



# The Most Overlooked Niche For Cost Cutting.

By Heather Buechsenschuetz

The easiest way to reduce bottom-line costs is by reducing mistakes. Unplanned shutdowns are never budgeted in anybody's plan. Reducing mistakes will also lower equipment repair or replacement costs. With the ever tightening margins of today every penny can add up over the long haul.

An article by Donna Funk, CPA, (2015) suggests efficiency to save time and money:

*Focus on production efficiencies. Take time to review all the steps within your production cycle. Concentrate on small, incremental savings. Encourage employees across your entire organization to look for savings and share efficiency ideas. Then, commit to evaluate all suggestions, executing on those that make sense. This also fosters a continuous improvement mindset. (p. 94)*

**Process Information Technology Solutions** has that solution for reducing mistakes.

**PITSolutions** has developed a software program that will reduce your production costs by increasing efficiency and reliability using your existing employees and equipment. It will increase safety awareness and reduce Incident



The Shift Supervisor (above) monitors procedural progress on the big screen at the top of the wall.

rates. It will give management a valuable tool for ensuring accountability and compliance. It provides training availability on demand. This is accomplished by providing your greatest asset, your employees, with instantaneous knowledge to aid them in making more informed decisions as they do their jobs reducing guess work. Real Time Procedure Execution provides this much needed information through the use of computer, tablet, or cell phone.

**PITSolutions** Founder Tim Coombes has 35 years of experience in the petrochemical industry. He qualified for nineteen positions throughout the refinery at which he was employed. Fifteen of those years were in an Operations Supervisory role; writing, executing, and editing procedures for all operational jobs in

a refining complex. While with this company, he developed several innovative programs that were used plant wide to increase efficiency. These are still being used to this day. For these programs he received several outstanding achievement awards presented by the company. He has teamed up with an outstanding group of programmers led by Aaron King who developed the components for a complete patent pending software program.

Tim realized that there were a lot of inadequacies in the present system of using paper documents. Learning from those experiences, the team developed a software program to improve the whole process of viewing all Process Information and training. This program is useful for all departments, not just Operations. All departments will be linked together viewing the very same information at the very same time. Advantages of the system they developed are covered in this article.

Tim talked about two incidents out of many that occurred while at work at the refinery. During a unit shut down for maintenance activities at the refinery they had a serious incident when the amount of time scheduled to clean up a piece of equipment was not met. The steps written in the procedure were not followed correctly due to a lack of communication. The procedure called for a four-hour steam purge and the start time was not written down. The DCS operator was not aware of where they were in the procedure steps, and a valve had closed automatically on low level as it should.

# Mistakes can be dramatically reduced by supplying all employees with Process Information instantly to help make better informed decisions.

The procedure had indicated to verify the valve was in manual and opened during the purge steps. With the valve closed steam flow was stopped and the equipment was not properly cleaned. The outside operators assumed this step was done. When maintenance signed in to go to work, testing indicated unsafe levels of hydrocarbons so they had to regroup and find a new way to clean that section. This mistake cost time and money. With Real Time Procedure Execution, the DCS operator is required to mark the verification step so all the outside operators could see this on their procedure. In another incident, the procedure wasn't followed correctly as a valve was lined up during a steam decoking process but the unit area limits blind had not been pulled on the steam line. Operators continued firing the gas fired heater with no steam flow inside the tubes resulting in an explosion and fire that melted all the furnace tubes out of the heater. The unit was down for two months while repairs costing thousands of dollars in downtime and repairs. If you go back and review all major incidents you will find a lack of communication and not following procedures are most often fundamental factors.

Tim was involved with lots of Incident Investigations and found these reasons to be a common issue that is not acceptable and one that can be reduced dramatically by his software.

Why spend money on having written procedures and not use them? This software makes it easier to use them and verifies the steps are being followed correctly. Procedures are required to be used under PSM regulations to prevent mistakes.

Today's young people are at home with carrying a device with them all the time and accessing information instantly. This program can reduce new hire stress by providing process information instantaneously when needed through a venue they are used to: a website. The volume of information available is up to the company. They lay out this information in an easy to view dashboard. The Real Time Software allows various types of devices to be used with this software: computer, tablet, and cell phones with either Android or Apple operating systems. It provides procedures, P&IDs, photographs, video, and training drawings all available at the click of the button.



Outside operators complete their steps on their devices automatically updating the procedure in Real Time. All operators now know exactly where they are in all procedures as they are being executed. No more confusion.

### **Training**

PITSolutions software allows new and experienced employees to do their cross-covering jobs, with less anxiety, with easy access to Process Information.

- Training documents can be viewed at any time to clear up confusion 24/7.
- All procedures and training documents are saved after execution automatically.
- They can be reviewed at any time after completion.
- Any document can be turned into a training document.

Yes there are other training programs but none of them has all that the Real Time Procedure Execution offers.

### **Management**

PITSolutions software has a date and time stamp plus the initials of the employee who completed that step automatically filled in. With paper version pencils marks can be changed or erased completely changing the time.

- Provides accurate and verified timing for environmental and incident investigations.
- Supervisors can monitor progress anytime from any place; if a question arises they all can view the same procedure simultaneously.
- Supervisory over site can be enhanced and allow accountability for coaching needs.

