

An Overview for Managers



**QAD eQ**   
E-orders for the  
Enterprise

## The E-business Challenge

The pressure to move into the realm of e-business is intense, but making the move successfully requires much more than just putting up a Web storefront. Analysts and industry experts agree: manufacturing and distribution companies need full-featured e-business applications that increase sales, lower supply-chain costs, open new global markets, personalize trading relationships, and improve customer satisfaction.

While delivering these benefits, these new applications must also leverage existing investments in hardware and software, provide real-time integration with enterprise applications, bridge the disparate systems of multiple trading partners, and scale to handle large volumes of transactions without missing a byte.

It's a tall order, but QAD eQ can handle it. QAD eQ is a new e-business application suite built for the Internet that offers the key to success in e-commerce.

## Why Choose QAD eQ

For an enterprise and its supply chain, e-business is not an option. It is essential for survival. By 2004, B2B e-commerce is expected to reach \$7.29 trillion worldwide, according to the Gartner Group.

The Internet is forcing a major shift in traditional business commerce, organizing businesses around trading communities rather than the production of goods and services. The customer is now the focus.

Supply chains are emerging as agile competitors in the global marketplace. Operating as integrated, collaborative, B2B e-commerce systems, these dynamic chains can realize the benefits of higher profit margins, lower operating costs, and improved customer service.

With sell-side e-commerce applications, companies can achieve more than a 250% return on investment (ROI) by reducing the sales order cost from \$8 to 10 cents, according to the Goldman Sachs Group. This is achieved through customer self-service, increased accuracy of sales orders, lead-time reduction, and always being open for e-business (24x7).

With buy-side e-commerce applications, companies can achieve more than a 250% ROI by reducing the purchase order cost from the industry average of \$170 to \$30, Goldman Sachs reported. This can be achieved through improved selection of suppliers, new negotiating techniques such as reverse auctions, and elimination of rogue buying.

With replenishment e-commerce applications, companies can achieve more than a 300% improvement through unattended order processing, also called Internet Kanban.

Industry analysts estimate that more than 90% of today's Web order-entry systems are built as Web silos that are not integrated with back-office systems. Most of these systems will have to be replaced by new, integrated, Internet-based order systems.

### QAD eQ

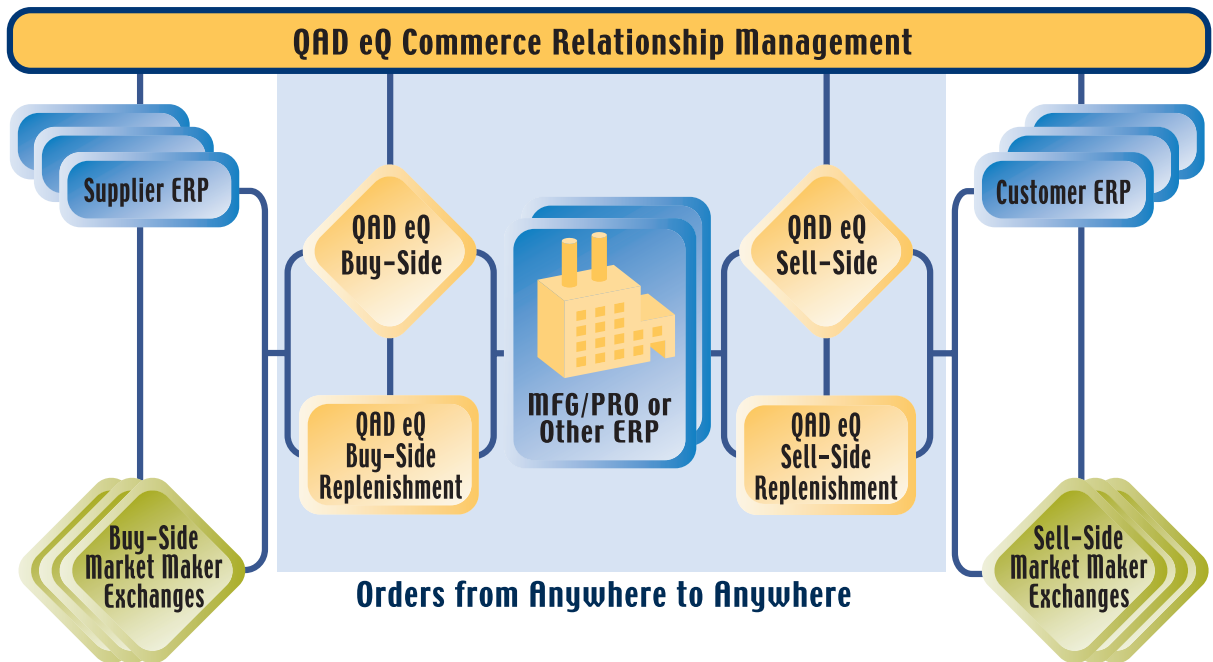
QAD eQ was built from the outset for B2B order management. It is designed using Internet technologies and seamlessly integrates B2B orders to back-office systems.

To operate in this new community-centric e-market realm, QAD eQ takes advantage of new and more powerful, platform-independent technologies. QAD eQ provides you with a reliable, portable, and scalable application to take your company into the future.

Benefits of QAD eQ e-orders for enterprises are:

- Increased market share through the global reach provided by the Internet.
- Access to new market channels, i.e. e-market exchanges.
- Improved efficiency of your corporation's selling and buying process resulting in increased profits.
- Improved customer service through personalization of the ordering process.
- Investment protection by leveraging your current ERP or back-office system.

**QAD eQ**  
E-orders for the Enterprise



**QAD eQ is a new e-business application for Sell-Side, Buy-Side, and Replenishment.**

**The QAD eQ application suite includes:**

- **Sell-Side** – expands your global reach to sell your products and services anywhere, anyway, and fulfill them from any place while improving your customer service through personalization of business commerce.
- **Buy-Side** – reduces your direct material procurement costs while providing an on-ramp to E-Market Exchanges for MRO and indirect procurement.
- **Replenishment (Internet Kanban)** – significantly reduces supply chain costs while improving customer satisfaction through applying vendor-managed inventories and Internet Kanban concepts.
- **E-market Exchanges** – specializes in manufacturing exchanges, both public and private.
- **Commerce Relationship Management** – takes you out of the one-to-many relationship restrictions that are found in traditional ERP systems and into the many-to-many relationships demanded by e-business.

## AT&T Case Study

### An E-business Vision for Success

#### The Business Challenge

AT&T Wireless owns its inventory until it is installed at a customer site, but has no inventory visibility across the extended supply chain. Third-party installers receive AT&T Wireless products from a complex network of distribution warehouses. These products are consumed daily, supplied by many sources, and transported by many carriers. Managing this inventory, which includes different product versions and configurations, is an enormous task.

The replenishment goals of AT&T Wireless were to:

- have no more than five to seven days of inventory throughout the entire internal and external supply chain
- maintain a minimal logistics staff
- minimize product obsolescence.

#### QAD eQ Simplifies and Streamlines Complex Inventory Management

The implementation of QAD eQ at AT&T Wireless achieved the above goals. QAD eQ Replenishment provided AT&T Wireless with an automated system that manages and replenishes inventory on a daily basis for a complex distribution network. This complex network consists of the AT&T Wireless manufacturing plant, third-party transportation, public warehouses, and third-party installers.

