



FACILEX[®]

**RISK BASED PROCESS SAFETY
SOLUTIONS & SERVICES**

Gateway Consulting Group, Inc.
8610 Transit Road, Suite 100, East Amherst, NY 14051
Telephone: (716) 636-0200
Email: info@gatewaygroup.com <<<☼>>> <http://www.gatewaygroup.com>

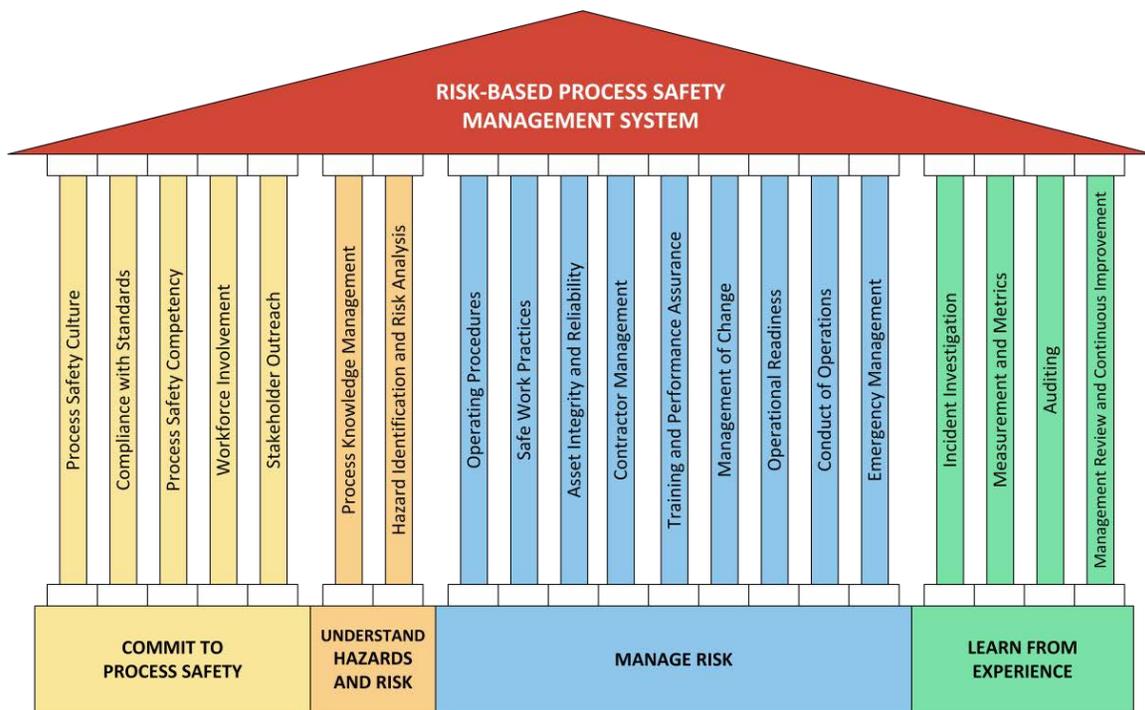
WHAT WE DO

Gateway Consulting Group provides information management solutions and services for the chemical, energy and life science sectors. We excel at business process improvement projects that demand electronic document management and process safety management expertise.



