SALES AND OPERATIONS PLANNING PERFORMANCE BLUEPRINT—DISTRIBUTION

APPLICATION BRIEF

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INTRODUCTION

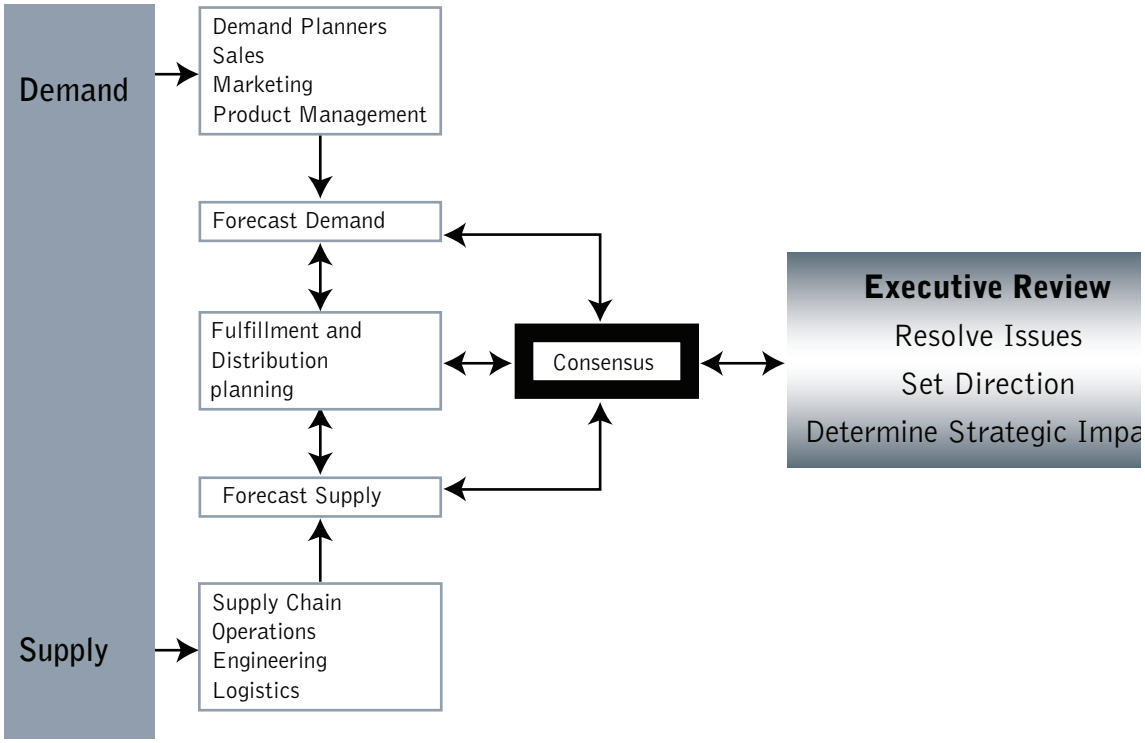
This application brief demonstrates best practices for sales and operations distribution planning. By implementing the IBM Cognos Sales and Operations Planning Performance Blueprint-Distribution*, organizations can test many factors in the planning process and use the plan to determine whether resources and budget will meet demand. The models and processes described in this document are generic for most North American companies, but can be configured to support alternative model requirements and to accommodate planning in many countries.*

OVERVIEW

The *IBM Cognos Sales and Operations Planning Performance Blueprint—Distribution* provides an in-depth guide to post-production fulfillment and distribution planning. As sales and operations planning (S&OP) matures in organizations, it has evolved into an internal, supply chain-wide process that reconciles operational plans across all relevant business operations. The Sales and Operations Planning suite of Blueprints continues to grow due to demand plans and their connection to production-constrained supply plans and constrained distribution plans. Demand and supply plans and the executive review components strongly reflect companies' operational and strategic financial plans.

Figure 1 shows where the new functionality in fulfillment and distribution fits into the *Sales and Operations Planning Blueprint* suite of models.

Figure 1



BLUEPRINT OBJECTIVES

The *IBM Cognos Sales and Operations Planning Performance Blueprint—Distribution* is a Web-based process for S&OP distribution planning using IBM Cognos 8 Planning and IBM Cognos 8 Business Intelligence. The *Blueprint* provides a performance-management framework that includes planning, metrics, and reporting.

This application brief provides an overview of a typical customer implementation. The models and processes described here apply to most manufacturing companies and can be configured to support alternative model requirements and accommodate planning in any environment.

Using the *Blueprint*, organizations can test many major constraints in the planning process: inventory targets and budgets; warehouse space; service versus cost trade-offs; and other supply chain costs such as carrying costs and capital investments, variable costs, and fixed cost budgets on the distribution side of the organization. Manufacturers can use the plan to determine whether sufficient resources and budget exist to meet demand over broad time frames, such as months, quarters, or years.

The *Blueprint* was designed to meet typical business needs, such as:

- A decision-making mechanism to identify over-capacity situations and make informed decisions to relieve bottlenecks such as allocating available capacity or investing in future capital expansion to provide additional future capacity
- Planning and controlling priorities
- The ability to model the constraints and costs of
  - Warehouse facilities (e.g., space and inventory)
  - Critical labor and machinery resources
  - Direct and indirect expenses
- Variance analysis and exception reporting from actual to plan
- *What-if* modeling, which enables managers to perform multi-dimensional and multi-scenario analyses of changes in demand, supply plan, resource availability, as well as the associated financial impact
- A tool to resolve conflicts in the supply and demand plan
- A method of determining the tradeoff between customer-service levels and constrained resources
- A method of integrating the fulfillment and distribution capabilities into the S&OP process

Supply-chain management focuses on the flow of raw materials, parts, work-in-process, and finished products required to ensure that customers receive finished products at the right time, in the right location, and in the right amounts. Executives now realize the importance of logistics to corporate strategy. Superior customer service may be the key goal driving logistics strategy, but organizations must also consider cost, value-added services, flexibility, and adaptability.

Manufacturers must align supply and demand to create one statement of anticipated demand and use that statement as the single driver for consumption of critical supply-chain resources. Frequently, one key step in the process—checking available capacity—occurs too late; manufacturers would benefit from integrating an effective supply-chain capacity check into the S&OP process. The focus should be on bottleneck work centers, critical in-bound supply chain materials, and restricted support processes, such as financial commitment, transportation and logistics, and warehousing facilities. More than ever, organizations today need an effective way to identify those resources and link them to the demand plan.

Business Problems Related to S&OP

- Inefficient operations, with limited integration between Sales, Supply Chain/Manufacturing Operations, and Finance
- Inability for senior management to develop integrated demand and supply plans and simulate financial impact of scenarios
- Decreased customer loyalty and greater competition
- Low-cost competition
- Systems that do not support overall view of the business
- Disconnected processes caused by multiple functions and processes in the organization
- Multiple and disjointed transaction systems
- Extended and complex global supply-chain networks
- Outsourced logistics and manufacturing
- Significantly increasing logistics costs
- Increasing globalization in manufacturing, resulting in new operational issues

S&OP is a critical link between strategy and execution; the S&OP plan is only valuable if it is attainable. Supply chain resource planning provides an effective tool for testing the S&OP plan against supply-chain critical resources as part of the consensus process. Specifically, the *IBM Cognos Sales and Operations Planning Performance Blueprint—Distribution:*

- Provides proactive analysis of resources beyond production capacity
- Identifies major resource constraints earlier in the planning process
- Improves communication and coordination
- Enables better alignment between S&OP and resource capabilities
- Drives better customer service through improved planning, faster identification of changes in business conditions, and more frequent performance review
- Improves visibility across the entire supply chain
- Provides greater connectivity among all aspects of the supply chain
- Delivers exception-based information
- Reduces costs
- Integrates supply-chain logistics planning into the S&OP process
- Parallels physical supply chains in all firms and financial supply chains involving decisions about capital investments, borrowing, dividends, and other factors under the control of the company financial managers (the two chains should be linked, especially at the strategic level of planning)
- Incorporates *what-if* modeling, enabling managers to perform multi-dimensional and multi-scenario analyses of changes in demand, supply plan, resource availability, as well as the associated financial impact

In addition to the benefits specific to the *Blueprint*, the IBM Cognos 8 Planning solution provides significant benefits to companies:

- Flexible model development to support a wide variety of planning models
- Web-based or Excel-based deployment of models for data collection and consolidation
- Easy version control
- Real-time workflow to drive collaboration
- Real-time consolidation
- Real-time reporting
- Real-time calculations in the browser for immediate results

- Audit tracking, user textual annotations, and attachments at the cell, worksheet, and model level to drive collaboration
- Drop-down validation lists to ensure data consistency
- Scalable architecture with proven deployments to thousands of users
- Linking functionality to provide divergent, yet interrelated components of planning environment
- Off-line capabilities
- Custom-date capabilities with no limit on the time dimension to enable planning by the week, season, period, quarter, or year
- Unique multi-directional calculation engine that enables input across any dimension at both the detail and total levels

BUSINESS INTELLIGENCE

The *IBM Cognos Sales and Operations Planning Performance Blueprint—Distribution* includes multiple views into key metrics, charts, graphs, and reports. Several views appear below.

To drive visibility into exceptions and alerts, the **Sales and Operations Planning Distribution Portal** (Figure 2) combines charts, graphs, maps and drill-down information to the supporting business intelligence.

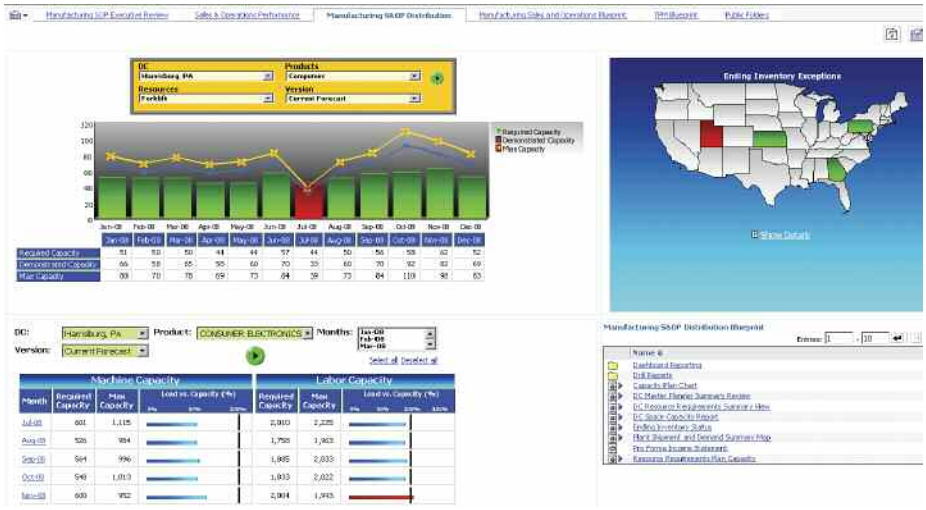


Figure 2

The **Distribution Center Inventory Level Monitor Map** (Figure 3) alerts managers about distribution center inventory exceptions. The report enables selections for month, product, and distribution center.

Figure 3

The **Distribution Center (DC) Master Planner Summary Review Report** (Figure 4) shows a complete view of a distribution center's inventory plan. This report enables a user to look at inbound inventory, outbound inventory, forecasted inventory values, and planned inventory value and provides alerts to those areas where inventory is forecasted above capacity plans.

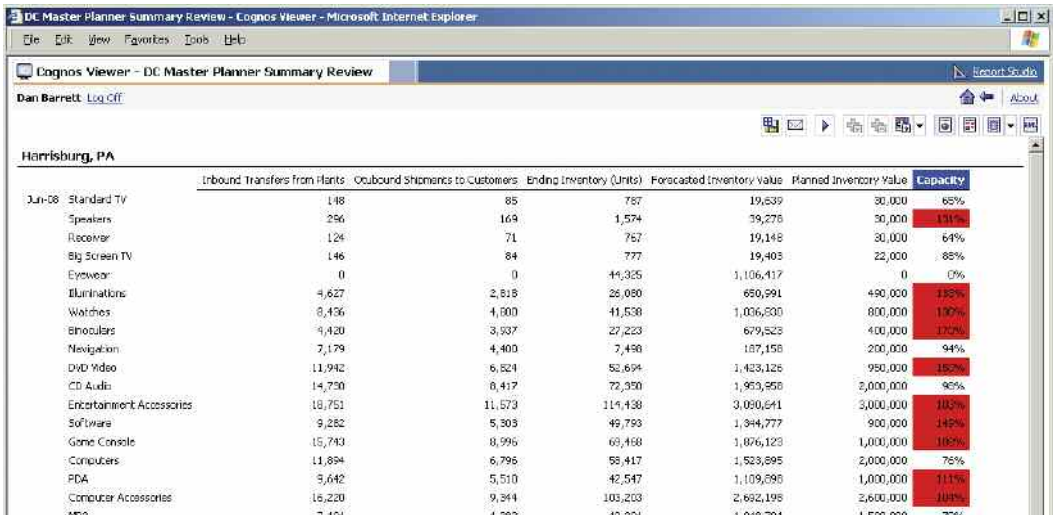
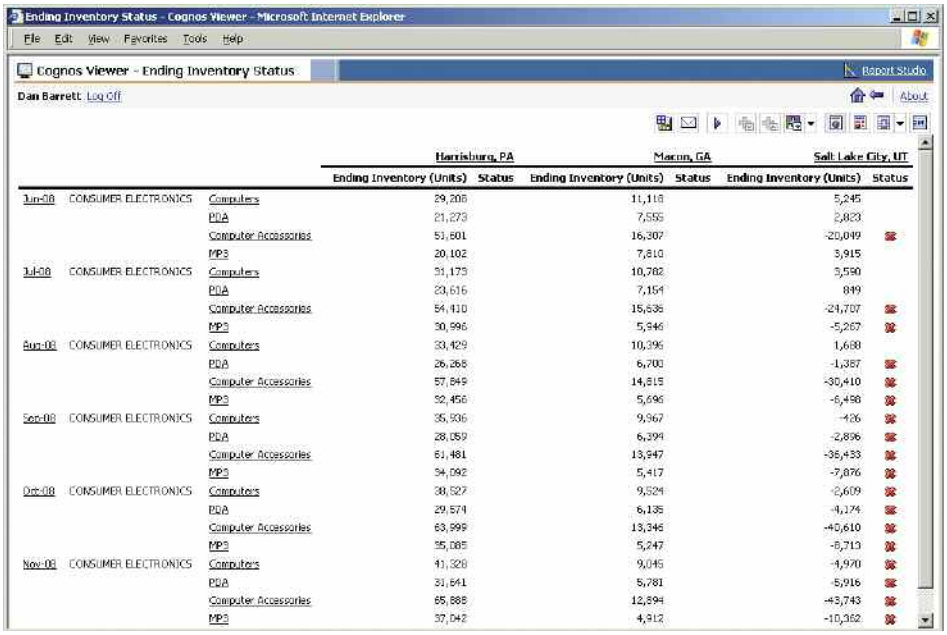


Figure 4

The **Ending Inventory Status Report** (Figure 5) shows projected ending inventory for a distribution center and highlights any products that are forecasted to be out of stock, providing future visibility to drive higher revenue and margin.



