



Getting it Right: Redesigning My Account

Web Self-Service History
User-Centric Design Process
The Results
Summary

Chris Bond Bio





Utility Experience: 29 years Usability / UX Experience: 25 years

- Past 28 years as an employee of PGE:
 - IVR, Web, CIS, Outage, Intranet design
 - Last 2 years, integrating usability into Agile software development (portal technology)
 - Mobile user interface design and two-way texting
- Past 12 years private consulting (w/ PGE permission):
 - 2006 2007 Conducted Comparative Usability Study for 22 energy utilities
 - Developed and participated in Market Strategies IVR Energy Utility Evaluation for 3 years (over 100 utilities)
 - Provide usability design, testing and evaluation for over 40 utilities
- Clients outside the utility industry include:
 - Corillian Software, InfoUSA, Virgin Mobile, Microsoft, Sound Transit, King County Metro



Dennis E. Crumb Bio



Utility Experience: 14 years Proj. Mgmt / CX Experience: 19 years

- Avista Utilities Web Redesign
 - Business Project Manager
 - Sr. Web Architect
 - IS/IT Lead Manager
- 1 yr E-Commerce
- Past 3 Yrs FT Consulting
 - Web Redesign Process
 - Mobile/Social Media
 - Cust. Exp. Management

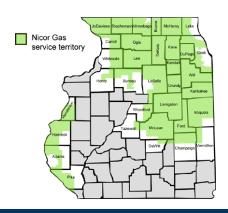




About Nicor Gas



- 1954: Northern Illinois Gas founded
- 1997: Name change to Nicor Gas
- 2011: Nicor merged with AGL
- Natural gas utility serving the northern third of Illinois
 - 2.2 million customers
 - Headquartered in Naperville, IL









WEB SELF-SERVICE HISTORY



Nicor Gas' Web Self-Service History



In 2003, the company launched its first web self-service site



- Current offerings 2003-2010 (~ 300,000 customers enrolled)
 - Account balance, due date, meter reading, BP, etc.
 - Web forms (moving orders, meter read appointments)
 - Email reminders
 - Links to other websites CheckFree, etc.



Customers were dissatisfied (2010 verbatims)



Web self-service feedback

ePayments

- "You have one of the WORST web sites for paying bills of all the ones I use, every month! Update your web site so I can pay my bill easily, please."
- "Make the site a bit easier to do business with. I want to pay my bill. I should not have to go through
 a ton of questions to do so. If you had my account information [use it] so that next time I would just
 click and pay..."

Bill View and eBill enrollment.

- "Add the monthly statement feature as other utility companies provide. Or, if you do have it on the web site, make navigation to it more prominent."
- "I would like to be able to download a PDF copy of the monthly bill like I can on all other web sites I use (electric, cable, credit cards, garbage, phone, etc.)

Payment History

- "Make it user friendly so customers can access payment/billing history."
- "I was looking for payment history from previous year for tax records. Add payment history."

Comparison to other websites

- The ability to print your bill or save in PDF format for future use. Most others use that format electric, mobile phone, mortgage companies, etc."
- "Copy the electric company's web site that one at least works well."
- "Tracking of payment information. Take a look at other gas and electric utility web sites. They are much easier to use and navigate. Information is much more useful."



My Account Transaction Survey (Residential and Commercial Customers)



Did you find what you were looking for or accomplish what you intended?





