You say you provide customer service, but I've been shopping with you for years and every time I go to your store or Web site, you haven't got a clue who I am. How much stuff do I have to buy before you get it right? If you really cared about my business, you'd get to know me.

Customer Data Integration:

Realizing the Promise of Customer Relationship Management

May, 2000

Charles Morgan
Company Leader
Acxiom Corporation

The battle is shifting. It's going to be more and more about customer relationships, more than who's got the pipe or who's got the content.

Steve Case
CEO, AOL

Customer Data Integration:

Realizing the Promise of Customer Relationship Management

As the revolutionary wave of the Internet becomes a standard tool for all successful companies, the next opportunity for establishing sustainable competitive advantage and shareholder value will be the companies' ability to better develop relationships with their customers. It will no longer be about the number of eyes visiting your Web site or traffic in your store. It will be about capturing the heart, the mind and the loyalty of each customer.

Customer relationship management (CRM) today focuses primarily on the implementation of software applications with the objective of automating customer-facing business processes within sales, marketing and customer service. As a whole, these applications are designed to optimize processes that enhance the customer experience. Enhanced customer experiences result in long-term customer relationships. This is CRM. Although simple in definition, many thought leaders, as well as companies struggling to implement CRM, have identified a blind spot—the inability of companies to successfully integrate customer information— that must be addressed before CRM will truly realize its full potential.

Acxiom Corporation has recently introduced a customer data integration (CDI) technology that for the first time enables managers of CRM activity to create a single view of each customer across the enterprise, despite the disparate source or inconsistent representations of customer data. What search engines did for the World Wide Web, AbiliTec will do for Customer Relationship Management— increase by an order of magnitude the speed and accuracy by which a company can compound customer information into a single, actionable view of the customer.

Acxiom believes this technology will enable CRM to make good on its promise to build strong, interactive, lifelong, customer relationships. It is the proposition of this paper that companies implementing CRM applications that effectively address the CDI challenge with AbiliTec are positioned for significant return on investment and shareholder value.

The Potential

Encompassing sales, marketing and customer service applications, CRM is emerging as a key business initiative for many of today's leading organizations. According to forecasts by the Boston-based analyst firm IDC, companies will invest more than $300 billion in CRM software and services over the next four to five years. Given the business advantages of CRM, this level of investment may not appear so surprising. According to IDC's Technology Integration Panel Study, by mid-1999, 22.2% of North American companies of all industries and sizes had implemented a CRM solution, with another 21.1% in the process of evaluating or implementing this technology. Looking forward, more than one-fifth of companies currently not considering adopting CRM anticipate the need for this type of solution in the future.

The value of a successful CRM implementation is ultimately judged by its ability to bring a business and a customer closer together. Before enhancing a customer relationship, companies need to understand who their customer actually is. What characteristics about a customer make them unique? What is it about the relationship that the customer values most? What conclusions can be drawn from this information to deliver better value to the customer? To do this, leaders must consider two things. First, how to identify and unlock the general data characteristics necessary to recognize their customers. Second, how to integrate this raw data into a single, comprehensive view of the individual customer.

Most companies looking for this information need not go beyond the bounds of their proprietary customer data stores. More often than not, in-house databases, data warehouses and data marts contain all of the essential data elements necessary to supply the building blocks for a solid information foundation. The trick is in the integration of customer specific data.

To paint the comprehensive customer portrait needed to achieve this personalized vision of CRM, implementers must draw from an array of data sources—many of them highly fragmented, disparate and outdated. Only by combining the most accurate, up-to-date information from across the enterprise into a single, holistic view of a customer can organizations truly begin to understand the lifetime value of their customer relationships.

The Challenge From the Customer's Perspective

The inability to see the whole customer picture can negatively affect customer relationships, especially when the business has multiple touch points. The best way to illustrate this is to look at things from the customer's perspective: Mary Clark has been shopping with the Abernaki Apparel Co. of Exeter, N.H., since she was in college. Although Abernaki has a number of outlet stores up and down the East Coast, Mary, a small business owner, has always shopped exclusively from the company's seasonal catalogs, as her hectic schedule allows her little or no time for casual clothes shopping.