			Harrisburg, PA		Macon, GA		Salt Lake City, UT	
			Ending Inventory (Units)	Status	Ending Inventory (Units)	Status	Ending Inventory (Units)	Status
Jun-08	CONSUMER ELECTRONICS	Computers	29,206		11,118		5,245	
		PDA	21,273		7,555		2,823	
		Computer Accessories	51,601		16,307		-20,049	
		MP3	20,102		7,810		3,915	
Jul-08	CONSUMER ELECTRONICS	Computers	31,175		10,782		3,590	
		PDA	23,616		7,154		849	
		Computer Accessories	54,410		15,636		-24,707	
		MP3	30,996		5,946		-5,267	
Aug-08	CONSUMER ELECTRONICS	Computers	33,429		10,396		1,688	
		PDA	26,268		6,700		-1,387	
		Computer Accessories	57,849		14,815		-30,410	
		MP3	32,456		5,696		-6,498	
Sep-08	CONSUMER ELECTRONICS	Computers	35,936		9,967		-426	
		PDA	28,059		6,399		-2,896	
		Computer Accessories	61,481		13,947		-36,433	
		MP3	34,092		5,417		-7,876	
Oct-08	CONSUMER ELECTRONICS	Computers	38,527		9,524		-2,609	
		PDA	29,574		6,135		-4,174	
		Computer Accessories	63,999		13,346		-40,610	
		MP3	35,085		5,247		-8,713	
Nov-08	CONSUMER ELECTRONICS	Computers	41,328		9,045		-4,970	
		PDA	31,641		5,781		-5,916	
		Computer Accessories	65,888		12,894		-43,743	
		MP3	37,042		4,912		-10,362	

Figure 5

The **Resource Capacity Plan Chart** (Figure 6) provides a resource capacity plan over time, by resource, product, distribution center, and plan version. Charting forecasted required capacity against demonstrated and maximum capacity with highlighting provides clear visibility into resources that will constrain the demand placed on the distribution center.

Figure 6

The **Distribution Center (DC) Resource Requirements Summary Chart** (Figure 7) shows the summary level machine and labor capacity for each month. To alert the planner of the need to reallocate plan data, this view highlights in red any months where required capacity exceeds maximum capacity. Users can display this report by distribution center, product, month, and version. Users can view details of resources in this summary report by clicking on the Month link.

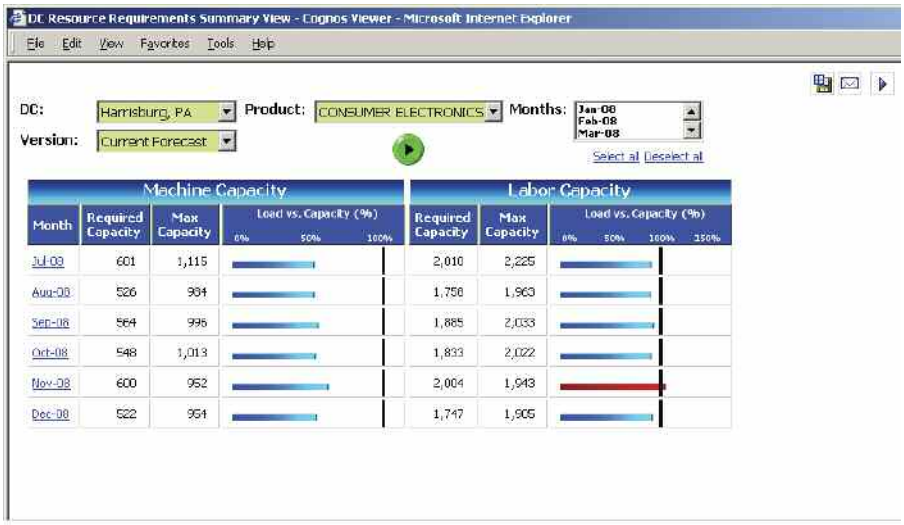


Figure 7

If you drill down from the Summary Report in Figure 7, you will see the **Resource Requirements Plan** (Figure 8). This report provides detailed information about resources, which helps drive resource-allocation decisions; the report also helps companies meet the demand plan on the distribution center.

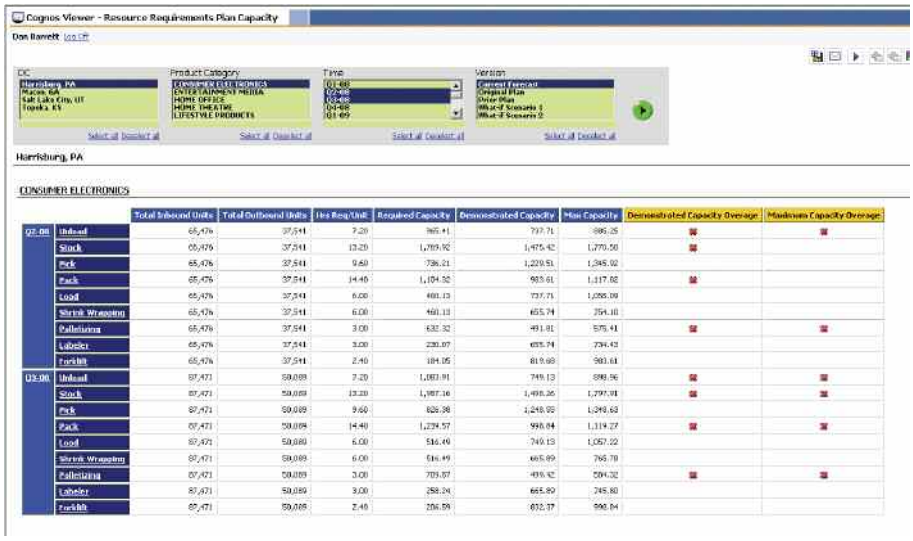
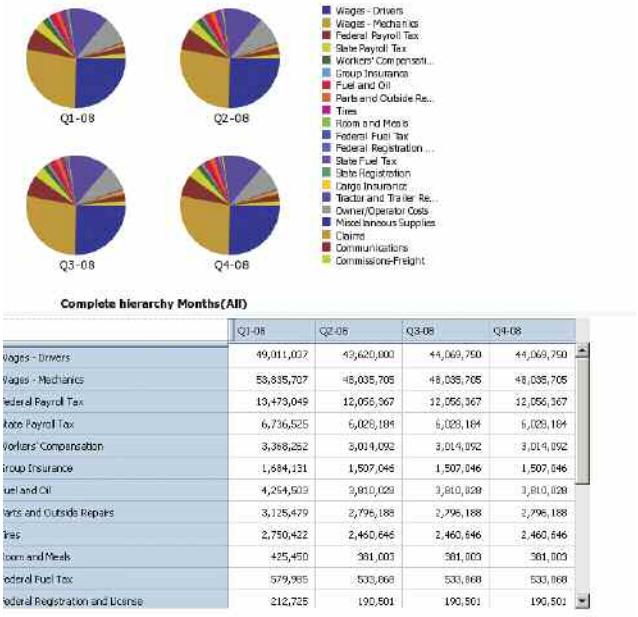


Figure 8

The **Distribution Center Pro Forma Income Statement** (Figure 9) provides a simulated pro-forma profit and loss statement (P&L) for the distribution center. The P&L is based on the demand and cost plans resulting from the planning process. In addition, multi-dimensional views (Figure 10) of costs provide insight into the variance between plan and actual.

	Jan-08	Feb-08	Mar-08	Q1-08
Total Revenue	150,187,317	149,688,614	152,541,251	**452,417,182**
Wages - Drivers	16,684,360	17,713,538	14,613,139	**49,011,037**
Wages - Mechanics	18,507,253	19,655,399	15,673,055	**53,835,707**
Federal Payroll Tax	4,626,813	4,913,850	3,932,386	**13,473,049**
State Payroll Tax	2,313,407	2,456,925	1,966,193	**6,736,525**
Workers' Compensation	1,156,703	1,228,462	983,097	**3,368,262**
Group Insurance	578,352	614,231	491,548	**1,684,131**
Fuel and Oil	1,458,315	1,553,489	1,242,699	**4,254,503**
Parts and Outside Repairs	1,073,944	1,139,510	912,025	**3,125,479**
Tires	945,071	1,002,769	802,582	**2,750,422**
Room and Meals	145,831	155,349	124,270	**425,450**
Federal Fuel Tax	185,073	220,809	174,104	**579,985**
Federal Registration and License	72,916	77,674	62,135	**212,725**
State Fuel Tax	92,536	110,405	87,052	**289,993**
State Registration	291,663	279,628	227,009	**798,300**
Cargo Insurance	182,289	194,186	155,337	**531,813**
Tractor and Trailer Rental	8,749,887	9,320,932	7,456,197	**25,527,016**
Owner/Operator Costs	5,833,258	6,213,955	4,970,798	**17,018,011**
Miscellaneous Supplies	145,831	155,349	124,270	**425,450**

Figure 9



	Q1-08	Q2-08	Q3-08	Q4-08
Wages - Drivers	49,011,037	49,620,000	44,069,750	44,069,750
Wages - Mechanics	53,835,707	48,035,705	48,035,705	48,035,705
Federal Payroll Tax	13,473,049	12,056,367	12,056,367	12,056,367
State Payroll Tax	6,736,525	6,028,184	6,028,184	6,028,184
Workers' Compensation	3,368,262	3,014,092	3,014,092	3,014,092
Group Insurance	1,684,131	1,507,046	1,507,046	1,507,046
Fuel and Oil	4,254,503	3,810,029	3,810,029	3,810,029
Parts and Outside Repairs	3,125,479	2,796,188	2,796,188	2,796,188
Tires	2,750,422	2,460,646	2,460,646	2,460,646
Room and Meals	425,450	381,003	381,003	381,003
Federal Fuel Tax	579,985	533,868	533,868	533,868
Federal Registration and License	212,725	190,501	190,501	190,501

Figure 10

REAL-TIME WORKFLOW VISIBILITY

As the master planner and distribution center managers update distribution center plans, executives need real-time visibility to workflow status.

This *Blueprint* offers a master planner role, which can make decisions on allocations from plant-level information to distribution centers. Distribution center managers can see the consolidated results of the S&OP plans in their operations and the effects of those results and scenarios on their distribution center. Executives and reviewers can see the workflow status of each distribution center. As co-owners of that information, they can also make edits, if required. All workflow status changes, data consolidations, and aggregations occur in real time, allowing for frequent planning iterations.

Before a user enters data, the state of the plan is **Not started**. Once a user saves a plan, the state becomes **Work in progress** and remains accessible for further editing. When a user submits an item, the plan is **Locked**, and permits no further changes. The Locked state indicates that the plan is ready for review.

A reviewer can see a plan in any state, but can only reject a Locked item. When a reviewer rejects a Locked plan, the plan returns to a state of Work In Progress, which means it is again editable.

Figure 11 shows a workflow in which the master planner is the reviewer of both the master planner assumptions and the distribution center managers.