Challenges



Limited in-house expertise

Project budget

Timeline constraints

Merger announced



USER-CENTRIC DESIGN PROCESS



7 Keys to a Positive Customer Experience

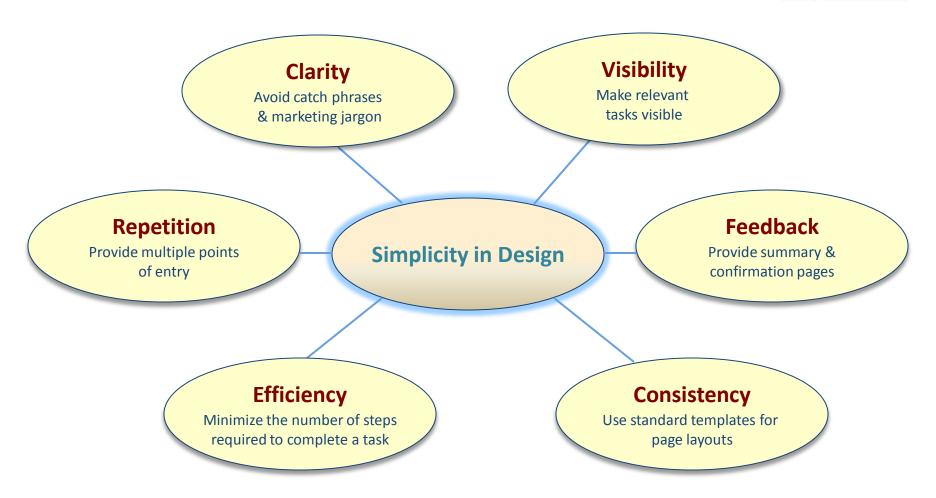






Key Principles of Usability







A Comprehensive Approach to User Experience Design



A number of techniques were used ensure optimum usability:

- Current State Assessment
- Heuristic Review (expert evaluation of existing My Account)
- Card Sort Exercises (IA design)
- Task Flows
- Conceptual Design
- Interactive Prototype
- User Testing
- Usability Oversight (throughout development)
- Exploratory Usability Testing
- Validation Usability Testing







Rating	Title	Definition
	Exemplary	 » Business processes are best practices and highly documented » Existing resources meet or exceed business requirements » No additional work is necessary prior to or post redesign launch
	Above Average	 » Business processes are in place but not fully documented or best practices » Existing resources may not fully meet all business requirements » Some work may be needed prior to or shortly after redesign launch
	Meeting Basic Needs	 » Business processes are known but not documented or explainable by non SME's » Existing resources may meet business requirements but are not SME's » Work is needed prior to or shortly after redesign launch
	Needs Improvement	 » Business processes exist but informally and little or no documentation exists » Existing resources have significant capability gaps » Major work is needed prior to redesign launch
	Needs Major Improvement	 » Business processes are defunct or don't exist. » No resources exist or resources not supporting basic needs of the organization » Significant work is needed prior to redesign launch



Current State Assessment



Work Area	Rating	Comments
Content		» No formal Content Strategy today
		» Lack of Nicor Corporate Communications resources will be future problem
Branding		» Brand Guidelines applied inconsistently today
		» Extent of branding on future content/My Account not clear
UX/IA		» No current Usability Guidelines
		» Distinction of Nicor Gas, Nicor Inc. & Affiliates not clear
My Account		»Integration w/ future Nicor.com not clear
		» New My Account still charging a fee to accept a payment
Governance		» No formal Governance Committee
		» Lack of 3-5 year Roadmap leaves Priorities unclear
Technology		» Current CMS has major limitations
		Web architecture and tools are challenging the business









Needs Major Improvement

- » No formal Governance Committee
- » Lack of 3-5 year Roadmap leaves Priorities unclear

Summary

Currently, it's tough for any group to take clear responsibility for the site because procedures weren't put in place seven years ago (last redesign).

Knowing who has authority over content, branding, voice, and style will create a more usable website.



Heuristic Review



A heuristic review is a structured inspection of a user interface based on guidelines, checklists and expert opinion. Heuristic reviews are a user-centered approach, in which an expert (or panel of experts) evaluate a system to identify potential design problems. Problems are noted when the system characteristics violate constraints known to influence usability. The constraints are based on principles derived from research with actual energy utility customers and are based largely on performance, perception and design problems.

