# **Business answers at your fingertips**

Get to the heart of the question—quickly and economically—with IBM InfoSphere Warehouse Packs







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How IBM InfoSphere Warehouse Packs help improve your business



## Introduction: Empower your company to answer critical business questions

All around the world, businesses like yours need to answer questions quickly and correctly if they want to be successful:

- Who are our most profitable customers?
- How can we make our merchandising and promotions more effective?
- Which bundles of products and services are the most attractive to customers?
- Can we better match our supply to customer demand—and make better use of our working capital?

Getting quick answers isn't easy. Even as your business fills hard drive after hard drive with data about your transactions, customers, suppliers and partners, the data still has to be analyzed to be useful.

Building a solution from the ground up means fighting twin enemies: time and cost. Data warehouses can be expensive and time-consuming to deploy. Analytics software takes time to configure. And even after everything is in place, the software can be too complicated to use without hours of help from IT. You need a way to simplify and speed deployment of critical business analytics.

## Accelerate your time-to-value with prebuilt data warehouses

IBM® InfoSphere® Warehouse Packs help your business deliver data-driven answers, fast. The packs are add-ons for InfoSphere Warehouse and the IBM Smart Analytics System. They come complete with physical data models and sample IBM Cognos® reports based on the business issues that you face every day. Think of them as solution accelerators designed to dramatically reduce your data warehousing project time, business risk and deployment cost.

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Currently, IBM offers three InfoSphere Warehouse Packs:

- Customer Insight: Find out everything you need to know about your own customers to help reduce churn and increase sales and profits per customer
- Supply Chain Insight: Detect problems and manage logistics to get the right products to the right customers, at the right time
- Market and Campaign Insight: See what products and services customers purchase together, so the most profitable items can be cross-sold and cross-promoted for greater overall revenue

Exactly how do these packs help you discover the right answers? Let's find out.



Picture yourself in the following scenarios...

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## Scenario 1: Customer retention at an emerging-market telco

"How are we going to beat the new competition?"

That's the question facing Julian Novak, director of marketing for a midsized Central European telecommunications company. Another company—a huge global firm—plans to buy a small business in the region, with an eye toward expanding in this fast-growing market.

"What's your plan for dealing with this? How will we grow once they get here?" Julian's vice president of marketing wants to know.

"Let's meet the day after tomorrow to discuss it," Julian suggests.

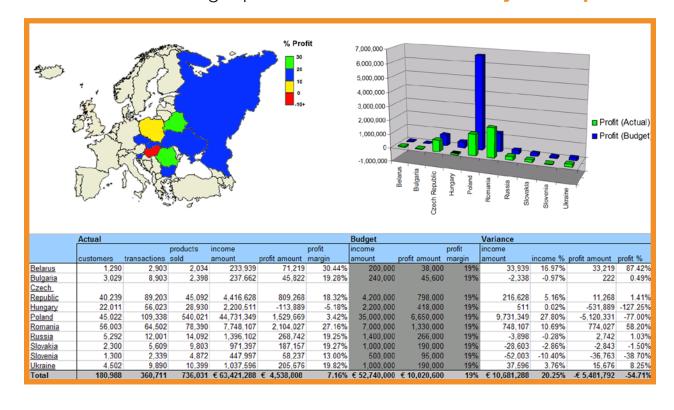
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### IBM InfoSphere Warehouse Pack for Customer Insight

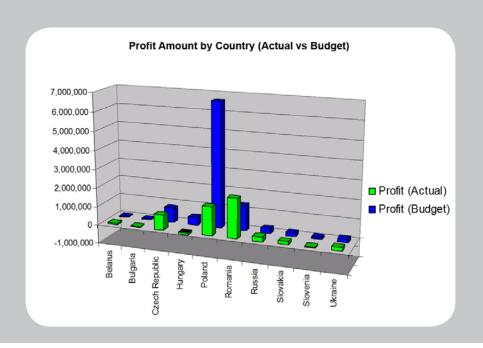
Julian logs into the IBM InfoSphere Warehouse Pack for Customer Insight, where he knows he'll find the data he needs to answer the questions that he'll soon be asked. He starts with the Customer Profitability report to figure out where to focus the company's attention.

#### He sees the following report: Customer Profitability—Europe





With a glance at the bar graph, Julian can see how close to plan—and budget—his company is operating.



	Actual					Budget			
			products	income		profit	income		profit
	customers	transactions	sold	amount	profit amount	margin	amount	profit amount	margin
Belarus	1,290	2,903	2,034	233,939	71,219	30.44%	200,000	38,000	19%
Bulgaria	3,029	8,903	2,398	237,662	45,822	19.28%	240,000	45,600	19%
Czech									
Republic	40,239	89,203	45,092	4,416,628	809,268	18.32%	4,200,000	798,000	19%
Hungary	22,011	56,023	28,930	2,200,511	-113,889	-5.18%	2,200,000	418,000	19%
Poland	45,022	109,338	540,021	44,731,349	1,529,669	3.42%	35,000,000	6,650,000	19%
Romania	56,003	64,502	78,390	7,748,107	2,104,027	27.16%	7,000,000	1,330,000	19%
Russia	5,292	12,001	14,092	1,396,102	268,742	19.25%	1,400,000	266,000	19%
Slovakia	2.300	5.609	9.803	971.397	187,157	19.27%	1.000.000	190.000	19%

By clicking on different country names, Julian can drill down into the data for regions where his company already competes. Instantly, he sees the most important profitability metrics broken out by country.

