

SOLUTION BRIEF

Digitizing Process Safety to Reduce Risk and Increase Uptime in Hazardous Operations

Acuity® by Acutech + Aegex Inherently Safe Solutions



Challenge

The process-manufacturing industry requires a significant amount of data collection for operations that ensure process safety. Antiquated, paper-based data capture in hazardous field locations doesn't allow for crucial real-time communications or collaboration. Transcription of paper-based data can introduce errors or cause loss of information that is crucial to a facility's operational integrity. Additionally, manually captured data does not enable authenticated and validated (time and location) auditable inputs. A series of small and often undetected errors can lead to a major catastrophic incident; thus, a system is needed to identify and mitigate those errors.



And, yet, the thousands of alarms and alerts that go off each day create “noise” and confusion without context or access to expert input to pinpoint what is most important or whether a risky confluence has occurred.

The potential for creating sparks prevents the use of most mobile computing devices (laptops, tablets, cameras, or phones) in Class I Division 1 or ATEX/IECEx Zone 1 hazardous locations. Only devices that are intrinsically safe – certified to not cause an explosion – are permitted as a means of connecting personnel to the Cloud and enabling them to manage critical and validated information more quickly and accurately



Solution

AcuTech is a process safety, security, and management consulting company that has over 25 years of experience conducting process hazard analyses, process safety compliance audits and conducting facility siting studies. AcuTech has leveraged its consulting expertise and deep industry knowledge to develop and deliver Acuity®; the most flexible, scalable, focused and cost effective EHS and Risk Management solution on the market today which improves operational performance and compliance.

Acuity® is an innovative cloud-based solution which delivers insight into process safety risk within the business through the consolidation of multiple process safety audits and assessments into one central risk registry platform, promoting increased audit efficiency, better assessment management, real-time visibility into the risk within the business and resolution of risk metrics through automated action item management.

Acuity® by AcuTech is a software platform that enables the mobility of existing process safety, security and environmental assessments from the office into the operating environment to facilitate field-level audits and assessments in accordance with existing company process safety and risk methodology. Acuity® replicates virtually any type of checklist, form, audit, inspection, survey, field review, operator or management walk-arounds and pre-startup reviews that companies are currently typically performing with spreadsheets, Word documents or existing homegrown software applications.

Intrinsically Safe Mobile Communications

Acuity® may be installed on intrinsically safe mobile computing devices, which allows real-time communications and collaboration between back office and high-risk hazardous areas. Certified intrinsically safe mobile computing devices eliminate paper-based data capture, reducing risk and helping create a culture of process safety.

Aegex has developed the certified, Windows 10 multi-touch aegex10™ Intrinsically Safe Tablet that extends enterprise-grade communications and collaboration into Division 1 or ATEX/IECEx Zone 1 hazardous areas. Using the aegex10 tablet, workers can easily capture images and video, place work orders, reference e-learning / training, or communicate instantly with experts via text, chat, or Skype.

AcuTech and Aegex can assist your company in improving your process safety and security performance by developing company-specific or site-specific programs that can be field implemented using Acuity® and the aegex10™ Intrinsically Safe Tablet. AcuTech and Aegex can also support this implementation by developing training materials, conducting training sessions and coaching personnel until results are achieved.



Empower your mobile workers with the power and security of real-time communications and data capture:

- **Remove errors and delays** in paper-based data capture and transmissions
- **Enable a compliant** audit trail of rounds conducted in a validated and secure digital environment
- **Facilitate and document** communication between SMEs and operators
- **Ensure critical knowledge** is highlighted and all relevant information is transferred at shift change



Capture the Unseen with Intrinsically Safe Sensors

Aegex's intrinsically safe-certified NexVu IoT Sensor Modules can be configured in thousands of combinations to collect the precise, real-time data you need to help you make better decisions about your operations. Augmenting data captured through digital rounds management and existing sensor inputs, the intelligent devices deliver data from up to 40 different sensor nodes via Microsoft Azure to virtually any process control or visualization system, including Acuity®. NexVu allows for real-time monitoring and predictive analytics that will drive improved productivity in operations with hazardous environments.

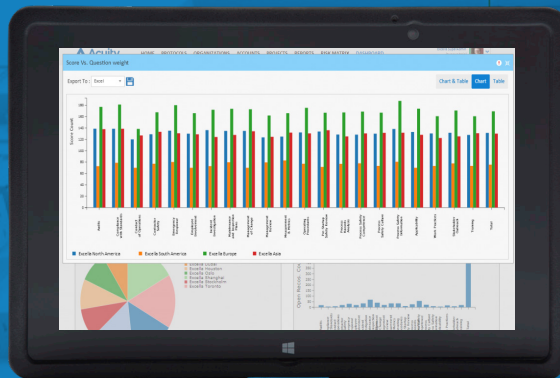


NexVu plus Acuity allows you to capture critical unseen issues and get the context you need to make the right decisions.

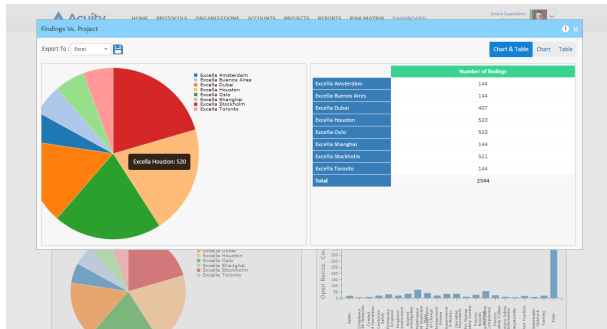
“Aggregated real-time analysis enhances process safety initiatives as they combine parameters to monitor factors such as corrosion, vibration, weather, energy consumption and other factors.” (Source: Industry 4.0 For Process Safety by Jim Petrusich and Hans Volkmar Schwarz, 2017)

Benefits of AcuTech + Aegex

- **Mitigate** Safety and Process Safety Hazards
- **Improved** Safety, Process Safety and Audit Compliance
- **Increase** Operational Integrity and Efficiency
- **Extend** Uptime
- **Reduce** Maintenance Costs
- **Achieve** Operational Excellence



Contact AcuTech or Aegex to learn more.



About AcuTech

AcuTech is a global leader offering a full range of management and technical consulting services, a world-class training institute and a new enterprise risk management software for improving risk, safety, and security performance.

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About Aegex:

A technology engineering and design company that provides intrinsically safe Industrial Internet of Things (IIoT) and mobile solutions for hazardous industries. Our globally certified intrinsically safe Windows 10 tablet, sensors and partner monitoring systems, form an IIoT platform that manages big data to improve efficiency, safety and productivity in hazardous industrial environments in oil & gas, chemical, pharmaceutical, utilities, public safety, defense and other industries with potentially explosive atmospheres.

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