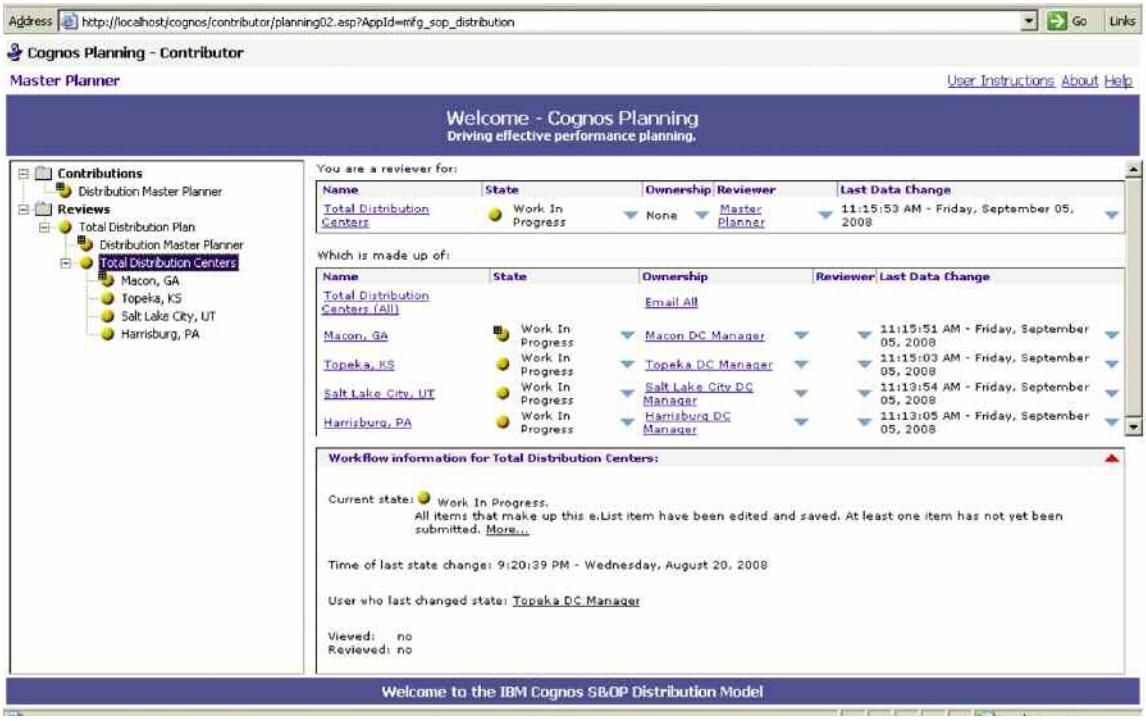


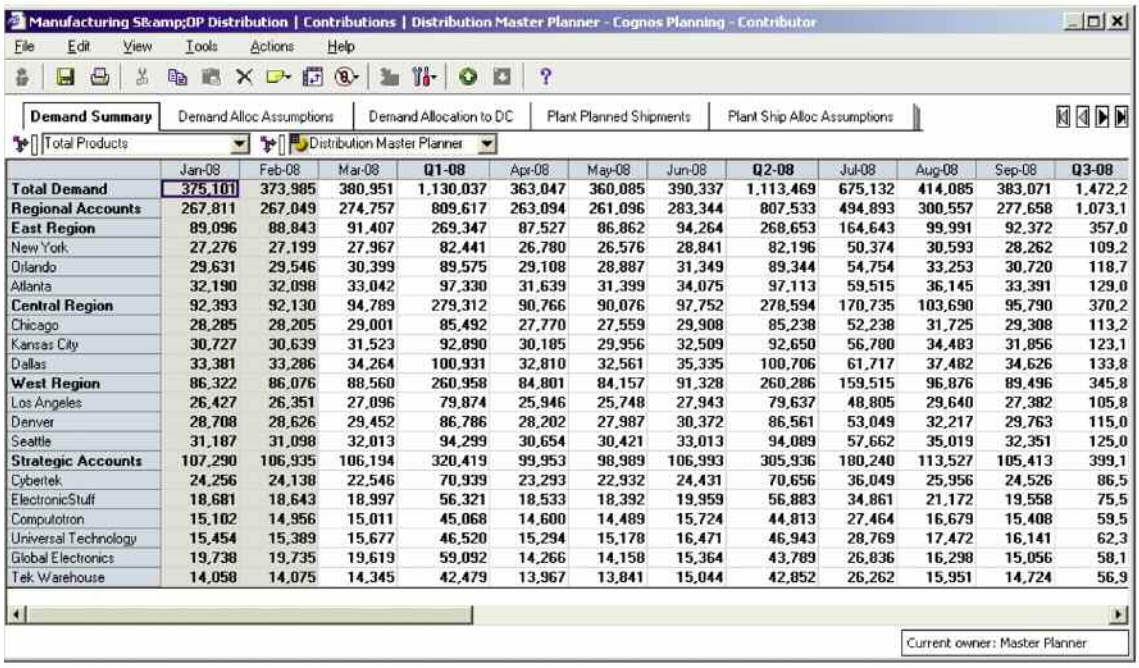
Figure 11

This model offers two distinct views: master planner and distribution center manager. The master planner makes the initial allocation of market demand and plant planned shipments to the distribution centers. The distribution center manager can adjust these forecasts. Although the process is automated, parties should keep an open line of communication to achieve corporate goals.

MASTER PLANNER VIEW

Demand Summary Tab

The **Demand Summary Tab** (Figure 12) displays summary of demand by market and product; this tab contains "Revised Demand Forecast" data from the forecast cube in the *IBM Cognos Manufacturing S&OP Customer Demand Blueprint*. The master planner can adjust the demand for forecast months, if desired.



	Jan-08	Feb-08	Mar-08	Q1-08	Apr-08	May-08	Jun-08	Q2-08	Jul-08	Aug-08	Sep-08	Q3-08
Total Demand	375,101	373,985	380,951	1,130,037	363,047	360,085	390,337	1,113,469	675,132	414,085	383,071	1,472,2
Regional Accounts	267,811	267,049	274,757	809,617	263,094	261,096	283,344	807,533	494,893	300,557	277,658	1,073,1
East Region	89,096	88,843	91,407	269,347	87,527	86,862	94,264	268,653	164,643	99,991	92,372	357,0
New York	27,276	27,199	27,967	82,441	26,780	26,576	28,841	82,196	50,374	30,593	28,262	109,2
Orlando	29,631	29,546	30,399	89,575	29,108	28,887	31,349	89,344	54,754	33,253	30,720	118,7
Atlanta	32,190	32,098	33,042	97,330	31,639	31,399	34,075	97,113	59,515	36,145	33,391	129,0
Central Region	92,393	92,130	94,789	279,312	90,766	90,076	97,752	278,594	170,735	103,690	95,790	370,2
Chicago	28,285	28,205	29,001	85,492	27,770	27,559	29,908	85,238	52,238	31,725	29,308	113,2
Kansas City	30,727	30,639	31,523	92,890	30,185	29,956	32,509	92,650	56,780	34,483	31,856	123,1
Dallas	33,381	33,286	34,264	100,931	32,810	32,561	35,335	100,706	61,717	37,482	34,626	133,8
West Region	86,322	86,076	88,560	260,958	84,801	84,157	91,328	260,286	159,515	96,876	89,496	345,8
Los Angeles	26,427	26,351	27,096	79,874	25,946	25,748	27,943	79,637	48,805	29,640	27,382	105,8
Denver	28,708	28,626	29,452	86,786	28,202	27,987	30,372	86,561	53,049	32,217	29,763	115,0
Seattle	31,187	31,098	32,013	94,299	30,654	30,421	33,013	94,089	57,662	35,019	32,351	125,0
Strategic Accounts	107,290	106,935	106,194	320,419	99,953	98,989	106,993	305,936	180,240	113,527	105,413	399,1
Cybertek	24,256	24,138	22,546	70,939	23,293	22,932	24,431	70,656	36,049	25,956	24,526	86,5
ElectronicStuff	18,681	18,643	18,997	56,321	18,533	18,392	19,959	56,883	34,861	21,172	19,558	75,5
Computotron	15,102	14,956	15,011	45,068	14,600	14,489	15,724	44,813	27,464	16,679	15,408	59,5
Universal Technology	15,454	15,389	15,677	46,520	15,294	15,178	16,471	46,943	28,769	17,472	16,141	62,3
Global Electronics	19,738	19,735	19,619	59,092	14,266	14,158	15,364	43,789	26,836	16,298	15,056	58,1
Tek Warehouse	14,058	14,075	14,345	42,479	13,967	13,841	15,044	42,852	26,262	15,951	14,724	56,9

Figure 12

Demand Allocation (Alloc) Assumptions Tab

The **Demand Alloc Assumptions Tab** (Figure 13) enables the master planner to allocate demand by market (including strategic accounts) to the various distribution centers. For example, below we see that demand for the ElectronicStuff account will be filled 50 percent by products from the Harrisburg, Pennsylvania, distribution center and 50 percent by products from the Macon, Georgia, distribution center. The master planner can reallocate the plan when reviewing forecasted inventory levels by distribution center.

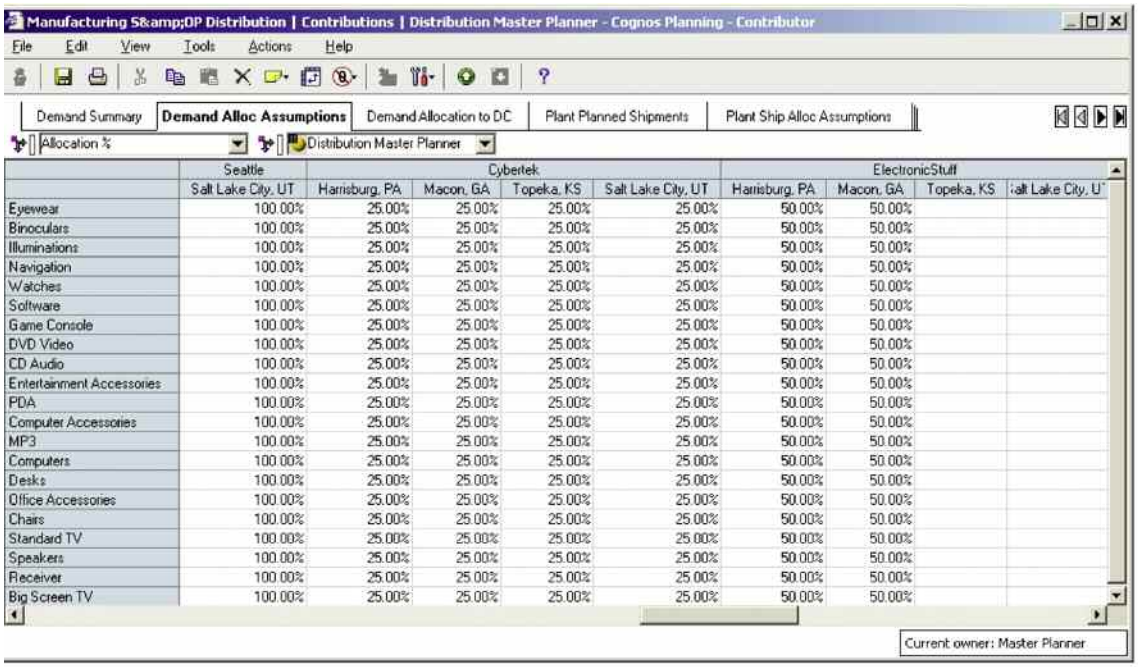
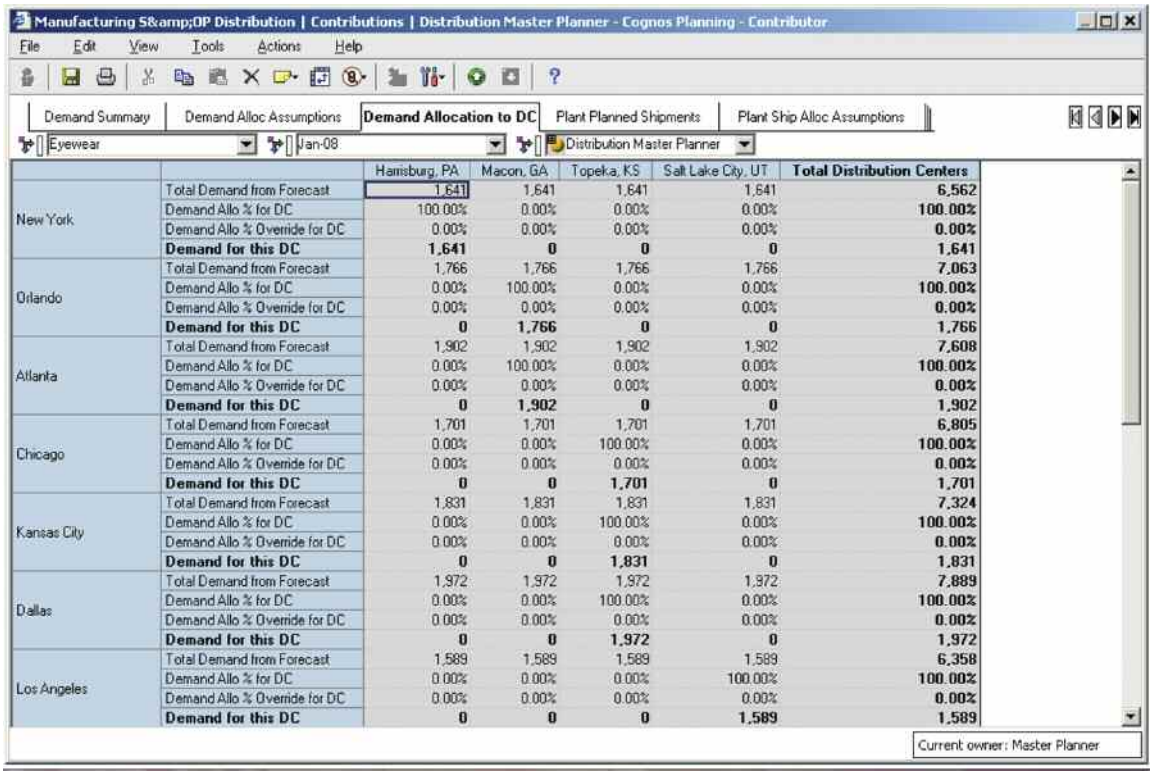


Figure 13

Demand Allocation to Distribution Center (DC) Tab

The **Demand Allocation to DC Tab,** shown in Figure 14, combines the total demand volume by market and the projected allocation of demand from the two previous tabs. This tab calculates the demand in units by product type and market for each distribution center.



		Harrisburg, PA	Macon, GA	Topeka, KS	Salt Lake City, UT	Total Distribution Centers
New York	Total Demand from Forecast	1,641	1,641	1,641	1,641	6,562
	Demand Allo % for DC	100.00%	0.00%	0.00%	0.00%	100.00%
	Demand Allo % Override for DC	0.00%	0.00%	0.00%	0.00%	0.00%
	Demand for this DC	**1,641**	**0**	**0**	**0**	**1,641**
Orlando	Total Demand from Forecast	1,766	1,766	1,766	1,766	7,063
	Demand Allo % for DC	0.00%	100.00%	0.00%	0.00%	100.00%
	Demand Allo % Override for DC	0.00%	0.00%	0.00%	0.00%	0.00%
	Demand for this DC	**0**	**1,766**	**0**	**0**	**1,766**
Atlanta	Total Demand from Forecast	1,902	1,902	1,902	1,902	7,608
	Demand Allo % for DC	0.00%	100.00%	0.00%	0.00%	100.00%
	Demand Allo % Override for DC	0.00%	0.00%	0.00%	0.00%	0.00%
	Demand for this DC	**0**	**1,902**	**0**	**0**	**1,902**
Chicago	Total Demand from Forecast	1,701	1,701	1,701	1,701	6,805
	Demand Allo % for DC	0.00%	0.00%	100.00%	0.00%	100.00%
	Demand Allo % Override for DC	0.00%	0.00%	0.00%	0.00%	0.00%
	Demand for this DC	**0**	**0**	**1,701**	**0**	**1,701**
Kansas City	Total Demand from Forecast	1,831	1,831	1,831	1,831	7,324
	Demand Allo % for DC	0.00%	0.00%	100.00%	0.00%	100.00%
	Demand Allo % Override for DC	0.00%	0.00%	0.00%	0.00%	0.00%
	Demand for this DC	**0**	**0**	**1,831**	**0**	**1,831**
Dallas	Total Demand from Forecast	1,972	1,972	1,972	1,972	7,889
	Demand Allo % for DC	0.00%	0.00%	100.00%	0.00%	100.00%
	Demand Allo % Override for DC	0.00%	0.00%	0.00%	0.00%	0.00%
	Demand for this DC	**0**	**0**	**1,972**	**0**	**1,972**
Los Angeles	Total Demand from Forecast	1,589	1,589	1,589	1,589	6,358
	Demand Allo % for DC	0.00%	0.00%	0.00%	100.00%	100.00%
	Demand Allo % Override for DC	0.00%	0.00%	0.00%	0.00%	0.00%
	Demand for this DC	**0**	**0**	**0**	**1,589**	**1,589**

Figure 14

Plant Planned Shipments Tab

The **Plant Planned Shipments Tab** summarizes planned shipments by plant and product, and contains "Shipments" data from the production plan cube in the *Blueprint*. The master planner can adjust shipments for forecast months, if desired.

