

*Efficient Data Mining and Reporting:
The Key to Maximum Return on your
OMS Investment*

White Paper

MARKETINGCONCEPTS
SOLUTIONS PROVIDER



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Executive Summary

This white paper explores the use of your existing order management system (OMS) as the foundation for a more broad-based customer relationship management (CRM) system. Smart use of your OMS database eliminates the need for an additional investment in a separate CRM product, thereby increasing the return on your OMS investment. As we shall see, mining your OMS data efficiently is the key to unlocking a more meaningful relationship with your customers. And as loyalty improves, you increase your bottom line.

The paper begins with a brief overview of the changing definition of CRM. We explore what your company needs to accomplish a successful CRM strategy. Barriers to effective use of your OMS database (as a centralized starting point for CRM) are then reviewed; process flow charts are included to help illustrate these barriers. The paper continues by examining the importance of systems integration and accessible reporting in the modern, agile business.

The paper concludes with an example of a flexible reporting solution for the Ecometry™ OMS: Data Warehouse from Ability-Software™. Additional graphics and process flow charts are included to illustrate how these two products work together. Combined, they provide a complete picture of your customers' behavior, accessible to all areas of your business, without the need for a company-wide, cumbersome CRM implementation.

Introduction

The technological innovations of the last decade have created new opportunities for savvy multi-channel retailers. These same innovations, however, have also created a need for a more thorough understanding of consumer activity in order to gain and retain loyal customers. The rise of *customer relationship management* strategies and software, or CRM, is the result of marketers' need for this broad-based, comprehensive view of their customers.

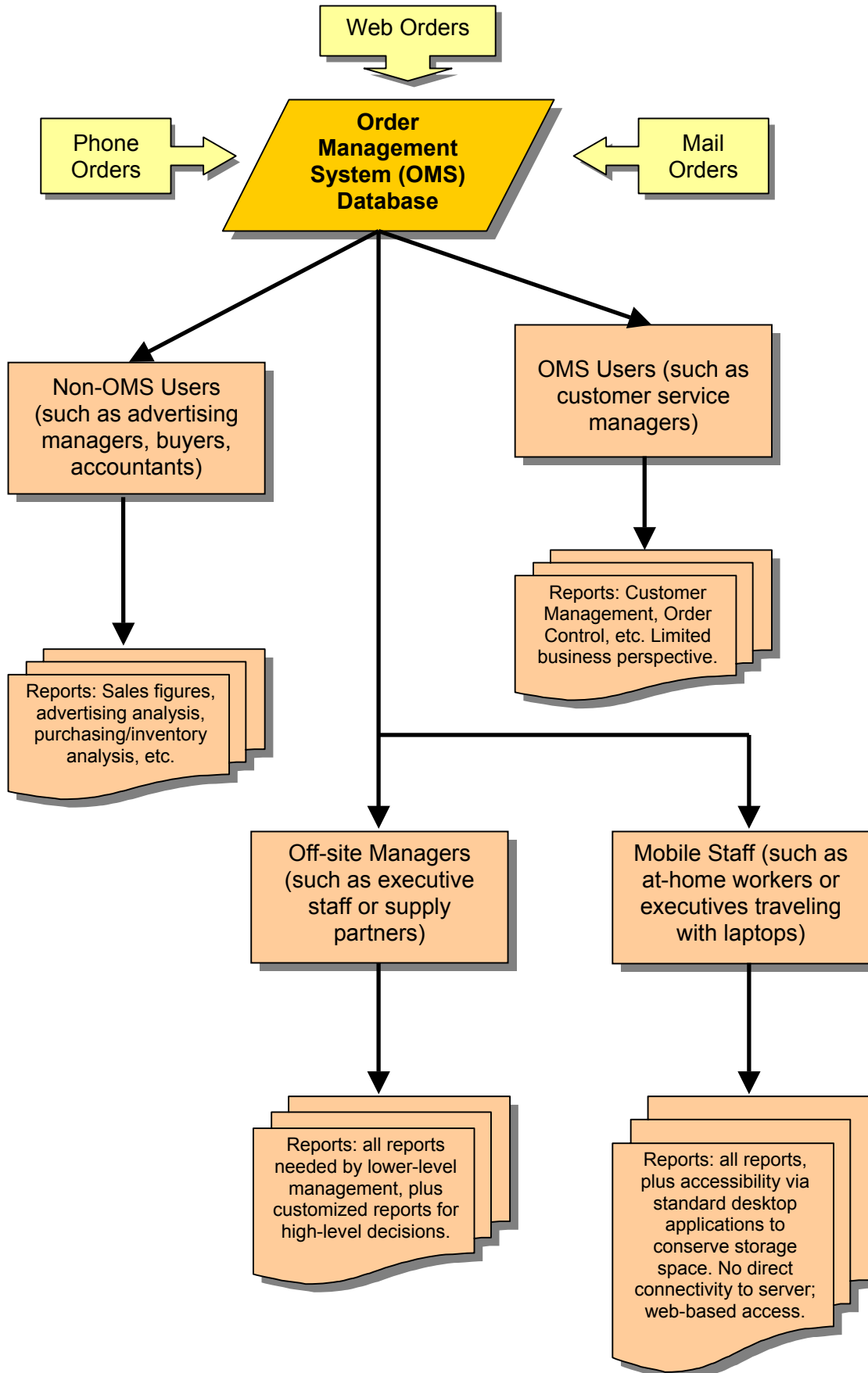
Author Cliff Allen quotes Gartner Group in his book, One-to-One Web Marketing, defining CRM as “a business strategy designed to optimize profitability, revenue and customer satisfaction.”¹ Allen continues: “But, in order to execute on that promise, *you must put the customer in the center and integrate all processes around a single view of the customer* . . . the essence of CRM is to have a single comprehensive database that can be accessed from any of the customer touch points.”²