Mary's Story:

Mary began shopping with Abernaki in 1988, while attending business school in Boston. Her experiences have always been positive and she has recommended the merchant to a number of colleagues, family and friends. Following a move to Framingham, Mass., in 1998, Mary noticed a sharp decline in the level of service she had grown accustomed to. The first sign of trouble occurred when she placed her first catalog order from her new address. The service representatives at Abernaki typed in the wrong street number. When nothing arrived after six weeks, she was required to call and rectify the situation. Following her marriage in the fall and a move to a neighboring town, Mary was again disappointed by Abernaki when her winter catalog did not arrive as usual. This was particularly frustrating because she had filled out a change of address card and mailed it to Abernaki specifically so this would not happen. After placing another call to the customer service desk, Mary discovered they had no record of ever receiving the correspondence, but they would correct this and mail out her new catalog immediately. Mary received her catalog four weeks later. Most of the items she was interested in were no longer in stock.

One of the perks of shopping with Abernaki for Mary is collecting customer discount points. From the time she started shopping with Abernaki, Mary had accrued enough in points to purchase more than $300 worth of clothing. During a pre-holiday shopping excursion to an Abernaki outlet store in New Hampshire, Mary thought that in addition to purchasing a jacket her husband wanted for Christmas, she would transfer her discount points to a joint account for her and her husband. A service rep informed Mary that there was no record of either her or her husband in the Abernaki database. A transfer would not be possible, however, she was encouraged to open a new account. To Mary, it seemed her entire transaction history and all of her points were lost.

The straw that broke the camel's back would come a few weeks later. Mary had heard from a friend that Abernaki had a new Web site. Since she had had so much difficulty ordering from catalogs as of late, perhaps the Internet would be a better place to do her shopping. When she entered the Web site she was directed to the registration page. Apparently, the site had some type of software that recognizes when someone is visiting for the first time. After filling out a lengthy form (with information she has already given Abernaki) and pressing enter, she was given a complementary 15% new customer discount. Filling out the form was annoying enough, but when she discovered the jacket she bought for her husband two weeks ago was on sale with double credit on discount points, Mary had had enough.

The inability of Abernaki's systems to provide a single view of customer Mary Malone across each database and point of customer contact represents a fundamental blind spot inherent in many CRM systems. Mary Malone (formerly known as Mary Clark) remains essentially an unknown person across the enterprise. Therefore, company employees have no information at their fingertips to personalize her buying experience. They also lack the information that quickly tells them Mary has been a loyal and lucrative customer who has made major purchases from the company for 13 years. In short, Mary's shopping experience is no different than a first-time customer's—a frustrating experience for her and a missed opportunity for the company.

This account, though fictional, demonstrates the possible consequences companies may face through ineffective integration and distribution of customer information.

