Kevin O’Donnell
Innovation in Practice

PS: In 2012, NextEra Energy’s Power Generation Division developed a custom app for reporting near-misses and unsafe conditions. In June 2014, the project received honorable mention recognition in the first-ever ASSE-Cintas Safety Innovation Award competition. Who was part of the team and how did they contribute?

Kevin: The team consisted of our centralized staff safety professionals who flowcharted the desired process for field employees to report a near-miss or unsafe condition using a hand-held portable device. Next, the software programmers developed the mobile app [which the team named iMiss]. Finally, we needed motivated field beta testers to evaluate the application and provide suggestions. Of course, management support was also required to ensure a successful implementation. The development of the NextEra Energy mobile app was the result of a true team effort.

PS: What prompted your company to develop the innovation?

Kevin: During an OSHA Voluntary Protection Programs (VPP) audit at one of our power plants, the OSHA inspector asked about our process for reporting safety events. Although he was impressed with our injury reporting and investigation process, he noted that we could improve how we captured and addressed near-miss events. Given our commitment to a safe work environment and continuous improvement, we wanted to better capture such events to avoid injuries. This effort also is an effective way to demonstrate employee involvement, which is a prime element of the VPP program.

PS: How did you sell it to management?

Kevin: Safety represents a core value at NextEra Energy. Our management is committed and fully supports safety initiatives that make sense. After the successful deployment of the app for collecting plant operational data, iMiss was a logical next step that would continue to enhance our commitment to safety.

PS: Why did you choose a mobile app over other platforms?

Kevin: As part of our effort to adopt new, more efficient technology in our power plant operations and maintenance, the Apple iTouch was introduced to replace clipboards that had been used previously to collect power plant operating data. Having a mobile app was most effective with employees who work in the field. The device has the look and feel of an iPhone and allows field technicians to record and trend pressures, temperatures, tank levels and other data needed for plant operations. We have deployed more than 1,950 of these devices to our plant technicians, and the response has been overwhelmingly positive.

Although we already had a computer program for reporting near-miss and unsafe condition events, the process required field personnel to leave the working environment and travel to the office to record the incident on a computer. Furthermore, the events could not be reported

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anonymously, and there was no ability to upload a photograph. iMiss empowers site workers, allows anonymous reporting and offers the ability to upload photos.

**PS: Describe the diffusion of innovation in your organization. How did people within react to the mobile app?**

**Kevin:** As seen in the rapid adoption of smartphone technology in recent years, technology that is simple as well as useful will become immediately accepted. This has been the case with the iTouch applications.

**PS: What results have you generated through this innovation?**

**Kevin:** There has been a tremendous increase in the number of reported near miss and unsafe condition reports since the rollout. After deployment in 2013, the number of reported safety events increased nearly 3,600%. At the end of 2014, we had recorded an additional 72% increase over the 2013 numbers.

The rollout plan included hard hat decals to remind employees “Don’t dismiss a near miss,” and we call these reported items “great catches.” Each plant reviews its reported events and nominates one for recognition, and each winner gets a $25 gift card. Gift card winners are recognized in a safety bulletin that announces their name and their plant, what they reported and what action was taken.

Another key point is the tracking of the number of reported events by plant location. We also track the number of events open longer than 30, 60 and 90 days to encourage plants to investigate and close those events. When an event is closed, the person who reported it gets an automated thank-you e-mail that also reports what actions were taken. The big results are 1) a positive effect on morale by giving employees a more visible role in their safety and 2) the lowest injury rate in the past 10 years in 2013.

**PS: Have you developed any new features?**

**Kevin:** Yes, the iTouch now has many safety-related apps that were developed in house. This includes the ability to conduct a behavior-based safety observation or a lockout/tagout audit, determine heat stress levels, and read safety procedure manuals in the field. It also contains a flashlight function and allows two-way live visual communication. Another significant safety feature is that the keyboard locks and displays a safety message if the technician is trying to walk and enter data at the same time.

In addition to the safety apps, the in-house development team has created multiple applications that support business processes such as daily work management, inspection of watch, condition assessment, major maintenance and productivity improvement applications.

**PS: What elements of the app are you hoping to enhance or adjust?**

**Kevin:** The current app uploads the reported events into our SIMS database. Plant leaders are notified via e-mail and must access the SIMS database to investigate and close the event. The reported event is often minor and corrected in the field by the person who reported it. An improvement would be to allow the person reporting the event to indicate it has been closed and that no further action is needed. This will allow us to still collect data while improving the closure process.

The latest change is not in the app but rather in an automated safety dashboard that displays the number of reported events by date range and/or by plant. It also shows the open events and the largest categories of events so we can focus improvement efforts. The dashboard also displays data on injuries as well as from our behavior-based safety database. With our use of iMiss on the front end to gather the events and the dashboard on the back end to display progress, we have a complete package of information related to safety. I believe this has been one of the most significant safety improvements implemented at our company.

**PS: What have you learned from this project that you could apply to future innovations?**

**Kevin:** We learned to always involve field workers in the initial testing, and to listen to and respond to their suggestions. The support from both senior management and field personnel was critical to the overall success.