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White Paper

SAP[®] Customer Care and Billing Solutions for a
Changed and Challenging Utility Environment

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U.S. Utilities Poised to Reenter the CIS Market

Customer care and billing and customer relationship management (CRM) software has been severely affected by the upheavals in the U.S. utility market during the last four or five years. First, utilities had to gear up rapidly for the expected sea change from treating their customers as rate payers to treating them as competitive customers who had to be wooed and coddled. This required utilities to invest heavily in new customer information systems (CISs) and other software in the late 1990s. The year 2000 scare added impetus to the drive to update aged customer care systems. And CRM burst upon the scene as the proposed ultimate in customer care and coddling.

Then the whipsaw occurred. Deregulation and competition stalled after a flawed California experiment (except for a few islands of competition scattered around the country, such as Texas). A raft of other problems – terrorism, corporate malfeasance, the Sarbanes-Oxley Act, and the sudden realization that the wires and pipes infrastructure is aged and shaky – also served to dampen utility executives' enthusiasm for dramatically altering their relationships with their customers. All of that happened rapidly in 2001 and 2002.

Since that time, customer information systems, as core billing and cashiering systems, gained widespread, if not dominant, sway in the thinking of utility executives. Basic data could be extracted, and everything else that needed to be done with that data could be accomplished in other, less expensive, outboard systems.

From a utility perspective, the ability to do nothing and survive has had a delaying effect on replacing aging customer information systems, one of the major IT expenses that utilities periodically face. CEOs have taken advantage of the longevity of existing CISs – some of which are more than 20 years old – to meet the other major mandate of the post 9/11 era: cutting costs to balance against the collapse or increasing irrelevance of unregulated subsidiaries and retail operations.

But over the last couple of years, U.S. utility executives have realized that their enterprise technology can't remain frozen indefinitely, especially in what they consider the core of their operations: customer care. For one thing, the United States is no longer an island separate from the global economy. For another, customer information systems do not last indefinitely, and the cost of maintaining aged systems is becoming increasingly burdensome.

According to Energy Central's research, an increasing number of utilities of all sizes are beginning to consider replacing legacy customer information systems that no longer have the functionality or the long-term viability for an uncertain, but rapidly evolving future. Open markets, time of use, complex billing requirements, and closer integration with other enterprise systems like work management and financials have become commonplace and critical to utilities.

Figure 1, which was compiled from a recent Energy Central survey, shows that an increasing number of utilities of all sizes and types are beginning to consider replacing their CISs over the next five years.