Marketing executives are realizing that a single-software approach to CRM is often unsuccessful, simply because the rapid rate of change in agile businesses makes flexibility absolutely essential. The most flexible systems consist of several integrated “best-of-breed” solutions, rather than a single cumbersome “do-it-all” solution.³ “Take a process approach (to CRM), a customer approach—not a product approach,” says Lisa Arthur, vice president of services and CRM product marketing, Oracle Corp. She continues, “Integrated data are key.”⁴

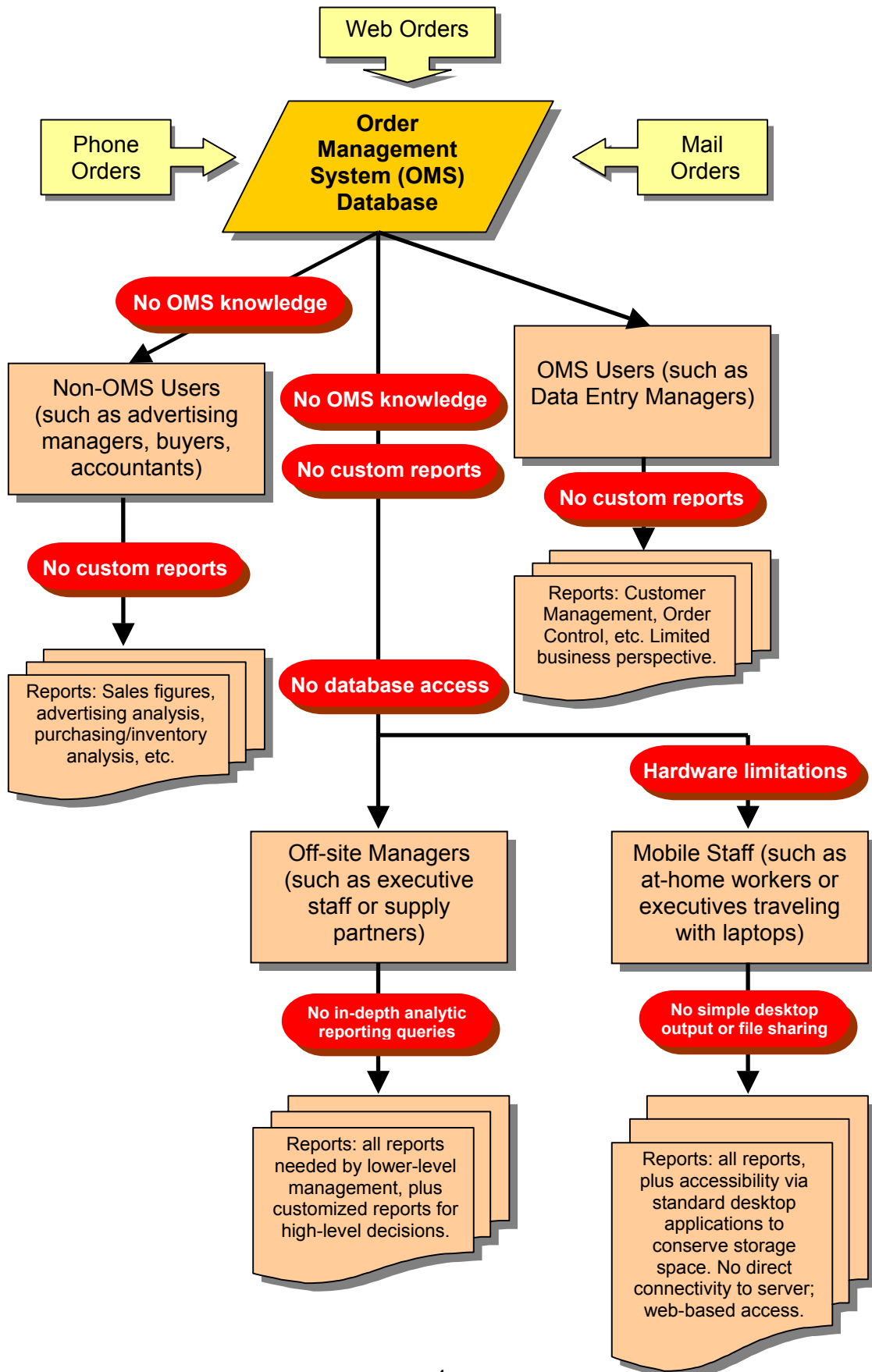
Integration. Access. A comprehensive database. Take a fresh look at your existing systems: what can you leverage as a “launch pad” for effective CRM? What is your system missing? For many direct marketers, their current off-the-shelf order management system (OMS) already gathers and stores a wealth of information—their OMS database is the comprehensive storage system they need, and it's already in place. What, then, prevents the use of this valuable data in company-wide decision making? The answer is *access*. You need to be able to organize your data in reports designed for all areas of your business—not only customer service, but also inventory, accounting, marketing, suppliers . . . only you and your managers know the specific reporting needs of your business. And you need to be able to view those reports from anywhere, and send them to anyone.