It is easy to see how customers' confidence in a company can be compromised when the company proves ineffective in the seemingly simple task of recognizing them when they enter through different contact points. This problem becomes more complex when you consider companies focused on business-to-business sales, especially when multiple independent operations exist.
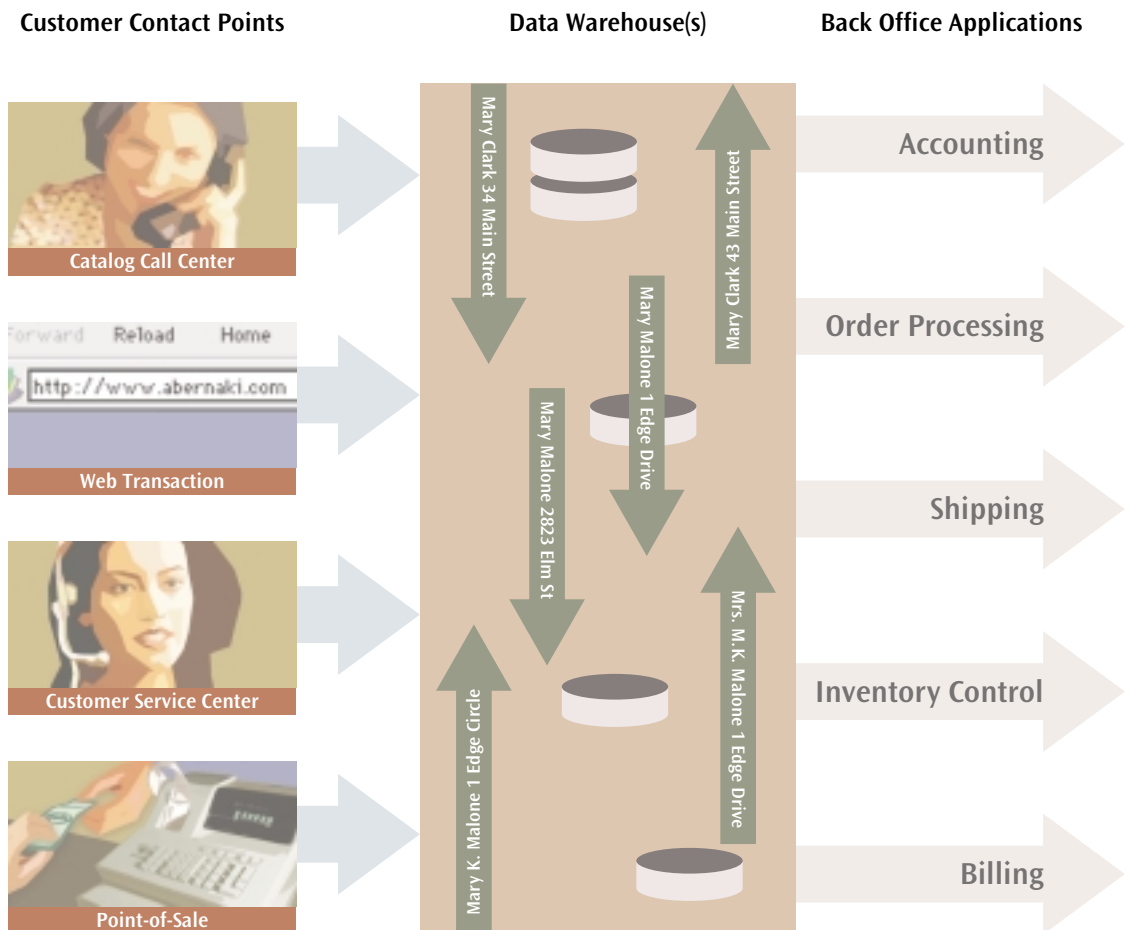
An interesting example of this happened here at Acxiom several months ago. Acxiom Corporation qualified for a $25,000 small business loan. A representative from a small business services arm of a very large financial institution contacted us. If the caller had access to his company's full complement of customer data, he would have realized Acxiom already had a multimillion-dollar relationship with his company. Chances are that with effective integration of customer information, this call would have never been made.

The Problem: Lack Of A Single Customer View

Customers perceiving long-term relationships with particular companies expect and deserve special treatment, regardless of where the shopping experience takes place. If your company is known for an excellent retail store shopping experience, you had better be able to graduate this level of service to your Web storefront and across every point where you touch your customer.

Customer frustration comes from the perception that an organization they have done business with for years doesn't care enough to make an effort to know who they are. The merchant has the dual frustration of falling short of customer expectations as well as the enterprise-wide disappointment with investing time and significant dollars in a CRM model that doesn't work.

Most companies think they are customer-focused by deploying various CRM systems. The problem emerges as the complexity of this technological tapestry increases, so too can the fragmentation of the customer view. Depending on the flavor of CRM, be it call center, point of sale or customer service automation, these systems routinely use different methods and algorithms to identify customers. As a result, consolidating this disparate data into the all-important "single customer view" can be a difficult task if not an impossible one.

Customer Contact Points	Data Warehouse(s)	Back Office Applications
Catalog Call Center	Mary Clark 34 Main Street	Accounting
Web Transaction http://www.abernaki.com	Mary Clark 43 Main Street Mary Malone 1 Edge Drive	Order Processing
Customer Service Center	Mary Malone 2823 Elm St	Shipping
Point-of-Sale	Mary K. Malone 1 Edge Circle Mrs. M.K. Malone 1 Edge Drive	Inventory Control
		Billing

Today's environment—with virtually all modern businesses offering consumers multiple methods of initiating a transaction, from catalogs and storefronts to call centers and Web sites—demands a customer-centric focus. Companies that can build strong customer relationships and foster customer loyalty are the ones that will survive and thrive in the new economy. Without comprehensive customer data available in real time, through a simple process, at the fingertips of all who need it, CRM is impossible to successfully implement.