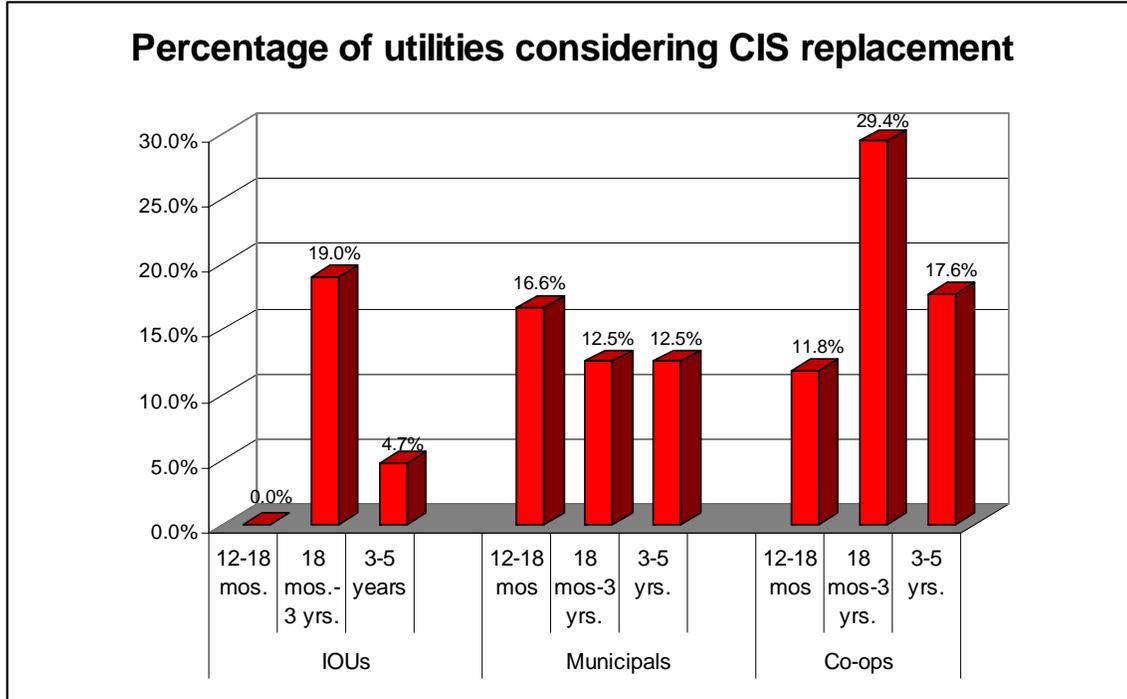


Figure 1: Percentage of Utilities Considering CIS Replacement *Source: Energy Central*

The need to consider replacing a CIS is becoming increasingly important as utility executives ponder the major risk of existing legacy systems failing. As these aging, costly, and hard to maintain CISs near the end of their useful life spans, it is important that a nagging problem doesn't become an urgent crisis. And the collapse of a CIS is certainly a major crisis for a utility.

Noted author Stephen Covey in his widely read book, *The Seven Habits of Highly Effective People*, developed a theory about why people and organizations are effective. They tend to deal with important issues in a logical sequence, always seeking to prevent crises. They proactively deal with important issues before they become urgent.

Customer care systems are imperative for utilities. In some, perhaps many, cases, the condition of aging legacy systems is becoming urgent. The time to deal with it is, as Covey would suggest, when the issue is important, but not urgent. The collapse of a CIS can be catastrophic for a utility, not merely urgent. Utility executives are becoming increasingly aware of the need to address their customer information system for a variety of reasons beyond the fact that they are old and fragile. These include the following:

- Deregulation is not completely dead, and even where it is stalled, regulators and customers are demanding better accountability, better visibility on bills, and improved customer care. Many legacy systems can't meet these demands.
- The new energy bill includes mandates for better meter-reading systems that feed data into CISs, some of which are incapable of handling such things as time-of-use rates and so on.
- Increasing costs for fuel and aging transmission and distribution (T&D) assets are putting pressure on utilities to be as efficient as possible. Keeping a legacy CIS alive beyond its usefulness is not an efficient expenditure of resources.

All of these are reasons why executives in Energy Central surveys indicate they are aware that CIS replacement is becoming more urgent every day.

U.S. utilities also face another issue: increased revenues have not translated into serious gains in profit. Figure 2 illustrates the problem.

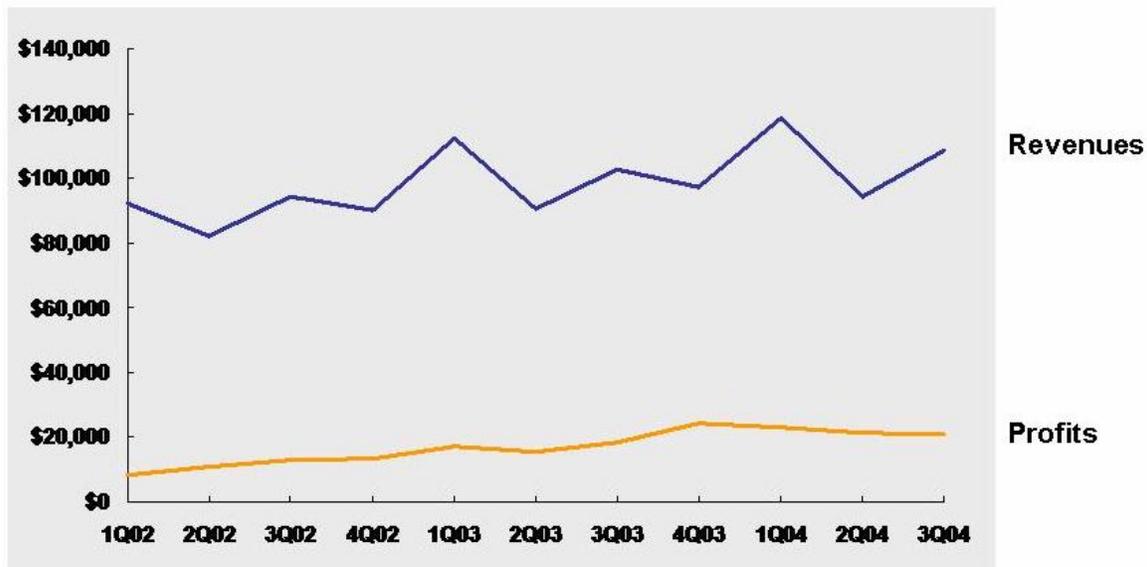


Figure 2: Utility Electric and Gas Quarterly Financials (\$M) Source: BEA, EIA, IDC