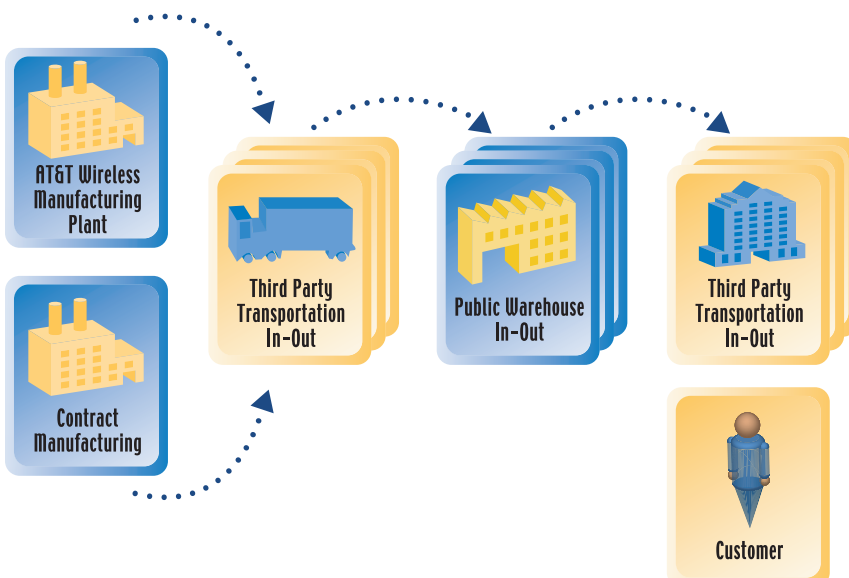
QAD eQ gives AT&T Wireless inventory visibility throughout the extended supply chain. It does this by allowing each third-party organization to input, through the Internet, the movement of inventory on a daily basis.

After the inventory is validated, QAD eQ calculates the required quantity based on usage trends at every node in the extended supply chain. This provides for the optimal reorder quantities.

AT&T Wireless uses MFG/PRO and other ERP systems to manage factory operations. Because QAD eQ is seamlessly integrated with different back-office systems, there was no need for customized interfaces. It was a "plug and play" installation.

QAD eQ automatically generates replenishment orders for each factory on a daily basis. Each order is processed, and the product is assigned to a carrier for delivery to the warehouse where the ordered product is needed.

As the AT&T distribution network grows, more than 15,000 orders will be delivered to the factories each day from more than 600 warehouses.



**QAD eQ Replenishment (Internet Kanban) supports vendor-managed inventories. The implementation of QAD eQ at AT&T Wireless created the ultimate demand-driven replenishment system.**

## Sell-Side

QAD eQ Sell-Side expands your global reach to sell your products and services anywhere, anyway, and fulfill them from any place while improving your customer service through personalization of business commerce.

QAD eQ Sell-Side provides multiple ways to capture an order, and it furnishes full order fulfillment integrated to the back-office system.

If your company needs a highly capable, Internet-based, centralized, sales order system, look to QAD eQ Sell-Side.

### Multiple Ways to Capture an Order

QAD eQ can be easily incorporated into your company website for the convenience of Internet customers who use a browser.

After perusing your catalog of selling items, the customer can make an unlimited number of selections. A mouse click forwards the order to QAD eQ Sell-Side order fulfillment for processing.

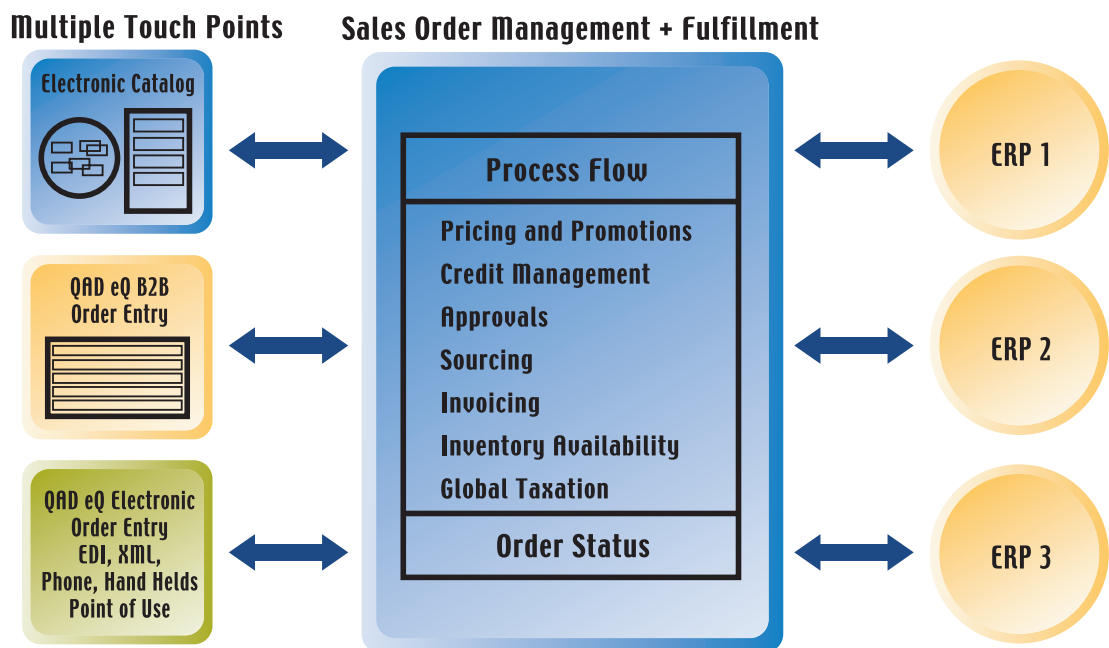
Electronic orders can be received by QAD eQ as the front-end for your back-office system. These unattended electronic orders include Electronic Data Interchange (EDI), fax, telephone, e-mail, documents in eXtensible Markup Language (XML), or those from hand-held devices.

### Flexible, Personalized Orders

The QAD eQ order process is designed to be highly automated and flexible.

For example, the order life cycle with its many steps, ranging from order entry to invoicing and posting, can be modified to reflect the variety of combinations that your company and industry use.

## QAD eQ Sell-Side



**Sell-Side expands your global reach to sell your products and services anywhere, anyway, and fulfill them from any place while improving your customer service through personalization of business commerce.**

Each order contains detailed commerce relationship data. The body of the order handles an unlimited number of independent sales order lines.

In QAD eQ, each sales order line is an independent order that can be confirmed and sent forward for fulfillment or retained as part of a larger order.

And the ordered items on each order line can be delivered on a varied schedule to different locations for the customer's convenience.

**Order Status and Tracking**

You can track the life cycle of your order in real-time from order entry to final payment, when the order is closed.

During the order process, you can recheck the ordered items, quantity, prices, and additional charges that are applied.

After the ordered goods have been shipped and an invoice is created, you can check its data against the sales order and sales order line. And you can confirm payments made to the account until the order is closed.

**Supply Chain Inventory**

Each order is supported by immediate available-to-promise (ATP) supply chain inventory information, assuring the customer that the ordered items can be delivered.

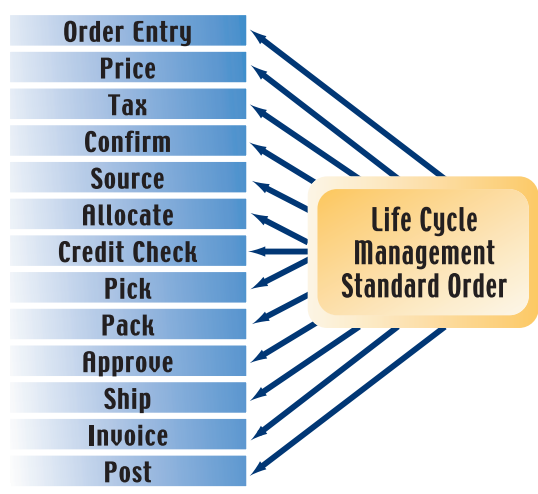
During order entry, the order is automatically checked against the available supply chain inventory through integration with the back-office systems.

QAD eQ can also be connected to advanced planning systems for optimal ATP or capacity-to-promise (CTP) calculations.

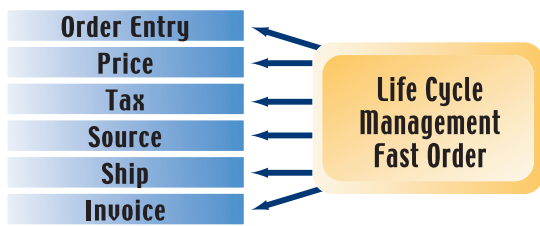
**Pricing and Promotions**

QAD eQ Pricing and Promotions is designed to meet the needs of today's most complex pricing and promotions requirements. In QAD eQ, a company with a pricer role defines and controls pricing agreements and pricing policies.