RISK-BASED PROCESS SAFETY

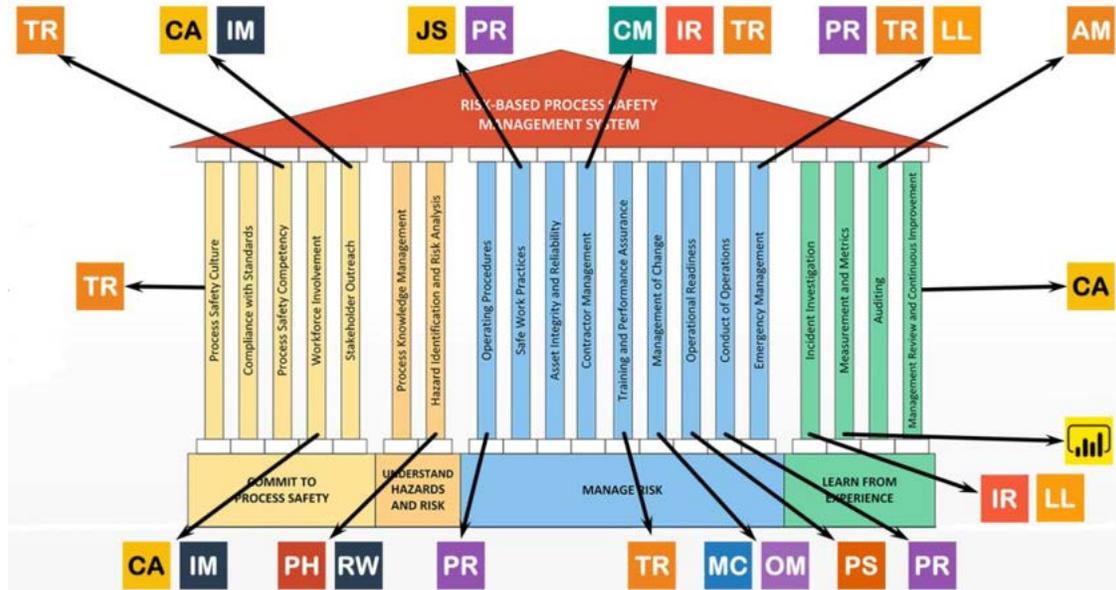
A “Complete Solution” for process safety management, as defined by the Center for Chemical Process Safety (CCPS) “Guidelines for Risk-Based Process Safety (RBPS)” is illustrated below. The RBPS management system incorporates four main accident prevention foundation blocks that support the twenty pillars or elements that constitute a sturdy RBPS Management System. The CCPS Guidelines take the position that all hazards and risks in an operation or facility are not equal. A risk-based approach focuses resources on the higher-risk activities.



Risk Based Process Safety Management System Foundation and Pillars

FACILEX® RISK-BASED PROCESS SAFETY SOLUTIONS

FACILEX® is a suite of advanced Microsoft 365 solutions designed by Gateway to implement all of the foundation blocks and pillars required for a complete RBPS management system. Each of the “Pillars” of process safety, such as Management of Change, Incident Investigation, Action Item Management, and so on, can be addressed using one or more FACILEX® applications which are seamlessly integrated.



The FACILEX® applications listed below provide solutions for all of the RBPS management pillars.

- | | |
|---------------------------------|-----------------------------------|
| AM Audit Management | LL Lessons Learned |
| CM Contractor Management | MC Management of Change |
| TR Training Records | OM Organizational Change |
| CA Corrective Actions | PR Procedures |
| IM Issue Management | PH Process Hazard Analysis |
| IR Incident Reporting | PS PSSR |
| JS Job Safe Analysis | RW Risk Watch |

AM FACILEX® Audit Management

Organizations are constantly involved in various audits. FACILEX® Audit eases the burden of audits by:

- Managing the audit protocols
- Collecting the data during the audits
- Ensuring that the follow-up items are resolved.

Typical Audit Lifecycle:



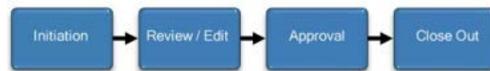
Key functionality includes:

- Providing a place to store all the “master” audit protocols or templates
- Associating audits with the proper time frame: daily, weekly, monthly, quarterly, annually, etc. as well as ad hoc audits
- Representing audit protocols using technology appropriate to the task: Word® or Excel® checklists, or FACILEX® configurable forms
- Being able to create or capture follow-up action items and track these items to completion
- Making all the data and risks available for specific and aggregated reporting

CM FACILEX® Contractor Management

The ability to manage the tasks associated with approving contract requests and contract execution is integral to a complete RBPS solution.

Typical Contract Management Lifecycle:



A contract management procedure can be easily configured in FACILEX® to automate this process.