Companies Attempt To Integrate CRM

Companies understand that the longer they delay in implementing a CRM solution, the farther behind they get. This sense of urgency, while commendable, often results in varied long-term problems:

1) A lack of vision and understanding of CRM leaves many such programs misaligned with business objectives.

2) Company decision-makers often are swayed more by flashy screen displays that attempt to support a CRM program than by its demonstrated ability to deepen and broaden customer relationships.

3) Too much focus often is placed largely on the development of software technologies—front-end applications that are then integrated with back office applications.

Of the 50 largest end users surveyed for a Meta/IMT report, 80 percent have at least one operational customer-facing CRM application in place. Fifty percent have invested in initiatives that facilitate post-transaction relationship building with customers.

The problem is that CRM in a fragmented data environment doesn't work. It only adds to the confusion. According to the Forrester Research report "The Demise of CRM" (June 1999), a full 40 percent of companies that are currently implementing CRM applications do not even attempt to tackle the job of integrating customer data scattered and isolated throughout the enterprise. Only a tiny fraction of the survey respondents —less than 2 percent—report having a single view of their customers across sales, marketing and customer-service channels.

This astounding gap has serious ramifications. According to Elizabeth Shahnam, senior program director for META Group's Application Delivery Strategies:

"CRM leaders must take dramatic action to optimize their systems around the customer or their customer relationship investments will not pay off."

Forward-looking companies intent on using the customer as their CRM design point are being forced to fundamentally rethink their customer data management activities as well as re-engineer enterprise-wide operational systems and data warehouses.

According to Henry Morris, research vice president of Data Warehousing and Applications at IDC:

> *"Companies able to link customer interactions individually across multiple touch points, and in turn match this knowledge with the historical information resident in data marts and warehouses as it relates to the customer, are those best positioned to respond to the individual wants and needs of the customer."*

Whether the enterprise develops a homegrown CRM data integration solution or outsources the task to a data matching specialist, more often than not they find that the traditional data integration approaches they employ do not deliver the accuracy or speed required to achieve real-time CRM as is required in contact center and e-commerce applications.

The CRM Blind Spot
"Creating A Single Customer View"

The proliferation of CRM applications and tools has made the job of achieving a "single customer view" more elusive. Many companies have deployed multiple applications and, within them, multiple databases, resulting in hundreds of stored instances of name, contact information, purchasing and billing history. This can lead to costly and embarrassing situations—using accurate information when marketing to a customer, but inaccurate information when billing. For example:

> *My wife and I still get duplicate catalogs every day at our home that cost the cataloger dearly—in both production cost and postage. Also, when I go to the Web site, I always wonder if I am recognized, which of the two catalog-receivers do they think I am? Or do they even know me at all?*

Avoiding situations like this means managing customer relationships consistently— across every point of customer contact. This is CRM's blind spot, yet it is probably the critical ingredient in building deep, lifelong customer relationships.

Most companies understand this issue and are moving to synchronize customer-facing systems to facilitate it. However, as the process of preparing legacy Data Warehouse and Enterprise Resource Planning systems gets off the ground, most discover that the CRM applications they planned on using to capture this single view of the customer are not quite up to the task.

Most CRM systems are designed to manage customer interactions; when and how often they purchase, what channel they utilize and what types of items they buy. This information is essential in determining the overall value an individual customer represents. However, if the company is unable to take multiple interactions from the same customer and link them in real time, regardless of how many different name and address variations the individual uses, this information will be of little use in building relationships.

This problem will only get worse for companies that don't get a handle on integrating their customer data. As the number of interaction points increases, so too will the various and often inconsistent representations of a customer's name and address information. The company then will continue to think a single customer is in fact multiple people—leading to redundant marketing, unnecessary costs and poor service.

What has been missing, until now, is a new approach that overcomes the challenges of data integration and fulfills the promise of CRM—providing a single, comprehensive view of the customer throughout the enterprise. This ability is so fundamental—not just to CRM but to successful business operations as a whole—that it is worthy of its own defined product category: Customer Data Integration.

Customer Data Integration
"Eliminate The CRM Blind Spot"

"A single view of the customer is at the heart of any successful Customer Relationship Management program. Obtaining that all-important single view hinges squarely on the ability to achieve real-time and accurate integration of customer data."