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Julian drills down to specific cities to see if there are local patterns that can be exploited. He notes that the most profitable customers seem to be located in just a few of the region's city centers.

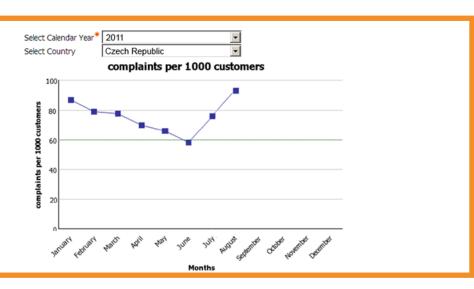
From the historical data, Julian sees that profitability per customer—while still above industry average—seems to have dipped slightly in the last two quarters. He wonders whether there have been an unusual number of complaints about the service.

	Actual					
			products	income		profit
City	customers	transactions	sold	amount	Profit (Actual)	margin
<u>Brno</u>	6,533	12,092	6,982	595,899	109,765	18.42%
<u>České</u>						
<u>Budějovice</u>	29	203	302	15,334	215	1.40%
<u>Havířov</u>	345	574	234	11,700	1,324	11.32%
Hradec Králové	434	879	592	29,600	4,763	16.09%
<u>Liberec</u>	424	3,243	782	90,441	16,950	18.74%
<u>Pardubice</u>	14	32	24	1,200	56	4.67%
<u>Plzeň</u>	5,678	14,532	6,382	757,149	123,314	16.29%
<u>Praha</u>	21,284	48,557	25,009	2,553,167	487,451	19.09%
Olomouc	100	145	320	18,880	234	1.24%
<u>Ostrava</u>	5,324	8,792	4,320	336,008	63,819	18.99%
Ústí nad Labem	45	89	100	5,000	1,184	23.68%
<u>Zlín</u>	29	65	45	2,250	194	8.60%
Total	40,239	89,203	45,092	€ 4,416,628	€ 809,268	18.32%

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To find out, he brings up a report showing customer complaints. The report displays complaints per 1,000 customers, tracked over time, along with the average number of complaints over time.



Julian sees that complaints seemed to have spiked to moderately high levels during the last two months. He drills down and discovers that some service representatives have higher complaints associated with them than others.

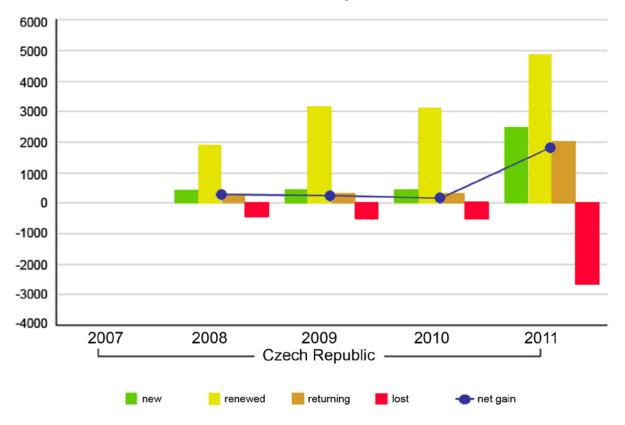
	customers	products sold	communications	customer complaints	complaints per 1000 customers
January	36,783	4,362	6,239	3,194	86.84
February	36,987	4,329	2,389	2,922	78.99
March	37,093	4,378	3,429	2,877	77.57
April	38,001	5,450	4,348	2,652	69.79
May	38,720	3,992	5,428	2,557	66.04
June	39,213	8,903	3,291	2,276	58.04
July	40,120	7,139	5,692	3,046	75.91
August	40,239	6,539	7,623	3,679	91.42
Total	307,156	45,092	38,439	23,202	604.6



Now Julian decides to analyze customer turnover, or churn, to see where his company might be vulnerable. He wonders if some of the same factors causing customers to complain could be causing the churn.

He calls up the report Customer Churn—Analysis Over Time to see the churn trend over the last year. He pays close attention to customer population factors such as renewal, returning, lost, new and net gain.

