



CIMPLICITY[®] EAM

Web-Based Enterprise Asset Management Solution

Physical assets are the cornerstone of your organization. They enable you to open your doors for business, they represent your path to greater profitability and they hold the keys to keeping one step ahead of your competitors. But for companies who poorly manage the use and maintenance of these assets, they can also represent a tremendous source of cost and liability.

CIMPLICITY[®] EAM from GE Fanuc is a powerful web-based Enterprise Asset Management solution designed to help you keep both your company and

the equipment it relies upon day after day to run at optimal efficiency and peak profitability. CIMPLICITY EAM enables you to gain true insight into your organization's asset utilization patterns, enabling you to more efficiently leverage maintenance materials, identify and eliminate problem areas within your company's maintenance operations and dramatically reduce the expense and aggravation of unscheduled downtime events, missing equipment and other asset-related concerns. As a result, your company can reduce costs, increase revenue and become more efficient and more effective than ever before.

Intelligent Production Management (IPM)

Optimizing Operational Performance

Intelligent Production Management (IPM) is a growing category of technologies designed to manage – and ultimately improve – every aspect of the manufacturing production process. It includes a comprehensive group of solutions designed to help users at all levels of the organization perform critical production functions more efficiently and effectively.

IPM hardware and software applications span a broad spectrum of functionality to manage key areas of the production lifecycle – from controlling plant floor processes to analyzing and sharing performance data to managing equipment assets throughout the organization. Ultimately, IPM represents an opportunity for companies to reduce costs, increase productivity and improve quality by optimizing the performance of their production processes.

IPM solutions can be categorized into four core functional areas, which can be implemented separately or as part of a fully integrated plant-wide solution:

Asset Management

Asset Management software solutions enable manufacturers to realize tremendous gains in equipment effectiveness through proactive and targeted equipment management. Asset Management solutions allow Production and Maintenance Managers to identify and track physical assets in order to perform scheduling and maintenance tasks with greater efficiency. Equipment usage, maintenance and repair operations, asset costs and more can be traced, viewed and controlled using these applications.

Plant Intelligence

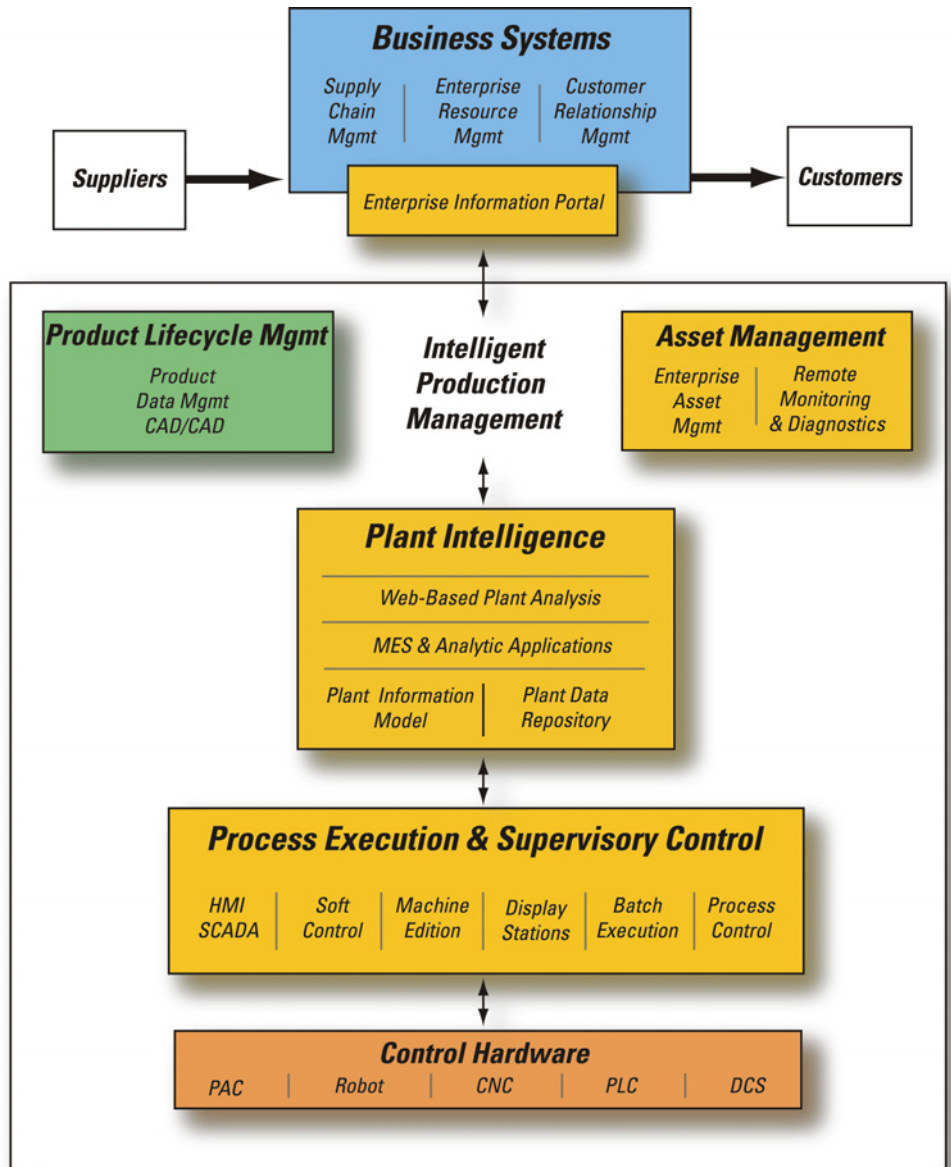
Plant Intelligence software applications are an integrated set of solutions that provide a new level of insight into operational performance, allowing decision makers to make business sense out of plant data in real time. These high-impact applications give Production Managers the information and analysis they need to make important real-time decisions that dramatically improve their performance. They are critical tools for companies seeking to gain a competitive edge through improved operations, collaborative production and corporate accountability.