Scott D. Nelson
Vice President and CRM Research Director
GartnerGroup

Acxiom believes it is clear that customer data buried in disparate systems is essentially worthless to CRM efforts unless it can be quickly linked and accessed by all who need it. The ability to integrate data across the enterprise and create a single, clean and highly accurate view of a customer's information for sales, marketing and customer-service purposes is paramount. It is the only way to achieve the "single customer view" that allows real-time interactive marketing: the tailoring of messages and offers to a customer based on past interactions with the company and personal preference.

This is the power CDI unlocks. This is the potential Acxiom's new AbiliTec turns into reality. With AbiliTec, every customer touch point—Web sites, contact centers, points-of-sale, marketing departments, sales departments, billing departments and more—can be linked together quickly, simply and seamlessly. The result? Much more accurate, unified and up-to-date customer data supplied in real time.

AbiliTec leverages a comprehensive warehouse of customer (both consumer and business) names and addresses to deliver "links" that set new standards for accuracy, speed and customer information management capabilities. When AbiliTec is used to analyze customer name and address information, it is matched and validated against the nation's largest knowledge base of consumer and business contact information. AbiliTec customer links and address links then are returned so that all related name and address information about a single individual across multiple sources can be consolidated accurately and quickly. Customers retain the same link, regardless of inconsistencies in location, address and occupancy.

As a result, an AbiliTec user will now know that multiple internal customer records for Mary Malone, Mary Clark and Mrs. Mary Kate Malone all contain information about the same individual. All transactions involving Mrs. Malone can now be accessed together in real time. This provides a complete and up-to-date view of this customer for the company employee who handles Mary's next interaction—regardless of whether it occurs through the sales department, the marketing department, the billing department or the customer service department. AbiliTec eliminates the "data compartmentalization" that has plagued companies and limited their ability to better serve customers. Analyzing customer links and address links can also reveal AbiliTec's role as an effective "householding" tool, which raises the technology's functionality to a new level.

AbiliTec eliminates much of the database maintenance that has confounded IT application developers for so long because customers who move or customers who marry or otherwise change the representation of their name keep the same AbiliTec links. Their life changes don't force database changes and that simplifies things greatly.

AbiliTec customer and address links can be applied as needed and are consistent across time. This eliminates the need for large data consolidation processes. As new information becomes available, links are simply applied and the new information is continuously fed into the data repository. The permanence of these links provides the ability to implement continuous updates to strategic corporate data warehouses. Thus, business decisions are always made on the freshest, most accurate information.

AbiliTec is an ideal solution for integrating large amounts of customer information across multiple business lines and databases for full-scale CRM implementations—as well as for standard customer database management initiatives that require a single, accurate view of an individual or business. AbiliTec is unique in its ability to accommodate large-scale database environments of hundreds of millions of customer records while accommodating real-time transactional needs.

AbiliTec In Action

Few companies have better utilized a catalog-shopping approach in achieving financial success and building customer loyalty than Lands' End. But when the retailer tried to replicate that performance through its Web site, without effective access to its customer information, it was less than satisfied. When a consumer purchased an item through the Lands' End Web site, the company had no way of knowing if it had just done business with a loyal, longtime customer or a first-timer.

But with AbiliTec, the catalog and Web departments are working to solve this problem by seamlessly combining their customer information. It has resulted in greatly enhanced customer service and improvement in the overall shopping experience, regardless of the preferred medium.

The leaders at Conseco, Inc., realized that the company was missing an excellent opportunity to more actively market its array of insurance, investments and lending offerings to its current customer base—a base divided over 30 once independent companies. But without accurate, up-to-date customer data integration, and files accessible in real-time, it is more difficult to launch successful cross-selling campaigns.

Conseco is now developing the ability to optimize relevant offers and offer personalized customer service with each customer interaction. Its representatives will have immediate access to customers' full transactional histories—whether they were generated by telephone, in person, over the Internet or some combination thereof. Armed with that information, Conseco representatives can make personalized offers that make sense for the company and its customers.

Achieving Immediate Return On Investment

As companies look to implement CRM solutions using AbiliTec, many choose to begin with opportunities that provide an immediate return on investment. These opportunities represent activities of lesser scale rather than full-scale, enterprise-wide CRM implementations. Examples include the department store chain that has determined it can save more than $30 million a year in catalog postage costs; the insurance company that is looking to better support customers by providing personalized policies and instantaneous approval; and the retailer with plans to use a single process for order processing, shipping and invoicing, regardless if the product is purchased from its Web site or catalog.

