

GLOVIA™
Powerful ERP Solutions for Manufacturers

n e x t g e n e r a t i o n

Extend
The Basics

Tools & Technologies

Manage Engineer-To-Order and
Complex Projects Profitably

FUJITSU



Extend The Basics Tools & Technologies

An extended ERP system, at the most basic level, is simply a tool that supports your business. Manufacturers often overlook the costs of proper management and maintenance for these tools when they choose a solution.

Just as we increased the functionality and capability of glovia.com over the years, we have also greatly improved the underlying tools and technologies. glovia.com Tools & Technologies is a supporting package of core technologies and application development tools that allow you to manage and customize your Glovia investment easily.

Tools & Technologies helps you better manage your enterprise-wide deployments without overtaxing your IT resources. These new capabilities give you greater control over your glovia.com investment and provide you with enhanced flexibility. More importantly, we developed applications to help you easily compare glovia.com code sets. This powerful new functionality enables you to identify customized codes quickly, making the installation of updates easier and minimizing migration costs and risks.

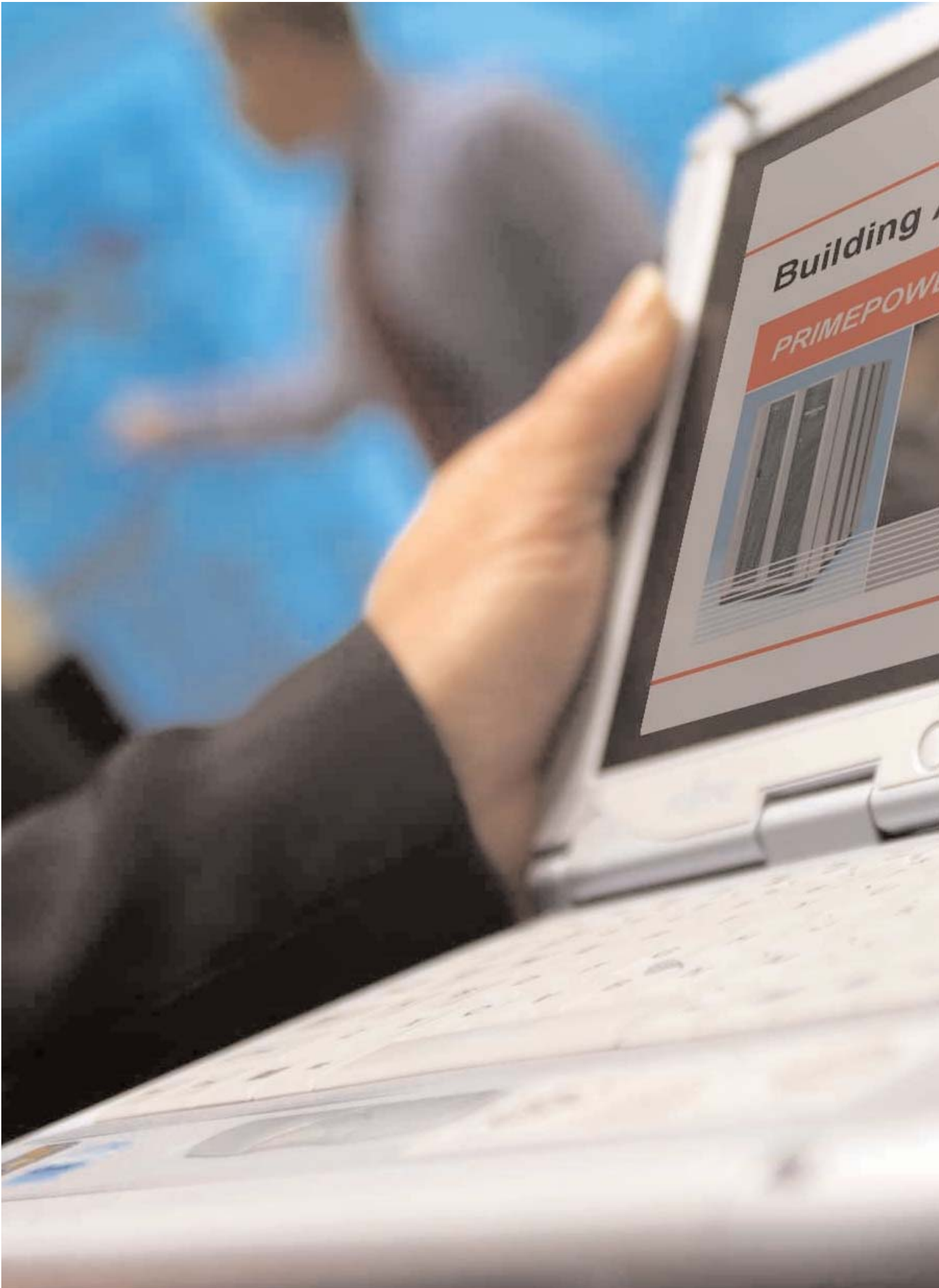
In addition to providing you with access to Glovia source code, the solution allows you to audit database transactions and changes, identify application modifications, and customize and extend functionality cost-effectively. These robust data auditing capabilities will help maintain the integrity of your data and support regulatory compliance. Increased capabilities to security administration and a web-enabled functionality are also offered.