Pricing is based on the pricing agreement between the pricer and the customer, the pricing item, and the company's pricing policies. The policies, translated into algorithms, control which pricing agreements



**QAD eQ Flexible, Personalized Orders**



**QAD eQ order process is highly automated and flexible. For example, the order life cycle with its many steps, ranging from order entry to post, can be modified to reflect the variety of combinations that your company and industry use.**



are selected and define how prices are calculated. This procedure allows a broad range of pricing, from the straightforward to the most complex.

QAD eQ has a rich set of pricing and promotions policies, and each policy can be tailored by item, item grouping, customer, and customer grouping.

And QAD eQ provides state-of-the-art “best pricing”, which allows the company to control how multiple discounts are to be combined with each other.

A pricing item group can also be designated a pricing and promotion break group. This allows items in the same break group to accumulate ordered quantities or currency amounts across order lines to receive cumulated price and promotion breaks.

QAD eQ pricing and promotions also captures the pricing and promotion history of each item and executes “what-if” scenarios to manage promotion analysis.

### Credit

Online credit checking in QAD eQ is accomplished through a very flexible credit management process. Credit checking occurs at the sales order line and can be invoked at any step in the sales order process.

Credit checking in QAD eQ is based on credit policies that you define for each individual customer — that is, how you want to do business together.

You can define credit check policies and process steps to check credit before an order is taken, during the order life cycle processing, or before the order is shipped.

For other customers, you may prefer not to check credit until the order is ready for shipment. In this case, all that is required is to select the correct credit policy to activate this behavior.

QAD eQ also gives you the ability to define how you should calculate an individual customer's credit limit.

For one customer, you may want to go as far as checking all outstanding orders, plus the outstanding accounts receivable balance for the past 90 days. For another customer, you may not set a credit limit at all.

It's up to you as to how you want to personalize your business for each customer.

If an order is placed on credit hold during order processing, the QAD eQ security feature is designed to allow only approved individuals to change the status of the company's credit-worthiness.

### Sourcing

Determining the correct location to source products can dramatically reduce product obsolescence and improve customer satisfaction through a shorter lead-time.

QAD eQ provides the capability to source products at each independent sales order line. The sourcing logic is based on the roles and business policies defined in Commerce Relationship Management.

When the order line information is entered, QAD eQ checks if the customer has a preferred source for the ordered item. If not, the seller's fulfillment planner makes the selection based on unique business policies for the customer-seller-product combination.



### Global Taxes

QAD eQ calculates value-added and sales taxes levied by multiple taxing authorities on the goods ordered by global companies.

It also provides information that you need to support the reporting of tax levies and collections or the recovery of taxes.

The data to compute taxes on an order is sent to a third-party tax software that makes the computations and passes the results back to QAD eQ.

### Invoicing

Invoicing in QAD eQ is based on the sales order life cycle, which means that invoicing can occur at any point in the sales order process.

QAD eQ invoicing is designed to use the roles and business policies defined in QAD eQ Commerce Relationship Management. This design provides multiple ways to consolidate, split, and manage invoices.

QAD eQ allows your company to consolidate invoices and even to define how the invoices are to be consolidated.

### Industry- and Country-Specific Sales Order Processes

QAD eQ defines standard sales order processes, based on the best practices for each vertical market QAD eQ supports.

QAD eQ will support the sales order process for the industrial, electronic, automotive, food and beverage, consumer packaged goods, and medical device vertical markets. These sales order processes can then be tailored to the requirements for localization in each country. (See QAD eQ release notes for the countries that are supported.)

By providing these best practice sales order processes, a company can implement QAD eQ quickly with little disruption its everyday processes.

## Replenishment (Internet Kanban)

QAD eQ Replenishment significantly reduces supply chain costs while improving customer satisfaction through applying vendor-managed inventories and Internet Kanban concepts. Replenishment (Internet Kanban) can establish the ultimate “pull” inventory system for your company.

Replenishment in QAD eQ provides not just automatic replenishment but also unattended replenishment based on point-of-use or point-of-sale information.

Replenishment brings many advantages:

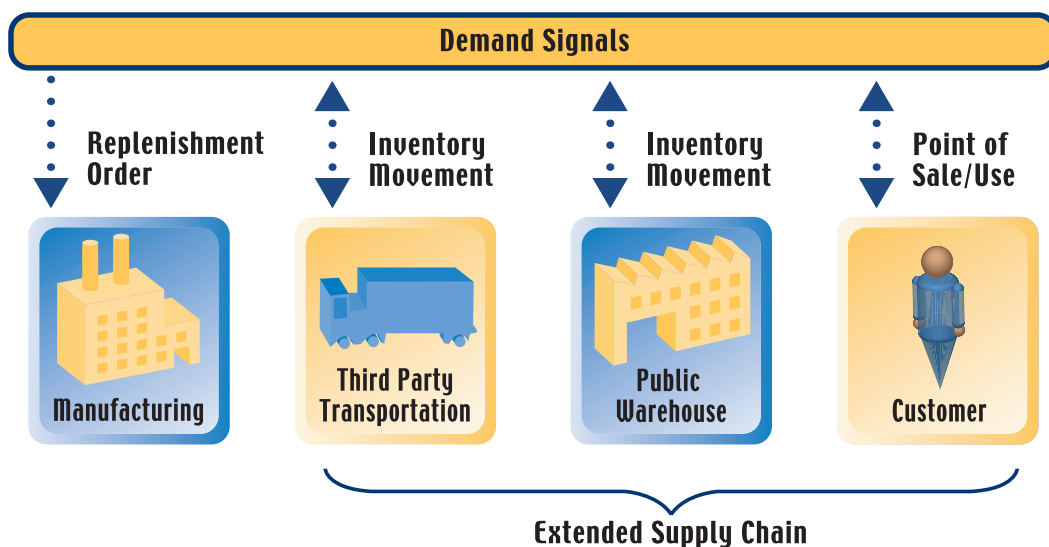
- Creates a significant ROI for the entire supply chain, typically more than 300%.
- Cuts sell-side and buy-side processing costs to approximately zero.
- Sets up unattended order processing.
- Improves inventory turnover by 3 to 4 times.
- Makes the entire supply chain visible, opens up communication, and encourages production planning.

Vendor-managed inventories are the key, the point at which a company can start to gain control of its processes and reshape itself as an agile, cost-effective competitor.

QAD eQ Replenishment integrates all distribution centers in the internal and external supply chain. The inventory level of each item is monitored at each inventory center, either by reporting through an Internet browser or through unattended monitoring based on integration to back-office systems.

QAD eQ offers various replenishment algorithms to calculate the appropriate replenishment quantity. Examples of the algorithms are standard reorder point, equivalent item management, and sophisticated usage analysis at every node in the supply chain. For example, when an item's inventory falls below its current prescribed level, the replenishment quantity for that item can be dynamically calculated based on the usage trends at every node in the supply chain.

## QAD eQ Replenishment (Internet Kanban)



**QAD eQ Replenishment significantly reduces supply chain costs while improving customer satisfaction through applying vendor-managed inventories and Internet Kanban concepts. Replenishment (Internet Kanban) can establish the ultimate “pull” inventory system for your company.**

Graphical depiction of the usage and reorder amounts of an item is displayed. An order is then automatically generated and sent forward to the factory for fulfillment. After the order is filled, the item is assigned to a carrier for delivery to the distribution center where the order originated.

Because QAD eQ is integrated to the back-office system, it's not necessary to manually take a sales order or to review it.

