BI360 for Manufacturing Companies

Enabling World-class Decisions for Manufacturing Companies

A Solver Vertical Industry White Paper

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Introduction

BI360 is a leading web-based Corporate Performance Management (CPM) suite made up of budgeting, reporting, dashboards, and data warehousing, delivered through a web portal. BI360 is offered for cloud and on-premise deployment and represents the next generation of CPM solutions. BI360 empowers business users with modern features including innovative use of Excel in the model design process. End users have anytime, anywhere access from a modern Web Portal and Mobile Apps.

The features that differentiate BI360 from other CPM applications are:

1. Available both for cloud and on-premise deployment.
2. Third generation Excel add-in for simple or complex reporting and budgeting template design.
3. Modern Excel, Web and Mobile end-user front-ends for easy access to information and powerful collaboration.
4. Pre-configured and extensible, "smart" data warehouse.
5. Deployed as individual modules or as a single, comprehensive CPM Suite with a single security model and deployment.

Architecture Overview

Below, you can see a simplified architecture with all the BI360 modules. The *Reporting, Budgeting* and *Dashboard* modules can both run live on a number of different ERP systems, as well as off the BI360 *Data Warehouse*.
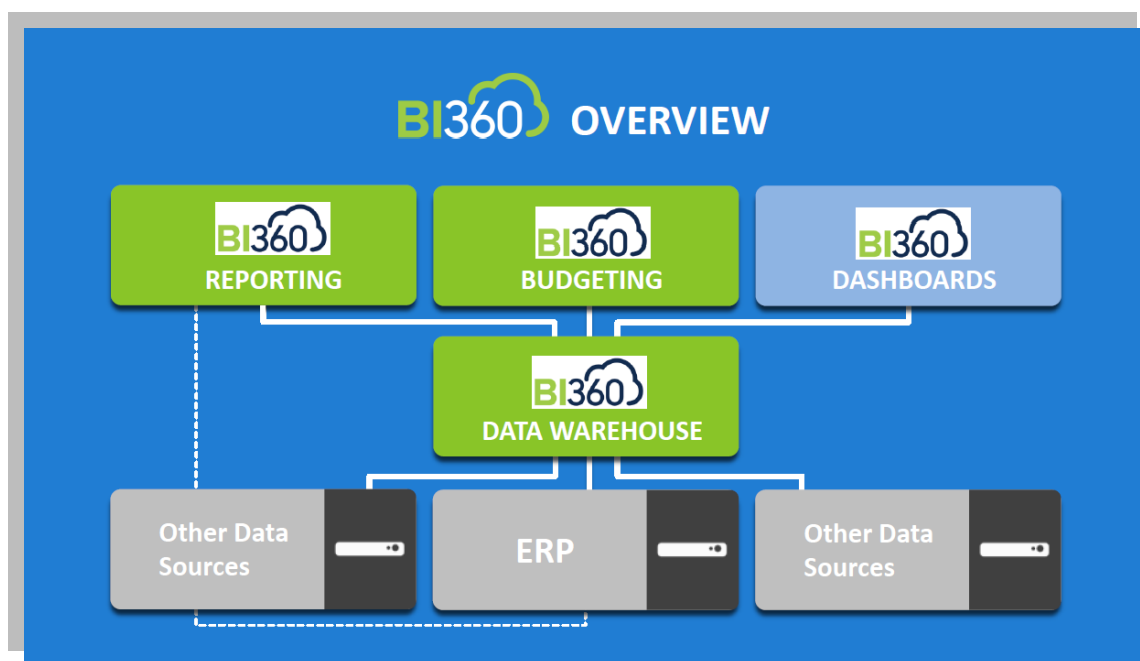
Note: For more detailed information about BI360, please email info@solverglobal.com and request the document: "BI360 White Paper – Overview of the BI360 Suite."