Key functionality includes:

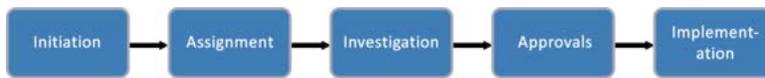
- Ability to configure the lifecycle to match the contract management procedure
- Ability to configure multiple lifecycles to accommodate small to very large contracts
- Links to other FACILEX® objects, like Capital Projects, MOCs, CAR, etc.
- Action item tracking
- Integration with Microsoft Project, Microsoft Office and Outlook
- Utilization of existing forms and templates
- Rich reporting features for presenting data and trends

CA FACILEX[®] Corrective Action

Corrective Action Requests (CARs) are used in certain industries to correct actual deficiencies or anticipate potential deficiencies. CARs tend to be quality or product focused. Corrective actions can be initiated from the following causes:

- Customer complaints
- Internal complaints
- Vendor/supplier deficiencies
- Corporate directives

Typical CAR Lifecycle:

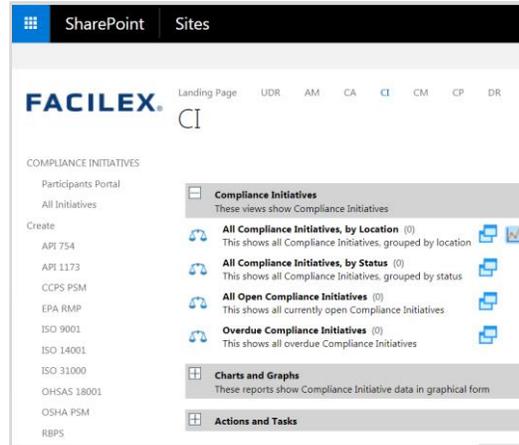


Key functionality includes:

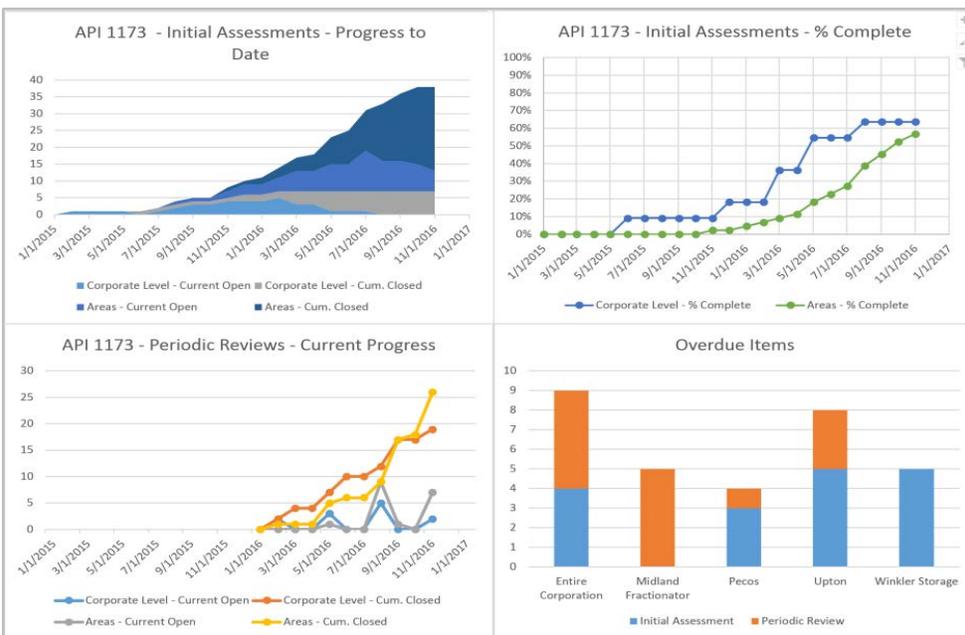
- Very simple CAR reports as well as large, detailed CAR investigations
- Determination of root causes, and perhaps “lessons learned”
- Escalation to the proper approval level depending on the severity of the problem

CI FACILEX® Compliance Initiatives

All of the elements promoted in the PSM regulations, ISO standards and CCPS Guidelines, etc. can be captured, managed and provided by the FACILEX® Compliance Initiatives (CI) application. One or more compliance initiatives (e.g. CCPS PSM) are tracked across the enterprise at a very granular level. Gateway supports numerous reporting technologies for presenting metrics.



