INTRODUCTION

In an environment of rising expectations, it is critical for utilities to engage their customers, and that means going beyond paper and web and instead connecting with them via their mobile phones. At the same time, a recent Navigant report[1] indicated that utility executives are not confident in their organizations' mobile development capabilities.

This white paper gives guidance to utilities who are planning a consumer-facing mobile solution. The following key considerations are discussed:

1. The **functionality** required for a successful mobile solution
2. How to future-proof via the right **platform** approach
3. The **build vs. buy** decision
4. What factors to consider to ensure **ease of deployment**
5. The **ancillary support** needed for a successful rollout

In addition to these considerations, the paper also suggests key requirements that should be addressed and vetted with every vendor, so as to ensure the utility can capture the highest near-term and long-term value from their mobile solution.

FIVE CONSIDERATIONS

1. FUNCTIONALITY

Mobile functionality is a double-edged sword: if done well, it presents a huge opportunity to engage consumers; but if done poorly, it's easy to lose users. Thus it's critical to create the most engaging mobile solution possible. Further, mobile development can cost hundreds of thousands (if not millions) of dollars. With this kind of cost commitment, be sure the app is not just a replication of a paper bill or a responsive version of your website. Also, while bill pay and outage are two of the most common mobile features, the best mobile solution will provide more: consumers expect new, positive interactions with their mobile apps, they're not interested in the status quo. Examples of these modern utility app features include:

Push vs. pull | Rather than relying on the user to proactively log in to pull data into an app, the mobile solution should push relevant notifications

Insights | Leading utilities are providing features like disaggregation, gamification, personalized tips and recommendations

Push notifications engage users with timely, relevant information

KEY VENDOR REQUIREMENTS

- Provide metrics and proof of user engagement
- Share experience and plan for testing the solution on real users
- Share experience and plan for A|B testing

1 Navigant: Bridging the Divide: Utilities and the Customer Capabilities Gap

Consumer-centric | The mobile solution should support utility
goals but must also be use-case oriented to provide functions
important to consumers, and not just a bunch of features

MOBILE APP OR MOBILE WEB?

Mobile doesn't necessarily mean an app. We're all familiar with mobile apps (Uber, Instagram, etc) but a mobile solution can also mean responsive web pages accessible via the phone's browser (Mobile Web). While Mobile Web represents a lower barrier to adoption, native applications will provide the best user experience and functionality by:

- accessing all capabilities of the device
- operating without connectivity to the web
- enabling push notifications

An idea mobile solution has both app and responsive web, so that you can reach the broadest audience possible with an engaging mobile experience.

Utility Insight

Customer-Centric Design | At the 2016 Mobile Utility Summit in Denver, Con Edison discussed how they had developed a mobile-optimized site in 2009 and then outsourced a mobile app in 2013. At that time, ConEd had no professional web design staff and was focused on channel-centric design rather than customer-centric design. The result was a text-heavy app that required numerous clicks for navigation, making it hard for customers to find what they were looking for, and creating the impression amongst many customers that ConEd was "hiding" things.

Having learned from that experience, today ConEd is undergoing a digital transformation process leveraging *user stories**, a software development methodology designed to ensure customer-centric design.

More information on ConEd's experience is available at this link.

*User Stories in Modern Software Development
Modern software development is centered around user stories as the best approach for identifying the most important consumer functions. The user story is typically defined in a Product Requirements Document (PRD) and it describes the type of user, what they want, and why. An example User Story is below:

User Stories

#	As...	I want to...	So that...
1.0	a <role>	<goal/desire>	<benefit>
1.1	a utility ratepayer	understand my most inefficient appliance usage	I can lower my energy bills

2. PLATFORM

A single, purpose-built solution that only serves an immediate need is not the right approach to long-term mobile success. Instead, finding a platform solution that provides rich functionality now, along with the flexibility to grow with changing needs in the future. Key aspects of a platform vs. a single-use app include:

Modular | A platform is able to serve multiple programs (e.g. EE, DR, and engagement) and should be flexible enough so that you can start small and grow, only paying for what you need, as you need it

Omni-channel | Consumers tend to be fluid in their use of information - they may start with a mobile app but then lose interest and move to email, or transition over time from paper to web. The proper platform can provide the same functionality regardless of consumer channel (e.g. SMS, email, paper), allowing you to reach the customer wherever they are in the engagement lifecycle

Omni-channel communication reaches users via their preferred channels

Customizable | Platforms can have completely customized branding and content, specific to a utility's geography, climate, goals, customer types, and more

Extensible | An advanced platform is able to integrate with other solution components, enabling various business models to fit the specific market approach

Utility Insight

Life Without a Cohesive Platform | An executive of one large utility described how the lack of both CIO oversight and control over decentralized digital initiatives led to varying levels of maturity over digital strategy and created multiple disparate initiatives across the organization. As a result, consumer experience suffered: the utility required different applications for moving, billing, energy insights, complaints, and outages.