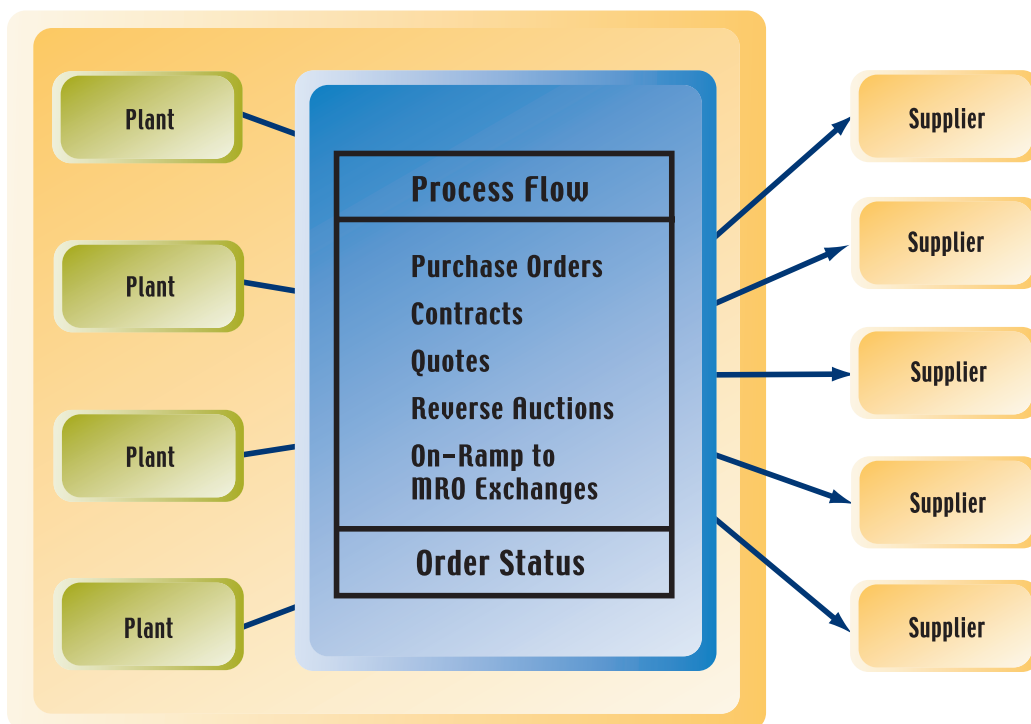
QAD eQ Replenishment means using your supply chain as a competitive weapon. An integrated supply chain with a lean, well-managed inventory can work as a highly coordinated unit that anticipates demand and adapts quickly to changing market conditions.

## Buy-Side

QAD eQ Buy-Side reduces your direct material procurement costs while providing an on-ramp to e-market exchanges for MRO and indirect procurement. Improving direct material costs will result in an immediate improvement to your company's bottom line.

QAD eQ Buy-Side is designed to handle large, multinational companies with centralized procurement functions. In addition, QAD eQ encompasses new negotiating techniques, such as reverse auctions, and the ability to participate in both private and public buy-side exchanges. You need look no further than to QAD eQ if your company is searching for a new e-procurement or buy-side application.

## Buy-Side



**QAD eQ Buy-Side reduces your direct material procurement costs while providing an on-ramp to E-Market Exchanges for MRO and indirect procurement.**

**Procurement Requirements**

How much time, resources, and money does your company spend in gathering requirements for direct material negotiations? QAD eQ addresses this hidden cost by collecting the usage of items from multiple back-end systems and then consolidating them in various formats for negotiating purposes.

This usage information, combined with a Demand Management application, will provide your company with timely and accurate requirements, which can be for one or many facilities. The requirements can be shared or collaborated with other companies in your supply chain.

**RFQ**

In QAD eQ Commerce Relationship Management, you define the process steps. These steps include approvals for your company's request for quotation (RFQ) process. These process flows can be unique for each customer, customer grouping, item, and item grouping.

A purchase quotation is generated in QAD eQ from a reverse auction process or from your company's procurement department. In QAD eQ, purchase quotations provide the capability to attach content documents from a variety of

sources. The RFQs can be automatically sent to your approved suppliers.

After a quotation or proposal is approved, a purchase order or contract is generated automatically in QAD eQ and sent to your back-office systems.

**Reverse Auctions**

The Internet has made it possible to deploy different negotiating techniques to improve procurement in today's global economy. The result is lower direct material costs.

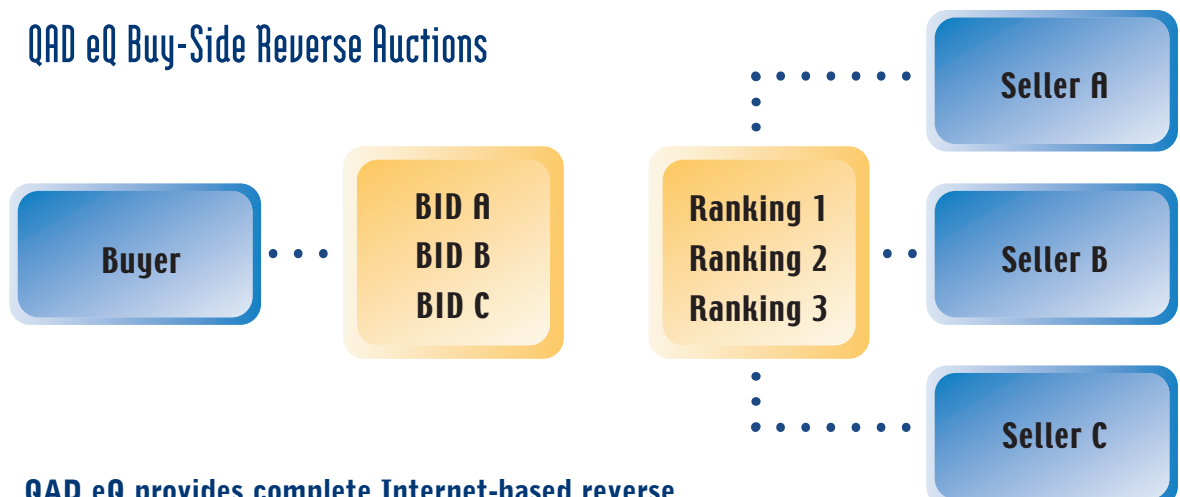
The reverse auction is one of these new techniques. QAD eQ provides complete Internet-based, reverse auction functionality. Your company can deploy this capability with your suppliers, or you can deploy it through an e-market exchange powered by QAD eQ.

QAD eQ streamlines the reverse auction process by defining the type of reverse auction that is to be deployed, Reverse auction types are:

- Open request for bids
- Ranked request for bids
- Request for sealed bids

In QAD eQ, the buying organization defines which suppliers will participate in each reverse auction.

**QAD eQ Buy-Side Reverse Auctions**



**QAD eQ provides complete Internet-based reverse auction functionality.**

Additional policies can be defined in QAD eQ to personalize each reverse auction.

Examples of policies are:

- Timing
- Day and/or hour
- Bid rules
- Partial fill or full fill
- Complete mix or partial mix
- Selection criteria
- On-time delivery
- Quality
- Lead time
- Specifications
- Price
- Process steps
- Manual bid selection
- Automatic bid selection

No additional software is required at your suppliers' sites to allow them to participate in a reverse auction. Your suppliers simply receive an e-mail notification that a reverse auction will occur on a specific date and time.

The supplier logs in to QAD eQ, using an Internet browser, adjusts or approves the pre-defined sales quotation, and submits it as a firm quote. This reverse auction process is intuitive and easy for your suppliers to use.

When the bid is awarded, QAD eQ automatically generates a purchase order or contract. Participants in the reverse auction are also notified automatically in QAD eQ whether their bid is accepted or rejected.

### **Contract Management**

QAD eQ Contract Management is designed to handle the complexities of large, multi-national companies in a centralized mode with decentralized back-office systems.

In QAD eQ, Contract Management offers multiple contract types, such as:

- Time
- Quantity
- Price varied by both time and quantity
- Product mix varied by both time and quantity, etc.

After a negotiation is completed, managing the contract can be difficult for both the buyers and sellers. The difficulty increases when multiple divisions, plants, or independent companies are involved.

QAD eQ manages the execution of these contracts with various back-office systems.

QAD eQ does this by providing:

- Central contract information electronically communicated to authorized purchasing agents
- Back-office system purchase orders automatically "called off" from the central contract
- Management exception indicators for contract management

### **Purchase Orders**

QAD eQ generates purchase orders from a variety of sources:

- RFQ
- Request for proposal (RFP)
- Reverse auction
- Contracts
- Your procurement department
- Integration with back-office ERP systems or e-market buy-side exchanges

### **On-Ramp to E-market Exchanges**

There are many vertical-specific, e-market buy-side exchanges that specialize in indirect or MRO procurement. QAD eQ provides the on-ramp capabilities to easily integrate with these e-market exchanges.

For more details, see **Integrating the Supply Chain** with the subtitle, "QAD eQ E-Market Chain Collaboration."