#### Customer Churn—Analysis Over Time



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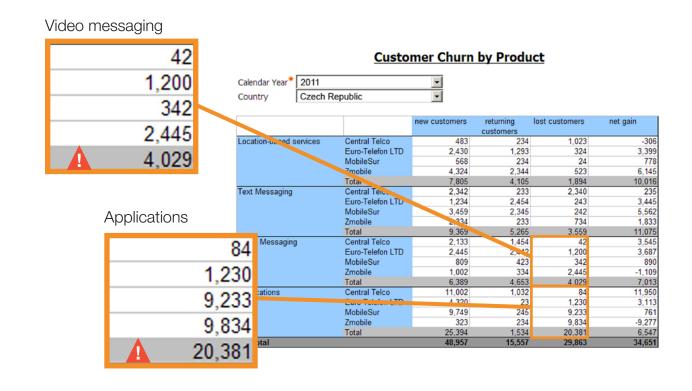






Julian wants to know which products are experiencing the greatest churn, so he accesses the **Customer Churn by Product** report. He selects a year from a drop-down menu to call up the report.

Julian sees that churn is worst for two products that his company offers: video messaging plans and applications. Knowing that these plans are expensive and have not been updated for a while, Julian makes a note to investigate if some form of discount promotion could help to reduce the churn.



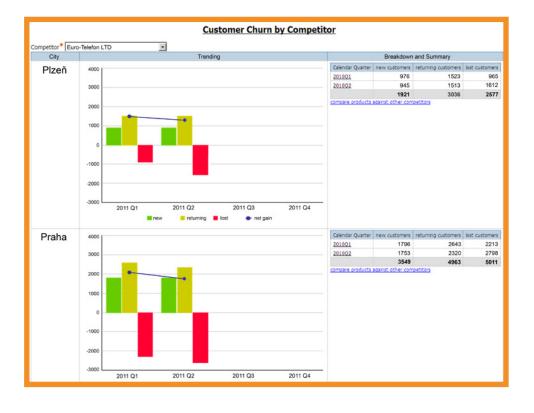


The report also contains some good news. Julian's company is doing well in other product categories where it directly competes with the newly acquired company in the market—the one that has Julian's company worried. That means the big competitor that acquired the company is not invincible.

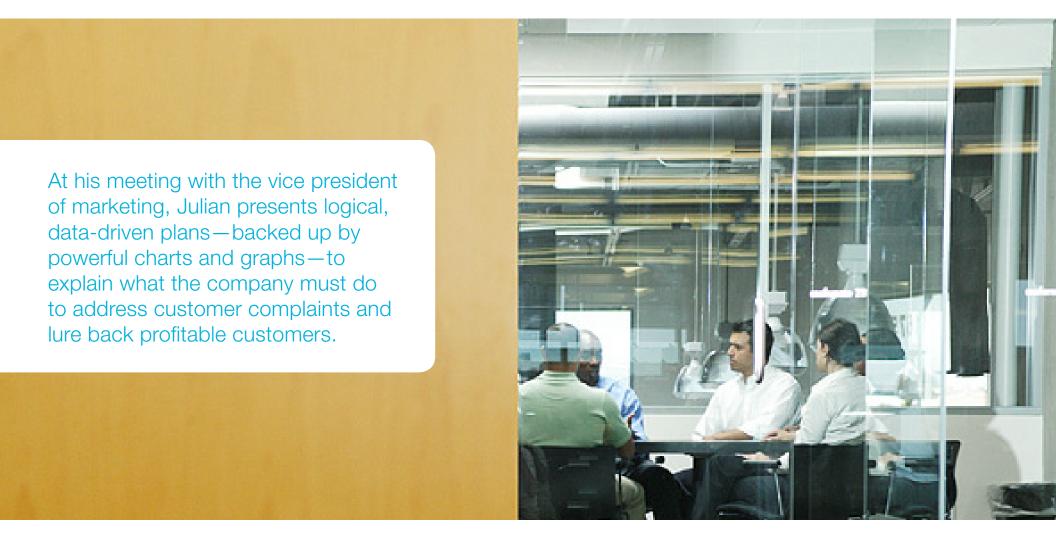
Julian then turns to the **Customer Churn by Competitor** report. Interestingly, the big competitor seems to be experiencing higher churn in its existing markets than Julian's firm.

In many service-based industries, such as telecommunications, the identity of the competitor from which an account is won (or to which an account is lost) is captured as part of the transfer process. The Customer Churn by Competitor report analyzes this data to provide a picture of where customers are coming from, and where they're going when they leave.

Julian realizes that with the right pricing, targeting and incentives, his company might be able to gain new market share by focusing on the areas and products where the competition is weakest.









## Scenario 2: Supply and demand management at a global electronics retailer

"Why are our retailers complaining that they're always running out of our most popular products?"

That's the question facing Mei Li, who handles logistics for a large chain of electronics stores. Her best store manager says he could sell more if his store had more of the "hot" items—the most popular digital cameras and electronics, for example. And he's not alone. She's heard similar complaints from other store managers.

What can the retailer do to make the best use of its working capital by better matching supply and demand—having

enough of the things people want, without overstocking less-popular items?