MFG01 – Manufacturing Benchmarking Dashboard

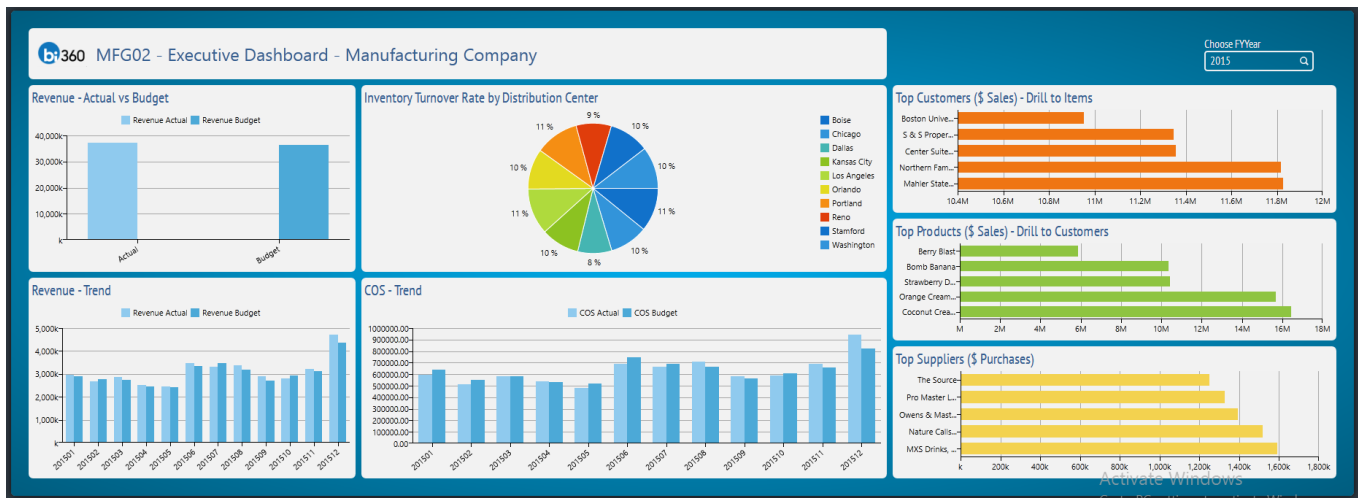This dashboard example compares key financials between your own company and selected Food Manufacturing companies. It shows the capability of using the BI360 Data Warehouse to load data from external data sources and then, to design dashboards with the BI360 Dashboard module for user-friendly graphical analysis, in this case used for benchmarking.

- Revenue Growth (%)
- Gross Margin (%)
- Surplus/Deficit Margin (%)

MFG02 – Executive Dashboard

This is an example of an executive dashboard. It shows the use of the BI360 Data Warehouse to combine numerous important data sources and on a single dashboard, present whatever a company determines as the most essential information to an executive. In this sample dashboard, the following information is included:

- Actual vs Budgeted Revenues - Monthly
- Actual vs Budgeted Revenues – Twelve month trend
- COS – Twelve month trend
- Inventory turnover rate by distribution center
- Top Customers with drill down to Items
- Top Products (Items) with drill down to Customers
- Top Suppliers

MFG03 – Profit and Loss

This Report shows your Net Income and associated account details in Month to date, as well as:

- Revenue and Profit Chart
- Profit Margin (%) and Revenue/Employee Chart
- Revenue by Products
- ACT MTD, YTD, and Comparative/Variance Columns

MFG04 – Balance Sheet

This is a standard Balance Sheet for a Manufacturing Company – includes:

- Assets MTD, Prior MTD Chart
- Liabilities MTD, Prior MTD Chart
- Custom Account Attributes (Rollups) - Custom categories of accounts may be used in reporting; the data source may be custom built in the Data Warehouse or may come direct from ERP.
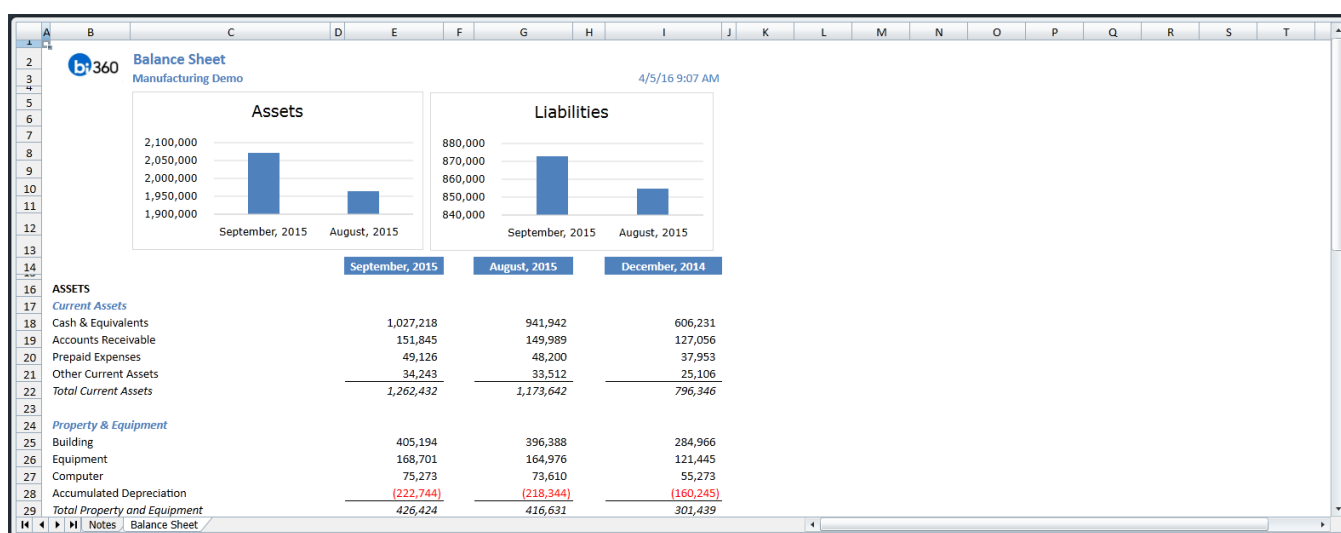
MFG05 – Cash Flow