The real barrier to access, for many companies, is the lack of a highly customizable, easy-to-use reporting solution for mining OMS data. In order to examine the problems inherent in using your existing OMS as a starting point for a comprehensive CRM process, then, we must explore the barriers to effective reporting and data mining within your OMS.

The chart below illustrates the ideal flow of data from your order management system to the numerous reports required for accurate business analysis of the generated data.



Now take a look at the next chart. Here, red boxes indicate areas where barriers to smooth data flow arise. Notice that, as you move higher on the “command chain,” these barriers accumulate—essential reports become less and less accessible.



Barriers to Effective Reporting

Customization tools are limited or difficult to use

It's a simple fact: different departments need different reports. Your inventory analysis manager needs order and return quantities. Your call center manager needs up-to-date backorder information. Your accountant needs sales figures. And today's executives can't afford to wait for a quarterly or end-of-month report. You need to gauge response to yesterday's email campaign so you can anticipate shipping needs, warehouse staffing, last-minute changes to tomorrow's advertising campaign . . . and the list goes on.

Chances are, your existing OMS provides limited reporting capability. However, it's true that good, readable reports contain only the data you need. The more *irrelevant* data that's included in a single report, the more difficult it becomes to focus on the *relevant* data, and to make accurate predictions based on that data.

The key to targeted reporting is customization. And, unfortunately, most off-the-shelf OMS software does not include report customization tools. If customization is even possible, it often requires assistance from the IT department. But you're in the business of marketing, not software development, so the flow of information bottlenecks while your management staff waits for their customization requests to rise to the top of the pile in the overloaded IT in-basket.

You may be able to mine your data with specialized reporting software. Here again, though, you run into the IT bottleneck; do you really want to hire a consultant every time you need a new report written? You may get a custom report, but it will be costly, and, since a consultant won't know your business needs as well as your internal managers, you may not end up with exactly what you wanted.

Multiple software solutions increase the learning curve

The best custom reports, as we have noted above, will rely on your internal expertise—your managers and external suppliers are the best sources of information about what they need in their reports. However, many departments probably don't use your OMS regularly. Or they use the system in a very limited way, in conjunction with other software solutions specific to their own areas.

Comprehensive, "one-tool-does-it-all" CRM software was originally conceived to help bridge these software barriers across a business. Unfortunately, this solution rarely works in the real world, because successful businesses today do not exist in a vacuum. They have to integrate not only their own systems, but also the systems of partners such as suppliers, web developers, and other outsourcing resources. Best-of-breed software solutions, therefore, are becoming the norm in the modern marketplace, because they allow maximum flexibility.

A best-of-breed approach does have a big limitation, however. Integration and information sharing can be a real challenge. Large corporations can have, on average, 45 systems that must be integrated to provide data across departmental lines.⁵ Your business may have considerably fewer, but, without a doubt, your employees can't afford to spend time learning each piece of the software puzzle to get a complete picture.

Without an easily learned reporting tool to access your OMS data, employees who don't work directly with your OMS must either spend time learning the OMS to get their own reports, or they must rely on existing OMS users to get their reports for them. Here again, this is a less than ideal scenario. Passing reports up the chain increases waiting time for crucial information, and specialized OMS users may not have a broad enough perspective on the business to predict which information will be helpful to upper management and which data will be irrelevant.