Mei Li asks the store manager for examples of recent stock-outs, and he mentions a few specific items. One of the products he mentions is always difficult to get, but she's surprised by some of the others, which are popular but generally available. She tells the manager that she'll get back to him soon, and starts to investigate.

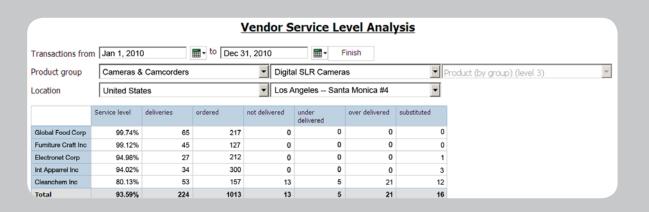


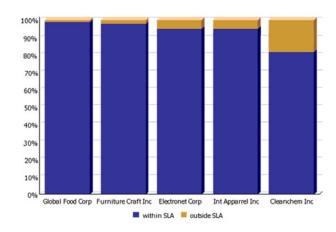


#### IBM InfoSphere Warehouse Pack for Supply Chain Insight

Mei Li begins by logging into the IBM InfoSphere Warehouse Pack for Supply Chain Management, which her company recently installed.

She calls up a report titled **Vendor Service Level Analysis.** It shows a high number for suppliers (vendors) that are meeting most of their deliveries and a lower number for vendors that have a lot of under-deliveries and substitutions.





Most of these vendors are coming in at a healthy 98 to 99 percent of their service levels, but **one stands out as having a much lower rate, about 80 percent.** Mei Li knows that is low enough to account for some of the stock-outs—including one of the items mentioned by her store manager.

Introduction

Scenario 1: Customer retention

Scenario 2: Supply and demand management

Scenario 3: Marketing optimization

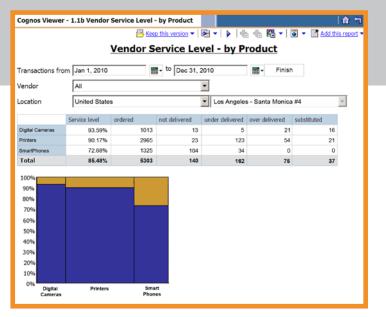
Actionable information



She saves the report to use for a discussion with the problem vendor. To get more details, she runs a similar report, **Vendor/Product SLA Matrix**. Using this report, she sees that the problem vendor has low performance in several product categories—printers, digital cameras and high-end smartphones.

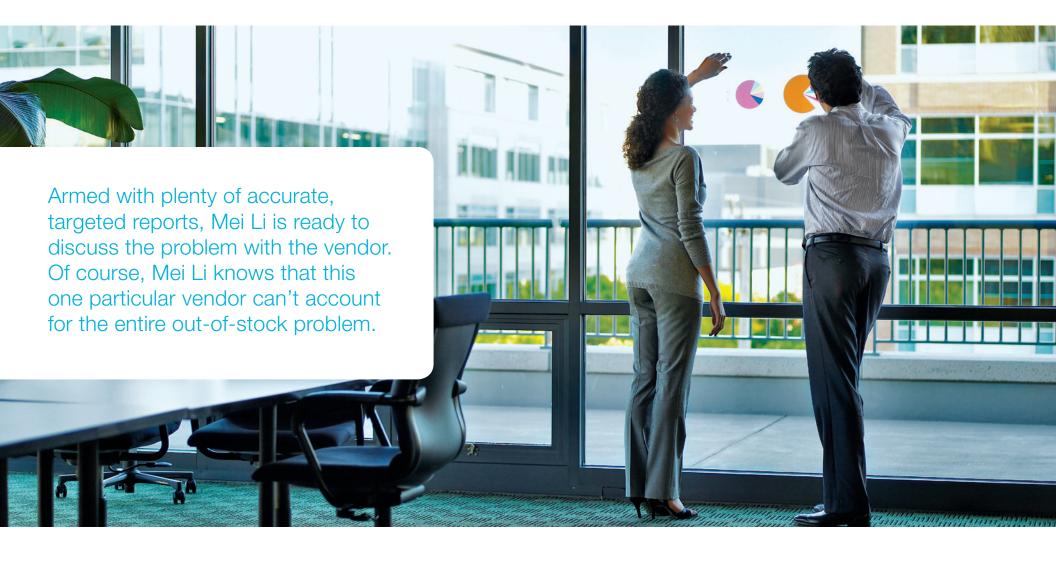
Service level	Digital Cameras	Printers	SmartPhones	Total
Cannen Ltd	99.74%	100.00%	99.52%	99.78%
Madison Holdings	99.12%	99.32%		99.23%
Nikko Inc	94.98%	96.00%	95.52%	95.41%
RTG Corp	94.02%			94.02%
Cascade Inc.	80.13%	65.34%	24.64%	56.98%
Total	93.59%	90.17%	72.68%	85.48%

**Vendor/Product SLA Matrix** 



Mei Li can also call up the **Vendor Service Level—by Product** report to compare the performance of several vendors that supply the same products.