Other Tools & Technologies business benefits include:

- Reduced total cost of ownership
- Reduced application management
- Reduced customization and migration costs
- Increased data integrity and security

glovia.com Tools & Technologies includes six world-class modules currently used by a number of prominent and successful companies:

- Audit Manager
- Security Manager
- Shop Floor Data Collection
- Web Client
- Application Development Tools
- Code Comparison Tools



Audit Manager

A flexible audit facility that enables you to track changes to key business processes

glovia.com Audit Manager allows the full audit / traceability of changes to the key business data elements for the enterprise. The solution logs the full history of change to any policy, calculation, or other business-critical data. The database audit facility is generic, thus applicable to any glovia.com modules or non-glovia.com / external modules that cause change to glovia.com data.

Isolated from the Application

Many audit solutions require application code in order to detect the change to the data and perform the subsequent write to the audit log. These solutions are expensive in development and future maintenance. Coverage of the audit is rarely one hundred percent as only those transactions that contain the specific code are written to the log.

With glovia.com, the audit capability has been moved down to the Oracle database via the use of triggers thus allowing the changes to the database to be controlled by Oracle instead of the application. Only the net change is written to the database. Writing only changed data ensures that database storage issues are minimized and clarity of the audit inquiry is optimized.

Fully Configurable by the User

Audit Manager allows a user to define the individual columns from a database table that are to be under audit control. The columns available for selection are those columns that appear both on the SuperLayer file definition and on the Oracle table definition. The user also defines when to track audits, i.e. when a field is inserted, changed, or deleted.



Audit Inquiry

The audit inquiry provides a flexible and powerful inquiry of the audit log. A single generic inquiry has been created that allows the history of changes of any table under audit to be viewed. The data on the inquiry screen, including the associated column names, is pertinent to the table that is under inquiry.

Purge of the Audit Log

The audit log can be purged by table name and date. Any audit records for the selected table with a change date equal to or older than the selected date will be permanently deleted.

Audit Inquiry Details

The data elements that are displayed for the audited table are:

- Date and time of the change
- glovia.com operator that performed the change
- Type of update (add, change or delete)
- Keys of the table that changed
- Columns of the table that changed (showing both the value of the column before the change and the value after the change)

Filtering Capabilities

You can search the audit log via the following criteria:

- Keys (allows the log to be searched for specific records by key)
- Columns (allows the log to be searched only for columns that have been selected in the inquiry that have undergone change)
- Others (date, time, operator and mode)

Before : \$48.50
After : \$42.20
When : 11/01/01
07:15:00
Who : JLG

Order No	Customer	Item	Price	Quantity	Total	Date
31214	320	TER1000E-5	48,564.00	1	40,564.00	11/11/2001
31215	340	TER1000E-10	52,134.50	1	32,134.50	11/15/2001
31216	400	CUK905	48.50	50	2425.00	11/12/2001
31217	500	CYLC-10-21-15	1,460.00	1	1,460.00	11/23/2001
31218	400	ca1259	0.45	5	2.25	11/16/2001

Security Manager

Simplify administration while increasing system activity

Establishing and maintaining end-user security profiles for enterprise-wide applications can be an overwhelming task for system administrators. Without the right tools, it is often time consuming, costly and frustrating.

glovia.com Security Manager is an easy-to-use front end to glovia.com's existing security capabilities. It provides system administrators and managers with a way to intelligently control all end-user access to glovia.com's functionality while greatly reducing administrative overhead and operational complexity.