Process Execution & Supervisory Control

These are the software applications which allow Operators and Process Engineers to better manage their production processes. Serving as a conduit for both communicating with the hardware and extracting real-time data from the industrial processes they control, Process Execution & Supervisory Control solutions help manufacturers visualize plant floor operations, perform supervisory automation and deliver the production data that feeds reliable, up to date information to the higher-level analytic applications. As a result, manufacturers can increase production, maximize quality and efficiency and improve regulatory compliance through user accountability.

Control Hardware

From industrial-hardened PCs and CNC systems to PLCs and robotics, these are the durable assets that are used to physically manufacture products, maintain the flow of materials and protect the safety and quality of what is being produced.



Intelligent Production Management (IPM) integrates all key areas of the production management lifecycle, giving you greater connectivity, analysis and control over your operation. **CIMPLICITY EAM** is part of GE Fanuc's **Asset Management** family of IPM solutions.



CIMPLICITY EAM Features and Benefits

Highly configurable

- Bundled and optional modules provides custom-tailored solution with off-the-shelf simplicity
- Security levels, access levels, visualization options and more are all easy to define and configure
- Specific functionality for regulated industries built unto application
- All aspects of user experience can be defined by the administrator(s)

Diverse management modules

- Budget Manager automates budget setup and capture, monitor and control of expenditures
- Inspection Manager facilitates planning, scheduling and execution of preventative maintenance activities
- Materials Manager delivers Economic Order Quantity (EOQ) and ABC analysis to reduce unnecessary spending
- Project Manager automates the entire project management process from initiation to completion, including all cost, labor and equipment tracking and assignment
- Purchasing Manager ensures that the right parts are ordered and delivered at the right time, all while monitoring vendor performance on key criteria you define
- Work manager handles the generation and distribution of work orders to all personnel

Web-based, ASP-Hosting Model

- Simplifies collaboration
- Access anywhere, anytime
- Reduces up-front costs and overall IT spending
- Accelerated implementation
- Reliable and secure

Streamlined purchasing and ordering (eMRO)

- Access to online eMRO marketplace accelerates purchasing, reduces costs
- Reduced order entry errors
- Automates much of the ordering process
- Maximizes efficiency of the requisitioning and approval process

Decrease Costs

- Simple web-based architecture decreases deployment, maintenance and training costs
- Extends the life of the asset base by ensuring timely and accurate maintenance
- Robust tracking and assignment capabilities reduces redundant purchases
- Online purchasing resource streamlines ordering process and helps companies to find the best prices and most efficient purchasing model
- Reduce MRO inventory costs
- Dramatically decrease the amount of safety claims and fines due to improperly maintained equipment