This report is a standard Cash Flow for Manufacturing.

The following information is included:

- Cash Flow from Operating Activities MTD, Prior MTD
- Net Cash provided by Operating Activities
- Cash from Investing
- Cash from Financing
- Net Increase in Cash

	September, 2015	August, 2015
Cash Flow from Operating Activities		
Net Income	88,605	(46,766)
Adj NI to Net Cash Provided by Ops. Activities		
Depreciation & Amortization Expense	(37,987)	(47,301)
Other Current Assets	(731)	(819)
Non-Current Assets	(8,096)	(9,887)
Accounts Receivable	(1,857)	(2,434)
Accounts Payable	2,029	2,239
Prepaid Expenses	(926)	(1,000)
Net Cash Provided by Operating Activities	**41,037**	**(105,968)**
Cash Flows from Investing Activities		
Purchase of Property, Plant, and Equipment	(14,194)	(17,993)
Accumulated Depreciation	42,387	52,830
Net Cash from Investing Activities	**28,194**	**34,837**
Cash Flows from Financing Activities		
Proceeds from Loans	16,044	18,805
Net Cash from Financing Activities	**16,044**	**18,805**
Net Increase in Cash	**85,276**	**(52,326)**
Cash at Beginning of Period	941,942	993,837

MFG06 – Revenue New/Existing Customers

This dashboard example focuses on Revenue from Existing Customers as well as New Customers.
The following dashboard features are enabled:

- Custom Filtering by Customers Top 10 New and Top 20 Existing, Measure Sorting (Revenue), Highest revenue producers to Lowest
- Period Selection, Drill to Period (Interactive Charts)
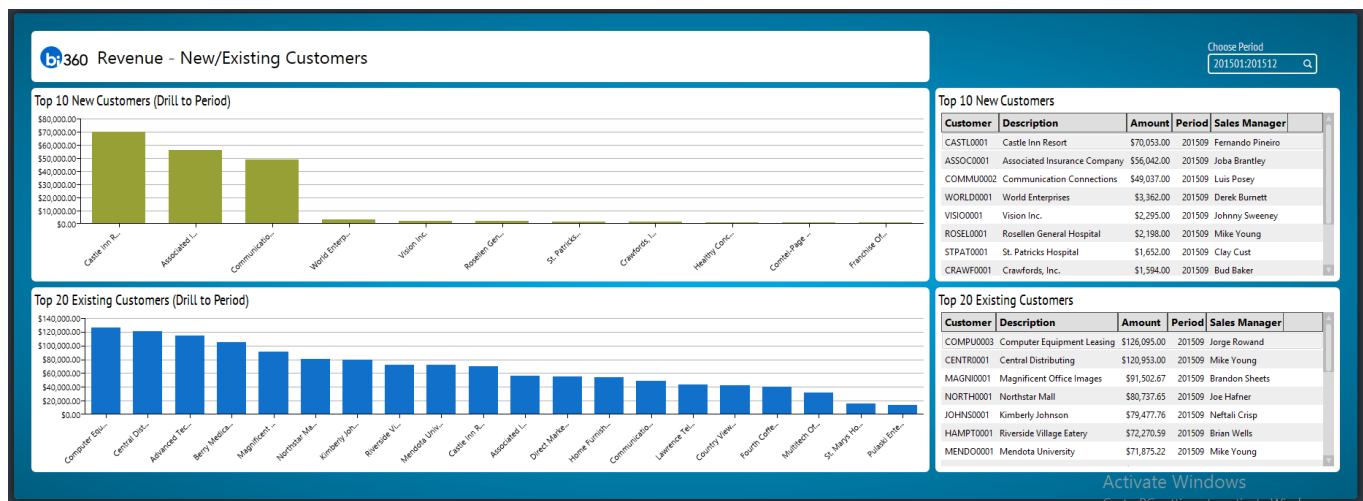
MFG07 – Direct Labor Cost by Manufacturing Process