Introduction

Scenario 1: Customer retention

Scenario 2: Supply and demand management

Scenario 3: Marketing optimization

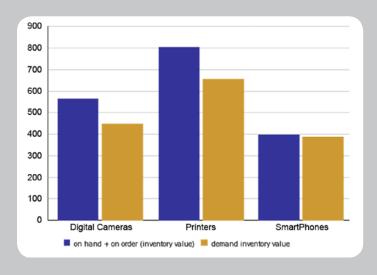
Actionable information



She wonders whether inventory or distribution problems are also causing product shortages. She begins by viewing **Inventory Levels— Stock Availability by Product Group** for some of the categories that sell out often.

Mei Li sees that there is a shortage of smartphones—or a supply that just barely covers demand—that could cause occasional stock-outs as demand goes up and down.





But in some of the product areas that her store manager mentioned, like **digital cameras** and **printers**, there is plenty of inventory in the company's warehouses to cover the demand.

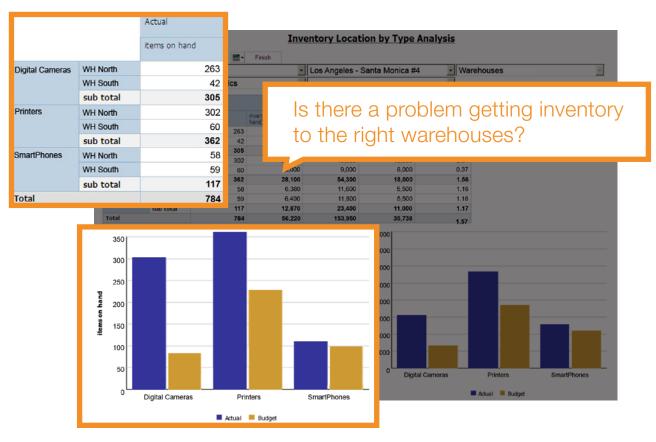
For some reason, that inventory is not getting to the stores that are complaining.



Since it looks as if there are plenty of printers and digital cameras overall, perhaps the problem is in the distribution of the items. To find out, Mei Li calls up an **Inventory Location by Type Analysis**.

She notices that the report shows far more inventory of printers and digital cameras in some warehouses than in others.

Mei Li also notices that the warehouses with the lowest inventory are served by one distribution center (DC). She wonders if that DC is operating as efficiently as it could.



Introduction

Scenario 1: Customer retention

Scenario 2: Supply and demand management

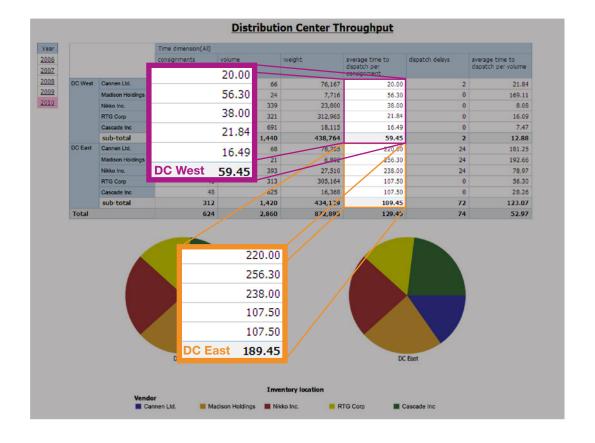
Scenario 3: Marketing optimization

Actionable information



Perhaps distribution delays are contributing to those warehouse inventory problems. Mei Li calls up a **Distribution Center Throughput** report.

experiencing delays and taking several times longer to process consignments than DC West. Extending the time period and rerunning the report shows that the problem has been going on for some time.





Next, Mei Li looks at a report showing the **Distribution Center Productivity by Employee.** 

She can see that productivity per worker is much lower at the problem DC, compared to the utilization rates at the other DCs.

The utilization rates spark Mei Li's memory: the low-performing facility recently submitted a request for more modern equipment. Time to recommend approval of those upgrades!



Mei Li's company has locations around the world with different data systems, which has always made it tough to compare DC performance. InfoSphere Warehouse Packs helps the IT group bring together data from all the systems, making performance comparisons easy.



Mei Li now knows how to solve the DC problem, but what about the warehouses?

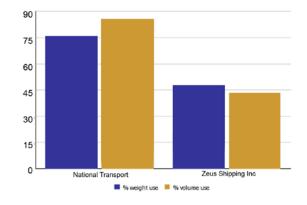
Many of them have sufficient inventory. She pulls a **Load Efficiency Analysis by Carrier** report.

Are there problems getting products out to the stores that need them?

From this report, Mei Li sees that

Zeus Shipping is much more efficient
in shipping goods along the North
and East routes. She makes a note to
herself—try assigning each carrier only
to the routes that it handles efficiently;
the company can always relax the
rule if unusual demand requires it.