There are numerous reasons why utilities – even though they went into a back-to-basics mode in the early part of this century – have been unable to maximize profits. Among those reasons is a lack of tightly integrated, modern technology for customer care and billing. As a result, when utilities are asked about what they consider most important CIS capabilities, they usually mention three items:

- Functionality
- Flexibility
- Ease of use

When utilities executives are asked about the possibility of replacing a legacy CIS, price and risk are prominent concerns, including the cost of the software,

the overall cost of implementation, and the risk of data migration, as well as new processes. However, increased value with a new CIS, the rapidly evolving market, and aging legacy systems are driving utilities to replace a CIS to:

- Gain efficiencies and reduce costs with service-oriented solutions
- Leverage the best business practices from the best-run utilities
- Lower the total cost of ownership (TCO)
- Build a foundation for growth and innovation

SAP Well Positioned for Global Market

With more than 550 installations worldwide and deep experience in dealing with both the regulated market in the United States and the competitive markets abroad, SAP has built its CRM and customer care and billing solutions around a raft of best practices from around the world. SAP introduced its SAP NetWeaver® platform to enable broader integration of SAP® and non-SAP applications, so utilities can use SAP NetWeaver to leverage their current investments. In addition, SAP has developed a preconfigured template for its utility-specific solution to provide a lower TCO and faster ROI.

Figure 3 shows SAP's view of how deregulation and competitive markets have developed around the world and the approximate position of different countries along a spectrum from totally regulated to relatively free markets.