The purpose of this example is to show Labor Cost Totals by Plant, as well as by Employee and Manufacturing Process.
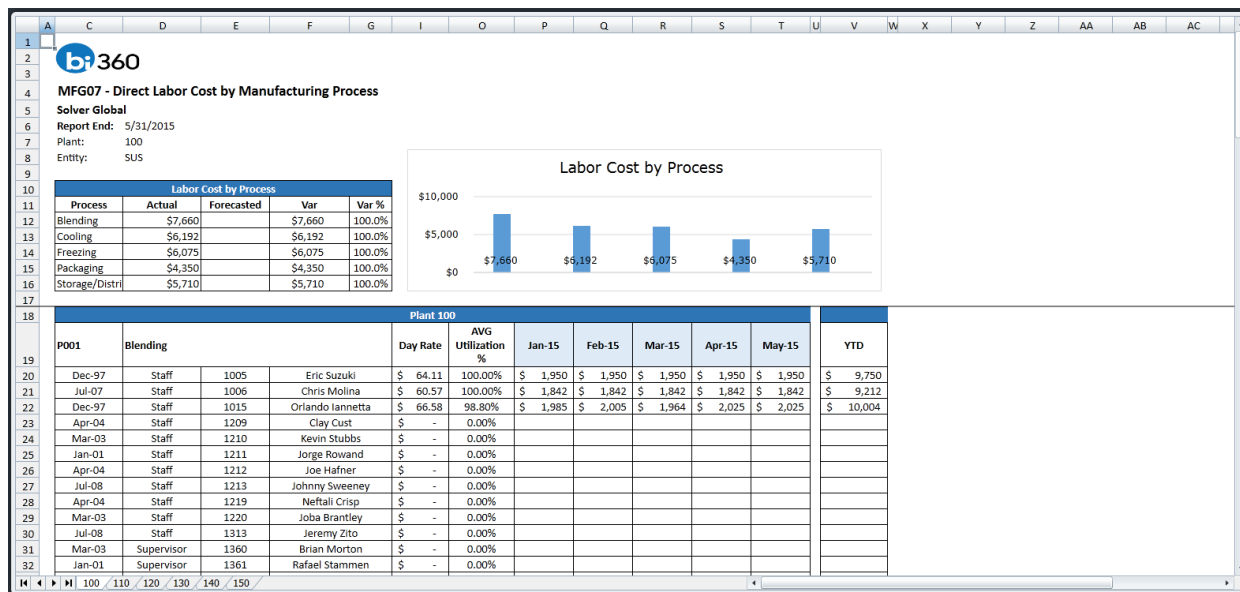

The following information is included in this example:
- Labor Cost Summary by Process/Plant
- Employee Cost Per Day
- Employee Utilization Rate
- Labor Cost YTD and YTD Total

MFG09 – Direct Labor Turnover Dashboard

This dashboard example focuses on Labor Headcount and Turnover.

The following dashboard features are enabled:

- Filtering by Employee
- Period Selection, Drill to Plant ID to view Plant specific data (Interactive Charts)
- 12 Month Turnover Rate Trend
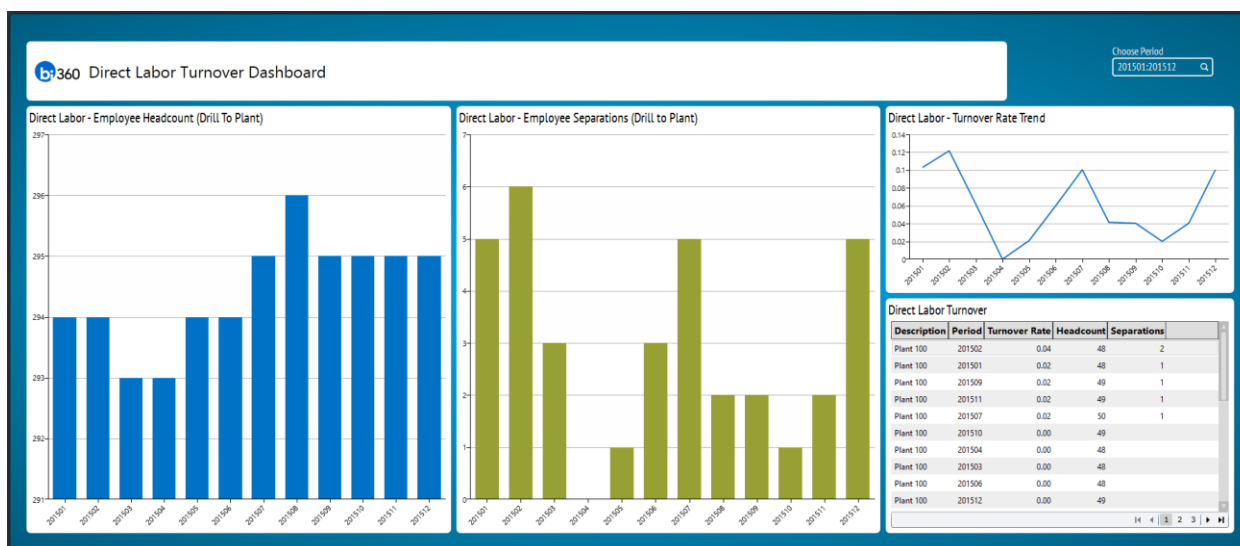
MFG10 – Direct Labor Safety Records Dashboard

This example shows Number of Safety Incidents and Near Incidents Reported.
The following dashboard features are enabled:

- Number of Incidents/Near Incidents Reported 12 Months
- Period Selection, Drill to Plant ID to view Plant specific data (Interactive Charts)
- Safety Quiz Score 12 Month Trend
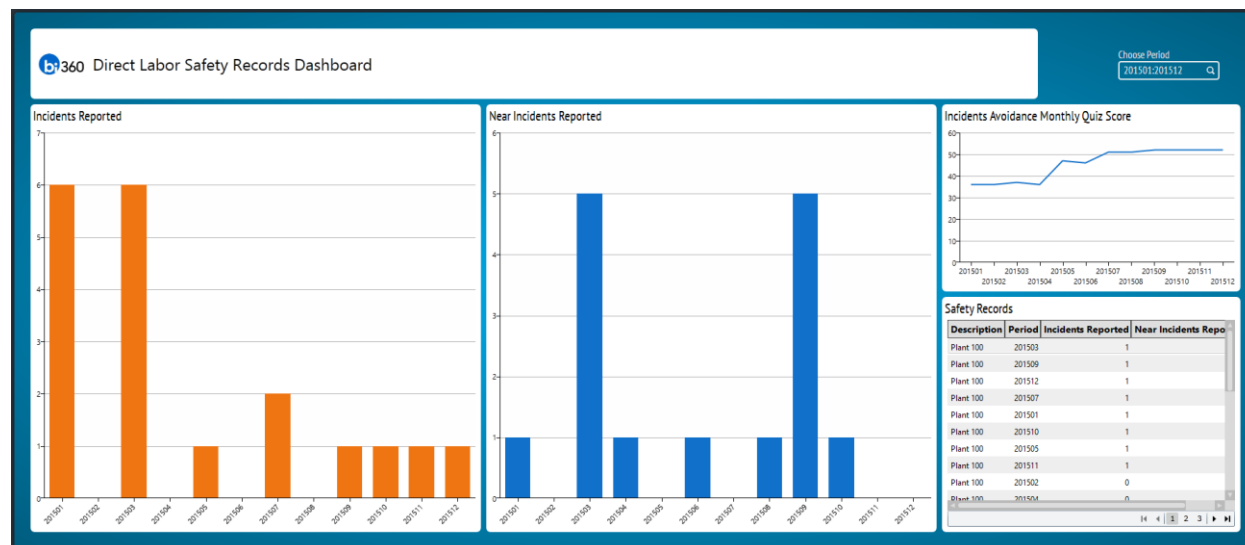
MFG11 – Labor Forecast by Employee