Increase Revenue

- Improved asset utilization improves margin by creating more efficient plant operations
- Properly maintained equipment delivers peak efficiency
- Reduction or elimination of unplanned outages delivers increased productivity
- Know exactly what's happening with any piece of equipment, anytime from anywhere
- Keep your personnel resources working efficiently via remote connectivity with PDAs and other field devices
- Gain timely and more accurate data collection
- Complete data collection and analysis tools enable you to gain insight into your asset utilization

- Robust online visualization and a diverse selection of reporting tools enable you to share utilization and maintenance information with anyone via the web
- Increase uptime by receiving automatic notification when a part needs to be replaced or when equipment needs to be reordered – enabling you to avoid problems instead of reacting to them

Meet regulatory demands

- Comply with regulations without inflating IT expenses
- Deliver full reporting, electronic signature and audit trail capabilities for all assets
- Meet security and electronic record needs of individual users

Asset Management

The screenshot shows the 'Equipment' form in the CIMPLICITY Enterprise Asset Management System. The form is divided into several sections: Equipment, WO's, PM's, Scheduling, Resources, Projects, Materials, PM Details, Purchasing, Utilities, and Inspections. The 'Equipment' section contains fields for Equipment ID (E03001), Name (Pump, Boiler Feed xx), Organization (ORG1), Dept (FAC1), Class (A002), Category (PU-HVY), and Profile (10000). The 'PM Details' section includes Manufacturer (BELL AND OSSETT), Model (50VBF9-B), and Serial number. The 'Purchasing' section shows Commission date (30-AUG-2001) and Value (1100).

Compile and access a host of asset-related information from one simple screen, including: location, cost history, warranties, claims, meters, permits, documents, and other more to maximize productivity, increase asset life and enhance ROI.

Purchasing Management

The screenshot shows the 'Purchase Order' form in the CIMPLICITY Enterprise Asset Management System. The form is divided into several sections: Equipment, WO's, PM's, Scheduling, Resources, Projects, Materials, Supplier Info, PM Details, Purchasing, Utilities, and Inspections. The 'Purchase Order' section contains fields for Purchase order (1), Organization (ORG1), Status (Unfinished), and Class. The 'Supplier Info' section includes Supplier, Lead, Language, Currency, and Exchange rate. The 'PM Details' section shows For store, Originator, Buyer (R5), Due date, Order date (22-JUL-2003), and Order value.

The purchase management feature ensures that the right parts are ordered at the right time. It also tracks and monitors vendor performance, delivery times, payment receipts for asset parts and supplies, and more.

CIMPLICITY® EAM – Web-Based Enterprise Asset Management Solution

As part of the Asset Management family of IPM solutions, CIMPLICITY EAM enables customers to access critical asset-related information from anywhere and at any time via a simple yet powerful Web-based architecture. Through this architecture and the functionality it provides, users can receive improve virtually every facet of their business – from maintenance, purchasing and productivity to budgeting, project planning and asset deployment.

CIMPLICITY EAM accomplishes this via a diverse array of features that both simplify and enhance enterprise asset management tasks for companies of all sizes and industries. Enabling you to identify, track, locate and analyze all your physical assets,

Simplify communication, connectivity and information sharing

Web-based architecture

Because CIMPLICITY EAM employs a true web-based architecture, the system is easy to install, administer and use. Accessible by any individual with Internet access and the appropriate authorization level, the data housed within CIMPLICITY EAM can be viewed by personnel from anywhere in the world – keeping your employees informed and able to make business decisions based on up-to-the-minute information.

In addition to extending accessibility to virtually any user, the Extended Web Services component enables CIMPLICITY EAM to cost-effectively extend accessibility to virtually any application as well. Using XML, Extended Web Services enables other enterprise applications – either at your own company or at those of your supply chain partners – to leverage the data housed within the application. (This may also be accomplished using the optional dataBridge module.)