Others may include the brick-and-mortar company wishing to empower customer service representatives to answer inquiries about purchases from both its Web site and retail outlets or the e-tailer desiring to provide Internet personalization. All these opportunities can supply executive-level proof of the power of AbiliTec's customer data integration capability, setting the stage for enterprise-wide implementation.

Consumer Privacy Meets Consumer Advocacy

AbiliTec was designed to allow its clients to link and correct information already stored in its various databases. Correct information being in most cases the consumer's greatest concern. This feature represents the passive way AbiliTec supports consumers' rights to privacy. But CDI technology also can be employed to actively support consumer privacy efforts. When consumers ask a company today to allow them to review, correct or remove information from the company's databases, that request can be difficult to honor for the same reason CRM has proven so difficult—ineffective customer data integration.

Companies will win true consumer advocacy when they share the consumer data they maintain and facilitate for purposes of correction. Further support will be obtained when these companies give consumers the choice to opt-out information deemed private or irrelevant. Without AbiliTec, this would be a time-consuming, expensive and often futile exercise. AbiliTec can make it happen.

AbiliTec can also facilitate the ability for companies to offer its customers the chance to set the contact-management guidelines under which the relationship will operate (No phone calls after 5 p.m. E-mail offers only. Direct mail only). Confident that AbiliTec has united every representation of a customer across every database, a company can offer this personalized contact-management service, which not only strengthens the customer relationship, but provides a competitive advantage for the company.

Conclusion

AbiliTec is an enabling technology that revolutionizes the customer data integration process and facilitates successful, enterprise-wide CRM. It brings together customer information across disparate databases, name changes and different address representations, in real time, to allow personalized customer service at every touch point.
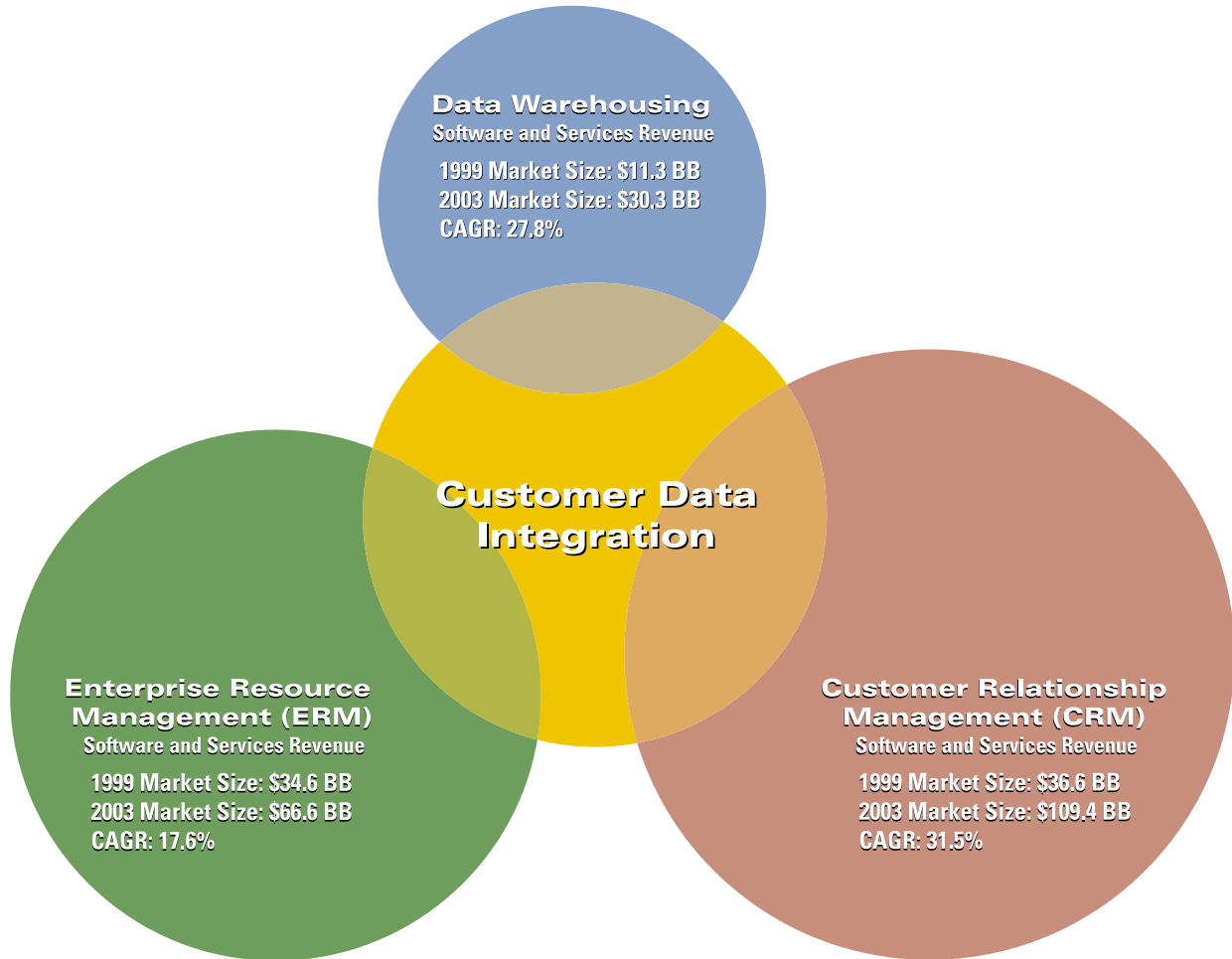
The picture is very clear: CRM is the key to building loyalty and retaining customers in the Internet age. AbiliTec enables successful CRM, providing the customer data integration capability that heretofore has been the missing link.