This report is an example of a Web Budgeting Input Form. Users can track and manage Labor Cost Scenarios by Employee. Monthly spread based on Annual Salary. Monthly Forecasts may be saved for Remaining Periods in the Year and compared to Actual Labor Costs incurred.
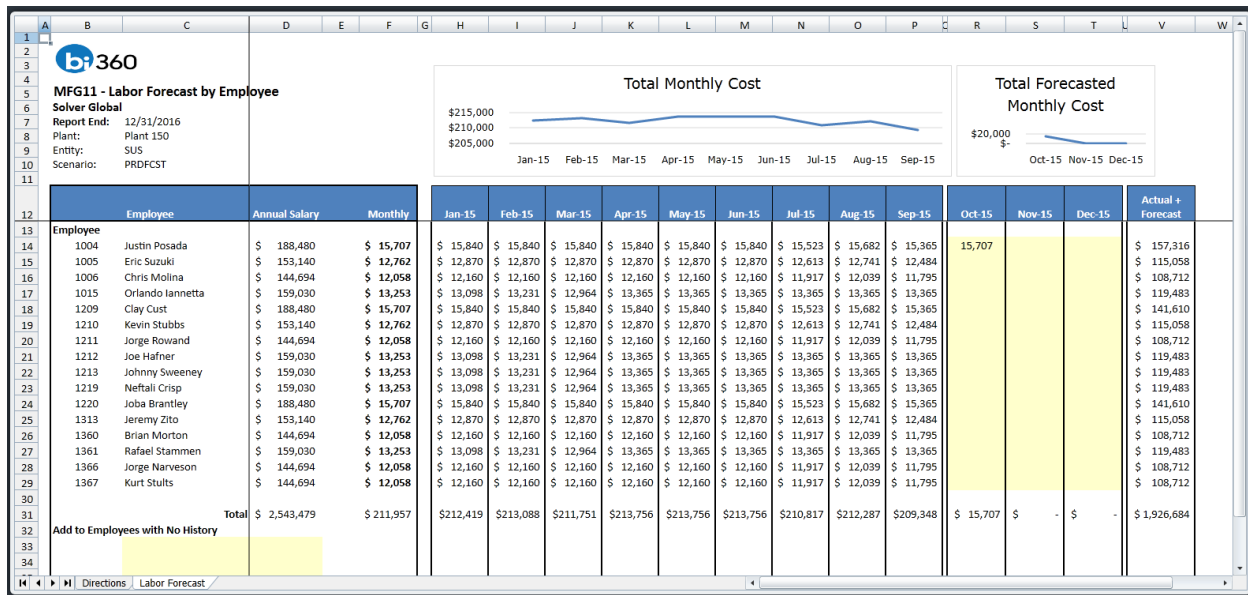
MFG12 – Open Orders

The Open Orders Report shows following metrics per Product, and is represented by Pie Chart showing data as visual % of whole.

- Qty on Hand
- Qty on Customer Orders
- Qty Available
- Backlog Qty
- Quality %
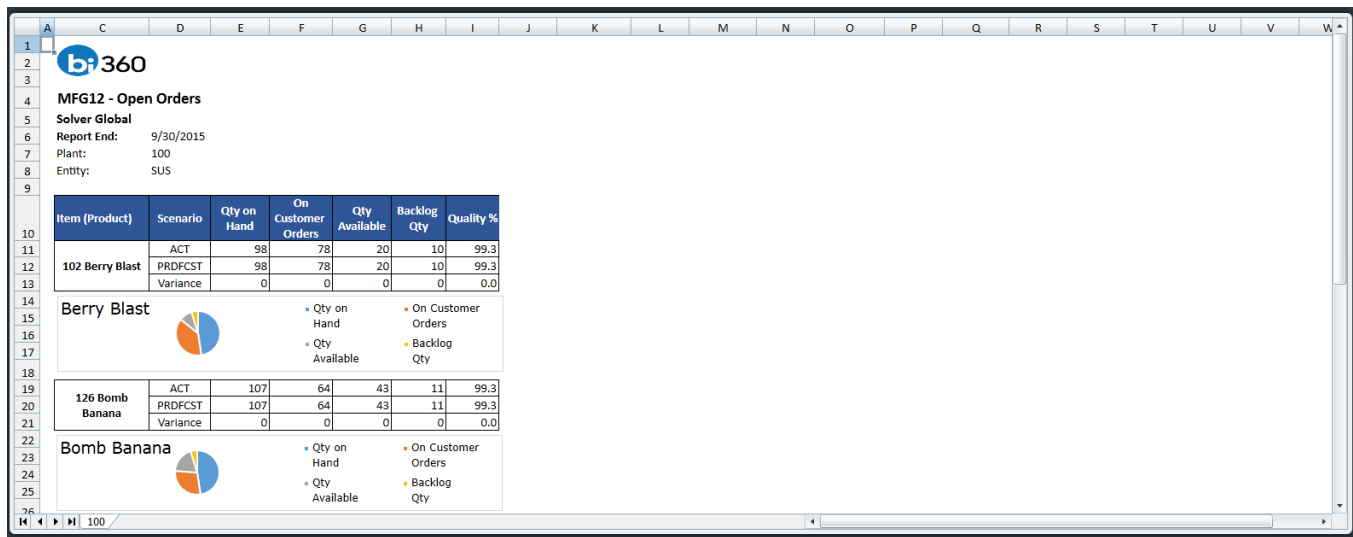
MFG13 – Work Order Management

This report shows a detailed view of Open Work Orders by Plant ID and Product ID. Note Sequence Column which indicates order in which work orders are processed according to each Facility.