Plant Ship Allocation (Alloc) Assumptions Tab

Shown in Figure 15, the **Plant Ship Alloc Assumptions Tab** enables the master planner to allocate plant shipments to various distribution centers. Below, we can see that 30 percent of shipments from the Moline, Illinois, plant go the Harrisburg, Pennsylvania, distribution center, and 70 percent of shipments go to the Topeka, Kansas, distribution center.

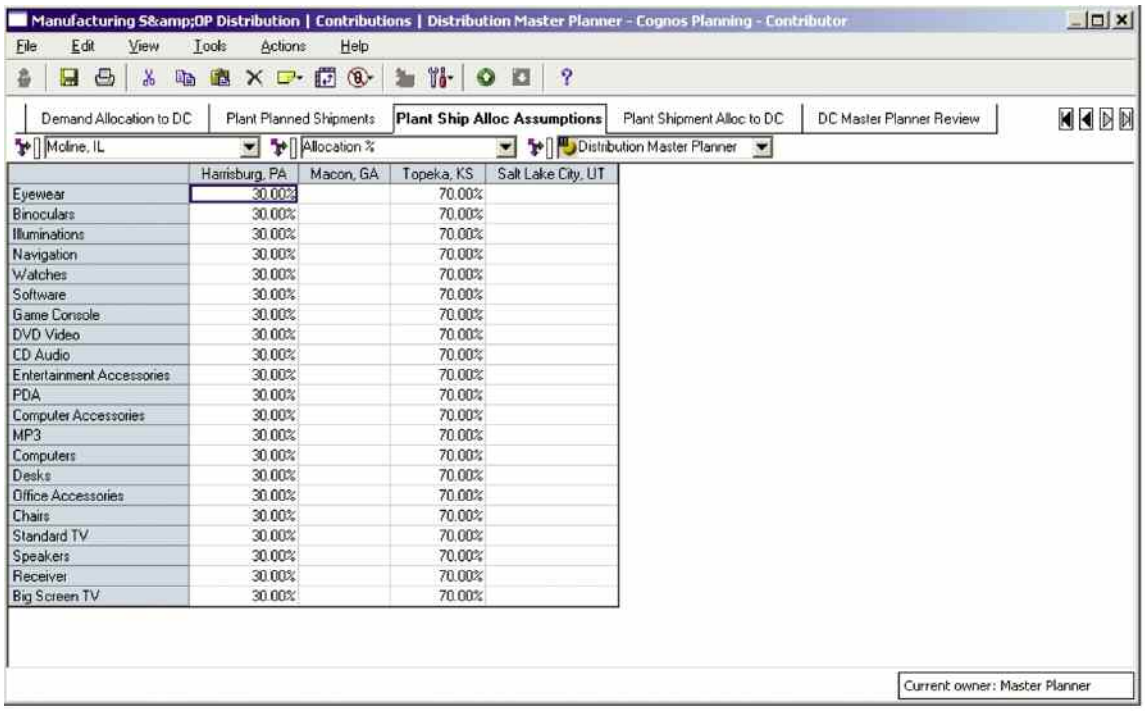
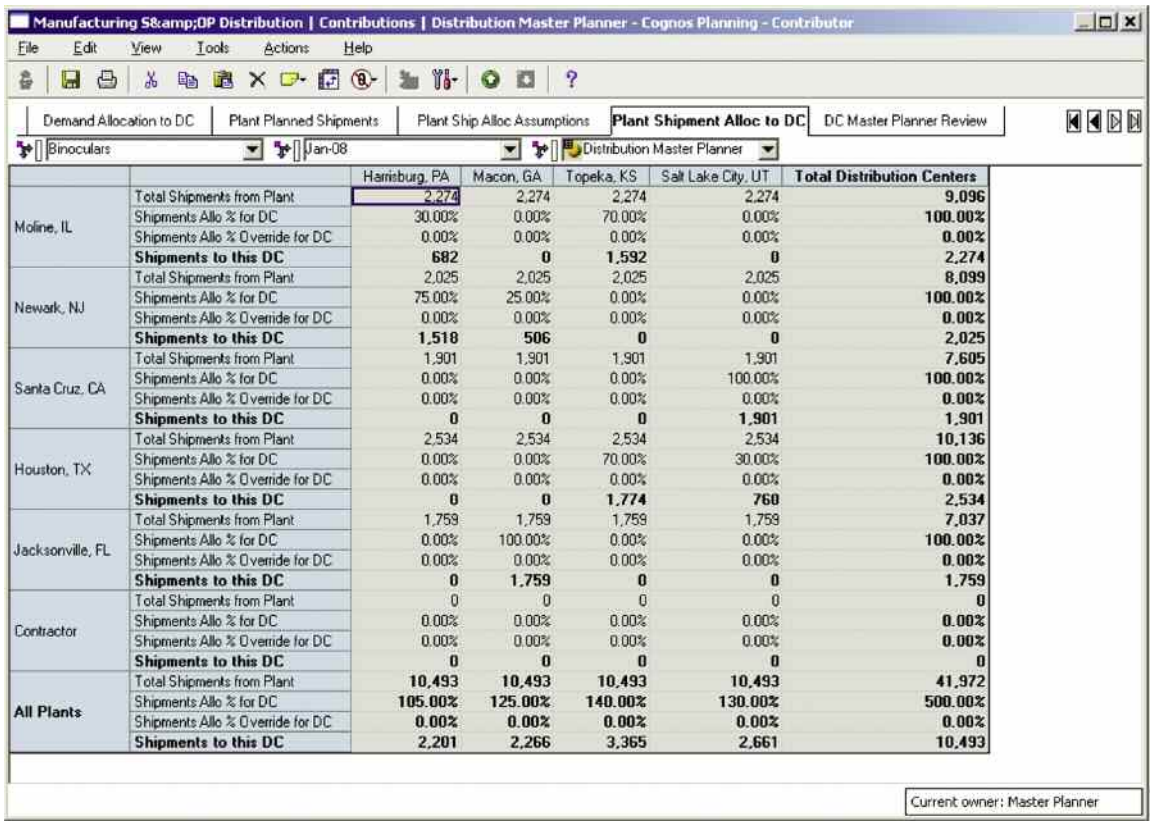


Figure 15

Plant Shipment Allocation (Alloc) to Distribution Center (DC) Tab

The **Plant Shipment Alloc to DC Tab** (Figure 16) shows a tab that combines shipment volumes from each plant with the percentage allocation of shipments to the distribution centers from the two previous tabs. The tab calculates the shipment volumes from each plant to each distribution center by product and month.

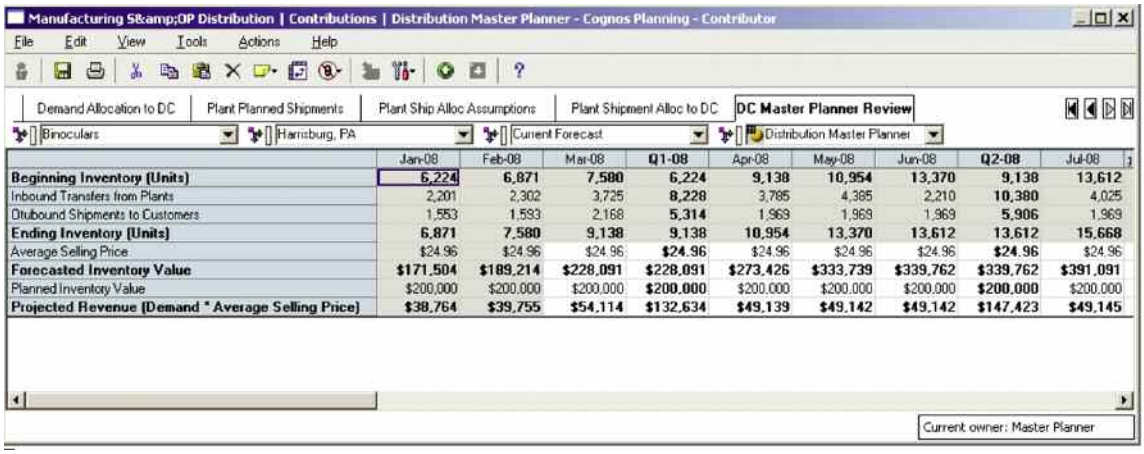


		Harrisburg, PA	Macon, GA	Topeka, KS	Salt Lake City, UT	Total Distribution Centers
Moline, IL	Total Shipments from Plant	2,274	2,274	2,274	2,274	9,096
	Shipments Allo % for DC	30.00%	0.00%	70.00%	0.00%	100.00%
	Shipments Allo % Override for DC	0.00%	0.00%	0.00%	0.00%	0.00%
	Shipments to this DC	**682**	**0**	**1,592**	**0**	**2,274**
Newark, NJ	Total Shipments from Plant	2,025	2,025	2,025	2,025	8,099
	Shipments Allo % for DC	75.00%	25.00%	0.00%	0.00%	100.00%
	Shipments Allo % Override for DC	0.00%	0.00%	0.00%	0.00%	0.00%
	Shipments to this DC	**1,518**	**506**	**0**	**0**	**2,025**
Santa Cruz, CA	Total Shipments from Plant	1,901	1,901	1,901	1,901	7,605
	Shipments Allo % for DC	0.00%	0.00%	0.00%	100.00%	100.00%
	Shipments Allo % Override for DC	0.00%	0.00%	0.00%	0.00%	0.00%
	Shipments to this DC	**0**	**0**	**0**	**1,901**	**1,901**
Houston, TX	Total Shipments from Plant	2,534	2,534	2,534	2,534	10,136
	Shipments Allo % for DC	0.00%	0.00%	70.00%	30.00%	100.00%
	Shipments Allo % Override for DC	0.00%	0.00%	0.00%	0.00%	0.00%
	Shipments to this DC	**0**	**0**	**1,774**	**760**	**2,534**
Jacksonville, FL	Total Shipments from Plant	1,759	1,759	1,759	1,759	7,037
	Shipments Allo % for DC	0.00%	100.00%	0.00%	0.00%	100.00%
	Shipments Allo % Override for DC	0.00%	0.00%	0.00%	0.00%	0.00%
	Shipments to this DC	**0**	**1,759**	**0**	**0**	**1,759**
Contractor	Total Shipments from Plant	0	0	0	0	0
	Shipments Allo % for DC	0.00%	0.00%	0.00%	0.00%	0.00%
	Shipments Allo % Override for DC	0.00%	0.00%	0.00%	0.00%	0.00%
	Shipments to this DC	**0**	**0**	**0**	**0**	**0**
All Plants	Total Shipments from Plant	**10,493**	**10,493**	**10,493**	**10,493**	**41,972**
	Shipments Allo % for DC	**105.00%**	**125.00%**	**140.00%**	**130.00%**	**500.00%**
	Shipments Allo % Override for DC	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**
	Shipments to this DC	**2,201**	**2,266**	**3,365**	**2,661**	**10,493**

Figure 16

Distribution Center (DC) Master Planner Review Tab

The **DC Master Planner Review Tab**, shown in Figure 17, enables the master planner to review projected beginning and ending inventory levels by product, distribution center, month, and version, based on incoming and outgoing shipments calculated in previous tabs. The master planner can also see the value of the inventory at each distribution center (the value is derived by multiplying inventory levels by the average selling price by product). The master planner can also input planned inventory value and compare this amount to calculated value.



	Jan-08	Feb-08	Mar-08	Q1-08	Apr-08	May-08	Jun-08	Q2-08	Jul-08
Beginning Inventory (Units)	6,224	6,871	7,580	6,224	9,138	10,954	13,370	9,138	13,612
Inbound Transfers from Plants	2,201	2,302	3,725	8,228	3,785	4,385	2,210	10,380	4,025
Otubound Shipments to Customers	1,553	1,593	2,168	5,314	1,969	1,969	1,969	5,906	1,969
Ending Inventory (Units)	6,871	7,580	9,138	9,138	10,954	13,370	13,612	13,612	15,668
Average Selling Price	$24.96	$24.96	$24.96	$24.96	$24.96	$24.96	$24.96	$24.96	$24.96
Forecasted Inventory Value	$171,504	$189,214	$228,091	$228,091	$273,426	$333,739	$339,762	$339,762	$391,091
Planned Inventory Value	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000
Projected Revenue (Demand * Average Selling Price)	$38,764	$39,755	$54,114	$132,634	$49,139	$49,142	$49,142	$147,423	$49,145

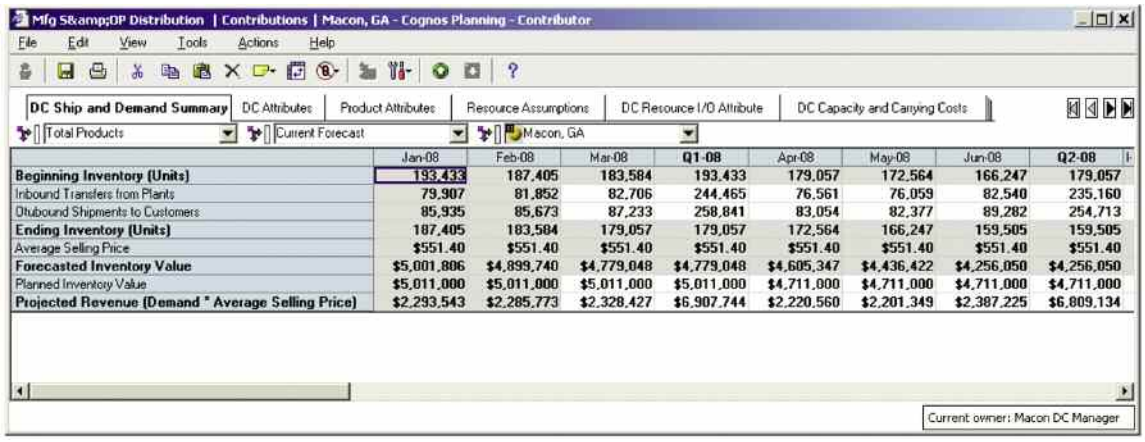
Figure 17

DISTRIBUTION CENTER MANAGER VIEW

The following represents the view available to a distribution center contributor and the aggregated view for all distribution centers. Inbound transfer and outbound shipments volume data comes from the master planner views described above.