FACILEX® applications are integrated and therefore provide the ability to aggregate data across business processes in order to generate regulatory compliance metrics. Dashboards and scorecards can be rapidly configured for compliance initiatives and quality standards as illustrated below.



CT FACILEX® Connect

FACILEX® Connect is a powerful suite of tools and utilities that permit connection between FACILEX® and programs and data external to FACILEX®. Each of the FACILEX® Connect tools has “hooks” into FACILEX®, and, FACILEX® has features and capabilities that make this interconnection much simpler. The current suite of Connect tools and utilities includes:

- **Aggregation:** aggregates data across multiple applications and facilities
- **UDR:** links FACILEX® business objects to external platforms i.e. SAP, Maximo, etc.
- **Visualization Integrations:** Excel, Power BI, or third party applications such as Tableau
- **DataMart:** SQL-Server database for temporary or transient staging of data
- **Mobile:** initiate any FACILEX® business process from a mobile interface.
- **Vault:** links FACILEX® business processes to document management libraries in SharePoint or other document management applications.
- **Navigator:** graphical asset structure navigator

The screen capture below is an example of the FACILEX® Connect Navigator (left) and Aggregation (“My Responsibilities”). From this landing page, an authorized user can access any of their FACILEX® applications and immediately see what tasks they are responsible for anywhere across the enterprise.

The screenshot displays the FACILEX® Connect interface, divided into two main sections: Navigator and My Responsibilities.

Navigator: A hierarchical tree view showing the organizational structure. It starts with 'Chemical Molecules' and branches down through 'Entire Corporation', 'Houston Plant', 'Area 1', 'Area 2', 'Area 3', 'Departments', 'Entire Facility', and 'Permian Region'. Each level includes 'FACILEX® Applications' and a small icon representing the asset.

My Responsibilities: A grid of colored boxes representing various tasks and responsibilities. The grid is organized into three columns and several rows. The first column lists tasks with counts: 'My Active Tasks (14)', 'My Overdue Tasks (14)', and 'My Active Objects (13)'. The second and third columns list specific responsibilities with their corresponding icons: AM (Audit Management), CA (Corrective Actions), FS (Functional Safety Management), JS (Job Safety Analysis), OM (Organizational MOC), PH (Process Hazard Analysis), SD (Standards Development), TX (Transmittals), CP (Capital Projects), DC (Data Captures), IR (Incidents), LL (Lessons Learned), PM (Permit Management), PS (PSSR), SR (Support Requests), CI (Compliance Initiatives), DR (Document Requests), IM (Issue Management), MC (Management of Change), PR (Procedures), and RW (Risk Watch). TR (Training) is also listed at the bottom right.

DR FACILEX® Document Release

Gateway has developed a user-friendly Document Release solution on the Microsoft 365 platform that's capable of initiating and/or managing the business process in three ways:

- Simple action items inside another business process
 - Single action, or,
 - A small number of actions, e.g. draft, review
- Stand-alone document/drafting requests
- Document/drafting requests linked to another business process

A key feature of FACILEX® DR is the representation of the business process using a lifecycle. The baseline configuration provides lifecycles for both drafting and document requests.

DRs can be initiated by any authorized personnel. The FACILEX® license model is based on facility or region. There is no limit on the number of users that can participate in this process.

Forms capture sufficient information about the issue to enable a resolution at some later time. This includes classifying the DR by department, facility, intended owner and description.

FACILEX® DR provides a powerful and intuitive initiation process that manages the collection of the common and site specific attributes.

FACILEX® DR is configured to represent an organization's asset structure in drop down menus that rapidly allow the initiator to define where the drawing or document applies.

FACILEX® uses standard SharePoint lists that can be easily configured for additional attributes such as text, numbers, dates or Boolean logic.