				Load Efficie	ency Analysis	s (by Carrier	)		
		2010							
		National Transport				Zeus Shipping Inc			
		weight capacity	volume capacity	% weight use	% volume use	weight capacity	volume capacity	% weight use	% volume use
	East Route	30,234	432	83.45%	80.32%	43,420	532	76.32%	71.92%
	North Route	21,423	344	54.65%	75.23%	48,872	464	79.11%	77.23%
	South Route	23,234	244	76.34%		50,400	512	25.42%	30.82%
		00.404	400	07 1501	00.400/	50.000	500	12.43%	10.90%
Zeus S	Shipping Inc							47.20%	44.26%
weight	capacity	volume c	apacity	% weigh	nt use	% volun	ne use		
	43,420		532	2	76.32%	6	71.929	%	
	48,872		464	l.	79.11%	ó	77.23	%	









Already, in less than an hour, Mei Li has used detailed data and analysis to:

- Assess store manager complaints to see if they are valid
- Flag vendors that are underperforming or unreliable
- Detect inventory and shipping efficiency problems
- Discover a distribution-center productivity problem

She has called up easy-to-understand, professional reports that she can use to explain the problems. Mei Li is now armed with the data she needs to revise her supply chain and to negotiate with

others—both inside and outside her company—to help improve the underlying logistics of the supply system.

Best of all, no part of her investigation required that she write code or produce even one SQL statement. Her data was available—down to the product level or to the level of performance of a single employee—with just a few clicks of the mouse. She automatically produced charts and graphs for discussing challenges and solutions. She quickly generated reports that can be used to make operations more profitable, more efficient and just plain smarter.



## Scenario 3: Marketing optimization at a retail superstore

"How do we get each customer to spend more in our stores?"

That's the question facing Christine Herrera, who heads retail sales for a chain of very large superstores that sells everything from personal-care items to home improvement wares. The chain's customer base has stayed the same for several years, so the vice president of in-store sales tasked Christine with developing strategies to increase the amount customers spend on each trip.

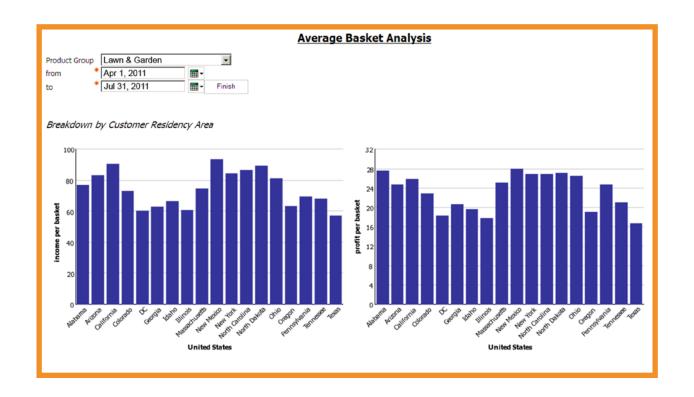
## IBM InfoSphere Warehouse Pack for Market and Campaign Insight v8.2

Christine knows that she can use the InfoSphere Warehouse Pack for Market and Campaign Insight to look for products that some customers already purchase in combination, so the products can be promoted or bundled together. The tool is a new addition at Christine's company, and she's looking forward to creating reports that can help her tease out these associations.





Christine needs to increase the average spend per trip, so she begins by calling up a report showing overall market basket statistics by geography. First, she selects the date range she's interested in by clicking on dates on a calendar interface. She selects the most recent four-month period and calls up an **Average Basket Analysis** report.

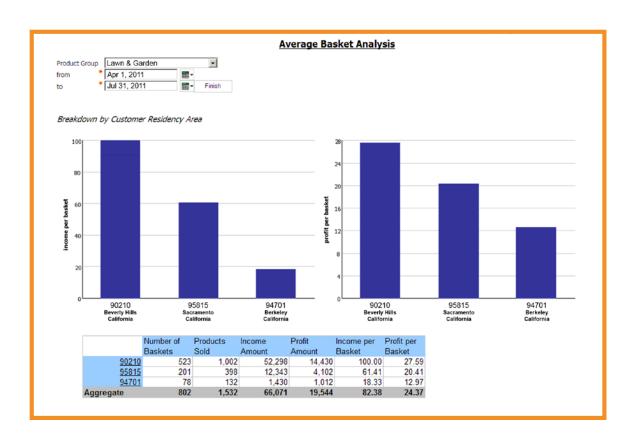




Christine is responsible for the Western United States and California is her largest market, so she drills down on the state. She clicks on several California cities to bring up the zip codes for each, and then clicks on individual zip codes.

Maybe there is some variation to what customers are purchasing based on not just their region, but also their location within the region.

She begins by selecting Beverly Hills, with zip 90210—obviously a high-end market—then tests a mid-range and a low-end zip code.



