# BUILDING SITUATION AWARENESS A Workshop for Operators

## "Achieving effective situation awareness requires more than installing advanced technology solutions."

Investigations from across different complex work environments found that anywhere from 60-85% of the human error was due to problems with situation awareness. **Human Centered Solutions** offers a handson workshop designed to improve a process plant operator's understanding of how situation awareness is developed and maintained through a shift. This workshop draws from our unique control room experience and our participation in Abnormal Situation Management<sup>®</sup> Consortium research.

The two-day workshop teaches concepts and techniques that enable shift teams to prepare for and respond to upset conditions while maintaining a high level of situation awareness. The workshop provides participants with an understanding of human factors principles critical for effective situation awareness and modes where it can fail.

Each lesson includes exercises to help participants develop situation awareness skills.

#### LESSON TOPICS

- UNDERSTANDING SITUATION AWARENESS
- SITUATION AWARENESS FAILURE MODES
- SITUATION AWARENESS PRACTICES
- TROUBLESHOOTING TECHNIQUES
- UPSET RESPONSE PROTOCOL
- UPSET RESPONSE EXERCISES





100% of the operators who have participated in a **Human Centered Solutions** Building Situation Awareness workshop recommend that all operators get a chance to attend.

#### **About Human Centered Solutions**

Human Centered Solutions (HCS) is a multidisciplinary group of psychologists and engineers who apply human-centered design to enhance the performance of people in and around the control rooms. HCS provides expertise in operator staffing, control room and building design, console workstation design, operator interface design, alarm management, procedure system design, training system design, and work process design.

## **Human Centered Solutions**



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### **Workshop Objectives**

- Understand the concept of situation awareness and how it applies to human information processing
- Understand factors that contribute to effective and ineffective operator situation awareness
- Understand **specific work behaviors** that contribute to good situation awareness in normal, upset, and startup situations
- Understand the benefits a **common mental model** of plant operations can provide operations teams for maintaining accurate situation awareness and effective upset response
- Understand four **techniques used to identify the sources of an upset** so that it can be effectively resolved and the process can return to normal operations
- Understand the protocol for responding to upset situations and the role situation awareness plays in the effectiveness of that response



 Practice techniques for establishing and maintaining situation awareness in context of plant upset scenarios and improve understanding of techniques through observing others responding to plant upset scenarios



### To learn more about the Building Situation Awareness workshop contact:

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Helping People Perform www.applyhcs.com

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