Each aspect of the customer experience was evaluated, and potential stumbling blocks customers may face were identified with regard to:

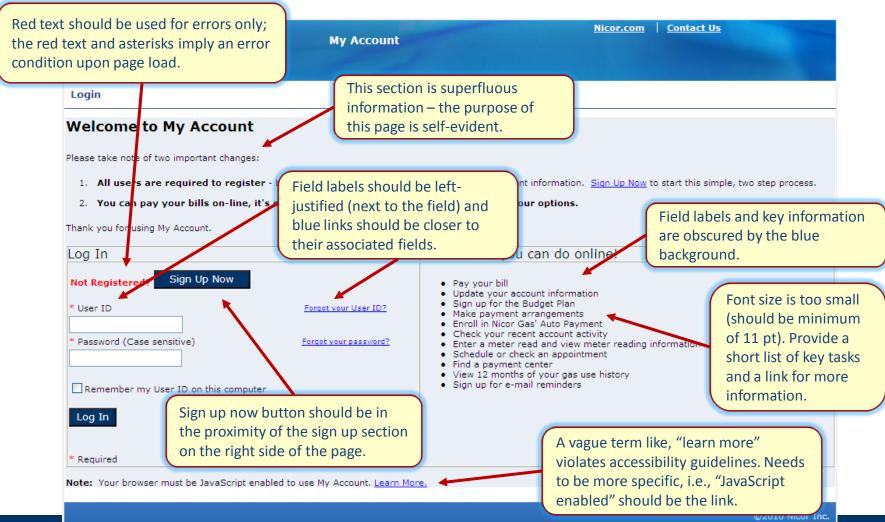
- Login/Registration
- Account Overview
- My Bill
- Analytics
- Payments
- Self Service
- Profile



Heuristic Review



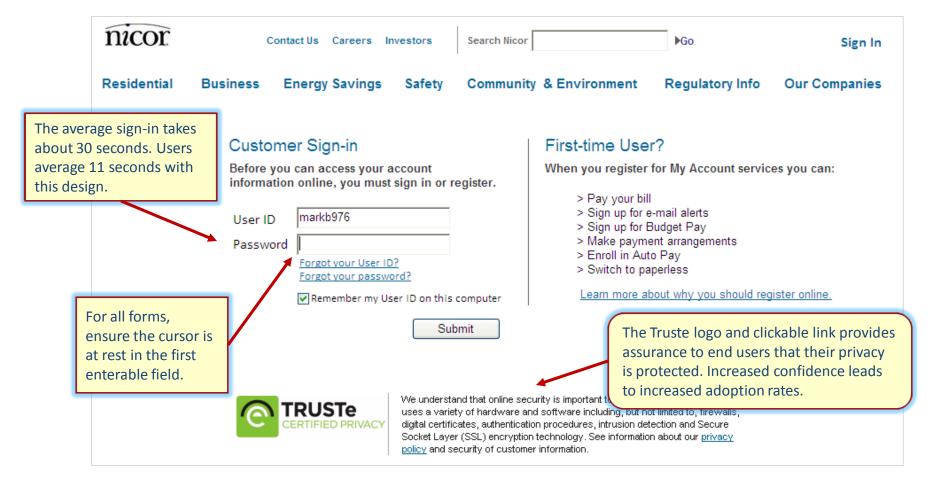
Login Page



Heuristic Review



Proposed Login Page





Card Sort Exercises



A total of 30 content items or task items were selected for the initial round of card sorting. The 30 items were selected because they are content items or task items where it may not be clear into what category they would fall. My Account Content items and task items that are quite clear (such as 'View My Bill', 'Pay My Bill', etc.) were left out of the exercise on purpose.

Three rounds of participants were:

- 1. Utility-industry usability and user experience experts 10 participants invited; 8 participated
- Nicor.com Evaluation Steering Committee 10 participants invited; 6
 participated
- 3. Nicor.com customers 73 participants invited; 13 participated