## Commerce Relationship Management

Commerce Relationship Management defines your community trading partners.

QAD eQ takes the complexity out of business relationships. It allows you to handle a large volume of relationships and provides you with the flexibility to shape each relationship the way you want it to be.

By modeling your entire company, QAD eQ captures exactly how you do business. The result is an explicit yet flexible representation of real-world business relationships.

QAD eQ accomplishes this real-world representation by defining roles, business policies, and process steps. Roles define the **who**. Business policies define the **how**. Process steps define the **what**.

For e-market exchanges, QAD eQ replaces the one-to-many relationship restrictions that are found in traditional enterprise resource planning (ERP) systems and creates the many-to-many realm of community trading exchanges. It creates the ultimate organizationally neutral business model.

With Commerce Relationship Management, you can capture the knowledge of your entire supply chain, encompassing the roles, policies, and processes that define its personality and how you do business.

### Roles

For an organization or individual, a role determines **who** can perform the function in QAD eQ.

Multiple roles can be assigned to an organization or an individual. Examples of roles include seller, purchaser, pricer, invoicer, fulfillment planner, destination, and source.

The power of this design is that you can determine which organization or individual is responsible for one or more roles, which mirrors how business-to-business is actually conducted.

### Business Policies

Business policies define **how** a particular business process is conducted. Examples of business policies include selling terms, credit terms, payment terms, and delivery terms.

By associating these business policies with a unique role, QAD eQ not only provides the one-to-one personalization that is required in today's Internet supply chain, but also gives you the power to manage multiple unique business relationships in one software solution.

### Process Steps

Process steps define **what** actions are taken and their sequence. Examples of process steps for the order function are: order entry, price, credit check, tax, confirm, source, pick, pack, approve, ship, invoice, and post.

QAD eQ gives you the flexibility to define and to sequence the process steps of each order line for each customer and product combination. This unparalleled flexibility gives you a competitive edge in customer satisfaction.

## Product Management

### Items

QAD eQ uses the term “item” rather than “product” to refer to a unit of goods. Commerce Relationship Management manages and personalizes the items that are produced and sold.

Items can be uniquely personalized by associating them with the role that owns them. For example, to the seller, it is a selling item; to the purchaser, it is a purchasing item; and to the pricer, it is a pricing item.

The power of QAD eQ items is that an item's attributes can differ, depending upon the role that is using it.

For example, an inventory item can be defined with a unique Unit Of Measure (UOM). Then a selling item can have a defined UOM of pounds, while the pricing item has a UOM of cases.

Therefore, when an order is taken, QAD eQ would refer to the role's use of the item to determine the UOM.

Items may be identical, but companies give them different numbers, a situation that can be troublesome. QAD eQ resolves this situation quickly with a master cross-reference that automatically matches all identifiers for an item.

QAD eQ allows any number of company-specific identifiers to be attached to an item, in addition to supporting UPC, EAN, TAN, and other standard codes.



## E-Market Exchanges

Buying and selling behaviors are changing rapidly due to new e-economy rules of engagement. To maintain your competitive edge, your company will need to participate in this new Internet economy.

Participation in the e-economy can include:

- Accessing e-market exchanges through on-ramps.
- Hosting your own private e-market exchange.
- Being an e-market maker.

Are you ready?

### Exchange Market

No matter which industry analyst firm, accounting firm, or consulting firm that you talk to today, they all say the same thing: B2B e-commerce is growing exponentially.

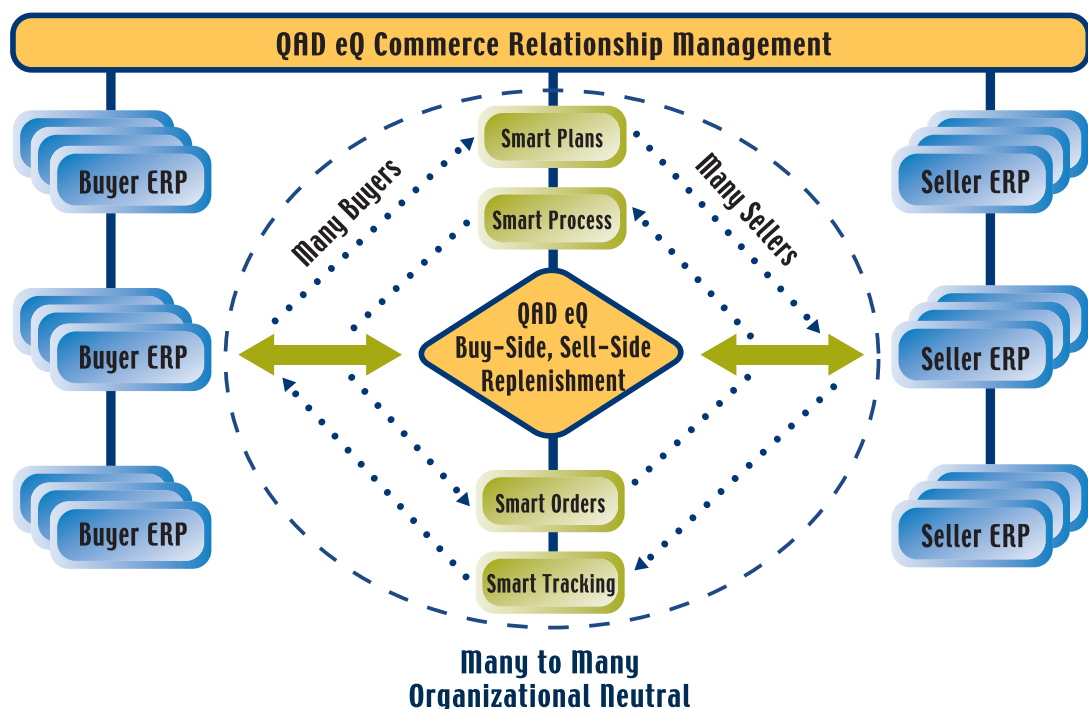
Gartner Group predicts that B2B e-commerce will be \$7.29 trillion by 2004. Forrester Group predicts that 70% of today's firms will participate in e-market exchanges for B2B e-commerce by 2002.

The value of e-market exchanges is:

- Ability to bring many buyers and sellers together in a single marketplace.
- More efficient and effective trading processes.
- Better flow of information and the ability to collaborate.
- Ability to reach new markets.

AMR places e-market exchanges into four categories: information, facilitation, transaction, and integration.

## QAD E-Market Exchanges



**QAD eQ is a new e-market exchange application. It provides for many-to-many commerce relationships.**

A more refined categorization of e-market applications consists of:

- Information
  - Content
  - Product Search Capabilities
- Facilitation
  - Collaborative Supply Chain Planning
  - Aggregate Catalog Management with Auctions and Reverse Auctions
- Transaction
  - Indirect/MRO Buying
  - Direct Material Buy-Side
  - Sell-Side
- Integration
  - Workflow
  - Integration with Back-Office Systems

Today, most applications for e-market exchanges fall into the categories of information and facilitation. E-market applications for information and facilitation are not designed for transaction processing beyond indirect MRO, or for integration with back-office systems.

For e-market exchanges to be successful, they need the functionality of all four areas, not just the first two.

QAD eQ is a new e-market exchange application that addresses the functionality of all four categories and specializes in the functional areas of transaction and integration. To be precise, QAD eQ excels in sell-side transaction and integration.

The key features of QAD eQ E-market Exchange application are:

- Exchange memberships and permissions
- Many-to-many relationships
- Web-based sell-side order management and fulfillment
- Personalized business transactions
- Integration with back-end systems
- On-ramp to other e-market exchanges
- Highly scalable, flexible application

### Exchange Memberships and Permissions

Membership in the e-market exchange is granted to organizations that are assigned the role of purchaser or seller.

Access to the exchange is limited to individuals who have been granted permission to perform business functions on behalf of a member organization.

After a role has been granted organization membership, access to each e-market exchange is based upon the following hierarchy:

- Position
- Permission Group
- Permissions

Positions can be individuals, departments, or any type of organizational unit. For example, positions can be defined for buyers, sales representatives, approval managers, and exchange managers.

If an individual is assigned the position of buyer, then he will only have access to the areas of the exchange application that are related to purchasing.