Asset Hierarchy Management

Using the familiar and easy to configure “family tree” visualization, Asset Hierarchy Management enables users to easily track asset costs and the movement of assets through their lifecycles. Relationships between equipment, systems and locations can be instantly ascertained, helping you to gain a better understanding of how your assets are interrelated, where they are at any given moment and how costs align with both individual and groupings of assets. When coupled with CIMPLICITY EAM’s Asset Management Services, maintenance organizations which operate as a separate business unit can easily define time, material and labor costs then apply cost charges for calculating job costs and generating invoices and reports.

In-Box/Scorecard Homepage

Providing a simple, at-a-glance view of CIMPLICITY EAM information, the application’s HTML homepage contains to basic sections: In-Box and Scorecard. In-Box acts as a “to-do” list that enables you to instantly see what critical tasks need to be completed for the day. Common tasks include requisitions to review, work orders to release and other items awaiting your action. Scorecard provides a direct view into the Key Performance Indicators (KPIs) of your company. Using a simple interface and a one-time setup process, you can define the asset performance criteria you would like to see on a regular basis – such as mean time between failures, equipment downtime and labor hours per trade. Once defined, the Scorecard section of your homepage will reflect these results using clear dashboard-like gauges, providing you with instant access to the information you need in a familiar format. Each item in both In-Box and Scorecard are hyperlinked to CIMPLICITY EAM the screens appropriate for the associated data input or other action which may be required, thereby providing you with a shortcut to the activities you may need to take.

CIMPLICITY EAM helps you to gain a true picture of all the status and location of all the resources in your facility while maximizing productivity and asset life.

Through a diverse array of “management modules,” CIMPLICITY EAM also helps you to track and control everything from budget and inspection activities to project and purchasing programs. As a result, you have everything you need to plan, schedule and record the results of all maintenance activities; maximize stock and spending efficiencies even evaluate vendor performance – all in a single, easy-to-use application that delivers a wealth of features to help your business become more efficient and more profitable than ever before.

Messenger

Further enhancing your organization’s ability to “push” relevant information to the appropriate users, Messenger enables you to define recipients to automatically receive an e-mail notification when certain events occur (such as the receipt of a part for a particular work order or the submission of a requisition request.) These automatic messages keep your personnel up-to-date on critical tasks and, because you fully manage and define the process, you can also dramatically reduce the likelihood of redundant purchasing, process-related downtime and other errors that affect efficiency.

Microsoft Project Interface

Leveraging the power and familiarity of Microsoft Project 2000, CIMPLICITY EAM enables you to seamlessly pass information between the two applications. Work orders, personnel availability and other information housed within CIMPLICITY EAM can be easily viewed and scheduled in Microsoft Project, the data can then be returned to CIMPLICITY EAM for execution and tracking.

Reporting Tools

CIMPLICITY EAM comes complete with over 130 predefined reports, ready for instant use. These reports include assets, materials, purchasing, scheduling, work, budget analysis and more. You’ll also have the ability to create reports specific to your company and your business, further enhancing the utility and functionality of CIMPLICITY EAM’s reporting capabilities.

Versatile Homepage



EAM’s homepage delivers at-a-glance access to pending action notification, action item status change and other KPI data for monitoring asset performance.

Improve security, agility and uptime

Multi-organization Security

Using a single database, you can efficiently and effectively manage multiple legal entities and define the access levels of multiple users throughout the organization. This is particularly helpful for companies that are located in multiple countries that need to control access rights centrally, yet provide each individual location with the ability to view and edit its own data while using its own currency and language.

Preventative Maintenance (PM) Flexibility

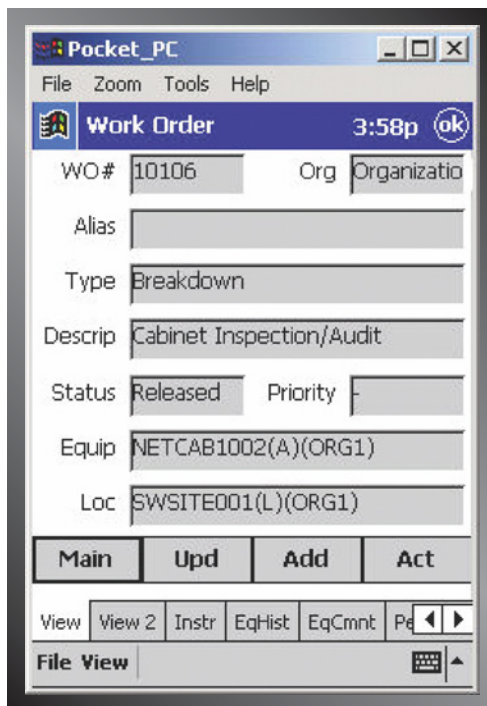
One of the most valuable features of CIMPLICITY EAM, PM Flexibility allows you to schedule preventative maintenance tasks based upon a fixed date, flexible time period or metered usage. You can incorporate routes with a PM task to service multiple assets that share similar PM requirements under a single work order, plus CIMPLICITY EAM will also automatically adjust PM schedules to compensate for early or late PM task completion. An additional revision control capability enables you to control and track modifications, adding yet another layer of approval and security while providing a simple and efficient method to ensure the timely completion of PM events.