The glovia.com Security Manager provides significant benefits:

- More precise control over functionality access
- Reduced security administration time and cost
- Increased flexibility in defining and *reusing* security roles
- Improved auditing, reporting, and inquiry capabilities

Powerful yet Flexible System Security

Security Manager provides easy access to glovia.com's native, function-level security capabilities, providing administrators with a flexible way to manage security settings, such as granting or restricting end-user access to specific glovia.com functionality. When a user is not authorized for a specific functionality, the associated menu choices are grayed out, prohibiting their access. This is true for normal menu navigation, as well as for all numeric short cuts. Even explicitly entered functions are prohibited from running when they are not authorized. In addition, both successful and failed accesses are logged and time-stamped for audit review.



Security Manager

Single Access Profile for User Roles

One of the biggest headaches for administrators is establishing and maintaining security profiles for each individual end-user. Security Manager overcomes this problem by enabling administrators and managers to easily define group or role-based security profiles.

For example, an administrator can quickly use Security Manager to define a group or role, such as "AP Clerk," as well as determine all of the access privileges and rights for that role. This newly defined profile can be applied to any end-user, greatly simplifying security administration. Security profiles, of course are fully customizable.

Security Manager also permits individual-level, exception-based security profiles. Administrators can quickly alter existing profiles to grant or restrict access for specific individuals. For example, the role of "AP Clerk" can be easily customized so that all users have data entry rights, but only one user can access glovia.com's check cutting functionality. This capability allows administrators to increase the usability of glovia.com without jeopardizing overall system security.

Integrity Reporting and Audit Trail

Security Manager provides powerful reporting and management capabilities. The module's inquiry functionality allows administrators to determine quickly which end-users have access to specific functionality as well as how frequently that functionality has been used. The reporting also provides a full security audit trail, including a comprehensive archive of all relevant data. The audit trail allows administrators to track critical information, such as successful and unsuccessful user attempts to log onto specific glovia.com functionality.

Key Features

- Single, easy-to-use interface for all glovia.com security operations
- Built on native functionality-level and menu-based glovia.com security
- Compatible with glovia.com shortcuts and text commands
- Fully definable and customizable security profiles—including group, role, exception and meta-role
- Comprehensive inquiry, reporting, and auditing capabilities
- Reduces navigation path of users to their intended roles

Shop Floor Data Collection

Real-time data collection for receiving, inventory, manufacturing operations and shipping

glovia.com Shop Floor Data Collection (SFDC) is designed to provide a real-time, mobile or fixed data collection interface to glovia.com. This solution supports radio frequency identification (RFID), radio frequency (RF) and hardwired terminals, laser and thermal barcode printers, fixed mount barcode readers, relays, reader boards and other serial or Ethernet devices. The interface is a Windows NT product designed to communicate real-time with glovia.com SFDC Transaction Manager. The power of the product is realized in the flexibility of device types, real-time data access and the ability to handle multiple locations in variable configurations.

Features

- Delivers unprecedented stability and functionality with a robust Windows NT based solution
- Creates additional glovia.com benefits by increasing productivity, reducing errors, cutting inventory costs and improving customer satisfaction
- Organizes screen and menu options, according to end user requirements
- Provides different screens for different devices, depending on functionality required
- Allows for choices among multiple RF (mobile, fixed, and vehicle mount) and hardwired devices



- Keeps real-time validation on employee number, part number, job number, job operation, location, P.O. item number, lot tracking number, shipper line item and quantity on hand
- Enables and disables validations as required
- Supports a supervisor end-of-day feature that allows employees to clock out quickly
- Supports lot and serial control

Transactions Supported

- Goods received from purchase orders
- Location to location transfer
- Labor time entry to a work order
- Physical inventory count entry
- Cycle count entry
- Shipping pack confirm for a customer release
- Work order completions
- Pack and ship confirm for a sales order
- Inventory adjustment
- Work order issue by pick list
- Assembly scrap
- Component scrap
- Operation scrap
- Material scrap
- Move to inventory inspection
- Inspection results
- Transfer order receipt
- Batch commit and ship transfer orders
- Direct material issue to work order
- Direct tool issue
- Tool return
- Receive customer returns
- Master location to master location transfer
- Return to vendor

Glovia SFDC Connectivity Options



SFDC tends to be a plant-specific implementation with some localization required to suit the working practices of particular plants. The architecture developed to support SFDC makes that localization process simpler.

Complementary Products

Our partner company for SFDC solutions is able to provide a complete network and hardware installation and consultation.