Card Sort Exercises



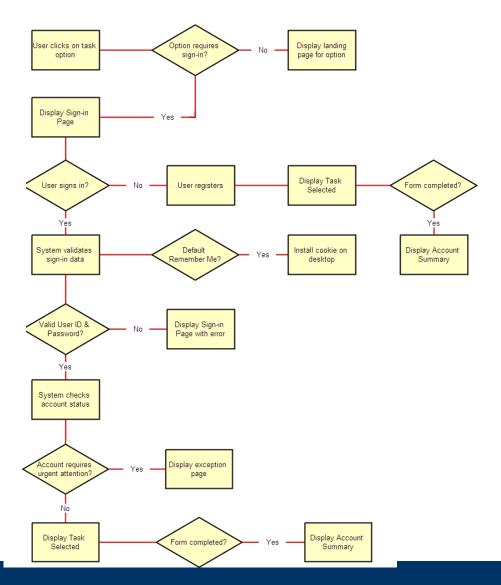
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		AN AGE A
UX / Usability Experts	Steering Committee	Customers
About your gas meter	About your gas meter	About your gas meter
Adventures in reading	Adventures in reading	Adventures in reading
Annual environmental statement	Annual sustainability report	Annual sustainability report
Awards and recognition	Awards and recognition	Awards and recognition
		Budget billing plan
Call before you dig	Call before you dig	Call before you dig
Charitable giving	Charitable giving	Charitable giving
Clean air counts	Clean air counts	Clean air counts
		Customer newsletter
Economic development	Economic development	Economic development
Emergency contact info	Emergency contact info	Emergency contact info
		Energy efficiency tips
Energy assistance programs	Assistance agencies & programs	Assistance agencies & programs
Federal energy tax credits	Federal energy tax credits	Federal energy tax credits
Gas prices	Gas prices	Gas prices
Help someone in need	Donate to help someone in need	Donate to help someone in need
Home energy audit	Home energy audit	Home energy audit
Information for new construction	New construction checklist	New construction checklist
Maintaining your gas pipelines	Maintaining your gas pipelines	Maintaining your gas pipelines
Moving in or out	Moving in or out	Moving in or out
Natural gas appliances	Natural gas appliances	Natural gas appliances
Natural gas suppliers for your home	Natural gas suppliers for your home	Natural gas suppliers for your home
Prairie grassland restoration	Prairie grassland restoration	Prairie grassland restoration
Reference guide to natural gas codes & specifications	Natural gas construction codes & specifications	Natural gas construction codes & specifications
Report a problem	Report a problem	Report a gas leak
Special offers and rebates	Energy efficiency rebates	Energy efficiency rebates
Sponsorships	Sponsorships	Sponsorships
Submit a meter read	Submit a meter read	Submit a meter read
Switch to natural gas	Convert to natural gas now	Convert to natural gas now
Understanding your bill	Understanding your bill	Understanding your bill
Update your online info	Update your online info	Update your online info
Ways to pay	Ways to pay	Ways to pay
Ways to save	Ways to save	Save energy, save money



Task Flows - Task Selection







Conceptual Design

Landing Page Template #1



Logo	Utility Nav Bar	Contact Us	Phone Number	Search	Sign In/Sign Out
Global Navigation	on				
Sectional Navigation	Heading				Promotional Tout Promotional Tout
			Footer		

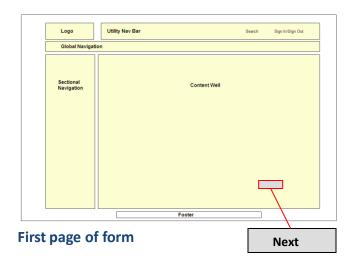


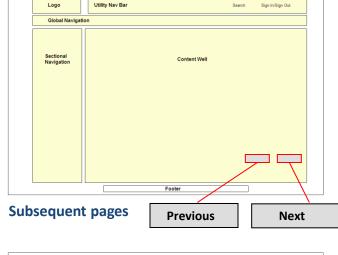
Conceptual Design - Form Navigation

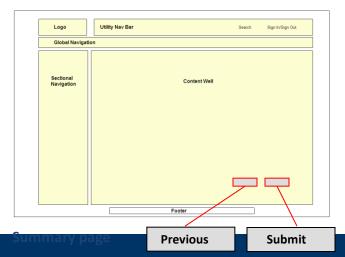


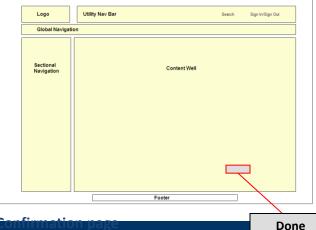
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Use of Action Buttons on Self-Service Forms