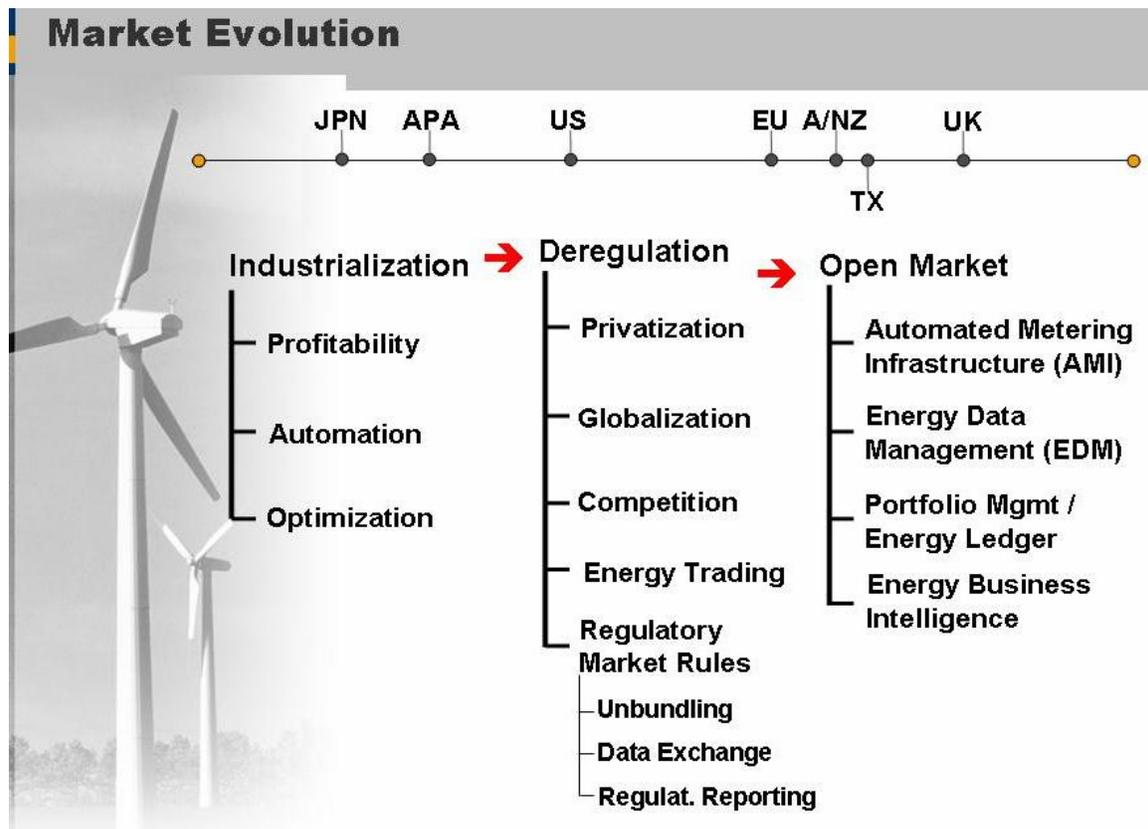


Figure 3: Evolution of World-Wide Utilities Markets

SAP America

SAP's advantage is that it has worked extensively in all of these markets, gleaned best practices from them, and blended those best practices into its customer care and billing functionality in its SAP for Utilities set of solutions. SAP's customer care and billing software provides the automation and optimization needed for still tightly regulated markets all the way through to the unbundled pieces, data exchange, regulation reporting, automated metering and even business intelligence required for competitive markets.

Helping Utilities Meet Their Strategic Objectives

The SAP customer care and services components are a core part of SAP's overall SAP for Utilities offering as shown in Figure 4.

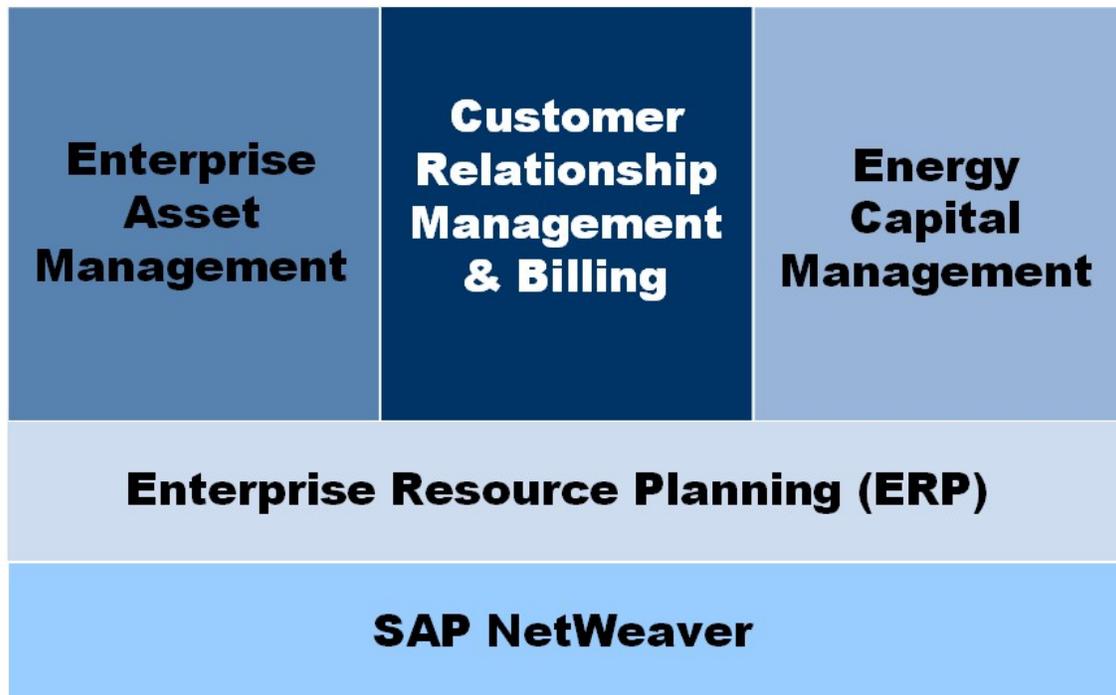


Figure 4: The Building Blocks of SAP for Utilities

Source: SAP America

The customer care and billing functionality in SAP for Utilities provides billing for routine retail service and complex billing for commercial and industrial accounts, flat-rate billing for unmetered energy and nonenergy products, and so on. All of these functions can also be aggregated according to business rules. The data is available out of the box with SAP software for customer care and service, and it doesn't need to be replicated regardless of where it originates.