The screenshot shows a SharePoint form for 'All Document Requests'. The form is titled 'FACILEX® All Document Requests' and has a navigation bar with 'Initiation', 'Active', and 'Drafting Request' buttons. The 'Drafting Request' button is highlighted. The form fields are as follows:

- Title:** Update P&IDs for the XL1000 Project
- Request Title:** (empty)
- Area:** Area 1
- Unit/Department:** Crude Unit
- Required Completion Date:** 12/4/2020
- Reference:** CP-17-1000
- Document Numbers:** 1000-D-246, 1000-D-247, 1000-D-248
- Special Instructions:** None

FACILEX® DR delivers efficiency to the process by reducing the amount of work required to process a simple action item, and yet also provides the ability to be incorporated into an MOC or capital project.

FACILEX® allows the initiator to select participants from SharePoint users and groups.

FACILEX® automatically generates all the standard action items for the issue lifecycle selected and notifies individuals and groups of their assignments by email and on the DR Participants Portal. Additional action items can be added or open action items can be edited or deleted by any authorized user.

Status	Info	Action Item	Action Type	Tools	Reference Links	State	Due Date	Role	Assigned To	ID
Count = 4										
■		Save redlines or other reference/supporting documentation	Perform First			Initiation	11/7/2020 7:09 AM	REQUESTOR	<input type="checkbox"/> Gord Blake	18
■		Scope out the work and make manpower assignments	Scope			Initiation		DOCUMENT SUPERVISOR		17
■		Approve new or updated drawings	Sign-off			Active		REQUESTOR		19
■		Check drawings into Document Library	Perform Last			Active		Document Control		20

FACILEX® uses SharePoint for all aspects of electronic document management including: access, version and revision control. Each DR has a comprehensive folder structure to store supporting documentation and work-in-progress documentation.

The baseline configuration comes with several standard reports and custom reports are easily configured. Issue reports can be rapidly printed or exported to graphical reporting tools such as Power BI, Excel and third party products such as a Tableau.

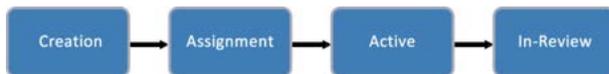
FACILEX® Issue Management

Organizations often maintain “to do” lists for various purposes. FACILEX® Issues application provides the ability to maintain lists of:

- Ideas and suggestions, i.e. corporate “suggestion box”
- Follow-up items from various applications
- Problems that people have discovered, but for which a solution isn’t yet known
- Ideas for changes, which might be an MOC in the future.

An issue may be addressed by one or more action items that can be created and assigned right within the Issues application. Alternatively, the issue can trigger a separate business process such as MOC.

Typical Issue Management Lifecycle:



Key functionality includes:

- Capturing sufficient information about the issue to enable a resolution at some later time
- Classifying the issues by department, facility, intended owner, urgency, etc.
- Configuring the resolution at the proper level of complexity, all the way from the one-step resolution to dozens of steps.

FACILEX® Lessons Learned

FACILEX® provides the ability to aggregate Lessons Learned from across the entire suite of applications. The best practice is to embed an “Action Item” to create Lessons Learned in the Close-Out phase of the business object lifecycle. Users are assigned the task as part of the project and need to complete it in order to finish the project. Lessons learned can also be imported from:

- Other Office applications
- Spreadsheets
- Third-party applications
- ERP/maintenance applications

JS

FACILEX[®] Job Safe Analysis

Gateway has developed a user-friendly Job Safe Analysis (JSA) solution on the Microsoft 365 platform that's capable of initiating and managing job safety analysis.

Establishing a dependable practice to collect, maintain, and protect a company's process knowledge helps protect an important asset which simply makes good business sense. Accurate and complete process knowledge is required to thoroughly identify process hazards and analyze risk.

FACILEX[®] JS systematically identifies: 1) job steps, 2) specific hazards associated with each job step, and 3) safe job procedures associated with each step to minimize accident potential.