Off-site workers have limited access

Another prominent feature of the modern business landscape is that one single physical building probably does not house your entire operation. Furthermore, individual employees may work from home, from several company sites, or while in transit. According to The Portable MBA, “with the rise of different lifestyles many companies have been forced to rethink the very definitions of work.” As a result, the authors continue, “there has been a dramatic increase in the use of technology to encourage telecommuting.”⁶

Business decentralization has been made possible by information technology; however, your OMS data (or any CRM data, for that matter), still has to be stored on a server. Typical OMS servers are not designed to provide portable access; they are designed to collect your order information from a variety of sources and provide centralized storage.

Let’s look at just a few examples of potential accessibility problems.

- Security concerns may make it difficult or impossible to provide access to your OMS server for off-site or telecommuting workers.
- You may outsource your order-taking processes, making it difficult to access OMS server data directly, even from your corporate headquarters.
- You may want to give a supplier access to a particular report, but you definitely don’t want to give them unfettered access to your OMS server.
- A traveling executive may want to download a report to a standard desktop format, like Microsoft® Excel or Adobe Acrobat™, for review on a computer with limited disk space, like a laptop or handheld device, without having extensive knowledge of file conversion processes.

In order to surmount portable access difficulties, your data must be copied, or *replicated*, to a server which can provide secure web access to your OMS data, such as Microsoft® SQL server.

Data replication for portable access may cause load-balancing problems

Data replication can deplete your system resources quickly, especially if you have large volumes of OMS data to replicate. If you don’t have control over which types of data you want to replicate, and which time of day to run replication processes, you risk load-balancing problems. Overloading your IT system is the last thing you want to do during your busy season. However, that’s just the time when replicated, accessible data would be most critical.

Reporting Across Departmental Lines

After examining the complex problems that can arise from using your OMS data as part of an integrated reporting solution, it’s easy to see why many executives are frustrated with the whole concept of integrated reporting and CRM. A complete solution must address all of these problems in order to be effective, which makes effective answers a rarity indeed. Might it not be easier to go back to our old, vertical channels for gathering information, and let each department fend for itself?

In this section, we will examine why proactive, thoughtful review of your OMS data via integrated reporting is so critical in today’s competitive marketplace. We’ll follow up with some ideas about how an ideal reporting solution would address the common problems we have identified.

How important is integrated reporting?

Reports, of course, provide a way to measure gains and losses in productivity and profit. “What is measured and how it is measured set very strong incentives for (a) firm’s employees,” says The Portable MBA. “The old adage that ‘what you measure will improve’ is true.”⁷

However, traditional means of reporting vertically, within a single department, provide an incomplete picture of business activity. Each department relies upon multiple other teams in order for the organization to function properly. Twenty-first century executives understand that effective customer service, for example, is not the responsibility of a single dedicated “customer service” department. Rather, it is a chain of processes—a chain that is only as strong as its weakest link. Reporting from a centralized database is critical to understanding this service chain. Without interdepartmental reporting, decisions within each department become increasingly unreliable.

Global competition means customers have a wide variety of choices. They can review all their options at leisure and choose the best one. Companies that do not strive to achieve “best practices” will be culled from the field by today’s savvy consumers, because inferior business practices inevitably become visible to the consumer as increases in price or decreases in service quality. We return to the expert analysis by the authors of The Portable MBA for a thought-provoking summation:

“Achieving and retaining a position on the frontier of best practice requires vigilant analysis and willingness to change as parts of a continual and relentless effort to improve the firm’s processes. It also requires integration with marketing and the other functions of the firm so that improvement efforts throughout the firm reinforce each other and so that the functions work together to create and enhance value for the customers.”⁸

What would an ideal solution look like?

