

# Customer Information Systems and e-Business...

BY GREG GALLUZZI

## The Utility's Viewpoint

Historically, utilities focused their resources on constructing, maintaining, and operating the infrastructure required to provide end use customers with access to the commodity (e.g. electric, gas, water, wastewater) and subsequent creation of a revenue stream. The utility created various service functions to interact with the end use customer for purposes of servicing the infrastructure, reading the meter, generating a bill, processing payments, resolving disputes and exceptions, and collecting past due money. These utility service functions ultimately worked to ensure a continuous revenue stream in support of utility operations.

Billing systems supported the transactional needs of each utility service function focusing on the meter, the premise, or the payment with little information or consideration for the customer sitting on the other side of the transaction. Customers quickly became frustrated in dealing with a utility, as most have structured business operations to meet the needs of the utility rather than the customers they serve. Each customer interaction is treated as an individual transaction with little information sharing across service groups. Billing systems have typically been developed and customized to a rigid set of utility specific business rules, validations, and data requirements. Changes require the involvement of Information Technology (IT) resources which typically result in time consuming and expensive modifications. This type of systems environment has been in place since the late 1960s and continues today in many utilities across the nation.

In the early 1980s, the utility industry began a slow process of evolving from its meter, premise and account focus, to a customer oriented environment. Within this environment, staff are expected to embrace and delight the customer with

exceptional levels of service exceeding anything the customer has ever expected of the utility. The core business cycle of interaction, service, usage, billing, payment, revenue and collection remains unchanged. However, the utility now views the customer as a single entity rather than a series of unrelated transactions or accounts. This view becomes even more important as retail markets open, distribution utilities are driven to unbundle their business (i.e. generation, transmission, distribution, metering, etc.) and are restricted in what services they may or may not offer to their customers. Retailers are required to analyze customer data as well as reposition the company's marketing campaigns and offerings in order to target appropriate end use customers.

To stay in business, it is important

order to drive a customer demand path. Some will be successful in leading customer demand while others will offer products off the customer demand path. In any event, change within the utility is overwhelming. Utilities find they must overhaul many aspects of the organization in order to move to a customer-centric environment. Utilities cannot ignore e-Business initiatives which allow the utility to improve customer satisfaction, provide customer options for interacting with the utility and lower their operating costs. Today the primary focus of many utilities is on Business to Customer (B2C) initiatives, while most bottom line gains are being achieved in Business to Business (B2B), and Business to Workforce (B2W) initiatives.

### Current Utility View

- *Meter, premise, account*
- *Billing system*
- *Transaction view*
- *Meet utility needs*
- *Core billing functions*
- *Our business*

### Target Utility View

- *Customer and relationship*
- *Customer information system*
- *Customer view*
- *Meet customer needs*
- *Extended CIS capabilities*
- *Everyone's business*

for utilities to develop strategies and initiatives which focus on reaching the customer. The CIS and related e-Business initiatives are critical in supporting the move to a target view as presented in the following table.

## The Customer's Viewpoint

Customers have maintained a relatively low level of interest in their utility. They contacted the utility only when they had a problem or a complaint. This view has changed dramatically as customers, driven primarily by price and convenience, are being forced by market deregulation and an increasing percentage of their household budget spent on the commodity, to pay more attention to their utility.

Historically, customer expectations have been minimal and easily met by the

order to drive a customer demand path. Some will be successful in leading customer demand while others will offer products off the customer demand path. In any event, change within the utility is overwhelming. Utilities find they must overhaul many aspects of the organization in order to move to a customer-centric environment. Utilities cannot ignore e-Business initiatives which allow the utility to improve customer satisfaction, provide customer options for interacting with the utility and lower their operating costs. Today the primary focus of many utilities is on Business to Customer (B2C) initiatives, while most bottom line gains are being achieved in Business to Business (B2B), and Business to Workforce (B2W) initiatives.

## Business to Customer (B2C) Initiatives

Generally, customer interest in utility websites remains relatively low. However, for utilities to offer more competitive prices they must reduce the costs associated with providing customer

service. In other industries, organizations have realized as much as a 92% cost reduction in providing online customer service versus serving a customer over the counter in branch offices or walk-up locations. Compared to these other industries, utilities find fewer Internet users typically due to apathy associated with switching energy suppliers. Additionally, many utilities have closed down walk-in customer service facilities, relying instead on call center and direct mail to communicate with customers. While there is a clear trend toward online transactions and movement away from hardcopy bills to electronic bill presentation and payment (EBPP), consider the following:

- Today, bill payment and transaction mail still represents almost half (49.1 percent) of all first-class mail in the United States.
- The number of U.S. households expected to use EBPP is projected to increase from 7.8 million in 2002 to 44.5 million by 2006.
- Today, direct biller sites account for 83 percent of bills viewed online. This is predicted to drop to 60 percent by 2006, when 40 percent of bills will be viewed at consolidators' sites.
- Paper checks currently comprise only about 60 percent of all payments made in the U.S., which is down significantly from the 85 percent share they held in 1979.
- An estimated 30 billion payments a year are now made electronically in the form of credit/debit cards and Automated Clearing House (ACH)/Electronic Funds Transfer (EFT) transactions.
- While organizations are moving to provide customers with multiple channels of communication including telephone, web, e-mail, fax, web collaboration, text-based chat and voice over IP, there remains a continued emphasis on direct mail.

Top performing utility web sites provide customers with the following B2C capabilities.

- At a minimum, utilities provide customers with the ability to view basic account information via the Internet.



A few utilities have extended this to self customer service for items such as changing service plans, selecting the day of the month to be billed, generating a service order or signing up for new products and services.