Figure 5 provides a more exploded view of the overall functionality of SAP's customer care and service software, from business intelligence on the left through end-to-end front-office processes on the right. As Figure 5 shows, SAP software for customer care service and billing provides end-to-end front- and back-office functionality. By linking all of these core CIS functions with business

intelligence, SAP enables your utility to truly integrate customer care and billing into your overall enterprise computing activities and link it with your strategic goals. The advantage is a complete view throughout the energy value chain so you can make on-demand decisions with real-time data.

Because the software can be tightly integrated with the mySAP™ ERP application or installed as a stand-alone CIS, the SAP customer care service and billing software meets the demands of utilities for a modern system. It is flexible enough to work with non-SAP software and, at the same time, provide state-of-the-art CIS functionality.



Figure 5: SAP Customer Care Service and Billing Software *Source: SAP America*

The SAP NetWeaver platform, which is the technical foundation of enterprise services architecture (ESA), makes individual mySAP Business Suite applications capable of working with legacy systems. SAP customer care service and billing software is already being integrated with other cutting-edge technology, such as predictive dialing, interactive voice response (IVR) systems, customer knowledge management, and so on, as shown in Figure 6. This crucial ability allows utilities to leverage their current investments with a lower TCO.

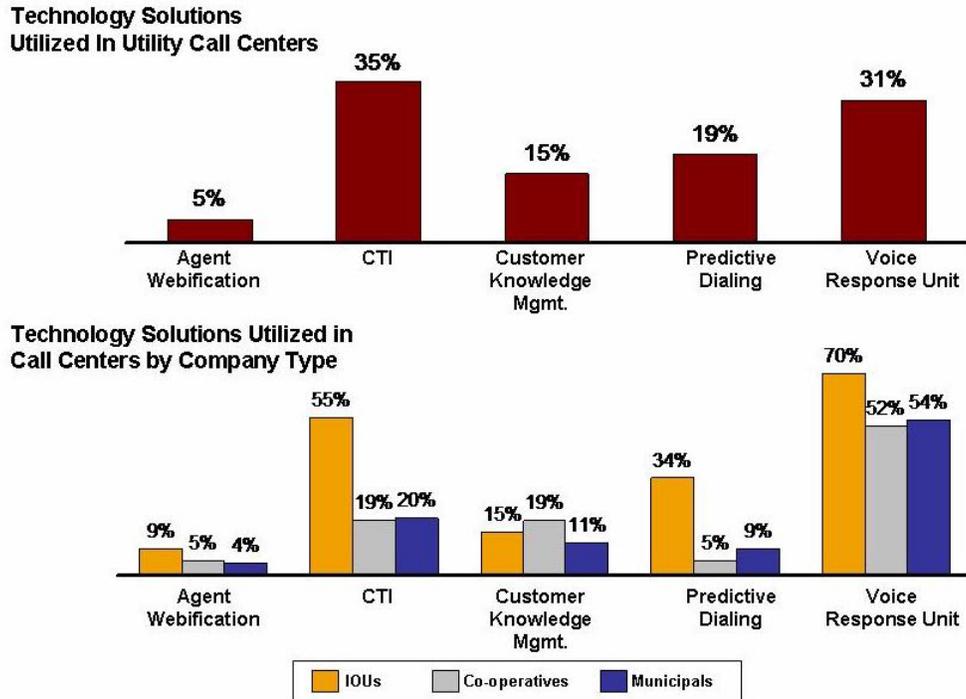


Figure 6: Other systems linked to CIS

Source: Utilipoint International

A large electric utility in the Midwest has used SAP technology to meet its strategic objectives. SAP and the utility were able to integrate SAP's customer care and service software to meet a specific set of strategic integration objectives that included implementing a new vision for its contact center, improving customer efficiency and customer satisfaction, and enabling new and redesigned processes.

The ability to integrate various systems that support its customer business processes has enabled the company to meet its objectives. Most utilities report a 30% to 40% improvement in call response times and other call center metrics when integrating these technologies. This example demonstrates the capability of SAP NetWeaver and SAP to embrace the latest in customer care technologies and how they can work seamlessly with non-SAP systems.