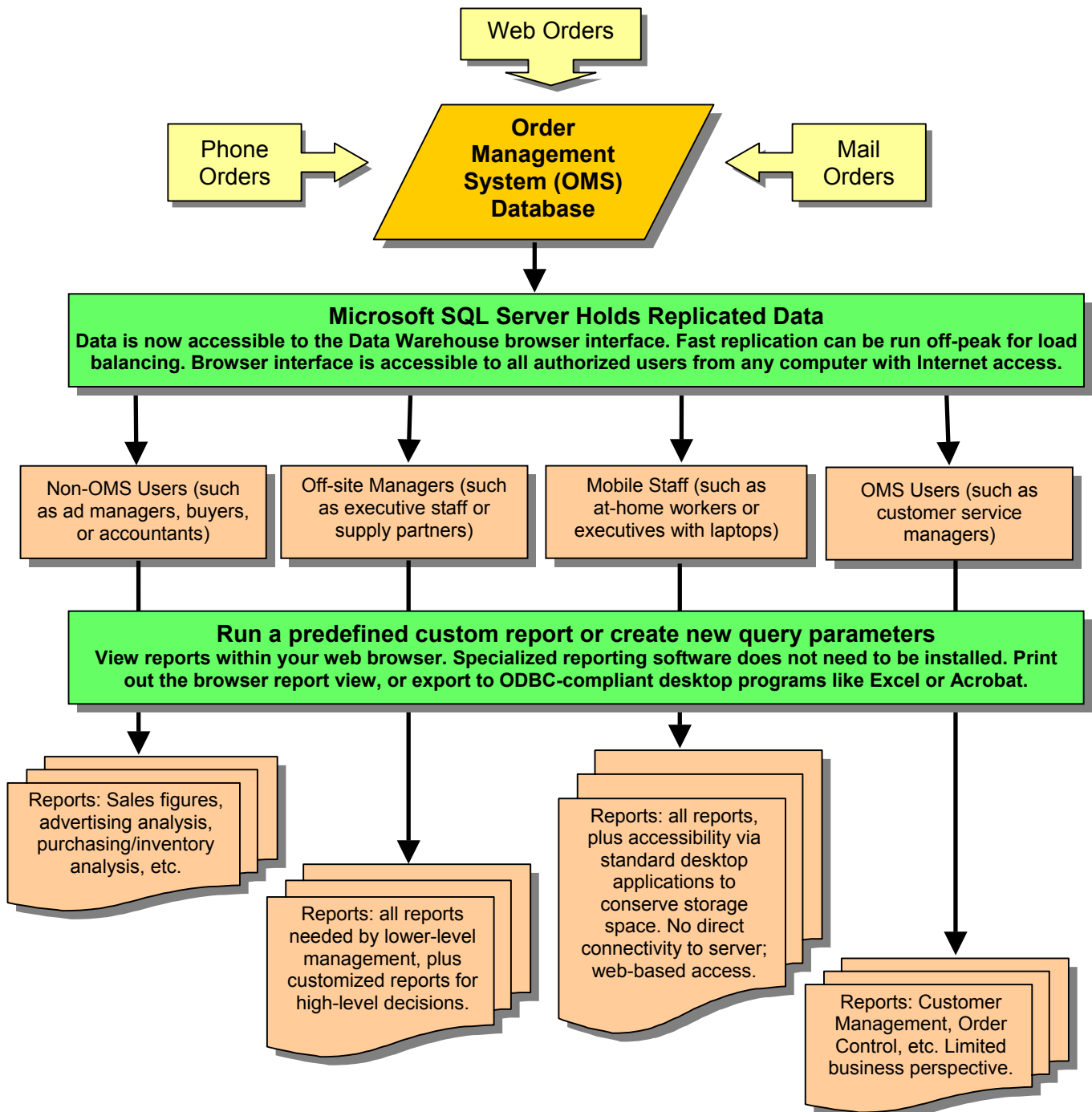
Based upon our analysis of the potential barriers to effective reporting of OMS data, we can identify essential features of an “ideal” reporting solution. Such a solution would:

- Provide a wide variety of standard reports, based upon an in-depth understanding of the needs of many different departments or areas within a company.
- Allow easy customization and sorting of data for reports, without the need for intensive IT assistance or special consultants.
- Use an easily learned, standard interface for report generation and viewing to decrease the software learning curve.
- Enable users to access and share information from multiple locations, in multiple formats, to accommodate ever-changing worker locations and service/supply channels.
- Allow common office software applications to be used to read reports without the need to load additional software onto small, portable laptops and handheld machines (therefore reducing the need for additional licenses for reporting or OMS software as well).
- Provide a fast, flexible, reliable means of data replication during off-peak hours to facilitate effective load-balancing processes.

Software Solution: Data Warehouse from Ability-Software

Data Warehouse is an integration solution designed to work with the Ecometry™ order management system. The web-based reporting module (Data Warehouse Reports) extends your ability to mine your Ecometry data by providing a diverse variety of “canned” reports as well as fast, intuitive customization capability. You can then view your reports right in your desktop’s web browser. Or export your final reports into any ODBC-compliant standard desktop program to which you have access, such as Microsoft® Excel or Adobe Acrobat™. You take it from there: e-mail reports to associates, send them to your handheld computer for review on your evening commute, or save them on your desktop for an upcoming meeting.

The Reports functionality is described in detail below, but first, let’s take one last look at our OMS data flow chart. This time, notice how the Reports module employs a replicated database to bridge those barriers to effective reporting, across all levels of your organization.



The Data Warehouse Reports Module and the Replication Process

The Reports module mines Ecometry data by replicating it into a Microsoft® SQL server environment. Data Warehouse replication is fast and reliable, so you'll always have the latest data at your fingertips. Plus, you can run the process at night or during other off-peak times, causing less stress to your IT systems.