Distribution Center (DC) Ship and Demand Summary Tab

The **DC Ship and Demand Summary Tab** (Figure 18) contains the same data as the Distribution Center (DC) Master Planner Review tab in the master planner view, but here the view is limited to selected distribution centers. The tab displays projected beginning and ending inventory levels by product, month, and version and includes data for incoming and outgoing shipments. The distribution center manager can also see the value of the inventory at a distribution center (the value is derived by multiplying inventory levels by the average selling price by product). Planned Inventory Value links to the master planner cube; the distribution center manager can adjust the value, if necessary.

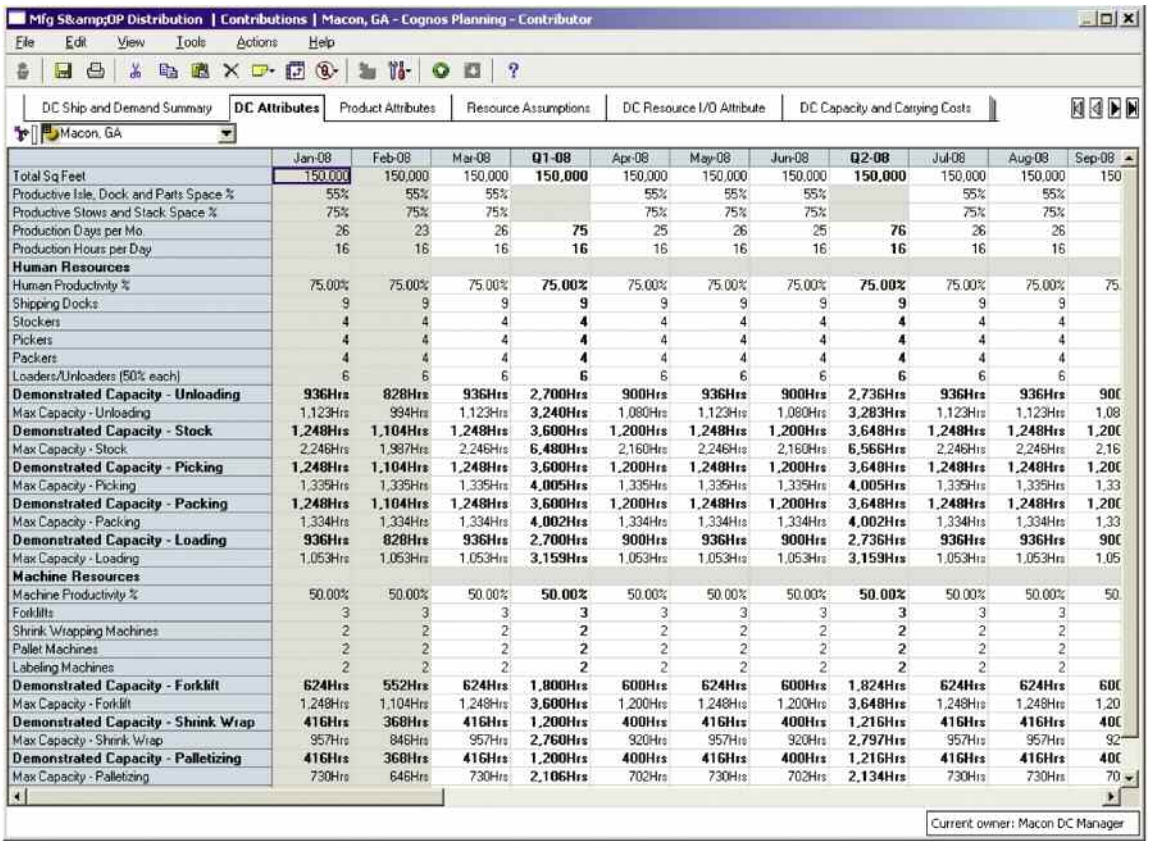


	Jan-08	Feb-08	Mar-08	Q1-08	Apr-08	May-08	Jun-08	Q2-08
Beginning Inventory (Units)	193,433	187,405	183,584	193,433	179,057	172,564	166,247	179,057
Inbound Transfers from Plants	79,907	81,852	82,706	244,465	76,561	76,059	82,540	235,160
Otubound Shipments to Customers	85,935	85,673	87,233	258,841	83,054	82,377	89,282	254,713
Ending Inventory (Units)	187,405	183,584	179,057	179,057	172,564	166,247	159,505	159,505
Average Selling Price	$551.40	$551.40	$551.40	$551.40	$551.40	$551.40	$551.40	$551.40
Forecasted Inventory Value	$5,001,806	$4,899,740	$4,779,048	$4,779,048	$4,605,347	$4,436,422	$4,256,050	$4,256,050
Planned Inventory Value	$5,011,000	$5,011,000	$5,011,000	$5,011,000	$4,711,000	$4,711,000	$4,711,000	$4,711,000
Projected Revenue (Demand * Average Selling Price)	$2,293,543	$2,285,773	$2,328,427	$6,907,744	$2,220,560	$2,201,349	$2,387,225	$6,809,134

Figure 18

Distribution Center (DC) Attributes Tab

Figure 19 shows **DC Attributes Tab**, which contains data about the distribution center, such as productive space percentages, number of resources, demonstrated capacity, and maximum capacity.

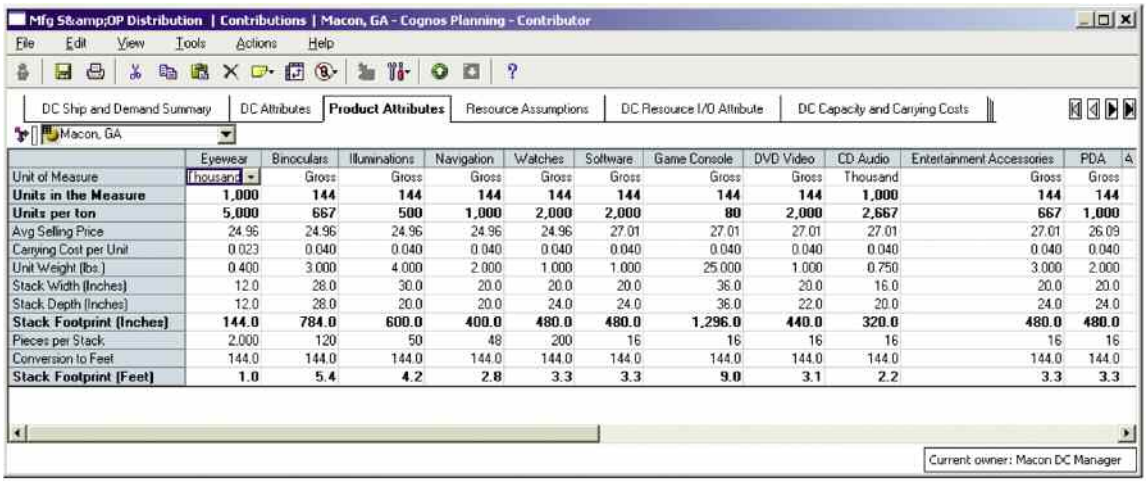


	Jan-08	Feb-08	Mar-08	Q1-08	Apr-08	May-08	Jun-08	Q2-08	Jul-08	Aug-08	Sep-08
Total Sq Feet	150,000	150,000	150,000	**150,000**	150,000	150,000	150,000	**150,000**	150,000	150,000	150
Productive Isle, Dock and Parts Space %	55%	55%	55%		55%	55%	55%		55%	55%	
Productive Stows and Stack Space %	75%	75%	75%		75%	75%	75%		75%	75%	
Production Days per Mo	26	23	26	**75**	25	26	25	**76**	26	26	
Production Hours per Day	16	16	16	**16**	16	16	16	**16**	16	16	
Human Resources											
Human Productivity %	75.00%	75.00%	75.00%	**75.00%**	75.00%	75.00%	75.00%	**75.00%**	75.00%	75.00%	75
Shipping Docks	9	9	9	**9**	9	9	9	**9**	9	9	
Stockers	4	4	4	**4**	4	4	4	**4**	4	4	
Pickers	4	4	4	**4**	4	4	4	**4**	4	4	
Packers	4	4	4	**4**	4	4	4	**4**	4	4	
Loaders/Unloaders (50% each)	6	6	6	**6**	6	6	6	**6**	6	6	
Demonstrated Capacity - Unloading	**936Hrs**	**828Hrs**	**936Hrs**	**2,700Hrs**	**900Hrs**	**936Hrs**	**900Hrs**	**2,736Hrs**	**936Hrs**	**936Hrs**	**90**
Max Capacity - Unloading	1,123Hrs	994Hrs	1,123Hrs	**3,240Hrs**	1,080Hrs	1,123Hrs	1,080Hrs	**3,283Hrs**	1,123Hrs	1,123Hrs	1,08
Demonstrated Capacity - Stock	**1,248Hrs**	**1,104Hrs**	**1,248Hrs**	**3,600Hrs**	**1,200Hrs**	**1,248Hrs**	**1,200Hrs**	**3,648Hrs**	**1,248Hrs**	**1,248Hrs**	**1,20**
Max Capacity - Stock	2,246Hrs	1,987Hrs	2,246Hrs	**6,480Hrs**	2,160Hrs	2,246Hrs	2,160Hrs	**6,566Hrs**	2,246Hrs	2,246Hrs	2,16
Demonstrated Capacity - Picking	**1,248Hrs**	**1,104Hrs**	**1,248Hrs**	**3,600Hrs**	**1,200Hrs**	**1,248Hrs**	**1,200Hrs**	**3,648Hrs**	**1,248Hrs**	**1,248Hrs**	**1,20**
Max Capacity - Picking	1,335Hrs	1,335Hrs	1,335Hrs	**4,005Hrs**	1,335Hrs	1,335Hrs	1,335Hrs	**4,005Hrs**	1,335Hrs	1,335Hrs	1,33
Demonstrated Capacity - Packing	**1,248Hrs**	**1,104Hrs**	**1,248Hrs**	**3,600Hrs**	**1,200Hrs**	**1,248Hrs**	**1,200Hrs**	**3,648Hrs**	**1,248Hrs**	**1,248Hrs**	**1,20**
Max Capacity - Packing	1,334Hrs	1,334Hrs	1,334Hrs	**4,002Hrs**	1,334Hrs	1,334Hrs	1,334Hrs	**4,002Hrs**	1,334Hrs	1,334Hrs	1,33
Demonstrated Capacity - Loading	**936Hrs**	**828Hrs**	**936Hrs**	**2,700Hrs**	**900Hrs**	**936Hrs**	**900Hrs**	**2,736Hrs**	**936Hrs**	**936Hrs**	**90**
Max Capacity - Loading	1,053Hrs	1,053Hrs	1,053Hrs	**3,159Hrs**	1,053Hrs	1,053Hrs	1,053Hrs	**3,159Hrs**	1,053Hrs	1,053Hrs	1,05
Machine Resources											
Machine Productivity %	50.00%	50.00%	50.00%	**50.00%**	50.00%	50.00%	50.00%	**50.00%**	50.00%	50.00%	50
Forklifts	3	3	3	**3**	3	3	3	**3**	3	3	
Shrink Wrapping Machines	2	2	2	**2**	2	2	2	**2**	2	2	
Pallet Machines	2	2	2	**2**	2	2	2	**2**	2	2	
Labeling Machines	2	2	2	**2**	2	2	2	**2**	2	2	
Demonstrated Capacity - Forklift	**624Hrs**	**552Hrs**	**624Hrs**	**1,800Hrs**	**600Hrs**	**624Hrs**	**600Hrs**	**1,824Hrs**	**624Hrs**	**624Hrs**	**60**
Max Capacity - Forklift	1,248Hrs	1,104Hrs	1,248Hrs	**3,600Hrs**	1,200Hrs	1,248Hrs	1,200Hrs	**3,648Hrs**	1,248Hrs	1,248Hrs	1,20
Demonstrated Capacity - Shrink Wrap	**416Hrs**	**368Hrs**	**416Hrs**	**1,200Hrs**	**400Hrs**	**416Hrs**	**400Hrs**	**1,216Hrs**	**416Hrs**	**416Hrs**	**40**
Max Capacity - Shrink Wrap	957Hrs	846Hrs	957Hrs	**2,760Hrs**	920Hrs	957Hrs	920Hrs	**2,797Hrs**	957Hrs	957Hrs	92
Demonstrated Capacity - Palletizing	**416Hrs**	**368Hrs**	**416Hrs**	**1,200Hrs**	**400Hrs**	**416Hrs**	**400Hrs**	**1,216Hrs**	**416Hrs**	**416Hrs**	**40**
Max Capacity - Palletizing	730Hrs	646Hrs	730Hrs	**2,106Hrs**	702Hrs	730Hrs	702Hrs	**2,134Hrs**	730Hrs	730Hrs	70

Figure 19

Product Attributes Tab

The **Product Attributes Tab** (Figure 20) contains data about products, including units of measure, units per ton, average selling price, carrying cost per unit, weight, size, and stack footprint calculations by product.