The Benefits for Midsize Companies from SAP Solutions

Because most CIS replacements over the last two to three years have been among midmarket utilities, SAP has moved aggressively to simplify and reduce implementation costs of its customer care and billing solutions for these smaller companies. A major focus of that effort has been the development of a template. This template leverages best practices from the 550 utilities that have installed SAP customer care service and billing software, and SAP has identified the most likely scenarios for utilities of different size and functions.

SAP now offers a template for midsize water utilities that is preconfigured to support eight core scenarios that commonly occur at such utilities. SAP worked with Deloitte Consulting on this preconfigured approach. Those eight scenarios include 45 configured, fully documented functions. Figure 7 illustrates this template.

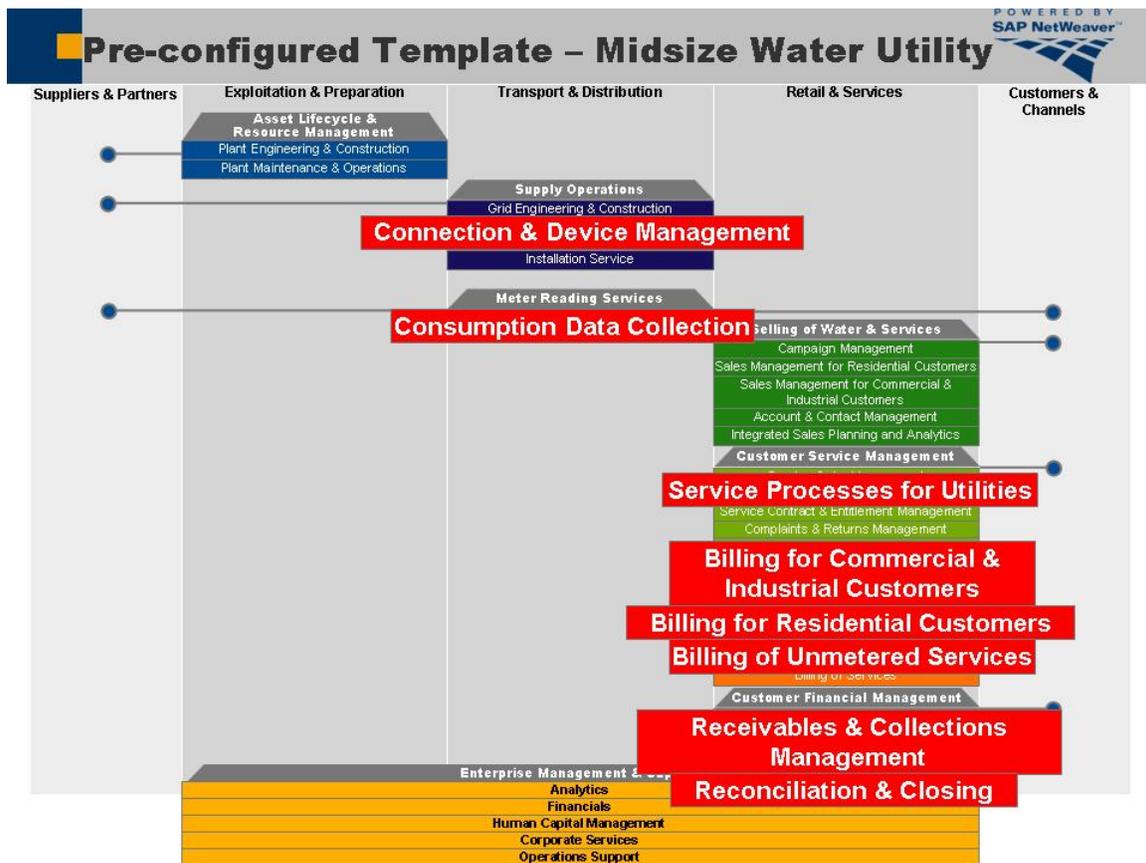


Figure 7: SAP's Preconfigured Template for Midsize Water Utilities Source: SAP America

With this template approach, only the individual functions shown in the larger text in Figure 7 are activated when SAP software is installed. These are the functions that a midsize water utility is most likely to need. The other functions are still available and can be turned on later if needed, as it is the same solution that a large utility would receive. Individual fields, such as those for natural gas and

electricity, would be hidden on all screens for a water utility. The template version costs less to install, is more likely to be exactly what utilities needs, and they are up and running faster with a quicker time to benefit. The water utility template includes the following:

- Support for 8 core scenarios
- 45 configured functions
- 550 pages of blueprint documentation
- 24 preconfigured test scenarios and workflow templates
- 4 additional suggested processes
- Fully functional invoice form
- Installation and technical guides

The first utility to use this template approach to installing SAP customer care service and billing software and other systems was WaterOne of Lenexa, Kansas. WaterOne serves approximately 130,000 customers with more than 360 full- and part-time employees. The customers include residential and commercial accounts in 15 cities in the Johnson County, Kansas area. They are served through 2,500 miles of transmission and distribution mains in a service area of more than 270 square miles. The utility's current treatment capacity is 165 millions gallons per day.

The new customer information system was part of an overall project that included replacing all internal systems, including financials, work management, human resources, and the legacy CIS with integrated mySAP Business Suite applications. This new software eliminates almost all integration requirements. It also provides a single view of all data and a single version of the truth. The template approach to the implementation substantially reduced the cost of the system to WaterOne.

In its CIS replacement project, WaterOne had certain specific goals. These included:

- Simplify and integrate WaterOne's core system infrastructure
- Reduce the number of separate information systems
- Eliminate administrative activities that add no value, such as redundant data entry and data reconciliation
- Limit the customization of SAP software to hold down implementation costs, support standardization of best business practices, and preserve the ability to upgrade to new versions of the software when they are released
- Improve WaterOne's operational processes by integrating enterprise accounting, human resources, procurement, customer information system, maintenance and work order, and permits management functionality
- Provide more reliable, useful, timely, and accessible financial information for WaterOne decision makers
- Gain better access to information needed to effectively manage programs and measure their success

- Provide a means of information management that streamlines business processes

Using SAP's new template approach, WaterOne was able to meet all of those goals, plus obtain a new CIS that can meet all of the company's future objectives, which include:

- IVR Integration
- Internet self-services
- Additional mobile functions
- Back-office automation
- Portals
- Extended business warehouse functions
- CRM

Because of the template approach and SAP NetWeaver, the company was able to replace an outdated CIS and open the possibility of extensive added functionality in the future and at lower TCO.

SAP is developing additional templates for other types of scenarios, including one in cooperation between SAP and Accenture for the eventual migration of Accenture's Customer/1 CIS, which was installed at many large utilities in the 1990s. The Accenture-SAP migration template is called Jump Start and will enable a more rapid and easier migration of data as utilities decide to migrate to SAP's customer care system. Because Accenture knows the Customer/1 installations, it can map migrations directly from the legacy CIS into SAP's customer care and billing systems.

Conclusion

All of the evidence points to utilities, even the larger investor-owned utilities, reentering the CIS replacement market in the next three to five years. As they do so, they are going to find a markedly change landscape. A number of the smaller players have fallen by the wayside and others have consolidated. But through all the turmoil, SAP has continued to expand its presence around the world and in the United States. SAP has also continued to develop and adapt its product line for the utility industry: customer care and billing, SAP NetWeaver, and templates. This has positioned SAP well for the anticipated resurgence of utility CIS replacements.

SAP recommends that you consider the following four points as you ponder replacing your current CIS:

- Research the leaders
- Understand what makes a good practice a best practice
- Work with industry experts to streamline implementation of the right technology
- Integrate the entire process – don't stop at the call center

Those recommendations make sense with regard to any type of technology – especially CIS as it represents the largest single IT investment a utility is likely to make.

As your utility moves into the anticipated new era of CIS replacement, you should keep three salient issues in mind:

- SAP continues to be a major player in the CIS market and has continued to expand its customer care service and billing software, its ability to link with critical functionality included in other enterprise systems, and its best practices standards gleaned from more than 550 installations.
- SAP offers utilities the ability to move beyond considering CIS as a stand-alone system and to integrate it tightly with enterprise resource planning (ERP) functionality, plus external systems for specific functionality. This provides 360-degree visibility into the enterprise, which is vital in the new environment in which utilities find themselves.
- The cost of ownership of all CIS systems has come down markedly in the last three or four years. SAP has kept pace with that trend, not only with enhanced functionality, but also with templates configured for midsize utilities. These templates enable the installation of a state-of-the art customer care service and billing software without unneeded functionality and cost.

