

Solving the Data Dilemma:

Maximizing Data Quality to Build Profitable Customer Relationships

Peppers & Rogers Group

GROUP1
GROUP 1 SOFTWARE

Maximizing Data Quality to Build Profitable Customer Relationships

Overview

The Data-Driven Marketplace

Managing data to grow profitable customer relationships is the next wave of business evolution. Leading companies of every size across all verticals are leveraging customer information in order to maximize return on investment (ROI) opportunities. On the surface, the recipe for success appears straightforward: interact with customers, collect valuable data, compile 360-degree views of individual customers and utilize the information to build rich relationships that get smarter—and more profitable—over time.

As experience shows, however, this is easier said than done. Countless companies collect customer data, but collection is just the beginning. A number of additional challenges must be addressed before the value of customer data can be unlocked: How do I deal with multiple and disparate data formats? How do I consolidate duplicate information and ensure accuracy? How do I mine the data and determine what's actionable? How do I place it in the hands of key customer-facing employees? These are the strategic and technological data conundrums that many companies have yet to unravel.

Understanding how customer strategy and technology come together to address these challenges is the purpose of this paper. It seeks to identify how to generate ROI by providing stakeholders from across the enterprise with the *right* customer data at the *right* time. As we shall uncover, those companies leading the way can reap substantial returns in revenue growth, improved efficiency and reduced cost.

■ Identifying the Obstacles; the Costs of Unclean Data

Low Quality Data Equals High Costs

Simply collecting customer data is not enough to achieve effective Customer Relationship Management (CRM). Rather, customer data should serve as the building block from which an enterprise's customer-focused initiatives grow and thrive. Cleaning and organizing data can allow a company to enrich customer profiles with additional information, enabling the organization to develop unique views of each customer. However, companies cannot interact with their Most Valuable Customers (MVCs) if poor data quality obscures the relationship.

Without clean data, CRM will not work correctly and a company will have little hope of effectively interacting with valuable customers. Ted Friedman, Senior Research Analyst at Stamford, Conn.-based Gartner, calls clean data the underpinning of CRM, and says often companies simply don't have enough information to achieve optimal results from their CRM projects. "Most people are worried about getting their data in one place to do CRM," explains Friedman, "so they focus on finding customer data, pulling it together, and delivering it to their CRM applications, but they totally ignore the quality of it. This comes back to hurt them in their CRM efforts."

Doug Laney, VP and Research Director of Enterprise Analytic Strategies for the Stamford, Conn.-based firm META Group, believes data problems add up to inefficiencies among an organization's processes, entities, partners, suppliers and customers. In some cases, companies don't know the simple facts about their customers, such as how many they have or where they live. Add to this that basic customer information, such as address, phone number and email address, is often incorrect. This can be especially damaging to a cus-

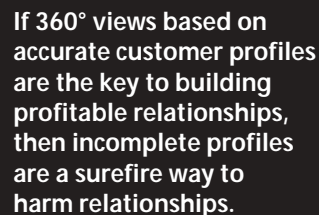
tomers relationship since these information sources represent the most direct links between a company and its customers and prospects.

The Six Data Quality Obstacles

The six most common data quality problems include: information that cannot be interpreted, inconsistent representations of information, inaccurate information, incomplete information, duplicate information and correlating relationships within information.

Interpretability

Interpretability, or the ability to recognize and understand data, is one of the biggest challenges to implementing successful data quality programs. In many cases, stored data exists in a wide variety of formats. Also, the individual elements within a given record have not been separated or may contain misleading data. Before any data quality processes can be implemented, the source data must be parsed into the appropriate components so that it can be understood by data quality systems. In addition, certain data elements may need to be moved, deleted or re-formatted.



If 360° views based on accurate customer profiles are the key to building profitable relationships, then incomplete profiles are a surefire way to harm relationships.

Consistency

Creating consistent representations of your data is critical for two reasons. First, for name and address data, consistency ensures the deliverability of goods and services. Second, the standardization of all data elements is necessary to achieve the best possible results for matching and consolidation.

Accuracy

Clearly, for data to be actionable, it must also be accurate. Information must be validated against known, up-

to-date reference data for correctness. Incorrect information about customers' names and addresses is a common and costly mistake that companies make, says Anthony Aruldoss, Director of Product Management at Lanham, Md.-based Group 1 Software. For example, if marketing is conducting a campaign based on incorrect address information, mailings will be undeliverable and the printing and postage costs will increase. Campaign effectiveness and loyalty decreases, while customer dissatisfaction increases. For these reasons, verifying the data is correct is not only vital to delivering goods and services quickly and accurately; it is fundamental to customer retention.