Usage Monitoring

Extensive metering functionality allows a virtually unlimited amount of meters to be associated with a single piece of equipment. You can also define an equipment hierarchy for metered messaging "flow down," eliminating the need for supplemental metering. For example, a vehicle's odometer can be used to register usage for tires, transmission, engine and any other component. Usage data remains associated with its defined equipment – even if that equipment is moved – enabling you to keep tabs on all preventative maintenance job release, warranty tracking and justification data.

Warranties and Warranty Claims

Dramatically simplifying warranty tracking and processing, CIMPLICITY EAM enables you to keep tabs on unlimited warranties against any asset. Accommodating both meter- and date-based warranties, CIMPLICITY EAM tracks all work orders in the system that have a potential claim. Furthermore, it will also automatically retrieve the work orders for claim processing and post specified meter readings for claim and historical purposes, as well as accommodating time-elapse warranties for consumables not registered assets.



Simplify customization for your company's specific needs

Thanks to CIMPLICITY EAM's modular design, you can easily add or customize specific components designed to tailor the application to meet requirements unique to your business. These modules enable you to achieve all the benefits of having a custom designed application while retaining the openness and cost-effectiveness that comes with using a pre-packaged solution. Bundled modules include:

Mobile

Leveraging the strength, versatility and portability of Windows CE-powered handheld devices, the *Mobile* module enables you to download work assignments and share information using docking cradles, dial-up or wireless connections. Using *Mobile*, you can also enable your workforce to create field-based work orders, use drill-down menus to retrieve detailed information about a piece of equipment and capture actual work time as maintenance is performed.

Information can be downloaded to specific handheld units, enabling field-based workers to receive personalized listings of tasks to be completed. Reassignment of work orders can also be completed and sent to the appropriate personnel thereby eliminating wasted time and effort and enabling you to better leverage your personnel assets as well as your durable assets.

Mobile is particularly useful for meter readings, physical inventory updates and the instantaneous collection of inspection date. The results of these activities are entered into the CIMPLICITY EAM database where the entire system is instantly updated and, depending upon rules you define, can then be associated with existing work orders or entirely new work orders can be created if necessary.

Thanks to *Mobile*'s true two-way communication between CIMPLICITY EAM and field devices, your personnel will have the ability to work with near real-time data accuracy. As a result, you can increase the productivity, agility and accuracy of your maintenance operations.

Mobile Data Collection



Modules

In addition to the robust features of the core application, EAM also comes with a diverse array of modules designed to extend the functionality and utility of this powerful solution