IR FACILEX[®] Incident Reporting

A key consideration with Incident Reporting and Investigation is the collection of data pertaining to incidents such as:

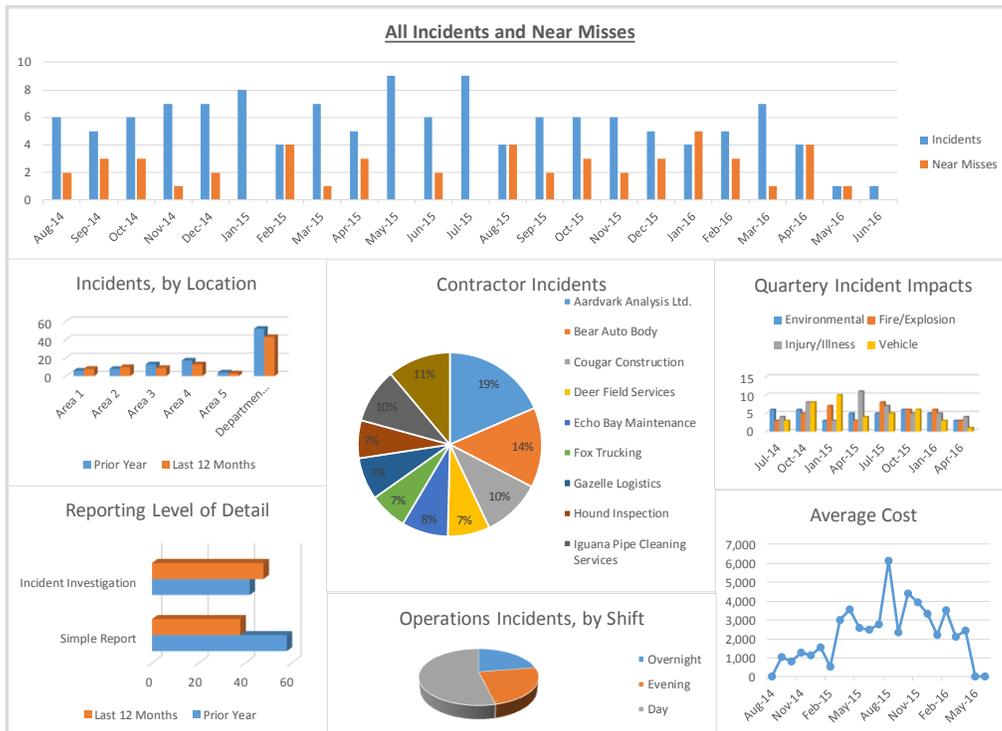
- Engineering or technical items
- Environmental issues
- Equipment damage
- Fires
- Illegal acts
- Injuries and illnesses
- Line strikes
- Pressure Safety valve discharges
- Regulatory/citation issues
- Reputation issues
- Vehicle incidents
- Weather impacts

Typical Incident Investigation Lifecycle:



Key functionality includes:

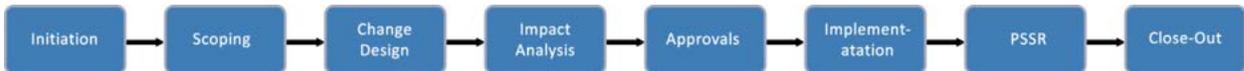
- Collecting the data—but only the necessary data—implied by the previous list.
- Objectively assessing the actual severity and the potential severity
- Determining root causes and lessons learned
- Extensive reporting capabilities as illustrated below.



MC FACILEX® Management of Change (MOC)

Management of Change to facilities (commonly “MOC”) is an OSHA Process Safety Management regulatory requirement that applies to US companies managing hazardous materials and/or processes.

The MOC process can be decomposed into a number of states. The collection and sequence of states is termed the lifecycle. The essential difference between different kinds of MOCs (e.g. permanent, temporary, emergency, etc.) is that they have different lifecycles. A lifecycle for a permanent MOC is shown below.



Key functionality includes:

The FACILEX® MOC application incorporates a complete package of industry best practices and is, by far, the most powerful, most configurable, yet easy-to-use solution on the market.