- Plant ID
- Customer
- Work Order ID
- Item (Product)
- Manufacturing Sequence
- Hold Status, Comments, Inventory Status, Capacity Status

bi360

MFG13 - Work Order Management
Solver Global
Report End: 1/31/2015
Plant: 100
Entity: SUS
Scenario: ACT

Demo Note: Sequence Column indicates order in which work orders are processed.

Plant ID	Customer	Work Order ID	Item (Product)	SKU	Release Date	Qty Open	Qty Recvd	Status	Sequence	Hold	Comments	Inv Status	Capacity Status
100	CENTR0001	405920	Berry Blast	102	1/1/2015	100		C	1		WIP	OK	OK
100	CENTR0001	405921	Berry Blast	102	1/1/2015	1		C	2		WIP	OK	OK
100	CENTR0001	405922	Berry Blast	102	1/1/2015	1		C	3		WIP	OK	OK
100	CENTR0001	405923	Berry Blast	102	1/1/2015	1		O	4		WIP	OK	OK
100	CENTR0001	405924	Berry Blast	102	1/1/2015	10		R	5		WIP	OK	OK
100	CENTR0001	405925	Berry Blast	102	1/1/2015	1		R	6		WIP	OK	OK
100	CENTR0001	405926	Bomb Banana	126	1/1/2015	1		C	7		WIP	OK	OK
100	CENTR0001	405927	Bomb Banana	126	1/1/2015	1		C	8		Past Released	SHORT	SHORT
100	CENTR0001	405928	Bomb Banana	126	1/1/2015	1		O	9		Past Released	SHORT	OK
100	CENTR0001	405929	Strawberry Dreams	194	1/1/2015	1		C	10		Past Released	OK	OK
100	CENTR0001	405940	Berry Blast	102	1/1/2015	25		C	21			OK	OK
100	CENTR0001	405941	Berry Blast	102	1/1/2015	1		C	22			OK	OK
100	CENTR0001	405942	Berry Blast	102	1/1/2015	10		C	23			OK	OK
100	CENTR0001	405943	Berry Blast	102	1/1/2015	1		C	24			OK	OK
100	CENTR0001	405944	Berry Blast	102	1/1/2015	1		C	25		WIP	OK	OK
100	CENTR0001	405945	Berry Blast	102	1/1/2015	1		C	26		WIP	OK	OK
100	CENTR0001	405946	Bomb Banana	126	1/1/2015	1		C	27		WIP	OK	OK
100	CENTR0001	405947	Bomb Banana	126	1/1/2015	1		C	28		WIP	OK	OK
100	CENTR0001	405948	Bomb Banana	126	1/1/2015	100		C	29		WIP	OK	OK
100	CENTR0001	405949	Strawberry Dreams	194	1/1/2015	100		R	30		WIP	OK	OK
100	COMTE0001	405980	Tutti Frutti	313	1/1/2015	100		C	61			OK	OK
100	COMTE0001	405981	Tutti Frutti	313	1/1/2015	100		C	62			OK	OK

Work Order Management

MFG14 – Materials Usage Variance

This report shows the differential between Standard and Actual Cost, as well as Standard Qty and Actual Qty per material used.