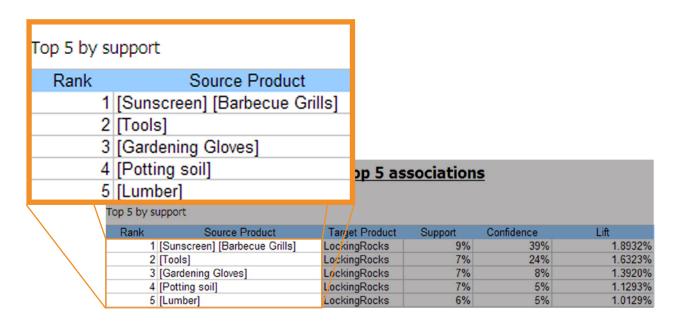
Christine wasn't expecting to be able to use the InfoSphere Warehouse Pack reports so soon—the kickoff meeting to install the pack happened less than two weeks ago, and it's already up and running in time for her sales project.



In early spring, many of the retail chain's California customers are starting home-improvement and gardening projects, and could be encouraged to buy other store items at the same time. She knows that one of the top sellers in the garden department lately has been a type of ready-made, interlocking paving stone called "LockingRocks." She starts by calling up a Top 5

Associations report that will tell her the top five products most commonly bought with the pavers last spring.

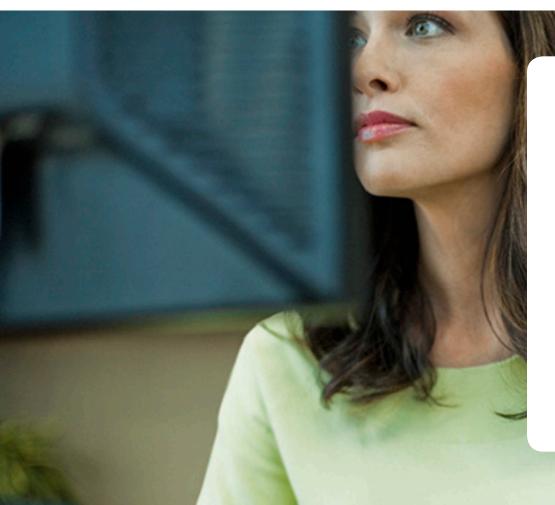
She selects the "support" view and sees that sunscreen/barbecue grills, tools, gloves, potting soil and lumber were the items most frequently bought by people purchasing LockingRocks.



Not only are the standard packs reports customizable, but Christine can use IBM Cognos to build her own reports as well. The packs are a starting point and can be used to expand into larger, industry-based data models.

Introduction	Scenario 1: Customer retention	Scenario 2: Supply and demand management	Scenario 3: Marketing optimization	Actionable information	Resources





The two categories with the strongest associations—sunscreen/barbecue grills and tools—aren't currently sold anywhere near the garden department. Sunscreen is located in the sundries section near the pharmaceuticals. Barbecue grills are in the small-appliance section. Moving some sunscreen into the garden department, where the pavers are located, is a fairly easy change to make, so Christine puts that on her list of action items.

InfoSphere Warehouse Pack for Market and Campaign Insight v8.2 is designed with reports immediately at hand that are packaged in a way that communicates and persuades. So Christine doesn't need an army of expert programmers and data analysts to build her case.



### Target Product Influence Analysis based on target product: Gas Grills

Christine sees that a very high number of customer market baskets that contain the pavers also contain big-ticket barbecue grills. If the number of people buying both items increased, it might mean a big boost in revenue. To verify this, she looks at the **Target Product Influence** report for information about the grills.

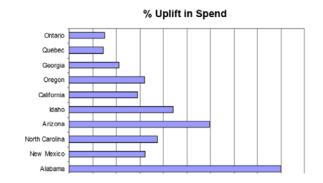
In this report, she sees the average market basket spend, as well as the average for all baskets containing the barbecue grills.

		Total spend	Market	Average Market	Baskets with	% Baskets	Average Spend	% uplift in
			Baskets	Basket Spend	target	with target	with target	spend
<b>Grand Total</b>		5,712,362	93,647	59.74	2,700	2.88%	268.353	349.21%
Canada	Country Total	255,281	4,553	55.91	176	3.87%	138.28	147.34%
	Ontario	113,721	2,134	53.29	78	3.66%	133.23	150.01%
	Quebec	141,560	2,419	58.52	98	4.05%	143.32	144.91%
<b>United States</b>	Country Total	5,457,081	89,094	60.17	2,524	2.83%	282.81	370.05%
	Georgia	404,659	5,923	68.32	469	7.92%	213.23	212.10%
	Oregon	487,999	6,238	78.23	458	7.34%	329.34	320.99%
	California	797,193	10,293	77.45	487	4.73%	302.45	290.51%
	Idaho	218,785	3,029	72.23	148	4.89%	392.02	442.74%
	Arizona	332,319	5,910	56.23	158	2.67%	392.44	597.92%
	North Carolina	432,353	6,430	67.24	148	2.30%	320.23	376.25%
	New Mexico	268,339	3,401	78.90	145	4.26%	334.9	324.46%

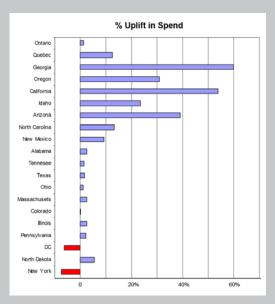
Christine realizes that if more people buy both items, it could mean a big boost in revenue. But can she get hard numbers to back up her plan?