Module	Function
Base	<ul style="list-style-type: none"> • Functions as the prerequisite for all other modules. • Provides key security and administrative controls over business processes: password aging control, classification codes, equipment hierarchy setup, and various operating accesses and permissions.
Asset Management	<ul style="list-style-type: none"> • Identifies, tracks, locates, and analyzes physical assets. • Establishes and controls interactive relationships between assets and their associated business processes and usage.
Work Management	<ul style="list-style-type: none"> • Controls work order processes for routine maintenance, response maintenance and periodic preventive maintenance. • Stores material and task lists in a library for easy reference and retrieval, as well as generates invoices for “third-party” assets • Determines cause and effect relationships, and provides a full range of diagnostic tests.
Project Management	<ul style="list-style-type: none"> • Allows large projects to be divided into more manageable sub-projects, assigning individual work order activities to each step. • Computes actual costs, committed costs, and planned costs of projects.
Inspection Management	<ul style="list-style-type: none"> • Manages condition-based maintenance by defining inspection points belonging to one or more assets. • Executes inspection jobs ad hoc, triggered by time frequency and/or meters or even condition-based inspections.
Materials Management	<ul style="list-style-type: none"> • Streamlines part and material management by constantly monitoring inventory online, identifying items that need to be requisitioned based on existing stock levels, forecasts, and current reservations • Maximizes an efficient quantity on hand of store room parts (EOQ Analysis) and allocates materials to work orders, automatically generating pick lists. • Classifies parts based on their percentage of total inventory value (ABC Analysis). • Includes individualized inventory pricing methods, such as pricing by Average, Last, or Standard Price or by LIFO or FIFO.
Purchasing Management	<ul style="list-style-type: none"> • Computes the cost of services using either fixed prices or time and materials. • Controls purchase order and invoice matching processes for stocked materials, direct materials, hired labor, and services. • Allows vendor ranking to facilitate the purchasing process. • Monitors the progress of quotations.
Budget Management	<ul style="list-style-type: none"> • Automates the process of setting up budgets and the subsequent capture, monitoring, control, and analysis of expenditures associated with maintenance work. • Provides a link between the financial structure of the enterprise, its organizational structure, and the physical asset hierarchies. • Calculates a variety of financial and performance indicators.

Buy/Supply

When parts break and equipment fails in your plant, it always seems to happen at the most inopportune time. CIMPLICITY EAM was designed to mitigate the problems associated with such headaches, but you still need to have all of the necessary parts in-house to ensure the timely replacement and repair of equipment. With the Buy/Supply module, CIMPLICITY EAM even simplifies this function for you and your business.

Tightly integrated with the MRO activities of your organization, Buy/Supply is an online purchasing resource and integrated procurement network designed to help you easily and flawlessly connect with a diverse marketplace of vendors to ensure that you always have access to the right parts, at the right time, at the best price.

As your maintenance staff completes orders and deplete your store of spare parts, CIMPLICITY EAM monitors and tracks the inventory level of these parts and dramatically simplifies the process for ordering and replenishing these items. You can even define workflow rules that enable authorized personnel to purchase the items online within minutes. Buy/Sell can remind you when it's time to order parts and offers you a user-friendly environment for finding needed supplies. Customers are also able to consolidate vendors and capture all purchasing data, further enhancing the cost saving and efficiency of your CIMPLICITY EAM investment.

If you're part of a multi-site organization, your savings can be even greater. Leveraging pre-negotiated contract pricing, aggregated purchasing and other such activities, you'll be able to realize substantial first-year savings via integrated buying, process improvement and reduced transaction costs... plus you'll virtually eliminate the potential for not having the parts you need to keep your plant up-and-running.

Meet regulatory requirements while enhancing your business

Businesses operating within the regulated industries face an additional layer of challenges. In addition to meeting the expectations of customers and shareholders, these manufacturers must also meet the exacting requirements of governmental administrations and the regulations they create – such as the FDA's 21 CFR Part 11. To help these companies to meet their regulatory requirements and to help any business who would like to enhance security and gain a better understanding of “who is doing what, when and where,” CIMPLICITY EAM has several features to meet these needs



Audit Trail

Central to many regulations is the ability to track and record who had access to what systems and what was done when they were accessing those systems. CIMPLICITY EAM delivers a simple way to track changes to data, comments and attributes, as well as track insertions, updates and deletions. This is also helpful when trying to determine patterns of human error when performing root-cause analysis of plant operations.

Record Copies

It's not enough for a manufacturer to produce a safe, quality product... you must also provide tangible evidence of the quality, safety and security of your production processes. To this end, CIMPLICITY EAM enables you to create reports in a number of different formats, including Microsoft Excel spreadsheets and Adobe Acrobat .PDF files. These records can be produced at the immediate request of any regulatory agent and can be transmitted electronically as well as produced in hard copy format.

Limited System Access

Critical to meeting regulatory demands is ensuring that only authorized personnel can gain access to specific functionality within your system. CIMPLICITY EAM allows you to set specific access levels for each individual and ensures that unauthorized users can not get into critical systems. You can restrict the number of unsuccessful login attempts, user lockout parameters and other features that bolster the security of your system. Furthermore, such activities are captured with the Audit Trail functionality so you'll be able to trace exactly what was being attempted and, more importantly, by whom.