- Provide info on the customer journey and how the platform evolves over the course of the consumer lifetime for various functions, programs, and channels
- Share development/ product roadmap

KEY VENDOR REQUIREMENTS

- Outline differences between NRE and product costs
- Provide cost of $X/year as an alternative to a single all-in charge
- Describe in detail the focus on utility market/ customer
- Require the availability of public APIs
- Document the details of previous deployments
- Provide both cost and process for app updates

3. BUILD VS. BUY

Once the decision has been made to go mobile, it's imperative to think through the ramifications of developing the mobile capabilities in house, utilizing a third party vendor to build a custom solution, or buying off the shelf. Each option has advantages and disadvantages:

Build Internally
- **Advantages:** The utility has full developmental control and can design/build to exactly match their needs
- **Disadvantages:** Requires internal skill set and budget not just for the initial deployment but on an ongoing basis for maintenance and support

Build Externally
- **Advantages:** By hiring an external firm to build to spec, the utility maintains full control and eliminates the internal development skillset requirement
- **Disadvantages:** The solution can feel "deserted" after the project ends, and maintenance fees related to updates, support, bug fixes, hosting fees, etc. can be significantly higher than expected

Buy Off-the-Shelf
- **Advantages:** Speed of deployment, product hardened through previous utility deployments, regular and ongoing maintenance (bug fixes and improvements) and development costs are amortized across multiple customer
- **Disadvantages:** Potential lack of differentiation and customization

In summary, while some utility functions are unique, many are common across all utilities. Therefore, the numerous advantages of an off-the-shelf solution make it the best option, in particular if it has a flexible and extensible platform that can be customized to provide unique content and specific functions.

A HYBRID APPROACH: Combining new and existing apps

Many utilities already have a mobile app that provides core functions like bill pay and outage. These core functions can easily be combined with an off-the-shelf mobile app that provides added insights and engagement. Some off-the-shelf products can provide functionality via APIs, which can add the engagement and insights directly to the existing app; other off-the-shelf solutions offer "deep linking", where two apps communicate directly and provide a relatively seamless experience to the consumer.

Utility Insight

The Importance of Domain Expertise | One large European utility experienced challenges with a third party mobile app developer. They hired the company based on their world class user interface and user experience skills, but quickly ran into problems because the partner lacked an understanding and context of the utility business. This became a major burden on the utility team, as the partner required constant education through the development cycle on such things as the definition of a kWh, how bills are calculated, and the different regulatory requirements driving their business.

- Provide relevant references for previous mobile deployments
- Complete a gap analysis of utility requirements vs. vendor's off-the-shelf standard product
- Provide Statements of Work from previous clients
- Document specs up front, allowing the utility IT department time for review, and ensuring the specs conform to the utility's design requirements.

4. EASE OF DEPLOYMENT

By utilizing Software-as-a-Service (SaaS) and industry-standard development protocols, a scalable off-the-shelf solution can avoid scope creep and be deployed quickly and easily. Further, an IT-friendly solution is a must; most utility IT departments are very busy and would appreciate if the chosen solution was:

Compatible | The solution should fit into existing IT infrastructure

Robust | Offers proven standards for security and SLAs that have been hardened by previous utility deployments

Adaptable | The solution's data integration process should adapt to your environment, not vice-versa
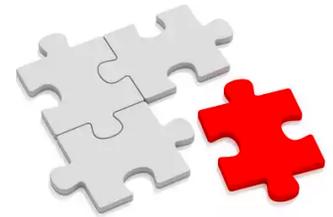
The best solution will be compatible and adaptable with existing infrastructure

Expert Viewpoint

"When you build your own product, you don't just get to walk away and let it run when it's finished. The same team that built it will probably spend a lot of their time providing maintenance, support, and tracking for it once it's complete. This means that you won't necessarily get the resources back that you diverted to build the solution in the first place, they'll stay diverted as long as you continue to use it. You also might end up bringing on new hires to supplement your current team's activities. Even though you'll be getting a customized solution for a product that's built in-house by a trusted team who knows your business and end-users – if this isn't their daily job, they might overlook certain critical functions or features that a seasoned solution provider would not. Sometimes it's better to let the experts guide you than to learn by trial and error with a critical mobile implementation."

Build vs. Buy: How Should You Roll Out Your Mobile Analytics Solution?

5. ANCILLARY SUPPORT

It's important to identify all of the issues _around_ the deployment of a mobile solution and not just focus on getting it out the door. The right partner will be experienced in providing ancillary support:

Marketing/Launch Support | Encouraging users to download a mobile app requires expertise in app marketing. In particular, marketing to millennials requires more than just bill inserts and web banners

Customer Support | Providing support to utility Customer Service Representatives on an ongoing basis is something that a good partner will include in their bid. That CSR support will typically include both pre-launch training and ongoing training as new features are released

Organizational Impact | A partner with previous deployment experience can set appropriate project expectations

CSR support is critical for a smooth rollout and ongoing customer success

KEY VENDOR REQUIREMENTS

• Provide examples of previous deployments and recruitment metrics

• Share content samples for landing pages, FAQs, support and training

• Detail their offering and capabilities for maintenance support (e.g. how quickly do they fix bugs and how often do they roll out new releases)

Utility Insight

Identifying the Root Cause | One large European retailer launched a new mobile app designed to encourage customer engagement and reduce impact on the call center. Instead they experienced an _increase_ in customer calls. Upon further analysis, the utility discovered that the unhappy calls were indeed decreased. However, the mobile app was sending push notifications to users about their consumption, and this increased awareness caused consumers to call the retailer to enquire about different rate tariffs available to them, leading many of them to renew their contracts for an additional two years.

CONCLUSION

In an environment of rising expectations, it is critical for utilities to engage their consumers, and deploying a great mobile solution gives utilities the best opportunity to build meaningful relationships with their consumers beyond the once-per-month paper bill. This paper was written to help utilities determine the right approach in identifying the best mobile platform for their needs, with the goal of maximizing both near- and long-term value.