

Software Description	Type of Application	Typical Industries	SPHERA Product
<p><b>Comply Plus®</b> is a chemical management software application that integrates SDS automation, regulatory compliance, hazard communication, environmental reporting, inventory management and total chemical management into one solution, tailored to single-site or global enterprises. Its key capabilities include chemical inventory management, compliance data management, material request and approval (MRAP), regulatory reporting and secondary labeling.</p>	Chemicals & Dangerous Goods Compliance and Reporting	Oil & gas Chemical Mining Pharma Utilities	Comply Plus
<p><b>Intelligent Authoring™</b> is a highly flexible solution that combines enterprise-level software, up-to-date regulatory content and expertise to help your organization create, manage and distribute a variety of regulatory and workplace-safety documents (SDS, labels, workplace safety cards, transport emergency cards, etc.) needed to market and ship your products.</p> <p>Intelligent Authoring includes Managed Regulatory Content, which contains regulatory data for thousands of chemical substances, a phrase library that holds thousands of phrases translated in more than 45 languages, thousands of rules that automate the creation of your document and hundreds of pre-formatted compliant templates. At the same time, Intelligent Authoring integrates with Comply Plus®, helping you analyze materials and products, perform material request and approvals, enable publishing and distribution of your safety documents in order to drive quality and compliance processes across the entire product lifecycle.</p>			Intelligent Authoring
<p><b>Hazardous Material Management System™</b> (HMMS) provides integrated modules to ensure compliance and improve productivity at every step of your material management process. From initial approval thru the material's life cycle and disposal, a tailored HMMS solution provides the most effective solution to your organization's hazardous material management challenges.</p> <p>The materials module optimizes inventory controls to help reduce material management costs, improve safety, and assure regulatory compliance, while the waste module helps you accurately track and manage hazardous waste while reducing expenditures and complying with federal and state regulations. Because HMMS tracks every container with unique serial numbers, you know the location, status, contents, and disposition of every waste container at any time.</p>			HMMS
<p><b>DolphinEco</b> is a unique and powerful platform to help companies evaluate, substitute and reformulate hazardous chemical products to get ahead of consumer, industry and regulatory pressures. It includes modules for product analysis and comparison, scorecarding, and product formulation to help you manage chemical inventory compliance and achieve long-term sustainable market position and growth.</p>			DolphinEco
<p><b>DolphinRTK™</b> is a Web-based right-to-know solution for material safety compliance. It is for those whose primary focus is SDS management rather than more in depth chemical management activities. It helps provide right-to-know access to end-users, as well as simple chemical management and SDS administration.</p>			DolphinRTK
<p><b>Compliance Suite®</b> is one of the most cost-effective and full-featured sets of information management applications available for OSHA/EPA recordkeeping and meeting EHS&amp;S reporting requirements. The suite is designed to help organizations maintain compliance and also use their environmental data to develop business-enhancing performance metrics that reduce operational expenses and risk.</p> <p>Compliance Suite includes modules for audit, industrial hygiene, job hazard analysis, liability claims, refrigerant compliance, Right to Know, safety, training and waste.</p>			Environmental Compliance and Reporting

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<p><b>Essential</b> is best-in-class enterprise software for environmental, health, safety and sustainability (EHS&amp;S) management. It delivers broad and deep capabilities that help companies comply with environmental regulations and standards while minimizing the impact of compliance processes on facilities, personnel and production.</p> <p>The main environmental capabilities include air emission, waste, water and chemical inventory management. The main health &amp; safety capabilities include industrial hygiene, emergency management and incident management. Essential also includes extensive capabilities for SDS, audit and task management as well as permits &amp; regulatory applicability management.</p> <p>Essential also distinguishes itself by having a built in integration with CyberRegs to support regulatory content. In addition its unique process data management capabilities provide out-of-the-box connectivity with over 400 process data historians and field devices to enable asset level data to be acquired, validated, and approved in support of EHS&amp;S requirements.</p>	Environmental , Health & Safety Enterprise and Reporting	Oil & gas Chemical Mining Pharma Utilities	Essential
<p><b>OpsInfo</b> makes collecting data from all your facilities efficient and easy, allowing corporate wide metrics data entry and reporting from the web. OpsInfo technology platform provides the core functionality needed to manage sustainability performance across the enterprise, in a framework flexible enough to accommodate diverse and evolving business needs.</p> <p>The platform was built from the ground up for handling measurement, analytics and change on an enterprise-wide basis. Powerful analytical tools enable complex calculations and bring the information to your desktop in easy to use, customizable dashboards and reports. A flexible design allows the system to accommodate business changes, regulatory changes, and personnel changes. OpsInfo includes modules for compliance assurance, greenhouse gas emissions, incident management, inventory, metrics, waste and water.</p>	Enterprise Risk Management	Oil & gas Chemical Mining Pharma Utilities	OpsInfo
<p><b>Impact™</b> is a comprehensive (ERM) solution that helps companies improve operational excellence. Impact facilitates the discovery and removal of exposures to risk that result in organizational loss, tracks incidents, investigations and responsibilities and facilitates assessment of corrective actions. The main operational risk capabilities include incident management, risk assessment and corrective and preventative action (CAPA).</p>			Impact
<p><b>Struxure™</b> is a web-based, sustainable data governance tool for Maintenance, Repair and Operations (MRO) master catalog data. Struxure enforces the rules and best practices necessary for creating and maintaining standardized, comprehensive MRO item descriptions. At the core of the Struxure application is the Standard Modifier Dictionary™ (SMD), a highly respected classification schema that delivers industry aligned templates with consistent and repeatable rules designed specifically for characterizing MRO master data. Struxure and SMD seamlessly integrate into enterprise resource planning (ERP) and enterprise asset management (EAM) systems and dynamically synchronize MRO data. This approach allows for real-time visibility into MRO inventory and greater control over operations and cost efficiencies. Other benefits include:</p> <p>Faster and more reliable inventory searching Identification of duplicated or alternate items Avoidance of false stock-outs Reduction in equipment downtime</p>	Maintenance, Repair and Operations Enterprise	Oil & gas Chemical Mining Pharma Utilities	Struxure