## Compliance

### Management Of Change Hazop

Compliance can see an increase in efficiency by tracking all the changes to procedures and training documents. Process Safety Management is greatly enhanced with this program as compliance is incorporated throughout the software. They provide training documentation for compliance issues which might need to be produced later as per litigation.

- It verifies training compliance is met by using measures built in the system to track all employees, so no one misses any training even if it's months later.
- When doing MOC and safety training, verification of training is required and if an employee comes back to work from long term disability for whatever reason these documents are compartmented for them to take on their return to work.
- The software has built in protections to prevent you from being out of compliance for outdated material or missing a review date for procedures and training as is required.

It provides a better accountability method to aid Supervision in applying coaching techniques as they monitor training and procedure step execution.

## Efficiency

- Multiple locations can be monitored and controlled by a single administrator and bring them to a uniform format.
- You can track and develop trends by close examination of data gained by checklist or operator readings.
- The software has built in measures to eliminate time overrun on steps saving time and money from these mistakes.
- Multiple technicians can collaborate on jobs and supervision can monitor progress from a distance. Eliminates paper documents and allows instantaneous updates to procedures during their execution.
- Software allows various types of devices to be used with this software: computer, tablet, and cell phones with either Android or Apple operating systems.
- This system can be used in numerous applications where procedures and training documentation are needed.

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Dashboard > My Dashboard

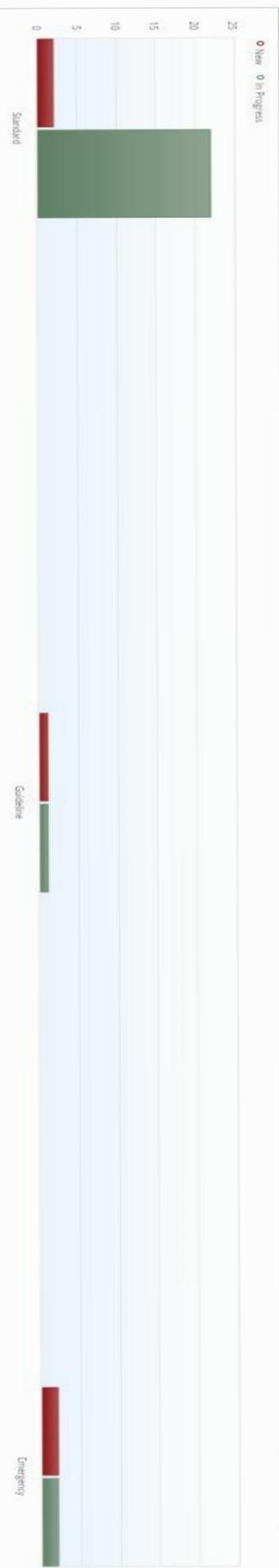
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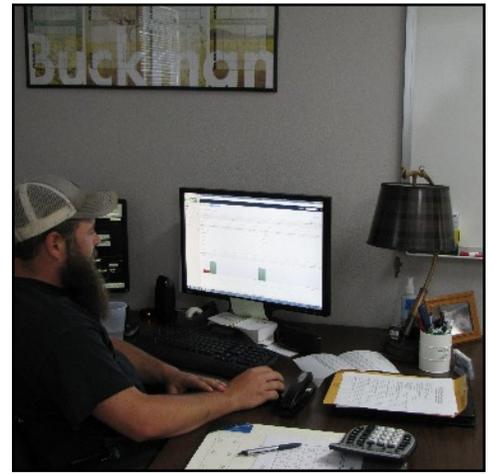
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Perex from Startup From Sandy	Preview	Procedure	6/29/2015 10:52:28 PM
Line Rupture and Or Explosion	Preview	Emergency Procedure	6/29/2015 2:20:05 PM
Release Spill Anhydrous Ammonia Tank or Pipe	Preview	Emergency Procedure	6/29/2015 3:25:28 PM
77C-12 Gas Drier Regeneration	Preview	Job	10/29/2015 11:32:09 PM

Information

	FERMENTER	FOREMAN'S ORDERS	MISC PROCESS LIMITS	PROP	SOS LINK	SUPERVISORS REPORT	TOOLBOX LINKS
TEMPERATURE	92° stage to 88°						
AP 1 PROTEASE	8						
UREA @ START FILL	220						
UREA 50%	130						
TOTAL GA	180						
GA @ START FILL	55						
GA @ 45%	125						

System Statistics





## All personnel are now on the same page with our software.

A new causal factor category for Process Safety Management needs to be added to Incident Investigations “**Access to Process Safety Information is less than adequate**”. Have your next Incident Investigation team determine for any incident past and or present if access to real time process information would have led to a different outcome. Bet you will be surprised.

A Plant Manager was telling Tim about an incident they had just had (plant shutdown loss of production for sixteen hours) and said it could have been prevented and or severely shortened the down time with his Real Time Procedure Execution program.

**Real Time Procedure Execution** software program by **PITSolutions** has been installed in multiple locations one current user has seen a dramatic drop in training costs in a short time since they installed it.

They have also increased communications between departments using Real Time Procedure Execution software.

**PITSolutions** has a solution for saving money and improving your employee’s execution

of work methods through the reduction of mistakes. Not all mistakes can be eliminated, but any such reduction should be a top goal of every organization that will save you production costs and increase efficiency and maybe save a life, the greatest asset you have.

### References:

Funk, D. (2015, June). Weathering Tight Margins. *Ethanol Producer Magazine*, 21 (6), 94.