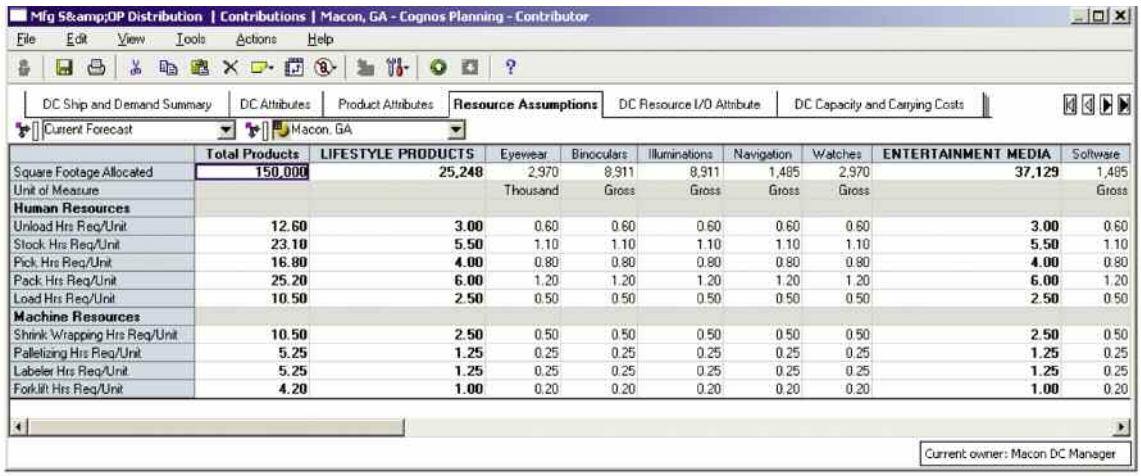


	Eyewear	Binoculars	Illuminations	Navigation	Watches	Software	Game Console	DVD Video	CD Audio	Entertainment Accessories	PDA
Unit of Measure	Thousand	Gross	Gross	Gross	Gross	Gross	Gross	Gross	Thousand	Gross	Gross
Units in the Measure	**1,000**	**144**	**144**	**144**	**144**	**144**	**144**	**144**	**1,000**	**144**	**144**
Units per ton	**5,000**	**667**	**500**	**1,000**	**2,000**	**2,000**	**80**	**2,000**	**2,667**	**667**	**1,000**
Avg Selling Price	24.96	24.96	24.96	24.96	24.96	27.01	27.01	27.01	27.01	27.01	26.09
Carrying Cost per Unit	0.023	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
Unit Weight (lbs.)	0.400	3.000	4.000	2.000	1.000	1.000	25.000	1.000	0.750	3.000	2.000
Stack Width (Inches)	12.0	28.0	30.0	20.0	20.0	20.0	36.0	20.0	16.0	20.0	20.0
Stack Depth (Inches)	12.0	28.0	20.0	20.0	24.0	24.0	36.0	22.0	20.0	24.0	24.0
Stack Footprint (Inches)	**144.0**	**784.0**	**600.0**	**400.0**	**480.0**	**480.0**	**1,296.0**	**440.0**	**320.0**	**480.0**	**480.0**
Pieces per Stack	2,000	120	50	48	200	16	16	16	16	16	16
Conversion to Feet	144.0	144.0	144.0	144.0	144.0	144.0	144.0	144.0	144.0	144.0	144.0
Stack Footprint (Feet)	**1.0**	**5.4**	**4.2**	**2.8**	**3.3**	**3.3**	**9.0**	**3.1**	**2.2**	**3.3**	**3.3**

Figure 20

Resource Assumptions Tab

Shown in Figure 21, the **Resource Assumptions Tab** lists the distribution center resources required per unit for each product.



	Total Products	LIFESTYLE PRODUCTS	Eyewear	Binoculars	Illuminations	Navigation	Watches	ENTERTAINMENT MEDIA	Software
Square Footage Allocated	150,000	25,248	2,970	8,911	8,911	1,485	2,970	37,129	1,485
Unit of Measure			Thousand	Gross	Gross	Gross	Gross		Gross
Human Resources									
Unload Hrs Req/Unit	**12.60**	**3.00**	0.60	0.60	0.60	0.60	0.60	**3.00**	0.60
Stock Hrs Req/Unit	**23.10**	**5.50**	1.10	1.10	1.10	1.10	1.10	**5.50**	1.10
Pick Hrs Req/Unit	**16.80**	**4.00**	0.80	0.80	0.80	0.80	0.80	**4.00**	0.80
Pack Hrs Req/Unit	**25.20**	**6.00**	1.20	1.20	1.20	1.20	1.20	**6.00**	1.20
Load Hrs Req/Unit	**10.50**	**2.50**	0.50	0.50	0.50	0.50	0.50	**2.50**	0.50
Machine Resources									
Shrink Wrapping Hrs Req/Unit	**10.50**	**2.50**	0.50	0.50	0.50	0.50	0.50	**2.50**	0.50
Palletizing Hrs Req/Unit	**5.25**	**1.25**	0.25	0.25	0.25	0.25	0.25	**1.25**	0.25
Labeler Hrs Req/Unit	**5.25**	**1.25**	0.25	0.25	0.25	0.25	0.25	**1.25**	0.25
Forklift Hrs Req/Unit	**4.20**	**1.00**	0.20	0.20	0.20	0.20	0.20	**1.00**	0.20

Figure 21

Distribution (DC) Resource Inbound/Outbound (I/O) Attribute Tab

The **DC Resource I/O Attribute Tab** (Figure 22) lists whether an inventory-processing activity is inbound or outbound.

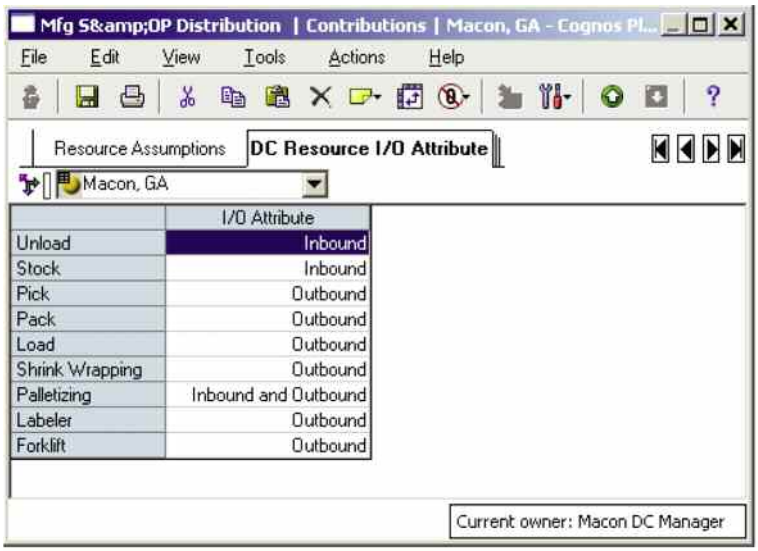


Figure 22

Distribution Center (DC) Capacity and Carrying Costs Tab

The **DC Capacity and Carrying Costs Tab,** shown in Figure 23, calculates the amount of square footage required to store each product; the tab also calculates carrying costs by product.

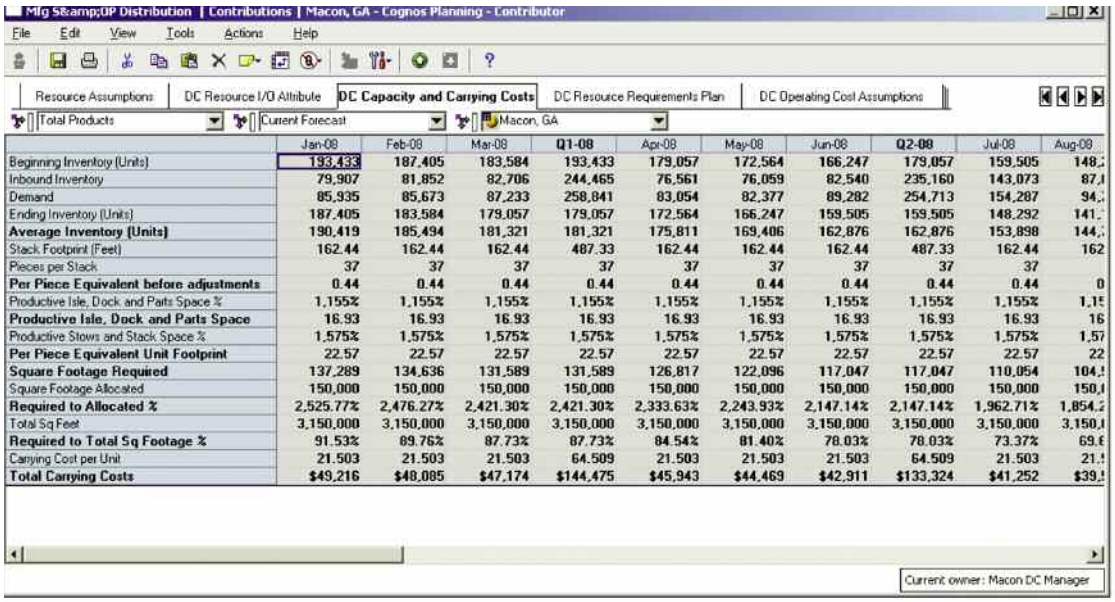
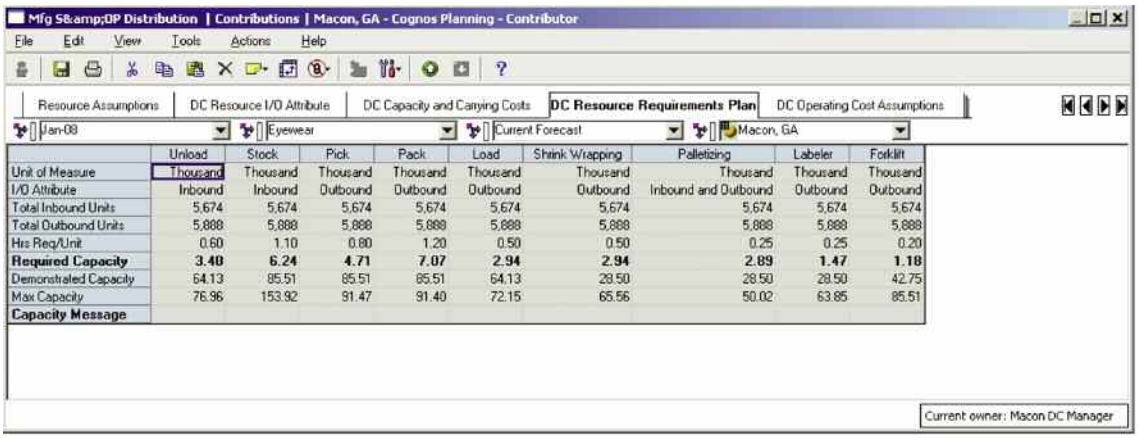


Figure 23

Distribution Center (DC) Resource Requirements Plan Tab

The **DC Resource Requirements Plan Tab** (Figure 24) calculates the resources required to process inbound and outbound inventory. The tab enables comparison of the calculated resource requirements to the demonstrated and maximum capacity.

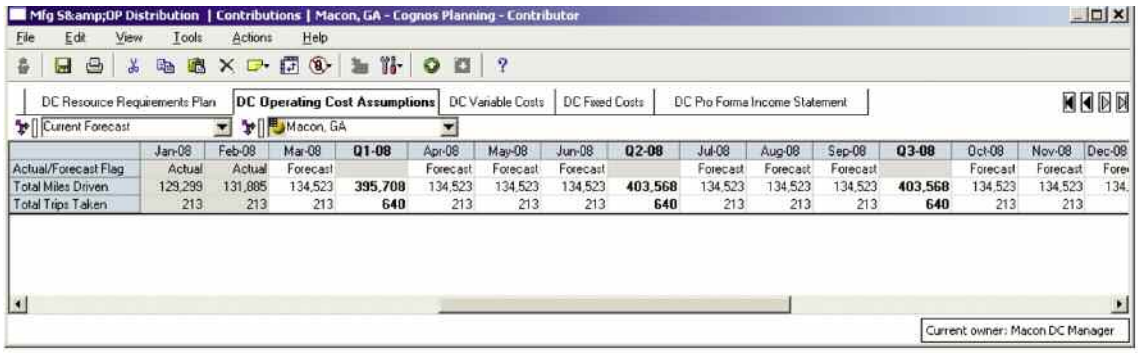


	Unload	Stock	Pick	Pack	Load	Shrink Wrapping	Palletizing	Labeler	Forklift
Unit of Measure	Thousand	Thousand	Thousand	Thousand	Thousand	Thousand	Thousand	Thousand	Thousand
I/O Attribute	Inbound	Inbound	Outbound	Outbound	Outbound	Outbound	Inbound and Outbound	Outbound	Outbound
Total Inbound Units	5,674	5,674	5,674	5,674	5,674	5,674	5,674	5,674	5,674
Total Outbound Units	5,888	5,888	5,888	5,888	5,888	5,888	5,888	5,888	5,888
Hrs Req/Unit	0.60	1.10	0.80	1.20	0.50	0.50	0.25	0.25	0.20
Required Capacity	**3.40**	**6.24**	**4.71**	**7.07**	**2.94**	**2.94**	**2.89**	**1.47**	**1.18**
Demonstrated Capacity	64.13	85.51	85.51	85.51	64.13	28.50	28.50	28.50	42.75
Max Capacity	76.96	153.92	91.47	91.40	72.15	65.56	50.02	63.85	85.51
Capacity Message									

Figure 24

Distribution Center (DC) Operating Cost Assumptions Tab

The **DC Operating Cost Assumptions Tab** (Figure 25) enables the distribution center manager to input a monthly forecast for miles driven and trips taken and calculate operating costs.