Permissions further define what function or tasks can be performed in the exchange, such as to confirm a purchase order or to override a list price.

In addition, QAD eQ has the ability to group permissions, thus simplifying the administration process. Aggregating permissions enables all of them to be granted at once.

You can be as general or specific with permissions and permission groups as is necessary. If you want some buyers to only have query capabilities and other buyers to have create, update, and delete capabilities, then QAD eQ provides this level of membership privileges.

For more details, see [Maintaining Security](#).

### Many-to-Many Relationships

Exchanges require many independent buyer and seller organizations to come together in one e-marketplace.

These may be multiple organizations from within the same corporation, such as multiple selling or buying divisions. They may also be separate legal entities, with their own ownership structure, financial reporting, and operating procedures.

QAD eQ Commerce Relationship Management allows any mixture of internal and external organizations to share specified resources and processes within an exchange while retaining their own identities and policies.

### Web-based Sell-Side Order Management and Fulfillment

QAD eQ provides a complete sales order life cycle – not just the Web order capture found in most e-commerce solutions today.

QAD eQ Sell-Side is designed to handle the complexity of large private and public e-market exchanges.

Functionality includes:

- Flexible, personalized orders
- Multiple ways to capture an order
- Order status and tracking
- Supply chain inventory
- Price and promotions
- Credit
- Available-to-Promise (ATP)
- Source
- Global taxes
- Invoice
- Industry- and country-specific sales order processes

For more details, see **Sell-Side**.

### Personalized Business Transactions

QAD eQ allows a personalized buying experience, even in the complex world of an e-market exchange. This is achieved through the role definition application, business policies, and process steps for each exchange member organization.

QAD eQ Commerce Relationship Management captures the knowledge of your entire supply chain, encompassing the roles, policies, and processes that define its personality and how you do business with each unique customer-buyer-product relationship.

### Integration to Back-End Systems

In the e-market exchange world, there are many different back-office systems. Again, to be successful, e-market exchanges will need to integrate with multiple back-office systems.

Key transaction integration points are:

- Inventory availability
- Credit check
- Shipment
- Inventory tracking
- Order status

QAD eQ provides the capability to completely integrate with various back-office systems. This integration is not only at the order level but also at the role level. Therefore, members in the exchange can determine which tasks are performed by the exchange and which tasks are performed by the company's back-office system.

For more details, see **Integrating the Supply Chain**.

### **On-Ramp to Other Exchanges**

A company will need access to many exchanges, and successful e-market exchanges will provide the capability to access other e-market exchanges.

QAD eQ gives you access to other e-market exchanges. This access can be performed in QAD eQ through facilitation, interfacing, or integration.

For more details, see **Integrating the Supply Chain**.

### **Secure, Scalable, Reliable Solutions**

All successful e-market exchange applications must be built on a scalable, reliable technology.

QAD eQ is based on IBM's WebSphere Business Components to assure scalable, reliable applications.

For more details, see **QAD eQ Architecture**.



## QAD eQ Architecture

Industry analysts estimate that more than 90% of today's Web order-entry systems are built as Web silos that are not integrated with back-office systems. Most of these systems will have to be replaced by new, integrated, Internet-based order systems.

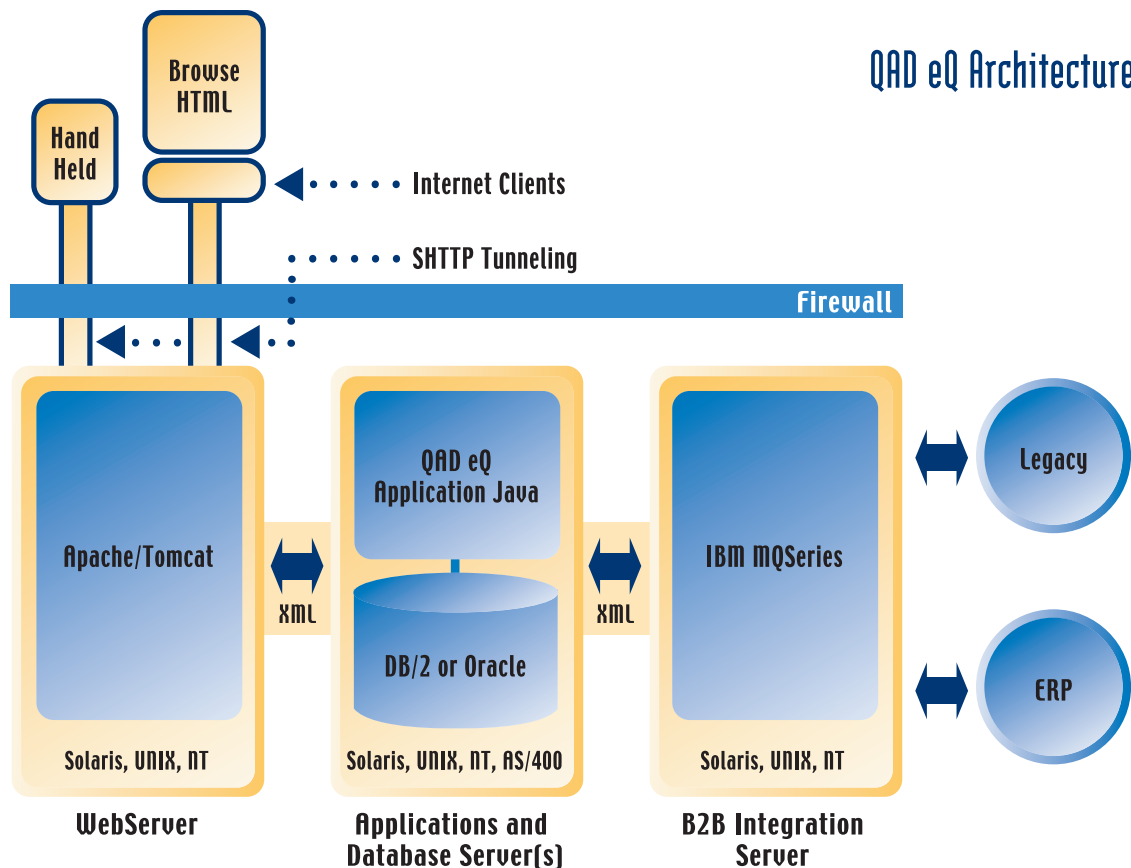
QAD eQ was built from the outset for B2B e-commerce. It is designed using Internet technologies and seamlessly integrates the entire commerce chain to its back-office systems.

To operate in this new community-centric e-market realm, QAD eQ takes advantage of the new and more powerful, platform-independent technologies, such as object-oriented (OO), Java, Servlets, JavaServer Pages (JSP), Dynamic HyperText Markup Language (DHTML), HTML, and XML.

By leveraging a distributed, multi-tiered architecture that encompasses a Web server, application server, and persistent data store, QAD eQ provides you the reliability, portability, and scalability to take your company into the future.

Several important advantages of the QAD eQ application architecture are:

- An application suite that can serve as a Web portal for your company, or be incorporated seamlessly into your existing corporate website.
- An Internet-based user interface (UI) powered by DHTML and JSP that allows you to easily link to other websites and to personalize the website for corporate and individual needs.



**QAD eQ Architecture**

**QAD eQ was built from the outset for B2B e-commerce. It is designed using Internet technologies and seamlessly integrates to back-office systems.**

- A Web server that takes advantage of an Apache and Tomcat Java engine combination to ensure secure transmission of your B2B data across the Internet.
- An application server that delivers high scalability and performance for an open, distributed, object-oriented B2B application suite.
- A Java-based set of business components that the application server leverages to extend and deploy robust, industry-specific applications for QAD vertical markets.
- A relational database system (RDBMS) persistence layer that allows you to choose either DB/2 or Oracle, two of the most powerful enterprise database servers on the market today.
- An architecture that is platform-independent and supports NT, Solaris, UNIX, AIX, and AS/400.

### Thin Client

The robust, multi-tiered architecture of QAD eQ, uses the latest Internet UI technologies to easily capture and display B2B information through your browser.

To connect with the thin client and direct all browser-based activity, QAD eQ leverages a Web server and Apache-Tomcat combination that has the advanced features and functionality required for B2B, B2C, and e-market exchanges.