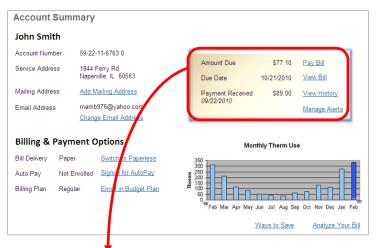




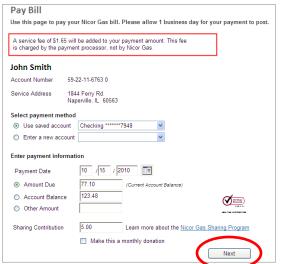


Interactive Prototype



















The best way to eliminate unnecessary (costly) calls to the contact center is by providing three levels of confirmation:

- **1. Confirmation page** with a confirmation number. A "Done" button which indicates the task is complete.
- An automatic e-mail confirmation which includes the confirmation number and transaction details (with sensitive data masked).
- 3. After clicking on the Done button from the confirmation page, the **Account Summary** displays with the updated status, i.e., amount due is now zero (if full payment was made).



User Testing



The 12 participants in this study spent 10-15 minutes performing approximately 6 tasks to locate target content. They did not sign in or complete actual self-service tasks

Benefits

- Inexpensive
- Quick assessment of concept
- Observational
- Qualitative feedback
- Validation of design

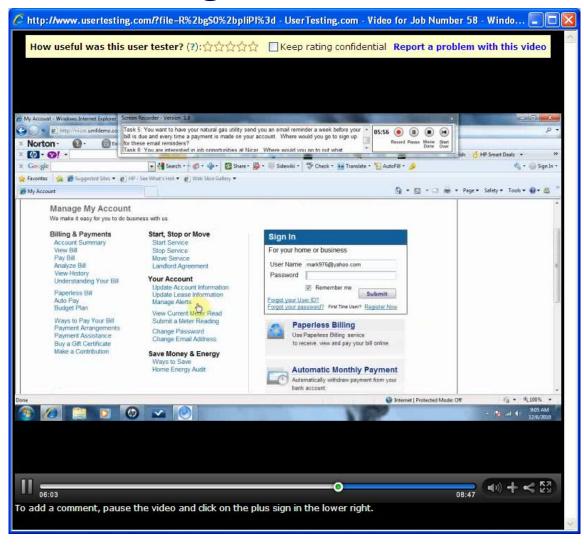
Drawbacks

- Facilitator not present with participants
- Prototype does NOT represent fully functional site
- Search not operational
- No error handling
- Limited test time (10 minutes vs. 90 minutes)



User Testing







User Testing



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User Testing.com

Your Account | Sign Out
Home FAQ Buzz About Us Try It

Answers to your Questions

http://nicor.umfdemo.com

User tester: sjneubauer

Date: December 06, 2010

Did you find the web site easy to use or hard to use?

. I found it very easy to use. Well laid out and didn't have problems finding anything.

What did you like about the site?

- · simplicity of use, easy to find commonly needed information
- . As a customer you has used your current site, I find this to be a MUCH improved experience

What other ideas do you have about how this site could be improved?

Nothing really, just make sure one can get back to the home page easily enough. Some of the links that should have taken me back there didn't seem to work, but I imagine that will be fixed in the final version.

How would you rate this site on a scale of 1 (poor) to 10 (outstanding)?

9



Usability Oversight



When is it appropriate to use a pop-up window and when do we keep the user on the same page?

Pop-up windows are problematic because they . . .

- Interrupt the task
- Require the user to remember the message (after clicking on the OK button) and locate the problem
- Require the user to use the mouse
- Only address one problem/error at a time (can be tedious and time consuming)
- Can be potentially very confusing



Usability Oversight



Pop-up windows should only be used when . . .