Authority Checks

In addition to the robust security features, you can also define an extensive network of overlapping security controls to restrict the activities of users within the system and ensure that users are performing only those tasks assigned to them. You can prevent or grant access to screens, tabs and any other component of the CIMPLICITY EAM environment.

Document Control

CIMPLICITY EAM also includes robust and secure functionality for controlling the distribution rights and access to change or revise documentation protocols and procedures. Multiple approvals can be defined as mandatory before access will be granted and a specific revision will be accepted.

Reduce Operating Risk

The best preparation for safe working conditions is a well-informed workforce. Reducing liability claims and improving safety in the workplace depends on documenting the correct procedures on all tasks. With EAM, companies guard their employees from hazards by compiling and protecting sensitive documents about how to perform tasks safely and effectively.

Documenting how procedures should be performed also helps companies comply with OSHA safety standards, allowing companies to avoid fines for non-compliance. Documenting maintenance procedures, safety information and maintenance history ensures that employees can work safely while improving their efficiency in addressing problems that arise with equipment and machinery.

EAM gives companies the ability to reduce safety incidents and costly liabilities, non-compliance fines, and lost labor expenses. GE Fanuc enables companies to compile safety notes on individual assets, including safety requirements and results from safety inspections. In addition, companies may copy sections of OSHA regulations directly into an asset's record to ensure the safety of maintenance personnel and operators, and EAM also helps companies comply with the Health and Safety Work Act.

CIMPLICITY EAM: A single solution for all your EAM / MRO needs

Web-based, globally accessible and fully integrated with your business' day-to-day activities, CIMPLICITY EAM is the only EAM resource that's optimized for users in the plant operations space... users like you. The challenges faced by companies in the industrial sector are unique and only a company like General Electric – one of the world's most diverse and most successful manufacturers – can deliver the features and functionality you need to stay ahead of the competition in a single package.

For more information on CIMPLICITY EAM or any of GE Fanuc's IPM solutions, contact your local sales representative or visit us online at www.gefanucautomation.com.

ROI on EAM: The CIMPLICITY EAM Online ROI Calculator

The GE Fanuc ROI calculator are based on information you provide about your company's current practices compared to industry analysts' reports to estimate potential customer savings.

Potential One-Year Savings				
		Conservative	Expected	Target
MRO Supply Chain		\$1,040,000	\$1,160,000	\$1,270,000
Workforce Management		\$60,000	\$70,000	\$80,000
Capital Investment		\$20,000	\$20,000	\$20,000
Asset Productivity		\$0	\$0	\$0
Total Potential Savings		\$1,120,000	\$1,240,000	\$1,370,000

We've developed a simple online tool for helping you to evaluate just how much money your company can save by using CIMPLICITY EAM. Visit www.gefanucautomation.com/eam to access our powerful ROI calculator and see how much EAM can be saving you!

CIMPLICITY EAM Capabilities

- Highly configurable
- Diverse management modules
- Web-based, ASP-Hosting Model
- Streamlined purchasing and ordering (eMRO)
- Decrease Costs
- Increase Revenue
- Meet regulatory demands

The GE Fanuc Family of Software Solutions Includes:

Asset Management

***Enterprise Asset Management
Remote Monitoring & Diagnostics***

Process Execution & Supervisory Control

CIMPLICITY. HMI

DataViews.

FIX.

I/O Drivers

iBatch.

iClientTS.

iFIX.

Intelligence

iWorkInstruction.

Manager

OpenProcess.

Plant Intelligence

Advantage

Digital Cockpit

iDowntime.

iHistorian.

iInfoAgent.

Proficiency for Manufacturing.

Tracker

VisualSPC.

Control Hardware

CNC & Machine Tools

Communications & Networking

Embedded Computers

Industrial Computers

Motion Control

PLC, Controllers & I/O

Contact Us

North American Offices

Headquarters: Charlottesville, VA

Albany, NY

Edmonton, Canada

Foxborough, MA

www.gefanucautomation.com

USA: 800-526-3486

Outside USA: 508-698-3322

International Offices

Australia

China-Beijing

China-Shanghai

France

Germany

Italy

Japan

Korea

United Kingdom

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