- Lifecycle Support
 - The best practice is to use a lifecycle model (not workflow).
 - Any lifecycle can be configured,
 - Baseline configured with lifecycles for MOC – Permanent and Temporary
- Plant Structure Awareness
 - Facility structure, e.g. areas, units, are configured to permit assigning action items to the proper personnel, and to provide better status reports.
- Powerful, Flexible Initiation Process
 - Common, and regulation-governed attributes on the MOC form
 - Your choice of additional attributes: text, numeric, date, Boolean
 - Thorough MOC descriptions
 - Risk ranking capabilities
 - Auto numbering: MOC’s are automatically numbered, in almost any format, starting at any number the customer specifies
 - Each MOC has its own folder structure to store supporting documentation and work-in-process documentation
 - Any folder can contain any number of standard templates or forms
- Standard Reports
 - Baseline configuration comes with several standard reports, each sorted and filtered by dates and units
 - MOC details can be rapidly printed for meeting and reporting requirements
 - MOC data can be easily exported to Power BI or other reporting tools

PS**FACILEX® Pre-Startup Safety Review (PSSR)**

Pre-startup Safety Reviews (PSSRs) are required before the start-up of new or modified facilities. In some companies PSSRs are called "Operational Readiness Reviews"; in other companies PSSRs constitute a portion of an Operational Readiness Review. Gateway's FACILEX® PSSR application may be implemented:

- Within a Management of Change (MOC) or capital project
- Referenced from an MOC or capital project
- As a stand-alone PSSRs application

Typical PSSR Lifecycle:



The FACILEX® PSSR application key features include support for:

- Level of detail: "Long" vs "Short" PSSRs
- Discipline-specific requirements: e.g. requirements for rotating equipment, cyanide hazards, etc.
- Triggering conditions and events: guides selection of the kind of PSSR required
- PSSRs can be conducted in the field on tablets or Smartphones

PH**FACILEX® Process Hazards Analysis (PHA)**

Gateway has created a PHA application that is fully integrated with the FACILEX® suite of applications.

All data is managed in SharePoint, but the user interface is in Microsoft Excel. PHA follows industry best practice with Projects > Drawings > Nodes > Hazards > Risks > Safeguards and Recommendations. Common PHA techniques are supported, including checklist analysis, What-if Analysis, What-if/Checklist analysis, HAZOPs, etc. Managing follow-up items is seamless and has exceptional audit and reporting functions.

Typical PHA Lifecycle:



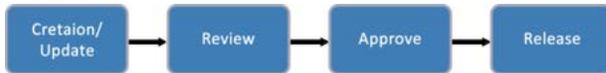
The FACILEX® Process Hazards Analysis (PHA) application begins from an enterprise perspective:

- Regions, Area, Units (using client terminology) are supported
- Equipment lists can be downloaded from common maintenance management systems
- Equipment can be categorized to the client's choosing
- Each equipment item can be linked to one or more PHAs
- Provides search capability for which PHAs a specific equipment item is covered on

The logo consists of a purple square containing the white letters 'PR' on the left, followed by the text 'FACILEX® Procedures' in a black sans-serif font.

The FACILEX® Procedures application provides a framework for the creation/update and execution of procedures. This fundamental process can be deployed as a standalone application or a lifecycle enhancement to an existing FACILEX® application such as MOC, Corrective Action, Audit, etc.

Typical Procedure Creation/Update Lifecycle:



When an incident occurs, the root cause can often be linked to some deficiency in a procedure, or perhaps not following the procedure. Gateway has applied its expertise to configure SharePoint for managing the execution of procedures. All of the tasks needed for conducting a procedure are generated, assigned and tracked throughout its lifecycle. SharePoint's best in class document management platform enables secure, enterprise-wide access to the documents, records and data, electronically linked to the procedure.

Typical Procedure Execution Lifecycle:



FACILEX® Procedures is a powerful yet easy-to-use application.

- Procedure in electronic form, managed in SharePoint
- Your choice of devices: PC, tablet, mobile IOS or Android
- Thorough tracking of reviewer comments and markups
- Supports multiple participants completing tasks in the process
- Management of deviations
- Auto numbering: Procedures are automatically numbered, in almost any format, starting at any number the customer specifies
- Each Procedure has its own folder structure to store supporting documentation and work-in-process documentation
- Any folder can contain any number of standard templates or forms
- Standard Reports: the baseline configuration comes with the several standard reports, each sorted and filtered by an organization's preferred views.