Selecting the "uplift" view, she can see that the presence of the grills pushes the market basket income well above average.



### She then runs the same report for the pavers.



		Total spend	Market Baskets	Average Market		% Baskets	Average Spend	% uplift in
Grand Total		5,712,362		Basket Spend 59.74	target 2,294	with target 2.45%	with target 68.376	spend 14.46%
	Country Total	255,281	4,553		2,254		59.97	7.26%
Janaua	Ontario	113,721					54.03	1.39%
	Quebec	141,560					65.9	12.61%
United States	Country Total	5,457,081					69.31	15.20%
Officed States	Georgia	404.659	00000000				109.32	60.01%
	Oregon	487,999					102.39	30.88%
	California	797,193					119.23	53.94%
	Idaho	218,785					89.23	23.54%
	Arizona	332,319					78.23	39.13%
	North Carolina	432,353			104		76.23	13.37%
	New Mexico	268,339					86.23	9.29%
	Alabama	108,392					54.23	2.51%
	Tennesee	226,704					60.23	1.57%
	Texas	345,834					45	1.74%
	Ohio	341,740					65.98	1.15%
	Massachusets	307,946					40.02	2.56%
	Colorado	161,691					49.99	0.14%
	Illinois	377,382					80.2	2.52%
	Pennsylvania	272,273					53.21	2.29%
	DC	54,205			12		58.23	-6.22%
	North Dakota	34,113					34.32	5.54%
	New York	285,155						-7.36%

Introduction

Scenario 1: Customer retention

Scenario 2: Supply and demand management

**Scenario 3: Marketing optimization** 

Actionable information



Christine now knows that she could probably increase sales substantially by cross-promoting these items in both departments. She has the following ideas:

- Place appealing pictures showing a barbecue area built with the pavers in both the garden and small-appliance departments. Place the purchasing tags that customers use to buy the pavers with the grills, perhaps with a sample paving tile in the display.
- Request that store managers place a sample grill and promotional signs with the pavers. Place purchasing tags for the grill on the promotional signs.
- Move some sunscreen product near the pavers—and maybe near the grills as well.

In less than half an hour, Christine discovered some interesting associations that weren't obvious at first, identified simple merchandising changes that could make a big difference in the bottom line, and figured out a few options for increasing the average customer spend per store.

Now that she has the insight and data she needs, she can incorporate information from the report—including graphics—into her planning documents and presentations. And since she's been able to do so much in so little time, she's confident that she can do the same for other products. She'll be able to find more creative ways to increase the revenue and profit from each customer market basket.





### Actionable information, just in time to boost your profits

## How do I get started?

As you've seen by following the stories of Julian, Mei Li and Christine, InfoSphere Warehouse Packs deliver complete business analytics capabilities. All you need to add is your organization's data.

Guided and self-service tools help you quickly achieve strategic insight without relying on IT. The most commonly needed reports—the ones that help to make or break profit goals and strategic objectives—

are already precoded and available, requiring little or no analyst expertise to produce them.

#### **Building for the future**

You can quickly see reports that show you the kinds of information needed to make and communicate critical decisions. Drill down to the day, postal code, customer or item level. The packs share atomic data with the IBM Industry Models so you can start on a business problem using your current data and get immediate answers from the packs—and then evolve to the more extensive Industry Models as needed. Data warehouse models are available for the banking, financial markets, insurance, retail and telecommunications

industries and offer data warehouse design models, business terminology models and analysis templates to accelerate the development of business intelligence applications. The Industry Models help your organization gain a competitive advantage by enabling the consolidation of clean, meaningful and insightful data across multiple channels and products.

Each of the three InfoSphere Warehouse Packs focuses on business questions in a particular analytical area. You can implement the packs individually over time and ultimately combine them to form a complete, enterprise data warehouse. Add a pack and you're building your company's future.

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#### Resources

Ready to start using InfoSphere Warehouse Packs at your company? It's easy. Contact your IBM representative for more information, or go online to view hardware and software deployment requirements.

In general, you can run your warehouse pack in a typical, high-end Microsoft Windows XP environment with 3 GB of RAM. Typical storage requirements range from 4 TB to 25 TB depending on your data volumes. The packs are also available for the IBM Smart Analytics System and IBM Netezza® deployments.

To learn more about IBM InfoSphere Warehouse Packs, visit **ibm.com**/infosphere/warehousepacks

To learn more about IBM InfoSphere Warehouse, visit **ibm.com**/software/data/infosphere/warehouse

To learn more about IBM Industry Models, visit **ibm.com**/software/data/industry-models



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