Companies that adopt this technology will someday wonder how they ever did business without AbiliTec.

APPENDIX
JUST HOW BIG IS THE MARKET FOR CUSTOMER DATA INTEGRATION?

Customer Data Integration (CDI) is establishing its role in three major competitive markets: Customer Relationship Management (CRM), Data Warehousing (DW) and Enterprise Resource Management (ERM). According to IDC, each of these markets represents a substantial market. Collectively they reached nearly $90 billion in 1999 with expected growth rates that will double within three years.

Data Warehousing
Software and Services Revenue
1999 Market Size: $11.3 BB
2003 Market Size: $30.3 BB
CAGR: 27.8%

Customer Data Integration

Enterprise Resource Management (ERM)
Software and Services Revenue
1999 Market Size: $34.6 BB
2003 Market Size: $66.6 BB
CAGR: 17.6%

Customer Relationship Management (CRM)
Software and Services Revenue
1999 Market Size: $36.6 BB
2003 Market Size: $109.4 BB
CAGR: 31.5%

Source for Statistics: IDC

IDC defines CRM software and services to be those used in sales, marketing and customer service automation, for example: sales software (Siebel, Trilogy, Oracle), marketing software (Siebel, Broadvision, Exchange Applications) and customer support/contact center software (PeopleSoft, Nortel and Quintus).

Enterprise Resource Management (ERM) automates back-office functions. IDC includes in ERM accounting software: human resources management software, payroll software and materials management software from such industry leaders as SAP, PeopleSoft and Oracle as well as project management software and maintenance management software from various other vendors.

IDC defines Data Warehousing as the process that organizes time-based data coming from multiple applications into a single database for the purpose of driving decision making. The data warehousing software market encompasses tools and applications software that support design, development and implementation of data warehouse solutions including warehouse generation (supporting data extraction, cleansing, transformation), warehouse management (supporting ongoing data management through multi-user database server software) and information access (supporting end-user data access and analysis).

IDC is currently assisting Acxiom to assess the growing CDI market, however, attempting to put a potential value on this segment today is much like trying to hit a moving target.

Acxiom's current assessment is that CDI is currently a $2 billion market with the lion's share of the revenues being earned from batch data hygiene processes in support of Data Warehousing applications. With the significant opportunities generated by companies' expansion into e-commerce and CRM and the continuing ERM growth rates, our expectations are that the CDI market could be a $10 billion to $15 billion market by 2004, and the market leader could command $3 billion to $5 billion of that business. Since CDI will become fundamental to successful CRM and e-commerce applications, Acxiom considers these realistic, and possibly conservative, estimates.

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