If you have your own in-house needs for replicated Ecometry data, you may purchase the replication process separately. You'll get easily mined, portable data, to use in any way your business needs dictate.

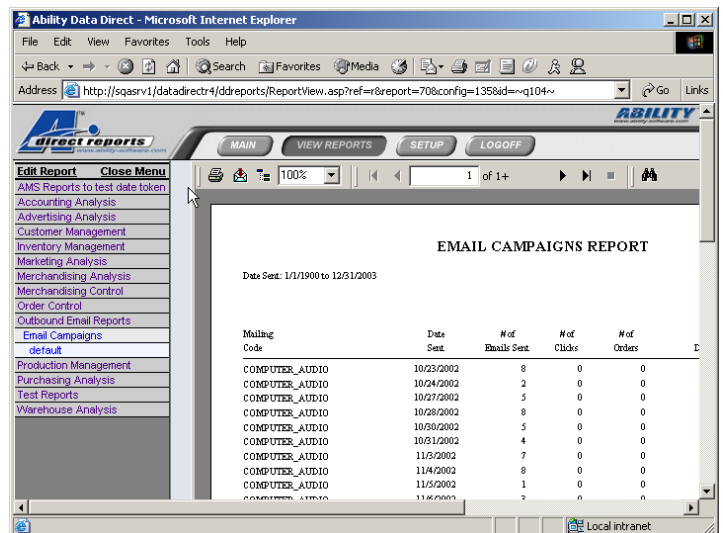
Add the Reports module to tap the expertise of marketing professionals, who have worked closely with experienced software developers and Crystal® report writers to create the standard reports available with the module. Dozens of standard reports are available across multiple business categories. These reports have been developed in close cooperation with users of the Ecometry OMS. As a result, these are the reports real Ecometry users have demanded, the reports they use on a daily basis to obtain a genuinely useful, comprehensive picture of their customer data. New reports are developed frequently, as the marketplace changes.

The Reports module features comprehensive documentation, which details all the available reports, sorts, and restriction options. Current report categories include:

- Accounting Analysis
- Advertising Analysis
- Customer Management
- Inventory Management
- Marketing Analysis
- Merchandising Analysis
- Outbound Email Reports (available for use with Data Warehouse Outbound Email Marketing)
- Merchandising Control
- Order Control
- Production Management
- Purchasing Analysis
- Warehouse Analysis

Flexible, Targeted Data Output

Most standard Data Warehouse Reports can be customized with existing sorts and restrictions. For example, you may sort many reports by order entry date or division. Or restrict by company or vendor. Just choose your desired parameters, name the report, and save it to the Reports system. After that, generating the report you want is a piece of cake. Simply select your customized report option. The report generates right in your web browser window, in an easy-to-read Crystal report viewer (included with Data Warehouse Reports). Simple magnification tools and page browsing buttons make it easy for you to review your report. Use the Find button to search for specific data quickly and efficiently.



The screenshot shows a web browser window titled 'Ability Data Direct - Microsoft Internet Explorer'. The address bar shows a URL: http://sqsrvt1/datadirectr4/dreports/ReportView.asp?ref=8&report=70&config=135&id=-q104-. The page has a navigation bar with buttons for 'MAIN', 'VIEW REPORTS', 'SETUP', and 'LOGOFF'. Below the navigation bar is a sidebar menu with options like 'Edit Report', 'Close Menu', 'AMS Reports to test date token', 'Accounting Analysis', 'Advertising Analysis', 'Customer Management', 'Inventory Management', 'Marketing Analysis', 'Merchandising Analysis', 'Merchandising Control', 'Order Control', 'Outbound Email Reports', 'Email Campaigns', 'Production Management', 'Purchasing Analysis', 'Test Reports', and 'Warehouse Analysis'. The main content area displays an 'EMAIL CAMPAIGNS REPORT' for the date range '1/1/1900 to 12/31/2003'. The report is a table with columns: Mailing Code, Date Sent, # of Email Sent, # of Clicks, # of Orders, and a small 'I' icon. The data rows show various mailing codes and dates with corresponding counts.