- The user invokes them
- Example: link for a glossary term
- Example: view sample check

A better alternative is a secondary browser, sized to be smaller than the current window, with a Close button.

As a rule, a separate page should be used for preventing the user from a potentially destructive action or informing them the task cannot be completed.

The majority of error handling should be done on the page, with bold, red text displayed above the field in error.



Usability Oversight



Example: User clicks on link for sample check from Pay Bill

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A service fee of \$1.65 will be added to your payment amount. This fee is charged by the payment processor, not by Nicor Gas.	
John Smith	Sample Check - Windows Internet Explorer provided by Comcas
Account Number 59-22-11-6763 0	Check
Service Address 1844 Ferry Rd. Naperville, IL 60563	Number 0000
Select payment method	Date
Use saved account Checking ******7948	Pay to the Order of \$
Enter a new account Checking	Dollars 🐧 🚟
Routing Number Sample check	For
Bank Account Number	Routing Account Check
Confirm Account Number	Number Number Number
Remember my account information for future page 1	Close
Enter payment information	
Payment Date 10 / 15 / 2010	
Amount Due 77.10 (Current Account Balance)	
Account Balance 123.48	(V) Verifiga

Exploratory Usability Testing



A usability test is a formal study in which 8-10 users are observed individually performing tasks with a system. Findings and recommendations are made according to objective data from the test such as number of errors, task times, problems and assists.

Other important measures include task failures (where users abandoned the task) and preference ratings for each of the functions tested.

Direct observation with actual customers to isolate design problems is one of the most reliable methods for ensuring the design is usable and meets the needs of customers.

Exploratory tests are conducted on new designs that have not been tested with actual customers.



Exploratory Usability Testing



On a scale of 0 to 10, with 10 being the most favorable, participants responded with an average of 8.75 when asked how likely is it that they would return to the site in the future.

Several metrics were used to gather data which indicates a high degree of usability:

- **Task times** the average task time for all tasks combined is 1:43 (exceeds best-in-class)
- Error rate the average number of errors was 1.08 (best-in-class)
- **Problems** the average number of problems was 1.19 (best-in-class)
- **Assists** the average number of assists was 0.35 (best-in-class)
- **Preference ratings** the average preference rating was 8.48 (best-in-class) on a scale of 0 to 10, with 10 being the most favorable.



Validation Usability Testing



Validation tests are conducted to verify that changes made after the first round of testing have measurably improved the user experience.

On a scale of 0 to 10, with 10 being the most favorable, participants responded with an average of 9.13 when asked how likely is it that they would return to the site in the future.

- **Task times** –average task time for all tasks is 1:43 (exceeds best-in-class)
- **Error rate** average number of errors was 0.71 (exceeds best-in-class)
- **Problems** average number of problems was 0.53 (exceeds best-in-class)
- **Assists** average number of assists was 0.24 (exceeds best-in-class)
- **Preference ratings** the average preference rating was 8.66 (best-in-class) on a scale of 0 to 10, with 10 being the most favorable.

NOTE: Most usability tests uncover an average of 100 problems; this test yielded fewer than 30 problems.



THE RESULTS



My Account – today Full Site





Contact Us

Sign Out

My Account

Rebate Program

Safety

Gas Service

Community

Environment

Billing

Account Summary View My Bill Go Paperless

Bill and Payment Activity Compare My Bills

Payment Options

Pay My Bill My Payment Info AutoPay

Budget Plan

Payment Arrangements

Give to Sharing

My Profile

Update My Information Email Alerts

Change Password Change Email Address

My Gas Service

Move In Move Out

Service Appointments

Meter Reading

Take Our Survey

Account Summary

Brian H Maruyama

Account Number

Service Address

123 Main St.

Glen Ellyn, IL 60137

Email bmaruya@aglresources.com

Change Email Address

10002

Phone (630)123-4567

Change Phone Number

Billing & Payment Options

Bill Delivery Paperless <u>Change Bill Delivery</u>
Auto Pay <u>Enrolled Change AutoPay</u>
Billing Plan Budget Cancel Budget Plan