There is also a range of complementary products available, including:

- Time and Attendance
 - ◆ Robust T&A with interface to glovia.com
 - ◆ Advanced Capacity Planning
 - ◆ Critical employee information
 - ◆ Security and grouping
 - ◆ Supervisor over-ride
 - ◆ Wired or wireless terminals
 - ◆ Bar Code badges or smart cards
- In/Out Board

For employees who do not need to clock in and out for payroll purposes but whose whereabouts need to be tracked, such as service engineers, consultants, managers, etc.; information is fed to an electronic 'In/Out' Board, which can be displayed on a standard Windows PC.

Web Client

Full Windows® graphical user interface client within any browser supporting ActiveX®

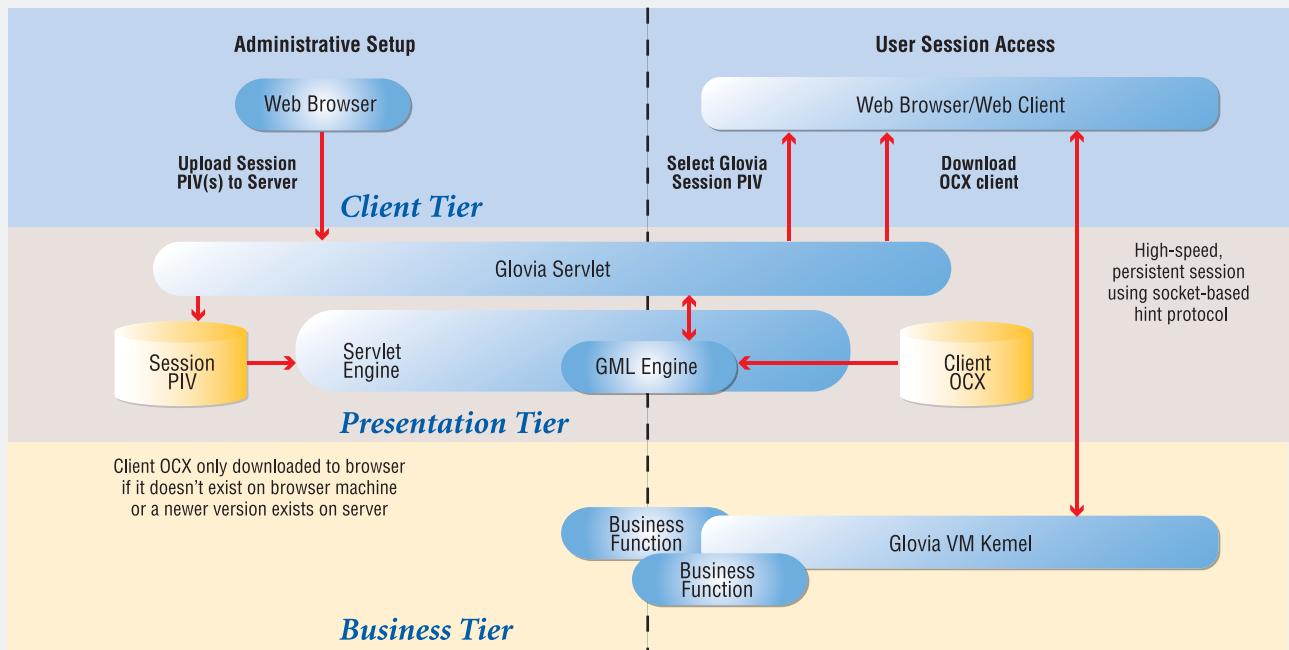
glovia.com Web Client is a Microsoft® graphical user interface (GUI) client in an OLE Control Extension (OCX) format. The solution provides everything that the standard Win32 client does within any web browser that supports ActiveX controls. This control executes within the selected browser's client window area using the browser's application framework to operate.

How does it work?

Through the use of centralized web-based administration tools, the ActiveX client will be installed from the central web server automatically, eliminating the need for individual client installation.

A new application user merely references an application URL, selects the application needed, and the plug-in automatically downloads, installs, and connects to a pre-designated Virtual Machine (VM) host. A browser-accessible download administrator permits easy management over what applications have web access. Updates to the GUI OCX are automatically distributed to users at logon, which minimizes the Glovia client install, upgrade, and related administrative costs.





Web Client supports most expected GUI operations and controls including accelerator keys, bubble help, private labeling, and the latest date operations such as calendars and date manipulation. Client-side Dynamic Data Exchange (DDE) is fully supported and enables clients to access, retrieve, and store local data if the application requires it. Developers can use GIF, BMP, and JPG formats for client backgrounds and other deployment cosmetics.

