

## *Intelligent Badging: The Only Resourceful Way to Digitally Connect the Workforce*

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*Before we begin our discussion of the cost benefits associated with utilization of the weavix™ platform and Smart Badge, it's important that we explain exactly what these tools are and at a high level how they can be utilized. A Smart Badge is a lightweight, inexpensive wearable badge designed specifically for the oil and gas industry. It can be utilized while on site by all employees providing an independent method of communication for a wide variety of applications designed to improve safety, productivity and to increase plant-wide communication on a real-time basis. weavix™ is an integrated data-sharing platform that connects with the Smart Badge for data transmission and real-time communication at all levels within the organization and the contractor workforce.*

*This innovation of a connected platform brings to the industry an entirely new approach to the conduct of the maintenance and reliability efforts both day-to-day and for turnarounds and projects. As with any new offering, firms who would potentially acquire and use these tools want to understand the cost benefit versus maintaining the status quo. The Return on Investment (RoI) is important so that funding of the effort can be achieved. Many vendors would reply to this question by stating all of the various applications that the weavix™ platform & Smart Badge can provide and associating each with an estimated value of the potential savings. The problem with this approach is that all of us are skeptical about the amount of savings that are stated in documents of this type. So, in order to provide the real cost benefit of these tools let's take a step back and look at it from your perspective as the owner. We are not going to try to list each of the applications and state the millions of dollars of potential savings that utilizing them will provide your organization. Instead, we are going to describe the applications and the benefits and leave it to you to determine the value that the weavix™ platform and Smart Badge can provide. We guarantee that you will find the value is impossible to ignore*

### *Let's begin with safety.*

*Imagine that you can geo-fence your facility (an invisible electronic fence that records movement both into and out of the facility as well as selected areas inside of your facility) so that by utilizing a Smart Badge you would be able to ascertain the location of your workforce. The purpose of this is not to spy on individuals as some may suggest. Rather it is to ensure the safety of all employees. Consider an individual wandering into a restricted area and your ability through the Smart Badge to alert them that, for their own safety, they needed to exit the area. Another benefit of a Smart Badge and geo-fencing is that in the event of an emergency or an evacuation you will be able to make certain that your employees were safe and out of the area of danger. Smart Badge technology also provides the ability for each employee to press an "SOS" button directly on the badge if they are in immediate danger or suffer an injury. A Smart Badge coupled with a biometric wrist band can also measure an individual's heart rate, blood pressure and hydration level. Fluctuations in any of these biometrics could indicate a potential health issue for one of your employees. Having this real-time information enables safety personnel to take immediate action. Not only can you identify potential issues, but you can also locate the person and direct emergency services to their location. The Smart Badge provides the ability to proactively address personnel safety issues in a manner that doesn't currently exist. Let me ask you, what is improved safety of the individuals in your workforce worth to you?*

### ***Now let's talk about improved communication.***

*In the past if you wanted to communicate with someone you had to go out into the field and find them; not always an easy task. This evolved into selected individuals carrying radios which can be expensive and is not applicable to a large workforce especially in a turnaround situation. The Smart Badge solves this problem. As an employer you can inexpensively equip every person in the workforce, including contractors, with a Smart Badge. This badge has the ability for two-way communication and provides you the ability to quickly respond to changes in work schedule where individuals need to be shifted to alternative jobs. The Smart Badge is built with the ability to create communication channels allowing targeted communication to those who need it without the problem of radio interference from other groups.*

*The Smart Badge also allows you to dispatch and request tools and material providing improved time on tools utilization. It enables you to rapidly communicate issues in the field that individuals need to be made aware of in order to assure their safety. Increased communication using the Smart Badge enables your workforce to be much more responsive to the work requirements and quickly respond to those needs. This ability to communicate has great benefit during day-to-day work but has a significant value for turnarounds where the ability to re-direct the work can save hundreds of thousands of dollars. Let me ask you, what is the ability of this vastly improved communication system worth to you?*

### ***Let's talk next about the value-added position of a Smart Badge related to workforce productivity.***

*On large turnarounds where there are literally hundreds of people working in a very small area workforce productivity is paramount. The lost revenue from extending a turnaround even one shift for a major processing unit could easily run into the hundreds of thousands of dollars. With the Smart Badge, working through your contractors and employing a geo-fence concept, it is easy to see what people are doing and where necessary reassign portions of the workforce to improve their overall productivity.*

*The use of the Smart Badge also can be applied to mobile equipment. How many times on a major project have you found pieces of mobile equipment sitting idle and recognized that while they are not working you are still paying for their rental. Having Smart Badge technology affixed to your mobile equipment allows you to see its utilization and movement throughout the worksite so that you can analyze the level of productivity and optimize the rental cost.*

*The Smart Badge coupled with geo-fencing also provides you with the ability to accurately analyze time on tools. By geo-fencing the plant, the unit or units where work is being conducted, the staging area, the warehouse and the tool area, you can accurately track time on tools in a manner that is not currently available in our industry. This is not designed to identify worker issues but rather to improve the way these resources are managed and directed in order to increase their ability to be more productive. Lost productivity can extend a turnaround beyond the planned schedule and cost a significant amount of money. What is increased productivity of your workforce worth to you?*

*The wearix™ platform & Smart Badge have many applications beyond what is mentioned in this white paper and only limited to your imagination since the tool is highly configurable.*

### *The benefits taken together add even more value*

*As an example of how the weavix™ platform & Smart Badge can work together to provide value in the areas of safety, communication and productivity, let's examine one of the most complex and difficult work tasks involved in a turnaround. Working within a vessel under confined space entry conditions is a difficult effort to say the least. You are restricted by access, the number of resources that can work within the vessel at any given time, ongoing materialization problems and the general safety of the workers.*

*The current method of protecting workers within a vessel is through the use of a hole watch, an individual stationed at each man head to monitor entry and exit and immediately bring to the attention of the turnaround team any emergencies or other issues that require resolution. There are several problems associated with the hole watch process, but the main one is the system is not associated directly with the individual working in the confined space environment. Any issues that arise need to be communicated to the individual at the man head who then in turn communicates it to others for the proper level of response. With the use of the weavix™ platform & Smart Badge the requirements for a productive effort inside of vessel is decoupled from the individual at the man head and tied directly to each employee working within that environment. The system is called the Automated Attendant Monitoring System™ and is a combination of an individual Smart Badge coupled with the weavix™ platform. Having this system in place links the Smart Badge with those monitoring each individual within the vessel. It identifies entry and exit, any safety related issues from the individual's biometrics, potential problems with the air conditions within the vessel and permits immediate communication through a designated communication channel with the employees conducting the work. The bottom line is that the confined space entry process along with the work conducted within the vessel is no longer equipment centric but rather individual centric. The value that this system brings in the area of safety, communication and productivity is enormous. What is the value to you and your organization of having the ability to execute internal vessel turnaround work in a much more effective and efficient fashion?*

*PK Technology's weavix™ platform & Smart Badge technology, and their Automated Attendant Monitoring System™ packs powerful technology in a cost-effective set of tools providing an unlimited set of potential benefits and is a revolutionary change in how work is conducted to improve safety, communication and workforce productivity. When the RoI is evaluated, the weavix™ platform & Smart Badge will deliver every time.*