Completeness

Incomplete data is often an organization's biggest data quality challenge. Informational gaps within one database or scattered among several customer databases contribute to rising costs. META's Laney says the problems most companies encounter relate to the completeness of the data. If 360-degree views based on accurate and up-to-date customer profiles are the key to building profitable relationships, then disparate and incomplete profiles are a surefire way to harm relationships. "Having incomplete data in the database is a much bigger issue for companies to solve," explains Laney. Simply stated, companies can lose credibility with customers—and thus revenue—when data is incomplete and unorganized.

De-duplication

It is not just the accuracy of data that can inhibit the effectiveness of your company's marketing and customer relationship efforts. The unnecessary duplication of data can also become a tremendous resource burden since it requires stakeholders to sift through vast quantities of redundant data for information that should be readily available. Large amounts of unnecessary and duplicate data can hamper efficiency, increase costs significantly due to storage and maintenance

and promote inaccurate customer profiles replete with contradictory information.

Correlation

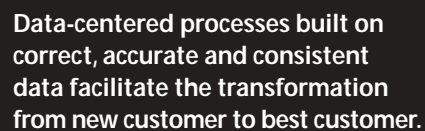
Profitable customer relationships rely on timely, relevant and accurate data; thus relationships between records must also be identified. The ability to pinpoint matches between various data elements or combinations of elements (such as identifying members of the same household) is essential. Once matches have been identified,

companies need to consolidate this data to eliminate duplicate processes and other actions that can negatively impact the bottom line. However, this must be done in such a way that useful information is not destroyed. To this end, it is necessary to select the best available elements to create a best-of-breed record. This selection may be based upon recency, completeness, source or other characteristics.

■ Improved Data Health Starts Internally

Tackling these common obstacles to better customer data begins right at home. The important first step is clearly recognizing the severity of data quality issues. According to a Gartner report titled, "A Strategic Approach to Improving Data Quality," 50 percent of enterprises undertaking a CRM strategy are unaware of significant data quality problems in their environments.

Many companies make assumptions that their data quality is good without even examining it. Historically, an organization's culture tends not to worry about data; but on the enterprise level, database quality issues impact daily business performance and must be identified. This mindset and culture must change. Companies must educate their executives about the importance of data quality and must plan to incur expenses, such as modeling and human cap-



Data-centered processes built on correct, accurate and consistent data facilitate the transformation from new customer to best customer.

ital costs, as well as the hardware and software costs associated with utilizing data. Once this mindset is in place, organizations should take data quality issues into account in all aspects of the enterprise.

When done right, data-centered processes built on correct, accurate and consistent data facilitate the transformation from new customer to best customer, says Gartner's Friedman. It sets the stage for enhanced revenue, heightened customer satisfaction and cost savings in the tens of millions for enterprise-level firms. Most importantly, companies gain confidence in being able to personalize customer experiences by having complete data and the ability to identify customers at every touchpoint.

■ Targeted Interactions Build Lasting Customer Relationships

The Role of Strategy

The data that an enterprise collects from a customer's purchase histories and inquiries serves as the starting point for any CRM initiative and propels the organization into successful interactions and communications with valuable customers. Backed by valuable data, customer strategy can then be rolled out. Peppers and Rogers Group applies a four-step methodology for building profitable customer relationships, and data is critical at every point.

- First, a company should **Identify** its customers. It is important to know a customer base in as much detail as possible, ranging from basic contact data to detailed needs and preference information. Intelligent data collection and use are critical here, since accurate, timely and relevant interactions with customers are the cornerstone of any successful customer strategy. It is also important to link information about individual customers across the enterprise.

- As identification takes place, companies should **Differentiate** customers according to their needs and value to the firm. This is key since some customers are

worth more to the organization than others. Most Valuable Customers (MVCs), for example, are those deemed most important to the firm. Most Growable Customers (MGCs) are those with the potential to become MVCs. Complete and accurate customer profiles based on channel preference information, past interactions, purchase histories and expressed preferences must be created for these groups.

- Once a company has a clear understanding of its customers' value levels, it can **Interact** with the customers across touchpoints. This is where the relationship—and the profile based on information from that customer—begins to develop. Organizations must provide 360-degree views of individual customers that can be updated according to each previous interaction. The result is greater efficiency, more targeted and relevant offerings and the foundation for long-term relationships.

- Finally, based on the information the organization has gathered and sorted, the ultimate goal is to **Customize** each client experience based on prior interactions and buying experiences to create an individualized communication. In doing so, loyalty, retention and share-of-customer revenue will increase.

Making the Best Technology Choice

Though a critical factor to success, strategy is only half the equation. Once the organization has identified the presence of data inconsistencies and begun the process of strategic change, it must also choose a technology to serve as the backbone for the intelligent use and preparation of relevant customer data. At its core, the solution must provide an accurate and

Data fact: According to a Data Warehousing Institute survey, over 25 percent of 600 respondents have purchased a data quality tool in the past three years to five years. Also, 25 percent say they are evaluating or purchasing a tool this year.