- Supports local and remote printing via session configuration
- Automatic client updates from central repository; no administrative or local re-install costs
- 100 percent OCX compliant architecture
- Runs natively within IE5.0 or later
- Uses an ActiveX plug-in on Netscape
- Maintains a socket-based, persistent connection between itself and the Glovia VM kernel for high performance

Features

- Full Windows GUI client within any browser supporting ActiveX
- On-browser demand, digitally signed, OCX download and self-install
- Central administration of Glovia VM kernel configurations; ability to upload and maintain available VM machines, UI defaults, local/remote printer setup, and other properties for personalized connections
- One click, user selectable session from central registry session list
- Automatic encrypted session between OCX and VM kernel using Secured Socket Layer (SSL)
- Support encrypted session configuration files (encrypted PIVs)

Microsoft, Windows, and Activex are registered trademark of Microsoft Corporation in the United States and/or other countries.

Extend Boundaries

Extended ERP

glovia.com is the next-generation of enterprise solutions—extended ERP—which addresses the pressing business issues that manufacturers face today: coordination of global supply chains, management of complex product lifecycles, and growth of profitable service offerings.

glovia.com provides manufacturers with advanced capabilities to manage and improve their entire business—from product design, procurement, planning and manufacturing to sales, fulfillment, installation and support.

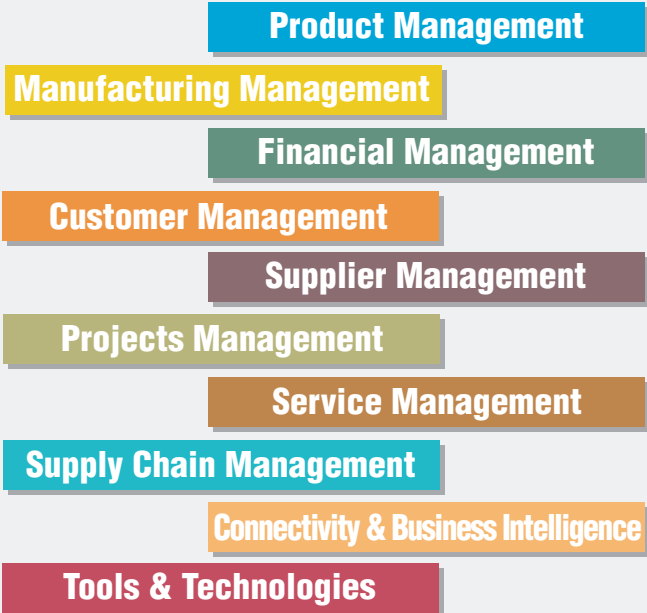
The solution streamlines operations within the four walls and beyond, and integrates disparate internal systems, eliminates functional silos, and brings you closer to your customers and suppliers.

The advantages for you are enormous.

For example, you can respond quickly and accurately to customer demands, compress both cycle times and information flow throughout your company and supply chain, transform your business into a lean organization, and allow demand to trigger downstream production and procurement activities.