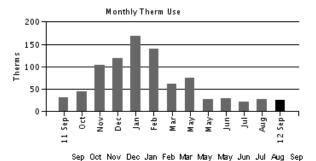
Amount Due \$0.00

 Due Date
 10/19/2012
 View Bill

 Payment Received
 \$41.00
 View History

10/19/2012

Current Balance \$125.07 CR



Awg. Temp 64 56 46 36 31 34 54 66 66 74 82 75 67 Natural Gas Cost \$.51 .51 .48 .48 .44 .33 .34 .22 .22 .31 .34 .39 .39

Compare My Bills



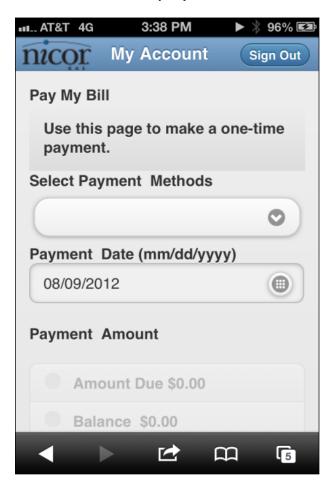
My Account – today Mobile Site



Login



Make a payment



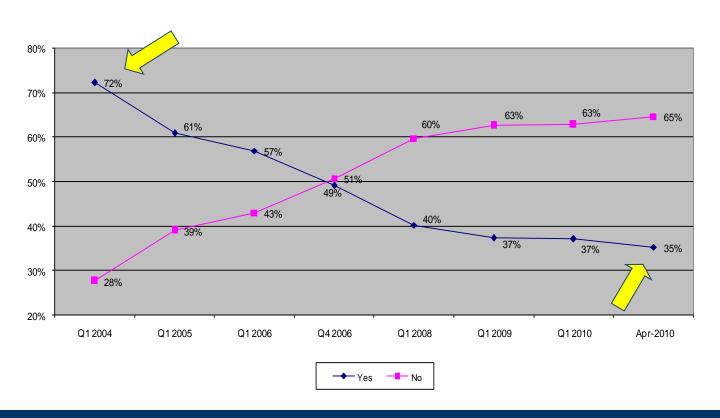


Customer Experience Trend "Prior to usability improvements"

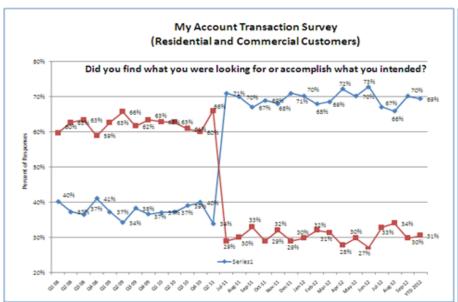


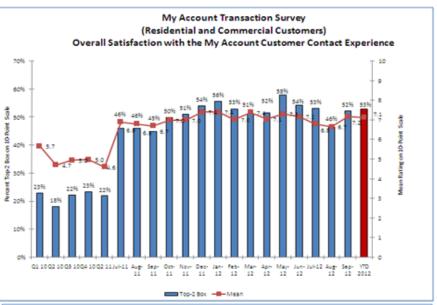
My Account Transaction Survey (Residential and Commercial Customers)

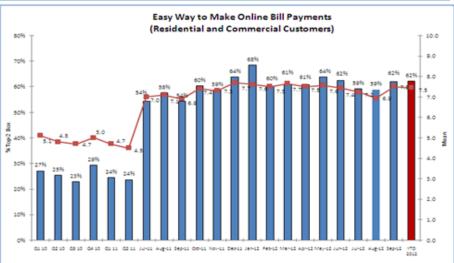
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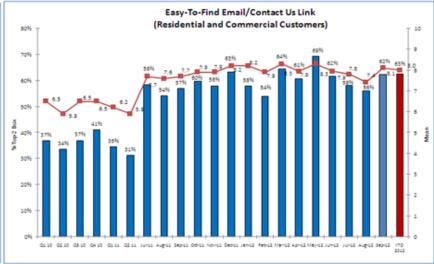