The Apache-Tomcat combination provides secure, reliable connection across the Internet with a browser and ensures the transfer of rich B2B content.

The technologies that QAD eQ deploys include DHTML, HTML, JSP, XML, and Java Servlets, which provide a rapid, secure display of information. The QAD eQ interface is a true thin client that decouples the display of information from the application logic.

In addition, these technologies eliminate the need for any additional components, such as Java plugins or extensions, to reside on your client.

### Application Server

In QAD eQ, the application server is the command center, supporting the business logic that runs the application suite.

The application server acting as the command center:

- Communicates directly with the Web server to display rich data content on the client.
- Acts as a hub that sends and receives data from the persistence store.
- Integrates seamlessly with your back-end ERP and legacy systems.

### Application Components

QAD eQ takes advantage of a robust set of Java-based business components to build industry-specific applications for QAD's vertical markets.

By extending these components and drawing upon the power of object-oriented technology, QAD eQ creates a suite of community, e-market applications that provide a competitive domain advantage.

For example, the QAD eQ E-market Order application offers order life cycle management from capture through fulfillment.

QAD eQ application components consist of:

- Core business processes
- Common business objects
- Foundation

### Core Business Processes

Each core business process provides the robust components for a specific business domain in an object-oriented application.

The order management domain, for example, includes components for commerce relationship management, pricing, discounts, credit, sourcing, shipping, and invoicing.

Each core process contains the fundamental behavior and structure for the domain and provides extension points to customize. These extension points give QAD eQ the power to reshape any order format to your company's needs.

### Common Business Objects

QAD eQ Common Business Components are so visible that they may be invisible. Yet these unheralded workers pack a big punch.

- You add one to the software and use it everywhere.
- You modify it once, and apply it everywhere.
- Every enterprise transaction requires at least one.

You know them by the names of address, business partner, company, currency, credit check, initials, item, and UOM.

They perform the functions that are commonly needed across the QAD eQ business domains, such as in Commerce Relationship Management and Sell-Side.

QAD eQ takes full advantage of this rich set of common business objects and extends them, when necessary, to meet the demands of the manufacturing and distribution markets.

### Foundation

The foundation provides the plumbing services required to store, distribute, synchronize, and persist data on an RDBMS.

QAD eQ drew from this layer a set of basic classes and the fundamental services and utilities necessary to build business applications in a distributed network environment.

This layer provides the services that allow objects to survive beyond the life of a single application session, as well as mechanisms to lock objects and transaction services to ensure data consistency.

In other words, it resolves record locking and contention issues that continue to plague today's large software applications.

For cross-platform, distributed object management, QAD eQ provides consistent behavior and common methods of administration and support.



## Maintaining Security

Are security concerns for B2B transactions and communications causing you to hesitate?

QAD eQ incorporates the most formidable security tools on the market into its multi-tiered architecture to provide an e-market supply chain with safe, reliable, rapid transmission of data across the Internet.

### Architectural Security

QAD eQ leverages Tomcat, a Java Servlet engine that provides secure Internet communications through the use of a Java Secure Socket Extension (JSSE) package.

Tomcat is a world-class implementation of the Java Servlet 2.2 and JavaServer Pages (JSP) 1.1 specifications.

Tomcat's JSSE furnishes the Secure Sockets Layer (SSL) and the Transport Layer Security (TLS) support to the Java 2 Platform.

SSL is a public, key-based network security protocol widely used to authenticate, protect privacy, and ensure the message integrity of transactions made over the Internet.

JSSE enables QAD eQ to use secure, encrypted communication channels. By abstracting the complex underlying security algorithms and "handshaking" mechanisms, JSSE minimizes the risk of creating subtle but dangerous security vulnerabilities.

By using JSSE, QAD eQ can provide for the secure passage of data between a client and a server running any application protocol, such as HTTP, Telnet, NNTP, and FTP, over TCP/IP.

### Application Security

QAD eQ allows your company to create and administer user identifications and passwords that control all access. Your company can define the password policy that establishes rules about the format and expiration of passwords.

But QAD eQ goes beyond application access. It allows you to restrict a user to specific levels of work. These levels are:

- **Permission** – A permission is the lowest level of user privilege. It relates to a specific task that is performed in QAD eQ, such as to confirm a sales order or to enter a sales order.
- **Permission Group** – A permission group aggregates permissions, enabling all of them to be granted at once. For example, an employee in your Pricing Administration department can be added to QAD eQ and associated with a Pricing permission group that includes permissions to maintain pricing policies, list price agreements, and discount agreements.
- **Position** – A position is the highest-level of user privilege. At this level, the person performs a set of business functions on behalf of the organization. Examples include a customer service representative, product manager, and system administrator.

Through its architecture and applications, QAD eQ provides a secure environment for Web commerce.

## Integrating the Supply Chain

Two concerns often arise when a company weighs a move into the B2B arena: Can we leverage our existing investments in hardware and software, and can we fully integrate the disparate systems of the commerce chain?

With QAD eQ, the answer to both is definitely yes.

QAD eQ allows a company to take full advantage of its existing hardware investment by supporting a wide range of platforms, such as NT, RS6000, Solaris, HP-UX, Unix, AIX, and AS400. QAD eQ also supports the two most widely accepted enterprise databases, Oracle and DB/2 UDB.

In addition, QAD eQ does not require that a company replace its existing in-house software components.

QAD eQ combines the most widely used Internet messaging protocol, XML, with an open and robust components-based architecture to send and receive business data across your entire global supply chain in a safe, secure, and reliable manner.

### XML and XSLT

XML was created to describe and deliver richly structured data over the Internet.

eXtensible StyleSheet Language Transformation (XSLT) was created to improve application communication between XML and other communication protocols to significantly speed up transformation of XML files.

QAD eQ takes advantage of the XML-tagged data structure and a chain of servlets to pull, post, and translate messages bi-directionally, in either a synchronous or asynchronous fashion.

By using a transformer, such as XSLT, QAD eQ can send and receive messages and transform those messages into any of the most widely used schemas today, such as OAGI BODs, SAP, RosettaNet, etc.

### OAGI BODs

The Open Applications Group, Inc. (OAGI), a consortium of the leading enterprise software vendors, has applied XML to more than one hundred Business Object Documents (BODs).

These BODs, based on industry consensus, contain high-quality business content represented in XML.

QAD eQ takes full advantage of these standard BODs and the XML protocol to communicate seamlessly with the QAD flagship product, MFG/PRO, and other ERP systems such as SAP and Oracle.

In addition, many other well-known software vendors have adopted this BOD message standard. By adhering to this standard, a company could save thousands, if not millions, of dollars because the time required to integrate QAD eQ would be virtually nonexistent.

### QAD eQ Components

QAD eQ was built from scratch with no legacy code in place. Therefore, it can take full advantage of its object-oriented components when integrating with another system.

What does this mean to our customers? It means that we can integrate to any object that resides within the QAD eQ object schema. This open architecture alone positions QAD eQ light years ahead of other software vendors when it comes to the challenges of integration.

With QAD eQ, if a customer wants to send or receive data from one of the simplest component objects, QAD eQ can do the job. For example, if you want to synchronize all QAD eQ UOMs or payment codes between disparate application systems, the QAD eQ open integration architecture can do so simply and reliably.

With QAD eQ, you do not have to go back to legacy application server logic and place hooks in the code to direct data to be sent and received. And you do not have to write new integration programs to pull directly from your database schema.

### MOMs and Data Mapping

Beyond the QAD eQ XML integration architecture, other technologies are needed to queue, translate, interpret, and accurately deliver data and communications across the enterprise and across the Internet to the global supply chain.

For this important task, QAD eQ uses two types of Message-Oriented Middleware (MOMs): IBM's MQSeries and eXtensible StyleSheet Language Transformation (XSLT).

For secure, reliable, and guaranteed message delivery within the enterprise, QAD eQ takes full advantage of IBM's MQSeries product. If you have multiple disparate application servers behind your company's firewalls, where messages must be sent and received in a secure and reliable manner, a MOM, such as IBM's MQSeries, should be used.