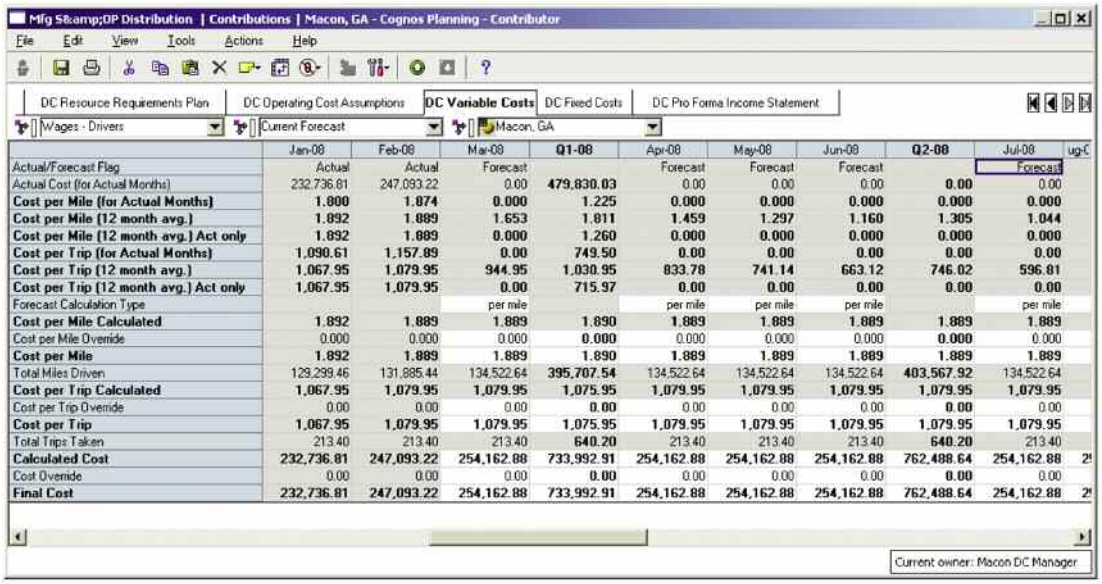


	Jan-08	Feb-08	Mar-08	Q1-08	Apr-08	May-08	Jun-08	Q2-08	Jul-08	Aug-08	Sep-08	Q3-08	Oct-08	Nov-08	Dec-08
Actual/Forecast Flag	Actual	Actual	Forecast		Forecast	Forecast	Forecast		Forecast	Forecast	Forecast		Forecast	Forecast	Fore
Total Miles Driven	129,299	131,885	134,523	**395,708**	134,523	134,523	134,523	**403,568**	134,523	134,523	134,523	**403,568**	134,523	134,523	134,
Total Trips Taken	213	213	213	**640**	213	213	213	**640**	213	213	213	**640**	213	213	

Figure 25

Distribution Center (DC) Variable Costs Tab

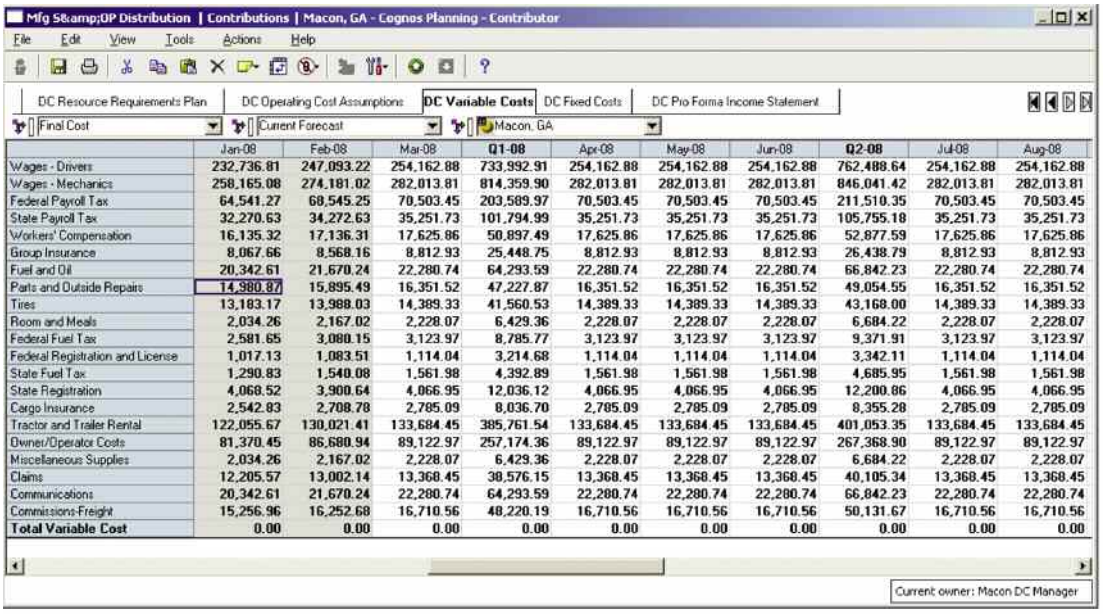
Shown in Figure 26, the **DC Variable Costs Tab** calculates variable costs based on historical cost per trip or cost per mile averages. The system enables overrides variable expense types cost per mile, cost per trip, and even total variable expense.



	Jan-08	Feb-08	Mar-08	Q1-08	Apr-08	May-08	Jun-08	Q2-08	Jul-08
Actual/Forecast Flag	Actual	Actual	Forecast		Forecast	Forecast	Forecast		Forecast
Actual Cost (for Actual Months)	232,736.81	247,093.22	0.00	479,830.03	0.00	0.00	0.00	0.00	0.00
Cost per Mile (for Actual Months)	1.800	1.874	0.000	1.225	0.000	0.000	0.000	0.000	0.000
Cost per Mile (12 month avg.)	1.892	1.889	1.653	1.811	1.459	1.297	1.160	1.305	1.044
Cost per Mile (12 month avg.) Act only	1.892	1.889	0.000	1.260	0.000	0.000	0.000	0.000	0.000
Cost per Trip (for Actual Months)	1,090.61	1,157.89	0.00	749.50	0.00	0.00	0.00	0.00	0.00
Cost per Trip (12 month avg.)	1,067.95	1,079.95	944.95	1,030.95	833.78	741.14	663.12	746.02	596.81
Cost per Trip (12 month avg.) Act only	1,067.95	1,079.95	0.00	715.97	0.00	0.00	0.00	0.00	0.00
Forecast Calculation Type			per mile		per mile	per mile	per mile		per mile
Cost per Mile Calculated	1.892	1.889	1.889	1.890	1.889	1.889	1.889	1.889	1.889
Cost per Mile Override	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cost per Mile	1.892	1.889	1.889	1.890	1.889	1.889	1.889	1.889	1.889
Total Miles Driven	129,299.46	131,885.44	134,522.64	395,707.54	134,522.64	134,522.64	134,522.64	403,567.92	134,522.64
Cost per Trip Calculated	1,067.95	1,079.95	1,079.95	1,075.95	1,079.95	1,079.95	1,079.95	1,079.95	1,079.95
Cost per Trip Override	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cost per Trip	1,067.95	1,079.95	1,079.95	1,075.95	1,079.95	1,079.95	1,079.95	1,079.95	1,079.95
Total Trips Taken	213.40	213.40	213.40	640.20	213.40	213.40	213.40	640.20	213.40
Calculated Cost	232,736.81	247,093.22	254,162.88	733,992.91	254,162.88	254,162.88	254,162.88	762,488.64	254,162.88
Cost Override	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Cost	232,736.81	247,093.22	254,162.88	733,992.91	254,162.88	254,162.88	254,162.88	762,488.64	254,162.88

Figure 26

Another view of the same tab (Figure 27) shows the variable expense categories available in the model.

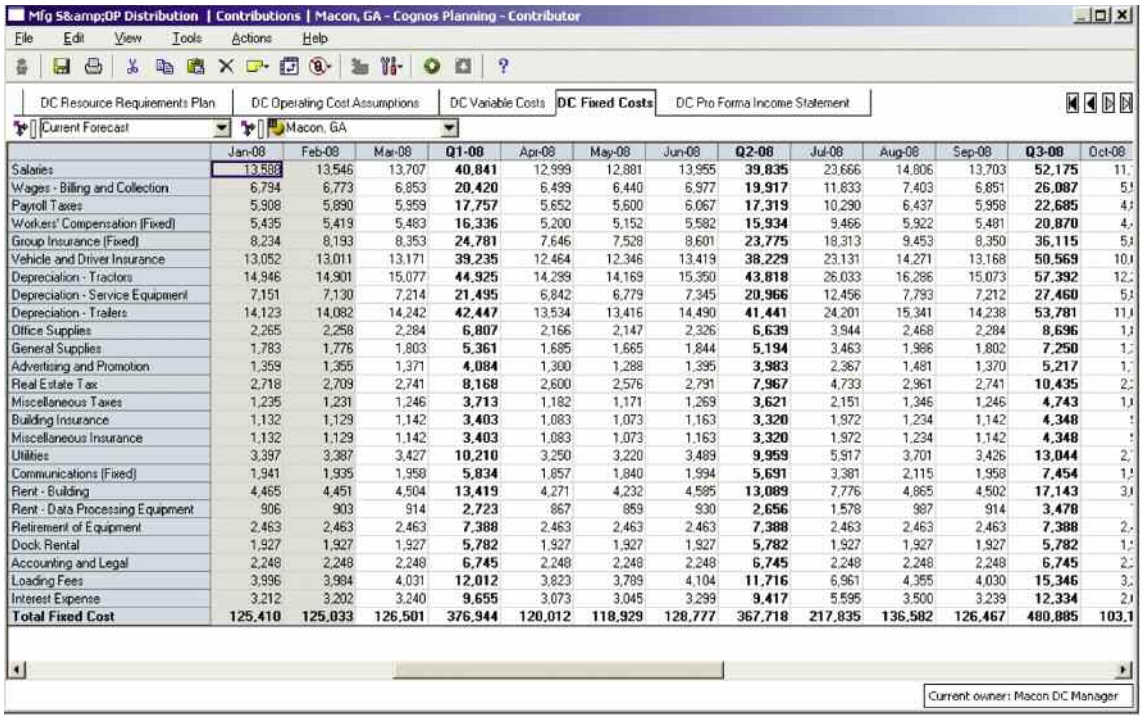


	Jan-08	Feb-08	Mar-08	Q1-08	Apr-08	May-08	Jun-08	Q2-08	Jul-08	Aug-08
Wages - Drivers	232,736.81	247,093.22	254,162.88	733,992.91	254,162.88	254,162.88	254,162.88	762,488.64	254,162.88	254,162.88
Wages - Mechanics	258,165.08	274,181.02	282,013.81	814,359.90	282,013.81	282,013.81	282,013.81	846,041.42	282,013.81	282,013.81
Federal Payroll Tax	64,541.27	68,545.25	70,503.45	203,589.97	70,503.45	70,503.45	70,503.45	211,510.35	70,503.45	70,503.45
State Payroll Tax	32,270.63	34,272.63	35,251.73	101,794.99	35,251.73	35,251.73	35,251.73	105,755.18	35,251.73	35,251.73
Workers' Compensation	16,135.32	17,136.31	17,625.86	50,897.49	17,625.86	17,625.86	17,625.86	52,877.59	17,625.86	17,625.86
Group Insurance	8,067.66	8,568.16	8,812.93	25,448.75	8,812.93	8,812.93	8,812.93	26,438.79	8,812.93	8,812.93
Fuel and Oil	20,342.61	21,670.24	22,280.74	64,293.59	22,280.74	22,280.74	22,280.74	66,842.23	22,280.74	22,280.74
Parts and Outside Repairs	14,980.87	15,895.49	16,351.52	47,227.87	16,351.52	16,351.52	16,351.52	49,054.55	16,351.52	16,351.52
Tires	13,183.17	13,988.03	14,389.33	41,560.53	14,389.33	14,389.33	14,389.33	43,168.00	14,389.33	14,389.33
Room and Meals	2,034.26	2,167.02	2,228.07	6,429.36	2,228.07	2,228.07	2,228.07	6,684.22	2,228.07	2,228.07
Federal Fuel Tax	2,581.65	3,080.15	3,123.97	8,785.77	3,123.97	3,123.97	3,123.97	9,371.91	3,123.97	3,123.97
Federal Registration and License	1,017.13	1,083.51	1,114.04	3,214.68	1,114.04	1,114.04	1,114.04	3,342.11	1,114.04	1,114.04
State Fuel Tax	1,290.83	1,540.08	1,561.98	4,392.89	1,561.98	1,561.98	1,561.98	4,685.95	1,561.98	1,561.98
State Registration	4,068.52	3,900.64	4,066.95	12,036.12	4,066.95	4,066.95	4,066.95	12,200.86	4,066.95	4,066.95
Cargo Insurance	2,542.83	2,708.78	2,785.09	8,036.70	2,785.09	2,785.09	2,785.09	8,355.28	2,785.09	2,785.09
Tractor and Trailer Rental	122,055.67	130,021.41	133,684.45	385,761.54	133,684.45	133,684.45	133,684.45	401,053.35	133,684.45	133,684.45
Owner/Operator Costs	81,370.45	86,680.94	89,122.97	257,174.36	89,122.97	89,122.97	89,122.97	267,368.90	89,122.97	89,122.97
Miscellaneous Supplies	2,034.26	2,167.02	2,228.07	6,429.36	2,228.07	2,228.07	2,228.07	6,684.22	2,228.07	2,228.07
Claims	12,205.57	13,002.14	13,368.45	38,576.15	13,368.45	13,368.45	13,368.45	40,105.34	13,368.45	13,368.45
Communications	20,342.61	21,670.24	22,280.74	64,293.59	22,280.74	22,280.74	22,280.74	66,842.23	22,280.74	22,280.74
Commissions-Freight	15,256.96	16,252.68	16,710.56	48,220.19	16,710.56	16,710.56	16,710.56	50,131.67	16,710.56	16,710.56
Total Variable Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Figure 27

Distribution Center (DC) Fixed Cost Tab

The **DC Fixed Cost Tab,** shown in Figure 28, enables input of fixed costs by month for forecast months, while pre-populating actual months with actual values.