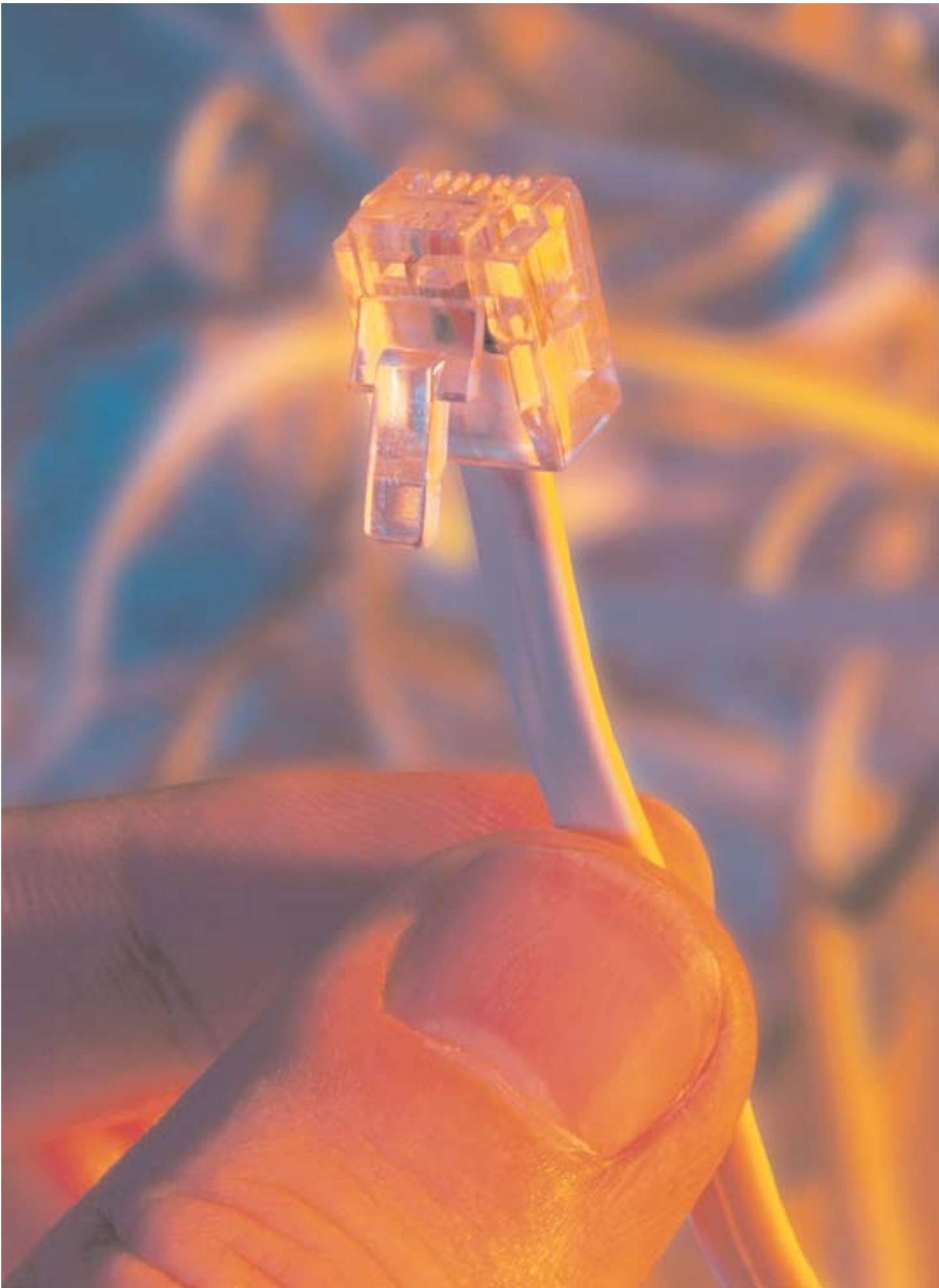
Naturally, all of these benefits eliminate costs while they improve your standing with customers and against competition.

Glovia’s extended ERP suite includes more than 70 seamlessly integrated modules that allow you to run and refine key business processes including:



Glovia has 10 solution groups in the glovia.com suite. glovia.com has more than 70 seamlessly integrated modules that allow manufacturers to manage and improve every aspect of their business with one proven solution.

Product Management	Manufacturing Management	Financial Management	Customer Management	Supplier Management	Projects Management	Service Management	Supply Chain Management	Connectivity & Business Intelligence	Tools & Technologies
Engineering	Master Production Scheduling (MPS)	Billing	Contact & Opportunity Management	Supplier Quotes	Project Definition	Installation Management	Factory Planning	Electronic Data Interchange	Audit Manager
Engineering Change	Material Requirements Planning (MRP)	Accounts Receivable	Bid Process Management	Purchase Orders	Project Management Interface	Field Service	Order Management	XML	Security Manager
Tool & Gauge	Seiban	Accounts Payable	Sales Quotes	Contract Purchasing	Project Resource Planning	Service & Repair	Supply Chain Planning	Application Adapters	Shop Floor Data Collection
Estimating	Work Orders	Cash Management	Sales Orders	Supplier Releasing	Project Accounting	Service Orders	Forecasting	External Interface Facility	Web Client
Costing	Repetitive Manufacturing	Fixed Assets	Contract Management	Material Supply	Program Cost Accounting			E-RMS	Application Dev. Tools
Configurator	Advanced Capacity Planning	Financial Integration Management	Customer Releasing	Supplier Portal				ActionDESK	Code Comparison Tools
Plant Maintenance	Shop Floor Control	General Ledger	Customer Portal					Publisher	
	Electronic Kanban	Time & Attendance						Cognos	
	Kanban								
	Inventory								
	Physical Inventory								





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Powerful ERP Solutions for Manufacturers

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