgets with various visualizations and tables on top of multidimensional data.

Create dashboard widgets with drill down function

1. In Infor BI Application Studio, select the preferred chart type for the dashboard widget. It can be:
   - Actual-budget Comparison
   - Column Chart
   - Bar Chart
   - Filter
   - Pie Chart
   - Trend
   - Single Line Chart
   - Multi-line Chart
   - Doughnut Chart
   - Line-bar Chart
   - Stacked Chart
2. If there is a sub chart type, select the one you want.
3. Select Data Source for both Dashboard Widget and Drill Down Detail Report.
4. Clicks the right arrow to progress.
5. Select data for both Dashboard Widget and Drill Down Detail Report.
6. Click a vertical dimension; Customer for example.
7. Drag and drop slicer dimension to vertical dimension; for example, Ship_Date to Customer.
8. Click measure; for example, Quantity Shipped.

Note: You can select multiple measure elements in this way:

   a. Click a measure element; for example, Gross Sales.
   b. Select **Select element…**

c. Click the measure name on the Element Browser dialog; for example, Measure_Sales_and_Product_Contribution_Analysis
d. Click **Show top level element**.
e. Select the measure elements to be displayed on drill down detail report.

9. Review the selected data for dashboard widget and drill down detail report.
10. Clicks the right arrow to progress.
11. Specify the Title and Description for both Dashboard Widget and Drill Down Detail Report.
12. Click the right arrow to progress. The resulting dashboard widget is displayed.
13. Save this report template to a snapshot so all the settings made in previous configuration steps are stored with this snapshot. Right-click the newly-created widget template, and select **New > Snapshot**.
14. Click the pie chart on snapshot to see the drill down report.

Modify dashboard widgets

1. Go to Application Studio windows client.
2. Login to Infor CloudSuite BI 9.00.31 repository.
3. Select the Dashboard Widgets; for example, Top 10 Sales by Net Sales.
4. Click **Show Data** to show different data.
5. Manipulate the data via OLAP operations such as zoom in / out vertical dimension, or select different measure.
6. Click **Show Chart**.
7. Right-click the Dashboard Widget.
8. Click **New > Snapshot**.
9. Copy Name and Unique Name from the properties of the original Dashboard Widget.
10. Delete Original Dashboard Widget.
11. Check-in this report folder so the deletion is applied to the repository.
12. Rename the new Dashboard Widget snapshot with old name or a unique name.
13. Check-in this new report snapshot.

Other information such as report title can be changed in Report Variable - Title. A new snapshot needs to be saved to keep this new report variable value.

If the original Dashboard Widget is used in Dashboard, then this old report will not work any more. You must remove the original dashboard widget and add the new one.

View and drill down from dashboard reports

1. Start Dashboard.
2. Click the gear icon at the top right corner of a dashboard widget. You get two options; Show data and Change filters.

Show data

If you choose **Show data**, you can view either a table or a chart.

Data table

When viewing a data table, if you click on the dimension name, a menu appears with several options.

1. Click **Select element…**. The element browser is displayed.
2. Select any check box or any combination of check boxes.
3. Click **OK**. The system refreshes the details report and only presents the selected elements of drill down dimension.
4. Select **Show top level elements** from the menu to present the top level elements of the drill down dimension.
5. Select **Level...** from the menu to present all elements on the selected level.
6. You can click on a vertical dimension or measure element to get more options in a menu.
7. If viewing a multi-measure data table, click the icon next to the header row to get more options in a menu.

Change filters

If you choose **Change filters**, the Filters dialog is displayed.

1. Click one of the dimension elements. An element browser dialog is displayed.
2. Specify a value in **Search for** field and click the **Find** icon. Results that match the search criteria are displayed.
3. Click **Clear Search Results**.
4. Expand the top level element. Child elements of this parent element are displayed.
5. Click one of the elements.
6. Click **OK**. The new selection is displayed.
7. Click **OK**. The details report is refreshed with recalculated measure data based on the new filter selection.

Drill down from dashboard widget

Click any dashboard widget chart area. The system directs you to the drill down detail report. There are three types of detail reports which will appear depending on what area of a chart you click:

- Detail Table
- Detail Trend
- Detail Comparison