# SPHERA Software Unit Briefing

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<b>Operational Risk Software Suites and Modules</b>			
<p><b>Desktop Pro</b> represents the risk assessment software that helps individual users more efficiently conduct risk assessments. Our flexible software solution dramatically shortens the time it takes to complete a risk assessment and results in more comprehensive compliance with industry, regulatory or corporate mandates and safer business processes and products.</p> <p>Desktop Pro software comes with pre-formatted industry templates for various risk assessment methodologies. Modules available:</p> <ul style="list-style-type: none"> <li>• <b>PHA</b> - Process Hazard Analysis encompasses a variety of methods of assessing and evaluating potential hazards in the process industry, including HAZOP, What-if and Checklist.</li> <li>• <b>HAZOP</b> - A Hazard and Operability Study is a method of assessing and evaluating potential hazards of a process to employees or equipment. Very common in solids-based processes (mining), during projects, and for smaller/simpler systems.</li> <li>• <b>What-If</b> - The What-If method is a less structured technique for conducting PHAs that relies on experienced team. Very common in solids-based processes (mining), during projects, and for smaller/simpler systems.</li> <li>• <b>Checklist</b> - The Checklist method uses a set of pre-written questions developed by experts to stimulate discussion and evaluate the potential hazards posed by a process.</li> <li>• <b>LOPA</b> – Layers of Protection Analysis assesses the layers of protection given to known hazards. It can be conducted alone, but is usually preceded by a HAZOP or other form of PHA. Once a PHA is conducted the LOPA evaluates the layers of protection that are recommended to mitigate each hazard. LOPA is one method that can be used for Safety Integrity level (SIL) Assignment / SIL Assessment studies, but if you end up in a SIL conversation, please engage professional services early in the process.</li> <li>• <b>JSA</b> - Job Safety Analysis (JSA) is a risk assessment tool used to review the hazards associated with tasks/procedures to be performed in the facility. It typically focusses more on the occupational hazards ("how" the work is done).</li> <li>• <b>FMEA</b> – Failure Modes and Effects Analysis identifies potential failure modes based on experience with similar products and processes - or based on common physics of failure logic. It is widely used in development and manufacturing industries in various phases of the product life cycle. Failure Modes and Effects and Criticality Analysis (<b>FMECA</b>) is a variation that extends FMEA by including a criticality analysis and is used more frequently in the military.</li> </ul>	Process safety	Oil & gas Chemical Mining Pharma Utilities	Desktop Pro Note: Also see <i>Stature</i>
<p><b>Stature™</b> is enterprise-level Web-based software that provides improved risk visibility and a central knowledge base for risk management. Lessons learned and best practices are captured and stored in a single database and can be found and applied by other facilities with similar issues.</p> <p>The risk management module helps teams identify, analyze, mitigate and monitor operational and quality risks while the management of change module simplifies Management Of Change (MOC) projects and offers real-time information about the status of changes and action items. It supports multiple workflows and provides companies with a complete audit trail and a more responsive and efficient business process. Modules available (Also option with full suite with Desktop Pro modules):</p> <ul style="list-style-type: none"> <li>• <b>Bow-tie</b> - Bow Tie Analysis, a qualitative assessment, provides a visual representation of the causes of unintended events, likely outcomes, and measures in place to mitigate or control hazards. Due to its graphic nature, Bow Tie Analysis is easily understood by all levels of operations and management. Like LOPA, a Bow-tie is often conducted after an initial PHA.</li> <li>• <b>FTA</b> – Fault Tree Analysis is a top-down approach for analyzing pre-event failures with systems in development, beginning with the top event (the potential failure), then determining all the ways it can occur. Similarly, post-event failures can be analyzed to find the root cause of the failure.</li> <li>• <b>SVA</b> – Security Vulnerability Analysis help identify, analyze and manage the physical security vulnerabilities of chemical sites. Some types of sites are required to submit SVAs and safety plans. Risk Analysis and Management for Critical Asset Protection (<b>RAMCAP</b>) is an SVA methodology commonly used in the U.S.</li> </ul>	Process & Occupational safety		As Above RiskSafe
	Process safety Products and associated manufacturing processes	Also Med Device Auto A&D	As above FMEA-Pro FMEA-Med
	Process Safety & Risk Enterprise	Oil & gas Chemical Mining Pharma Utilities Med Device Auto A&D	Stature
	Root cause of any type of failure		As above FTA-Pro
	Physical plant security		As above SVA-Pro