- Charts display Actual Cost by Plant and Actual Qty by Plant
- Plant Summary (Top Level)
- Materials/Product Specific detail by Plant (Materials Detail by Product Type)
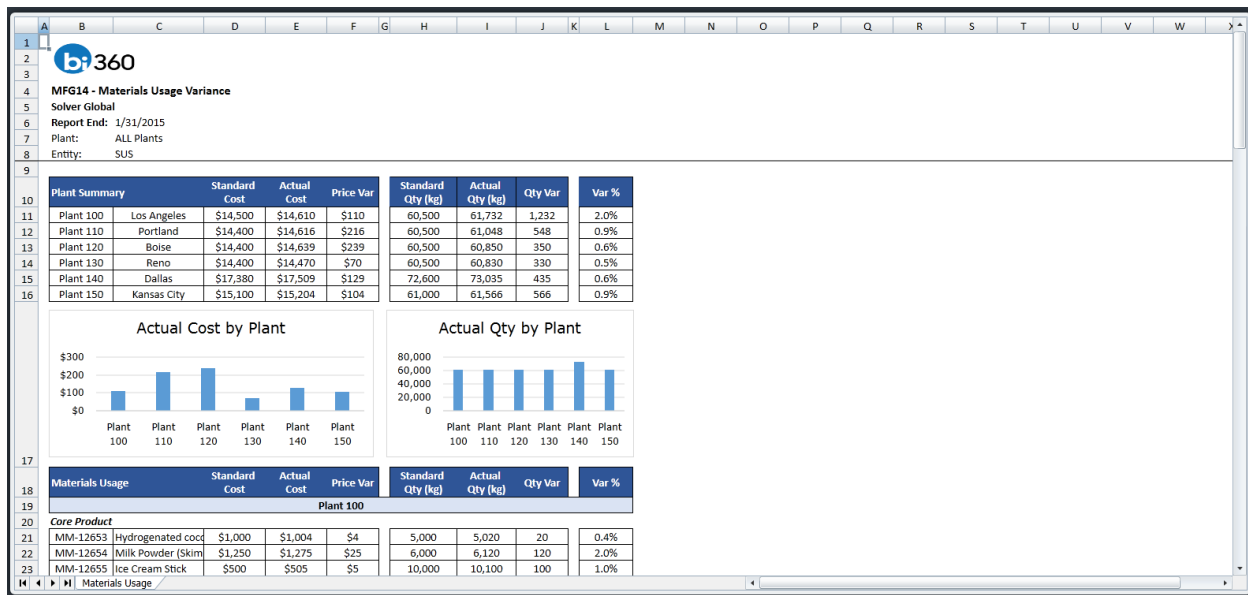
MFG15 – Materials Cost Dashboard

The following dashboard features are enabled:

- Key Manufacturing GL Accounts, 12 Month View
  - Raw Materials
  - Intermediate Inventory
  - Work in Progress (WIP)
  - Finished Goods
- Period Selection, Drill to Department to view Department level data (Interactive Charts)

MFG16 – Utilities Cost Dashboard

The following dashboard features are enabled:

- Key Manufacturing GL Accounts, 12 Month View
  - Electricity Cost
  - Natural Gas Cost
  - Sewage Cost
  - Water Cost
- Period Selection, Drill to Department to view Department level data (Interactive Charts)

MFG17 – Yield Variance

This report shows Product Yield figures by Plant ID. Yield Variance shows Standard Production Yield vs Actual Production Yield Outcome.

Plant 100		Act Price	Act Qty	Standard Qty	Prod Weight	Actuals Yield (kg)	Standard Yield (kg)	Yield Var (kg)		Cost per Kg	Yield Loss
194	Strawberry Dreams	2,980	12,100	12,100	19.8	239,580	239,580	0		$151	$0
313	Tutti Frutti	3,080	12,100	12,100	18	217,800	217,800	0		$171	$0
603	Fudge Swirl	2,913	12,484	12,100	18	217,800	224,712	6,912		$162	$1,118,669
795	Coffee Swirl	2,880	12,100	12,100	18	217,800	217,800	0		$160	$0
885	Lemon Swirl	2,780	12,100	12,100	18	217,800	217,800	0		$154	$0
	Total	14,633	60,884	60,500	92	1,110,780	1,117,692	6,912		$798	$1,118,669

MFG17 - Yield Variance
Solver Global
Report End: 9/30/2015
Plant ID: 100
Entity: SUS

Actual vs Expected

Demo Note: Hide Column

MFG18 – Capacity Utilization Dashboard

The following dashboard features are enabled:

- Capacity Utilization by Plant
- Average Utilization Rate 12 Month Trend
- Period Selection, Drill to Period to view Period specific data (Interactive Charts)

MFG19 – Equipment Maintenance

This report shows key maintenance data relative to Manufacturing Equipment.

- Machine/Equipment ID
- Maintenance Interval (Hours)
- Maintenance Type
- Equipment Run-Time (Hours): MTD, YTD, YTD Expanding
- Compare CY vs PY Run-Time

MFG20 – Production Forecast by Plant

This report is an example of a Web Budgeting Input Form. Users can track and manage Production Cost Scenarios by Plant and Product. Monthly spread based on Rate Table Selection. Monthly Forecasts may be saved for Remaining Periods in the Year and compared to Actual Production Costs incurred.