Process Safety Information (PSI) Vault

Process Safety Information (PSI) encompasses a wide range of content: procedures, drawings, documents data, etc. Managing PSI is a challenge because of the large volume of information and because each type of document or data requires its own properties and access controls. Each type has its own use cases and characteristics that must be taken into account.

Gateway provides consulting and analytical services to implement a PSI Vault. Key functions include:

- Asset-based organization of your facility, pipeline, or project
- Support for Areas, Zones, Complexes, Units
- User-defined attributes for standard documents and data
- Records retention capabilities and features
- Lists, libraries, views, settings, user-defined searching, viewing, organizing documents
- Revisions, versions and redlines

RW FACILEX® Risk Watch

The FACILEX® Risk Watch application provides a framework for managing a facility's operational and business risks. Risk Watch can be deployed as a standalone application or as an extension to enhance the capabilities of existing FACILEX® applications such as Incidents, MOC, Capital Projects, etc. Risk Watch provides a standard method for initiation and tracking risks through to ultimate mitigation.

Typical Risk Watch Lifecycle:



Key functionality includes:

- Multiple options for categorizing and ranking risks can be configured
 - Type, consequences, probability, detectability, etc.
- Facility structure:
 - Location, line segments, areas, units, etc.
- Initiation form attributes:
 - Title
 - Source
 - Classification
- Auto-numbering:
 - Numbered in almost any format per specification
 - Document management:
 - A folder structure for managing all supporting documentation
 - Any folder can contain any number of standard templates or forms
- Related Objects:
 - Mechanisms for managing parent-child relationships
- Standard reports:
 - Ability to create reports from any configured SharePoint view
 - Tightly integrated with Power BI, Excel and Access to support rich graphical reporting



FACILEX® Training Records

Organizations have a constant requirement to conduct and track training. The FACILEX® Training Records application provides the capabilities to:

- Manage the training materials
- Manage records associated with training assignment, review and completion
- Ensure that the follow-up items are resolved.

Typical Training Lifecycle:



Key functionality includes:

- Providing a place to store “master” training materials or templates, that are not otherwise managed in a computer-based training environment
- Associating training with the proper time frame: daily, weekly, monthly, quarterly, annually, etc., as well as ad hoc training
- Creation of training plans, and tracking progress to completion
- Presenting training materials using technology appropriate to the task: Word® or Excel® checklists, or FACILEX® “Related Items”
- Being able to create or capture follow-up action items and track these items to completion
- Making all the training data available for specific and aggregated reporting

CONTACT US

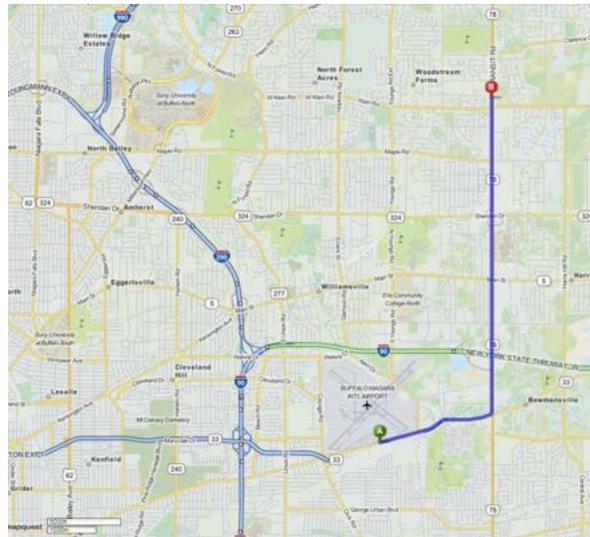
Head Office Address:

Gateway Consulting Group, Inc.
8610 Transit Road, Suite 100,
East Amherst, NY 14051 USA
Phone: (716) 636-0200



Directions from BUF Airport:

East on Genesee St./RT-33 for 1.6 mi.
North on Transit Rd./RT-78 for 4.4 mi
8610 Transit Rd is on the left
MapQuest: <http://mapq.st/RUjWjl>



Direct sales inquiries to:

Phone: (716) 636-0200 x 4
Email: info@gatewaygroup.com
Web Site: www.gatewaygroup.com