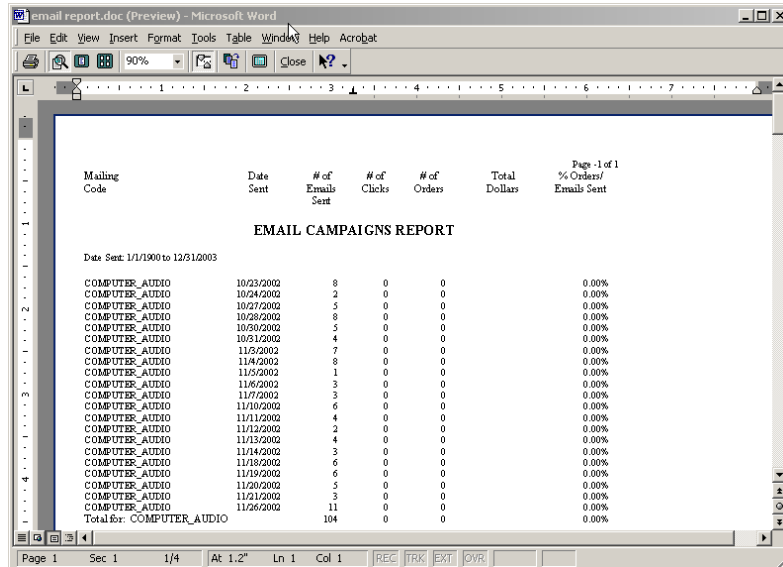
Mailing Code	Date Sent	# of Email Sent	# of Clicks	# of Orders	I
COMPUTER_AUDIO	10/23/2002	8	0	0	
COMPUTER_AUDIO	10/24/2002	2	0	0	
COMPUTER_AUDIO	10/27/2002	5	0	0	
COMPUTER_AUDIO	10/28/2002	8	0	0	
COMPUTER_AUDIO	10/30/2002	5	0	0	
COMPUTER_AUDIO	10/31/2002	4	0	0	
COMPUTER_AUDIO	11/3/2002	7	0	0	
COMPUTER_AUDIO	11/4/2002	8	0	0	
COMPUTER_AUDIO	11/5/2002	1	0	0	
COMPUTER_AUDIO	11/6/2002	7	0	0	

You can set up multiple data sources within the Reports module as well, so you can combine data from multiple sources if you like: replicated data from different Ecometry databases, or other data sources. If you own Crystal report-writing software, you can go even further and use your own "from-scratch" Crystal reports right within the easy-to-use Reports interface.

Data Sharing Across Locations

Because Data Warehouse is a browser-based application, you can generate and view your reports on any computer with an Internet connection and standard web browser software, such as Microsoft® Internet Explorer. Your OMS data becomes accessible to anyone you choose, not just experienced OMS users.

Easy printing and exporting tools make reports even more portable. You can print the report directly from the viewer by clicking the print icon. Or take advantage of the user-friendly export tools to save the displayed report in a variety of ODBC-compliant file types, such as Microsoft® Excel or Adobe Acrobat™ (.pdf) formats. (You must have the selected program installed on your computer to perform the export and view the exported file. For example, you must have Excel installed if you wish to save your report as an .xls file.)



The screenshot shows a Microsoft Word window titled "email report.doc (Preview) - Microsoft Word". The document content is an "EMAIL CAMPAIGNS REPORT" for the date range "1/1/1990 to 12/31/2003". The report is a table with the following columns: Mailing Code, Date Sent, # of Emails Sent, # of Clicks, # of Orders, Total Dollars, and % Orders/Emails Sent. The data rows show various "COMPUTER_AUDIO" campaigns with dates from 10/23/2002 to 11/26/2002. A total row at the bottom shows 104 emails sent, 0 clicks, and 0 orders.

Mailing Code	Date Sent	# of Emails Sent	# of Clicks	# of Orders	Total Dollars	% Orders/Emails Sent
Date Sent: 1/1/1990 to 12/31/2003						
COMPUTER_AUDIO	10/23/2002	8	0	0		0.00%
COMPUTER_AUDIO	10/24/2002	2	0	0		0.00%
COMPUTER_AUDIO	10/27/2002	5	0	0		0.00%
COMPUTER_AUDIO	10/28/2002	8	0	0		0.00%
COMPUTER_AUDIO	10/30/2002	5	0	0		0.00%
COMPUTER_AUDIO	10/31/2002	4	0	0		0.00%
COMPUTER_AUDIO	11/3/2002	7	0	0		0.00%
COMPUTER_AUDIO	11/4/2002	8	0	0		0.00%
COMPUTER_AUDIO	11/5/2002	1	0	0		0.00%
COMPUTER_AUDIO	11/6/2002	3	0	0		0.00%
COMPUTER_AUDIO	11/7/2002	3	0	0		0.00%
COMPUTER_AUDIO	11/10/2002	6	0	0		0.00%
COMPUTER_AUDIO	11/11/2002	4	0	0		0.00%
COMPUTER_AUDIO	11/12/2002	2	0	0		0.00%
COMPUTER_AUDIO	11/13/2002	4	0	0		0.00%
COMPUTER_AUDIO	11/14/2002	3	0	0		0.00%
COMPUTER_AUDIO	11/18/2002	6	0	0		0.00%
COMPUTER_AUDIO	11/19/2002	6	0	0		0.00%
COMPUTER_AUDIO	11/20/2002	5	0	0		0.00%
COMPUTER_AUDIO	11/21/2002	3	0	0		0.00%
COMPUTER_AUDIO	11/26/2002	11	0	0		0.00%
Total for: COMPUTER_AUDIO		104	0	0		0.00%

The report at left has been created quickly and easily, simply by clicking the Export icon in the Reports module, and exporting the data as a Microsoft® Word document. Use any of the standard tools available in Word to reformat the report as needed. Depending on your business needs, you could add your own graphics or charts to illustrate your data, or simply email the document to a colleague. Notice that the report's column headings are automatically imported into the Word document's header area at the top of the page. This ensures that column headings appear at the top of each page for clarity.