Five Benefits of Clean Data

1. Correcting inaccuracies is crucial to connecting with customers. The inability to recognize unique customers in an enterprise leads to high printing, mailing and marketing production costs.

2. Removing redundancy improves brand equity. Enterprises cannot afford to miss the opportunity to connect with new customers. By integrating databases, companies can direct marketing efforts toward their Most Valuable Customers.

3. De-duplication of entries can successfully reunite companies with their customers. Accurate profiles can enable targeted marketing communications. The elimination of duplicate records can avoid a customer's frustration from receiving multiple mailings of the same marketing piece.

4. Quality data contributes to operational savings. Deletion of redundant data eliminates the costs of maintaining duplicate records in databases, as well as the infrastructure fees associated with supporting the databases.

5. Clean and integrated customer records are essential to a CRM initiative. An effective database is vital to CRM success. A single and accurate view of the customer will spur all retention and acquisition efforts.

unique picture of the customer by consolidating records and enriching the data with geographic and demographic information.

Giga Information Group in Cambridge, Mass. reports that the total market for data and information quality has grown from \$250 million to an estimated \$580 million since August 2000. This growth of data cleansing vendors means finding a quality solution can become a challenge.

To help simplify this process, Laney and Friedman both believe that traditional, one-dimensional data extraction tools simply translate the data from one

format into another with no interpretation. Intelligent technology, they say, should include tight integration with components of the infrastructure and capabilities that enrich and extend a firm's data sets. Today's solutions should offer intelligent business rules that easily transform the content into actionable information. Also, the capabilities should help qualify each customer as a unique contact by offering additional data augmentation such as geographic and demographic information. This process will help organizations more effectively develop and introduce targeted cross-sell and up-sell offers that strengthen the bottom line.

An intelligent data solution should also include the following capabilities:

- Name and address and non-name and address cleansing
- Change of address processing
- Geographic data
- Demographic data
- Tax jurisdiction assignments
- Personalized messaging
- Tables and dictionaries
- Batch and real-time processing
- On-site and ASP solutions
- Graphical interfaces for business and technical users

For the capabilities to operate in a workflow environment, quality solutions should include a business rule repository that provides true data quality and integration consistency across the entire enterprise to fuel all capabilities within the data cleansing technology. According to Laney, businesses can't perform data quality functionality without these business rules. All are integral to the process and should include:

Extraction cleanses the data in its place and should integrate with third-party applications.

Standardization formats information for business processes after verifying accuracy and completeness of the data.

Parsing identifies specific units of data within contexts of information, such as a zip code in a customer's address.

Matching identifies a single view of a customer in a company's database, allowing for the rollout of extensive customization.

Consolidation eliminates duplicate records to allow building for best-of-breed databases.

Enrichment adds essential information to aid in understanding and reaching customers.

These functionalities allow users to enhance and broaden their data sets—features that Laney says are “unique” to Group 1's data quality solutions DataSight and the Data Quality Connector for Siebel. These solutions help companies make informed business decisions by enhancing customer, supplier and prospect data, and identifying and merging duplicate records. Together, the capabilities work to validate customer information and create a deeper understanding of these important constituents by adding census, geographic, lifestyle and demographic data to customer profiles.

■ Data-driven CRM in Action

A clean, enriched and well-integrated customer database is the cornerstone of successful CRM. The following case study illustrates the importance of data cleansing in avoiding data quality pitfalls and improving business processes within an enterprise. This company has realized the significant impacts of quality data. As a result, it has experienced measurable benefits.

A Global Company Cleans House



When RSA Security installed a CRM system two years ago to streamline marketing and sales capabilities and to merge prospect data that resided in separate contact management systems, the company came to realize what it least expected: A CRM solution was still not enough to create the efficiencies the company had planned to achieve.

Bedford, Mass.-based RSA Security, which provides authenticated encryption and digital signature solutions to 9,000 customers spread across 50 countries, had

implemented Siebel Systems eBusiness Applications CRM system in 2001 with the goal of creating an international centralized database. For a number of years prior to the Siebel implementation, the company had become burdened with duplicate prospect records and fragmented information due to the company's sales reps entering and storing prospect information in

different systems. The company's need to merge all data became paramount to ensure that sales reps could properly manage customer interactions, so RSA set out on a quest to merge its 160,000 prospect records scattered among seven disparate databases.

RSA has designated the Siebel system for sales prospecting, while the company's customer data resides in a SAP application. Siebel unified the database of 160,000 prospects, but despite the new 360-degree view, sales was slow to adopt the functionalities. This was due to a lack of consolidated data, which caused the forecasting, planning and management of sales and marketing accounts to be lackluster. In fact, only 10 percent of the company's sales force was using Siebel for pipeline management.