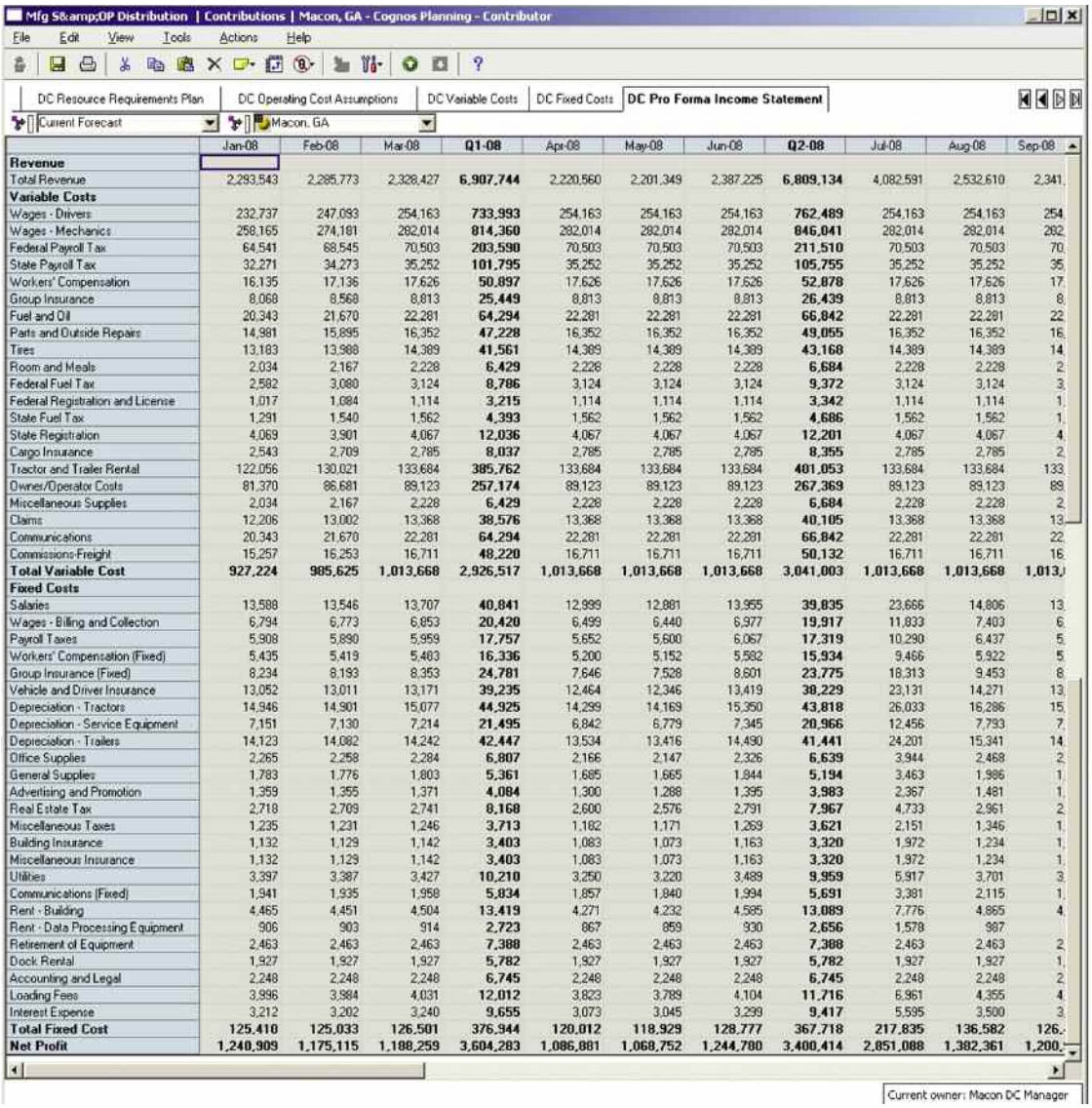


	Jan-08	Feb-08	Mar-08	Q1-08	Apr-08	May-08	Jun-08	Q2-08	Jul-08	Aug-08	Sep-08	Q3-08	Oct-08
Salaries	13,588	13,546	13,707	**40,841**	12,999	12,881	13,955	**39,835**	23,666	14,806	13,703	**52,175**	11,
Wages - Billing and Collection	6,794	6,773	6,853	**20,420**	6,499	6,440	6,977	**19,917**	11,833	7,403	6,851	**26,087**	5,!
Payroll Taxes	5,908	5,890	5,959	**17,757**	5,652	5,600	6,067	**17,319**	10,290	6,437	5,958	**22,685**	4,!
Workers' Compensation (Fixed)	5,435	5,419	5,483	**16,336**	5,200	5,152	5,582	**15,934**	9,466	5,922	5,481	**20,870**	4,-
Group Insurance (Fixed)	8,234	8,193	8,353	**24,781**	7,646	7,528	8,601	**23,775**	18,313	9,453	8,350	**36,115**	5,!
Vehicle and Driver Insurance	13,052	13,011	13,171	**39,235**	12,464	12,346	13,419	**38,229**	23,131	14,271	13,168	**50,569**	10,!
Depreciation - Tractors	14,946	14,901	15,077	**44,925**	14,289	14,169	15,350	**43,818**	26,033	16,286	15,073	**57,392**	12,:
Depreciation - Service Equipment	7,151	7,130	7,214	**21,495**	6,842	6,779	7,345	**20,966**	12,456	7,793	7,212	**27,460**	5,!
Depreciation - Trailers	14,123	14,082	14,242	**42,447**	13,534	13,416	14,490	**41,441**	24,201	15,341	14,238	**53,781**	11,!
Office Supplies	2,265	2,258	2,284	**6,807**	2,166	2,147	2,326	**6,639**	3,944	2,468	2,284	**8,696**	1,!
General Supplies	1,783	1,776	1,803	**5,361**	1,685	1,665	1,844	**5,194**	3,463	1,986	1,802	**7,250**	1,:
Advertising and Promotion	1,359	1,355	1,371	**4,084**	1,300	1,288	1,395	**3,983**	2,367	1,481	1,370	**5,217**	1,:
Real Estate Tax	2,718	2,709	2,741	**8,168**	2,600	2,576	2,791	**7,967**	4,733	2,961	2,741	**10,435**	2,:
Miscellaneous Taxes	1,235	1,231	1,246	**3,713**	1,182	1,171	1,269	**3,621**	2,151	1,346	1,246	**4,743**	1,!
Building Insurance	1,132	1,129	1,142	**3,403**	1,083	1,073	1,163	**3,320**	1,972	1,234	1,142	**4,348**	:
Miscellaneous Insurance	1,132	1,129	1,142	**3,403**	1,083	1,073	1,163	**3,320**	1,972	1,234	1,142	**4,348**	:
Utilities	3,397	3,387	3,427	**10,210**	3,250	3,220	3,489	**9,959**	5,917	3,701	3,426	**13,044**	2,:
Communications (Fixed)	1,941	1,935	1,958	**5,834**	1,857	1,840	1,994	**5,691**	3,381	2,115	1,958	**7,454**	1,!
Rent - Building	4,465	4,451	4,504	**13,419**	4,271	4,232	4,585	**13,089**	7,776	4,865	4,502	**17,143**	3,!
Rent - Data Processing Equipment	906	903	914	**2,723**	867	859	930	**2,656**	1,578	987	914	**3,478**	-
Retirement of Equipment	2,463	2,463	2,463	**7,388**	2,463	2,463	2,463	**7,388**	2,463	2,463	2,463	**7,388**	2,-
Dock Rental	1,927	1,927	1,927	**5,782**	1,927	1,927	1,927	**5,782**	1,927	1,927	1,927	**5,782**	1,:
Accounting and Legal	2,248	2,248	2,248	**6,745**	2,248	2,248	2,248	**6,745**	2,248	2,248	2,248	**6,745**	2,:
Loading Fees	3,996	3,984	4,031	**12,012**	3,823	3,789	4,104	**11,716**	6,961	4,355	4,030	**15,346**	3,:
Interest Expense	3,212	3,202	3,240	**9,655**	3,073	3,045	3,299	**9,417**	5,595	3,500	3,239	**12,334**	2,!
Total Fixed Cost	**125,410**	**125,033**	**126,501**	**376,944**	**120,012**	**118,929**	**128,777**	**367,718**	**217,835**	**136,582**	**126,467**	**480,885**	**103,1**

Figure 28

Distribution Center (DC) Pro Forma Income Statement Tab

The **DC Pro Forma Income Statement Tab** (Figure 29) combines total projected revenue for a distribution center's products and detailed variable and fixed costs associated with that distribution center.



	Jan-08	Feb-08	Mar-08	Q1-08	Apr-08	May-08	Jun-08	Q2-08	Jul-08	Aug-08	Sep-08
Revenue											
Total Revenue	2,293,543	2,285,773	2,328,427	**6,907,744**	2,220,560	2,201,349	2,387,225	**6,809,134**	4,082,591	2,532,610	2,341,
Variable Costs											
Wages - Drivers	232,737	247,093	254,163	**733,993**	254,163	254,163	254,163	**762,489**	254,163	254,163	254
Wages - Mechanics	258,165	274,181	282,014	**814,360**	282,014	282,014	282,014	**846,041**	282,014	282,014	282
Federal Payroll Tax	64,541	68,545	70,503	**203,590**	70,503	70,503	70,503	**211,510**	70,503	70,503	70
State Payroll Tax	32,271	34,273	35,252	**101,795**	35,252	35,252	35,252	**105,755**	35,252	35,252	35
Workers' Compensation	16,135	17,136	17,626	**50,897**	17,626	17,626	17,626	**52,878**	17,626	17,626	17
Group Insurance	8,068	8,568	8,813	**25,449**	8,813	8,813	8,813	**26,439**	8,813	8,813	8
Fuel and Oil	20,343	21,670	22,281	**64,294**	22,281	22,281	22,281	**66,842**	22,281	22,281	22
Parts and Outside Repairs	14,981	15,895	16,352	**47,228**	16,352	16,352	16,352	**49,055**	16,352	16,352	16
Tires	13,183	13,988	14,389	**41,561**	14,389	14,389	14,389	**43,168**	14,389	14,389	14
Room and Meals	2,034	2,167	2,228	**6,429**	2,228	2,228	2,228	**6,684**	2,228	2,228	2
Federal Fuel Tax	2,582	3,080	3,124	**8,786**	3,124	3,124	3,124	**9,372**	3,124	3,124	3
Federal Registration and License	1,017	1,084	1,114	**3,215**	1,114	1,114	1,114	**3,342**	1,114	1,114	1
State Fuel Tax	1,291	1,540	1,562	**4,393**	1,562	1,562	1,562	**4,686**	1,562	1,562	1
State Registration	4,069	3,901	4,067	**12,036**	4,067	4,067	4,067	**12,201**	4,067	4,067	4
Cargo Insurance	2,543	2,709	2,785	**8,037**	2,785	2,785	2,785	**8,355**	2,785	2,785	2
Tractor and Trailer Rental	122,056	130,021	133,684	**385,762**	133,684	133,684	133,684	**401,053**	133,684	133,684	133
Owner/Operator Costs	81,370	86,681	89,123	**257,174**	89,123	89,123	89,123	**267,369**	89,123	89,123	89
Miscellaneous Supplies	2,034	2,167	2,228	**6,429**	2,228	2,228	2,228	**6,684**	2,228	2,228	2
Claims	12,206	13,002	13,368	**38,576**	13,368	13,368	13,368	**40,105**	13,368	13,368	13
Communications	20,343	21,670	22,281	**64,294**	22,281	22,281	22,281	**66,842**	22,281	22,281	22
Commissions-Freight	15,257	16,253	16,711	**48,220**	16,711	16,711	16,711	**50,132**	16,711	16,711	16
Total Variable Cost	**927,224**	**985,625**	**1,013,668**	**2,926,517**	**1,013,668**	**1,013,668**	**1,013,668**	**3,041,003**	**1,013,668**	**1,013,668**	**1,013,**
Fixed Costs											
Salaries	13,588	13,546	13,707	**40,841**	12,999	12,881	13,955	**39,835**	23,666	14,806	13
Wages - Billing and Collection	6,794	6,773	6,853	**20,420**	6,499	6,440	6,977	**19,917**	11,833	7,403	6
Payroll Taxes	5,908	5,890	5,959	**17,757**	5,652	5,600	6,067	**17,319**	10,290	6,437	5
Workers' Compensation (Fixed)	5,435	5,419	5,483	**16,336**	5,200	5,152	5,582	**15,934**	9,466	5,922	5
Group Insurance (Fixed)	8,234	8,193	8,353	**24,781**	7,646	7,528	8,601	**23,775**	18,313	9,453	8
Vehicle and Driver Insurance	13,052	13,011	13,171	**39,235**	12,464	12,346	13,419	**38,229**	23,131	14,271	13
Depreciation - Tractors	14,946	14,901	15,077	**44,925**	14,299	14,169	15,350	**43,818**	26,033	16,286	15
Depreciation - Service Equipment	7,151	7,130	7,214	**21,495**	6,842	6,779	7,345	**20,966**	12,456	7,793	7
Depreciation - Trailers	14,123	14,082	14,242	**42,447**	13,534	13,416	14,490	**41,441**	24,201	15,341	14
Office Supplies	2,265	2,258	2,284	**6,807**	2,166	2,147	2,326	**6,639**	3,944	2,468	2
General Supplies	1,783	1,776	1,803	**5,361**	1,685	1,665	1,844	**5,194**	3,463	1,986	1
Advertising and Promotion	1,359	1,355	1,371	**4,084**	1,300	1,288	1,395	**3,983**	2,367	1,481	1
Real Estate Tax	2,718	2,709	2,741	**8,168**	2,600	2,576	2,791	**7,967**	4,733	2,961	2
Miscellaneous Taxes	1,235	1,231	1,246	**3,713**	1,182	1,171	1,269	**3,621**	2,151	1,346	1
Building Insurance	1,132	1,129	1,142	**3,403**	1,083	1,073	1,163	**3,320**	1,972	1,234	1
Miscellaneous Insurance	1,132	1,129	1,142	**3,403**	1,083	1,073	1,163	**3,320**	1,972	1,234	1
Utilities	3,397	3,387	3,427	**10,210**	3,250	3,220	3,489	**9,959**	5,917	3,701	3
Communications (Fixed)	1,941	1,935	1,958	**5,834**	1,857	1,840	1,994	**5,691**	3,381	2,115	1
Rent - Building	4,465	4,451	4,504	**13,419**	4,271	4,232	4,585	**13,089**	7,776	4,865	4
Rent - Data Processing Equipment	906	903	914	**2,723**	867	859	930	**2,656**	1,578	987	
Retirement of Equipment	2,463	2,463	2,463	**7,388**	2,463	2,463	2,463	**7,388**	2,463	2,463	2
Dock Rental	1,927	1,927	1,927	**5,782**	1,927	1,927	1,927	**5,782**	1,927	1,927	1
Accounting and Legal	2,248	2,248	2,248	**6,745**	2,248	2,248	2,248	**6,745**	2,248	2,248	2
Loading Fees	3,996	3,984	4,031	**12,012**	3,823	3,789	4,104	**11,716**	6,961	4,355	4
Interest Expense	3,212	3,202	3,240	**9,655**	3,073	3,045	3,299	**9,417**	5,595	3,500	3
Total Fixed Cost	**125,410**	**125,033**	**126,501**	**376,944**	**120,012**	**118,929**	**128,777**	**367,718**	**217,835**	**136,582**	**126,**
Net Profit	**1,240,909**	**1,175,115**	**1,188,259**	**3,604,283**	**1,086,881**	**1,068,752**	**1,244,780**	**3,400,414**	**2,851,088**	**1,382,361**	**1,200,**

Figure 29

ABOUT COGNOS, AN IBM COMPANY

Cognos, an IBM company, is the world leader in business intelligence and performance management solutions. It provides world-class enterprise planning and BI software and services to help companies plan, understand and manage financial and operational performance. Cognos was acquired by IBM in January 2008. For more information, visit www.cognos.com.

ABOUT THE COGNOS INNOVATION CENTER

The Cognos Innovation Center was established in North America and Europe to advance the understanding of proven planning and performance management techniques, technologies, and practices. The Innovation Center is dedicated to transforming routine performance management practices into "next practices" that help companies

- cut costs
- streamline processes
- boost productivity
- enable rapid response to opportunity
- increase management visibility

Staffed globally by experts in planning, technology, and performance and strategy management, the Innovation Center partners with more than 600 Cognos customers, academicians, industry leaders, and others seeking to accelerate adoption, reduce risk, and maximize the impact of technology-enabled performance management practices.

(09/08)

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