Security Features

Naturally, anytime you make your valuable data more accessible to employees, you must also address additional security concerns. The Data Warehouse Reports module offers your system administrator an easy-to-maintain security page to customize security settings for every user. Grant access to groups of reports, or pick and choose individual reports to make available on a per-user basis. You can even create your own groups ("Susan's Reports," for example), containing all the reports a particular user may want on a regular basis.

Exploring Other Productive Uses for Your OMS Data

In this white paper, we have explored using customized reports to reap maximum benefits from your existing OMS. You can stretch the return on your Ecometry investment even further by exploring additional Data Warehouse modules from Ability-Software. Get more information on these modules, and other groundbreaking Ability-Software solutions, at www.marketingconcepts.com.

Expanded Data

You may want to display certain types of product information on your Ecometry-based website that cannot be stored within the Ecometry database itself. The Expanded Data module for Ability Data Warehouse allows convenient, accessible storage of this additional data, for use on the website or in reports from the Reports module.

Expanded Data gives you trouble-free access to supplemental product information—store information in the data fields you designate, such as long item descriptions or minimum advertised prices. Or store other file types associated with product data, like image files, .pdf files for technical manuals, even MP3 files for sound samples.

Expanded Data is a flexible, robust storage system, limited only by your creativity. You can store information in a number of predetermined categories, or, if you choose, you can create your own categories to tailor Expanded Data functionality to your personal business needs.

Outbound Email Marketing

Many companies have discovered email marketing as an inexpensive, effective way of reaching customers. But response to your email campaign can be disappointing if you send offers that your customers don't want. That's where Data Warehouse gives your company the edge. The Outbound Email Marketing module uses your Ecometry order data to pair up your special offers with the customers who will be most interested in them.

For instance, if your company sells office supplies, you can set up a special sale on printer cartridges and paper, then send out an email notification about the sale only to those customers who have recently ordered a printer from you. Outbound Email Marketing finds those customers and sends them emails, automatically. What a great way to increase repeat business, and to let your customers know that you're interested in their individual needs.

Outbound Email Marketing allows you to further customize your campaigns by setting other variables, such as the time of day your campaign is sent out.

About the Author Company

Marketing Concepts, a leading provider of direct commerce software and services, is a Microsoft Certified Solution Developer and Reseller of the Microsoft Business Solutions product suite.

Marketing Concepts has become a leader in the direct commerce industry by using the knowledge that comes from a 20-year history in direct marketing. We offer our customers a range of experience in technology, marketing, operations, e-commerce and software solutions that is unmatched in the industry.

The flexibility and range of services provided by Marketing Concepts allows our customers to select from traditional direct marketing services, such as catalog production and circulation strategy, to e-business solutions, like Managed Application Services (MAS) using Ecometry, Ability-Software™ and custom programming services that allow you to interface with almost any software.

Our philosophy is simple; we apply the knowledge and experience of our professional team, and partners like the Ecometry Corporation and CoLinear Systems, Inc., to provide our customers with the services they need for maximum success and profitability. Let us develop a solution to help your business grow in today's challenging global marketplace.

Notes

¹ Allen, Cliff, Deborah Kania, and Beth Yaeckel, One-to-One Web Marketing: Build a Relationship Marketing Strategy One Customer at a Time, 2nd ed. (2001). (New York: John Wiley & Sons), 245. [electronic book] <http://emedia.netlibrary.com/reader/reader.asp?product_id=56680> [21 March 2003]

² Allen, 253-254.

³ "Users & vendors share their latest thinking on CRM technology & more," in Report on Customer Relationship Management (March 2003): 1. InfoTrac OneFile/Gale Group [03 March 2003]

⁴ "Users & vendors . . .," 1.

⁵ Moran, Nuala, "Failures persist in key areas of e-commerce," in The Financial Times (5 June 2002): 4. InfoTrac OneFile/Gale Group [06 March 2003]

⁶ Bruner, Robert F. et al., The Portable MBA, 3rd ed. (1998). (New York: John Wiley & Sons), 223. [electronic book] <http://emedia.netlibrary.com/reader/reader.asp?product_id=26308> [04 April 2003]

⁷ Bruner, 129.

⁸ Bruner, 127.