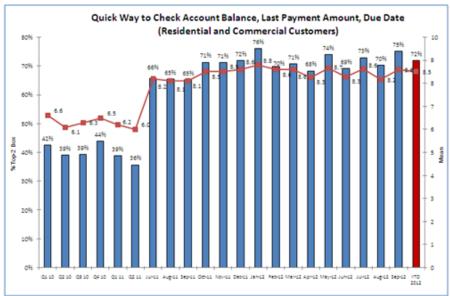


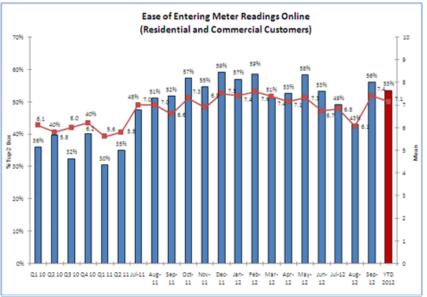


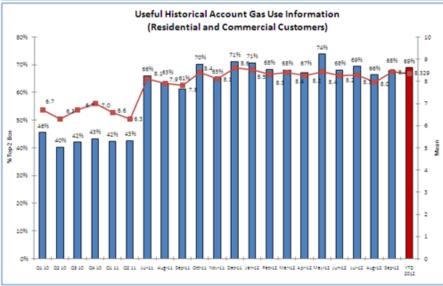


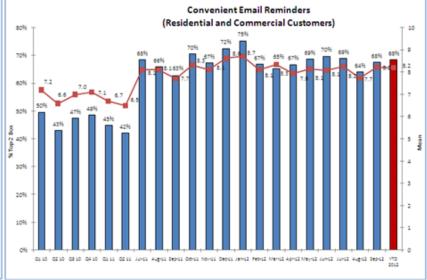




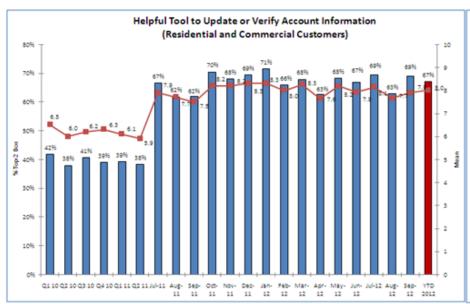


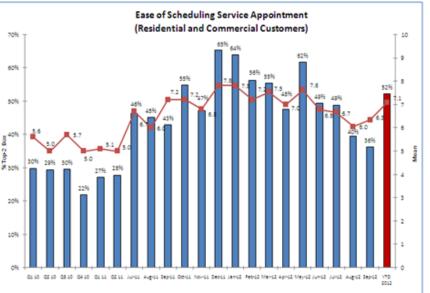


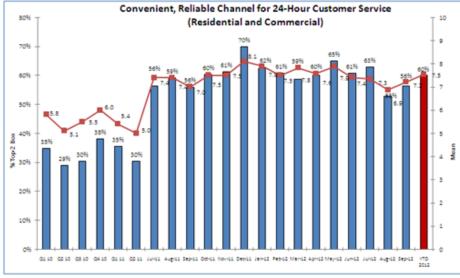














Customers are satisfied (2012 verbatims)



Web customer survey feedback

- "Great system so much easier than calling."
- "Totally easy to use...all other utilities should have such easy sites. Thanks."
- "You have the best website for your clients from ease of use and general information, I was able to locate anything I needed and quickly. I also liked that you posted the information on your home page about that email scam - your website tells us you care."
- "Quick way to check account balance, last payment amount and due date"
- "I haven't used your website for a very long time because the last time I did use it, the
 experience was very frustrating. You have made many excellent improvements and I
 am very pleasantly surprised."



SUMMARY



Keys to Success



- 1. Executive support
- 2. Clear vision
- 3. Cross-functional team
- 4. Customer-centric design
- 5. Customer Market Research



Questions?



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