John Ma, RSA's manager of IS applications, explains that when prospects participated in sales events, trade shows and conferences, the information collected would automatically be loaded into Siebel's lead generation system. However, because of the system's inability to filter the data, the quality of leads remained poor. “In the end, we created similar con-

"Data cleansing is the foundation of effective CRM."

John Ma, Manager of IS Applications, RSA Security

tact records in the system several times.” If RSA hoped to see a return on its investment, the company knew that it must resolve this situation by deploying a data cleansing solution for operations to run effectively.

Selecting a Vendor

After evaluating four data-cleansing vendors, RSA purchased Group 1’s Data Quality Connector to integrate into its Siebel system. Ma says the solution’s ability to verify and correct addresses for more than 220 countries and to consolidate prospect information was a big draw for purchasing the Group 1 technology.

Since implementing the Data Quality Connector, the company has been able to validate and attach ZIP+4 Codes to 70 percent of domestic records, which Ma says has allowed them to increase the number of prospects. Prior, RSA had never used ZIP+4 Codes. Also, due to high quality data, Ma says the reps find

Data fact: The Data Warehousing Institute reports that unclean data costs U.S. businesses \$600 billion per year.

that the Siebel system is now appealing and easy to use. Now the marketing department conducts meaningful and effective campaigns, especially from trade show leads, from which to gauge interest levels.

Most importantly, the solution’s business rules have allowed the company to analyze its addresses and de-duplicate the data—a process that has eliminated 40,000 duplicate records, which Ma calls truly astounding. Moreover the ability to cleanse domestic and international records in the same batch job has significantly saved time and money because 40 percent of the company’s records are international.

When certain records cannot be cleaned, the Data Quality Connector’s transaction logging capability locates hidden problems associated with stubborn records and mends them. In addition, the solution’s merge/purge feature allows the company to consolidate newly captured data with existing records.

Impacting the Bottom Line

The sales department’s adoption of Siebel has increased dramatically for RSA Security, particularly in the area of forecasting. Although RSA has yet to calculate hard ROI metrics, Ma says he knows the cleansing solution has yielded a significant cost savings and has helped the company’s sales team increase the accuracy of its forecasts. Most importantly, the customers see the company as a well-oiled machine. Says Ma: “Data cleansing is the foundation of effective CRM.”

■ Conclusion

Providing key stakeholders across the enterprise with the right information at the right time—profitably and efficiently—has become critical for building profitable customer relationships. But achieving this goal requires companies to address steep data challenges: How do I deal with multiple and disparate data formats? How do I consolidate duplicate information and ensure accuracy? How do I mine the data and determine what’s actionable? How do I place it in the hands of key customer-facing employees?

These are the strategic and technological data challenges that we have explored here. Customer strategy and technology must come together to build 360-degree views of customers that drive results. Firms able to achieve this task position themselves to unlock the value of customer data and reap substantial returns in revenue growth, greater efficiency and reduced cost. ■

About Group 1 Software

Group 1 Software (Nasdaq: GSOF) is a leading provider of software solutions for data quality, marketing automation, customer communications management and direct marketing applications. Group 1's software systems and services enable over 2,000 customers worldwide to market smarter by helping them find, reach and keep customers. Founded in 1982 and headquartered in Lanham, Maryland, Group 1's solutions are utilized by leaders in the financial services, banking, retail, telecommunications, utilities, e-commerce and insurance industries. The company's customer base includes such recognized names as Charles Schwab, Entergy, GEICO, L.L. Bean, Wal-Mart and Wells Fargo. For more information about Group 1, visit the company's Web site at <http://www.g1.com>.

About Peppers and Rogers Group

Founded in 1993 by Don Peppers and Martha Rogers, Ph.D., Peppers and Rogers Group is a management consulting firm recognized as the world's leading authority on customer-based business strategy. The company is dedicated to helping enterprises identify differences within the customer base and use that knowledge to gain competitive advantage. Recognized in 2001 by the World Technology Network as having played a significant role in developing the field of CRM, Don Peppers and Martha Rogers, Ph.D., are the co-authors of the revolutionary book, *The One to One Future*, and a series of business books that further develop the unique one to one methodology espoused by their firm.

Peppers and Rogers Group is headquartered in Norwalk, Conn. The firm maintains a global client list that includes BEA Systems, BMW of North America LLC, Bayer Corporation, Bentley Systems, Boise Office Solutions, The Ford Motor Company, Hewlett-Packard, Jaguar Cars, Roche, Telesp, The United States Postal Service, Wolters Kluwer, Verizon, Visa International and Volvo. For more information visit the company's Web site: www.1to1.com

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