- Provide energy and consumption based information allowing the customer to obtain real-time pricing data and to monitor hourly energy consumption.
- Support for online energy marketplaces allowing for energy purchases by large commercial and industrial customers.
- Provide for hardcopy bill presentation as well as online presentation and viewing of the customer bill. This is being accomplished through Internet bill presentation, electronic bill presentation, and e-mail bill based presentation.
- Utilities provide the customer with multiple options for paying the bill

including traditional methods such as mail-in, lock-box, walk-in, payment stations, and third party payment agents. Additionally, the utility is moving to incorporate payment via the Internet, electronic media, automatic bank account debit, credit cards over the telephone, and bill payment kiosks.

The following scenarios are typically found when considering e-Business initiatives in conjunction with legacy billing systems and CIS initiatives.

**1 Extend Legacy Billing With e-Business Capabilities.** The utility retains the legacy billing system and develops e-Business components to extend the capabilities of the legacy billing system. There are numerous examples of a utility enabling electronic bill presentation and payment capabilities through the use of third party software, or extended payment

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## CIS and eBusiness *continued*

capabilities such as credit card payments. A new CIS is not required to enable e-Business and enhance customer service. These extended capabilities must be taken into consideration by any subsequent CIS initiatives. In some instances the extended e-Business components will need to be replaced with other offerings which are more in tune with the new CIS solution.

**2 Implement New CIS and e-Business Capabilities.** Many times, justification for a new CIS is attributed in part to the inability of the legacy billing system to adequately support and promote various e-Business initiatives. In these instances, online customer service, account management, electronic bill presentment and payment are promoted as benefits to be realized as part of the CIS initiative. Frequently, the cost in time and money of implementing these extended CIS capabilities at the same time the core CIS is replaced are underestimated and may ultimately be pushed to a subsequent phase.

**3 Implement New CIS Followed By e-Business Capabilities.** Similar to item 2, the utility recognizes the need to replace the legacy billing system with a new CIS in order to provide a solid platform for the development of e-Business initiatives. Although the utility frequently views e-Business as critically important to the future of customer service, they realize the significant risk associated with implementing a new CIS and work to minimize risk by implementing and stabilizing the core CIS as quickly as possible, then focusing on the implementation of extended e-Business capabilities in subsequent phases.

In some instances, the CIS replacement effort is restricted in terms of the e-Business initiatives it can pursue. Many times, the utility is developing an overall e-Business strategy at the same time the new CIS is being implemented. If this is the case, the team is often restricted in terms of the e-Business initiatives to be considered. For example, the bigger picture of how the new CIS will operate within a city's overall e-Business strategy will incorporate a customer's ability to pay their utility bill, pay their traffic

ticket, register for a parks and recreation program, enter a solid waste pickup request, view the status of a building permit, pay a library fine, and much more.

## Business to Business (B2B) Initiatives

B2B transactions represent a utility doing business with its suppliers. Experts predict that by 2004, 10% of all B2B transactions will be conducted via the Internet. What is described as Electronic Invoice Presentment and Payment or EIPP is expected to surpass EBPP B2C transactions in the long-term. Currently, while only 10% of Fortune 1000 companies have adopted B2B EIPP compared to 13% for EBPP, this is expected to grow to nearly 40% for EIPP compared to 27% for EBPP during the same time period.

Industry experts indicate that while opportunities exist for both EBPP and EIPP vendors, the future looks brighter for B2B EIPP rather than B2C EBPP. For utilities, this requires emphasis in the areas of e-Procurement and interaction with suppliers and e-Choice representing interaction with the wholesale and retail commodity markets. Many times these initiatives are considered outside the scope of the new CIS replacement initiative and may be treated as a parallel effort or a phase 2 initiative.

## Business to Workforce (B2W) Initiatives

Many B2W initiatives are considered as interface or integration points to a new CIS initiative. Examples of a B2W initiative includes the following:

- **Distribution Management.** Implementation of a work management system or field automation system which requires integration to the CIS for service work and customer information.
- **Outage Management.** Implementation of an outage management system which requires integration to the CIS for customer information and the work management system for work information.
- **Human Resource Management.** Frequently considered out-of-scope from a CIS perspective, a primary area of Internet enablement involves human resources, payroll,

and benefits management.

- **Document Management.** Implementation of a document management system which may include the automation of all customer correspondence for online access and retrieval.

The benefits of work force automation, streamlined workflow and resource optimization make B2W initiatives very attractive to utilities looking to increase efficiencies and manage operating costs. However, many utilities have found trying to implement a new CIS at the same time as a major work management or field automation system has proven difficult to manage and staff to a successful outcome. The need to plan, prioritize and resource competing B2C and B2W initiatives is critical to the success of these projects and the overall health of the utility.

**Regardless of where your utility is in implementing an e-Business initiative or a new CIS, consider the following:**

- An overall e-Business and CIS strategy must be created for the utility as a whole. The value of any initiative should demonstrate a significant return on investment and be measured in terms of customer convenience, process improvement, cost reduction, revenue enhancement and utility differentiation.
- Many utilities implement e-Business and CIS solutions without addressing other key aspects such as process, strategy, organization, and staffing. Injecting new technology without addressing these other areas results in the utility obtaining a lower return on its technology investment.
- To make e-Business and CIS initiatives work, technology staff, business users, customer focus groups, suppliers, and executives need to work together to define objectives and requirements in order to make the technology investment pay off.

At a minimum, utilities must follow these three essential elements; otherwise they risk losing customers, minimizing revenue and wasting technology investment.

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