For intra-enterprise integration, you not only need to guarantee message delivery behind your corporate firewalls using MQSeries, but you may also require a link to non-OAGI-

compliant ERP and proprietary legacy systems. The XSLT could then be used to transform these messages.

The XSLT transforms inbound data into a form for QAD eQ and converts outbound data back into the form used by the ERP or legacy system.

This data mapping capability allows QAD eQ to leverage one integration format and realizes the concepts of "write once and support many."

In the inter-enterprise, where you need to communicate outside your corporate firewalls – to a trade exchange or a third-party supplier, as an example – a Servlet engine such as Tomcat should be used. The Tomcat Servlet engine is located between your company's firewall and QAD eQ to provide for secure reliable data transmission over the Web.

The firewall penetration and synchronous messaging capabilities of these companion servers are the keys that integrate all the trading partners of the supply chain.

Within the enterprise and within the trading partner companies, IBM's MQSeries is used optionally to handle data transfer and asynchronous messaging between non-OAGI-compliant ERP and legacy systems.

QAD eQ integration with MFG/PRO is quite simple, using MFG/PRO Q/LINQ module and IBM's MQ Series.

### QAD eQ E-Market Chain Collaboration

A deeply nested supply chain, whether it stretches across a country or encircles the globe, can be represented in QAD eQ.

In QAD eQ, you can assign associated supply chain roles to ERP or proprietary legacy systems, multiple sites of trading partners, and external or internal exchanges.

By leveraging the flexibility of QAD eQ Commerce Relationship Management, a role can choose to hand off its responsibilities to the associated role or fulfill them itself. The role also can receive requests from the associated supply chain roles and take necessary action.

QAD eQ provides the ability to establish integration business policies for each role, setting up the collaboration to take place between the role and an associated role.

For example, QAD eQ provides confirmation of sent and received transactions, based upon the confirmation-level status that a role requires from the associated role, the trading partner's system.

In this way, you can set up the collaboration that needs to occur in the supply chain network. And the business policies can be modified to meet the ever-changing conditions of today's business environment.

QAD eQ indeed integrates the global supply chain, enabling your diverse, dispersed network to operate as an efficient, collaborative, cost-effective system – a requirement for success in the global B2B arena.

## Glossary

**Active Company** The company that is the principal party in the business transaction.

**Application Server** The middle tier in a three-tiered application architecture. In this differentiated architecture, the client tier handles the presentation layer or user interface (UI), the middle tier handles the application, and the third tier is the data source.

**Associated Role** A set of capabilities that enables a company or person to perform a particular function that helps a role to complete a business transaction.

**Auction** Also known as "Forward Auction." A technique used by a seller in public or private electronic exchanges to secure the best price among candidate buyers.

**Available-To-Promise (ATP)** The uncommitted portion of inventory or planned production.

**Back Office** Organizations that support and or work with the front office for sales organizations and companies. These include marketing and engineering organizations for managing products that can be sold, a pricing organization that manages pricing, a credit organization that manages customer credit, an inventory organization, and a shipping or order fulfillment organization.

**Base UOM** The standard unit used to measure quantities of goods, such as kilo, ounce, and can.

**Best Pricing** A policy that provides the lowest available price to an order or order line. A technique for calculating such a price.

**Bill-To Customer** A customer type that allows a customer, on behalf of a Sold-To Customer, to receive invoices for goods shipped or services rendered and to be responsible for payment. The Bill-To Customer can choose to have someone make the payment on his behalf.

**Break Group** A group of products whose order quantities or currency amounts are accumulated across order lines or orders and compared to price break amounts.

**Break Type** A control that determines whether amount (currency) or quantity (total number of items) is used to determine breaks in the price list. If quantity is the break type, price breaks are based on the number of items ordered. If amount is the break type, price breaks are based on the total extended list price of items ordered, measured in the price list currency.

**Business Item** A way to personalize an item by associating it with the role that owns it. For example, to a seller, it is a selling item; to a pricer, it is a pricing item; and to a fulfillment planner, it is a planning item.

**Business Object Document (BOD)** An Open Applications Group, Inc. (OAGI)-defined transaction format used to communicate among enterprise business applications. The BODs, based on industry consensus, contain high-quality business content represented in XML.

**Business Partner** A party with whom a company intends to do business and may designate as a customer or supplier. A company has to be listed as a business partner before it can do business in QAD eQ. Business partner denotes no legalized connection to the company that wants to do business with it.

**Business-To-Business** An industry term for a category of commerce involving two trading partners. Examples include transactions between a manufacturer and a distributor, or between a distributor and a retailer.

**Business-To-Consumer** An industry term for a category of commerce involving a transaction between an end consumer and a retailer. An example of B2C is buying a book from Amazon.com.

## Glossary (continued)

**Business Type** A category designation for items. The business types for items are planning, pricing, and selling.

**Calculation Type** A pricing policy that determines how price list discounts is to be combined: cascading or cumulative.

**Capacity-To-Promise (CTP)** The uncommitted capacity of planned production.

**Cascading** A way of combining multiple discounts by applying each discount in succession. This calculation is performed in QAD eQ by converting each discount to a discount factor and then multiplying the list price by each discount factor.

**Channel** A stratification of customers used to determine market strategies, such as retail and wholesale.

**Client** A client, also known as a client tier in software architecture, handles the user interface (UI), which is the computer through which the user interacts with the software. The client handles the presentation logic of the application but, in the simple client-server architecture, it can also handle the business or application logic.

**Combinable Discount** An incremental discount which may be combined with standard price lists or other combinable discounts.

**Combinability Type** A price list attribute that determines if it can be combined with other price lists.

**Common Business Objects** These objects perform the functions that are commonly needed across business domains in an application. These objects include address, business partner, company, currency, credit check, initials, item, and Unit of Measure (UOM).

**Company** A group of one or more people who gather together to do business. A company is the heart of doing business in QAD eQ.

**Company Identifier** An alphanumeric designation that points to a specific company.

**Conversion Factor** A numerical factor used to multiply a quantity expressed in one unit of measure to yield a quantity expressed in another unit of measure.

**Core Business Process** A core business process provides the common processes and object classes for a particular business domain in an application.

**Credit Checking** A process that enables the company to determine the credit limit of a business partner and the total owed by the business partner for shipped goods or ordered goods.

**Credit Hold** A stop placed on completion of an order, until the business partner makes payment on an outstanding balance.

**Credit Limit** The maximum allowable amount of unpaid invoices and open orders to be extended to a credit customer and expressed in a currency.

**Credit Policies** A set of business rules that a creditor uses to determine the creditworthiness of a credit customer and to manage payment for ordered goods and services.

**Credit Rating** A grade assigned by a creditor that indicates the credit worthiness of a credit customer. A creditor uses the grade to determine the credit customer's credit limit.



## Glossary (continued)

**Credit Terms** A clause describing how payment should be made, including conditions that may indicate the discount time frame, early payment discount and time frame, and/or other specifications for the delivery of the payment. An example is 2/10net30, which means that the buyer receives a two percent discount if he/she pays in 10 days; otherwise, the buyer must pay within 30 days.

**Creditor** A role that allows a company to authorize credit to a credit customer.

**Cross-Platform Transaction** A transaction that spans more than one database or server.

**Cumulative** A way of calculating discounts by combining multiple discounts before applying them to the list price. This calculation is performed in QAD eQ by converting each discount to a discount amount and then subtracting the sum from the list price.

**Currency** A monetary amount qualifier that a governing body assigns for use as a medium of exchange.

**Customer** A company or person who purchases goods or services from a seller in a business transaction.

**Customer Type** The role that the customer will perform in the sales transaction. For example, Bill-To Customer.

**Delivery Terms** Also known as "free on board" (FOB), it is the point at which the legal ownership of goods is transferred during the shipping process. The terms may indicate the point of origin or the destination. This designation by the seller may have insurance implications.

**Direct Material** The products that a manufacturer produces for sale.

**Discount** In pricing, a reduction from the list price.

**Discount Amount** A deduction from the list price, expressed in terms of an amount subtracted from list. Also, the amount deducted from the list price that is attributable to a particular price list.

**Discount Factor** A deduction from the list price, expressed in terms of a factor multiplied by the list price.

**Discount Percent** A deduction from the list price, expressed in terms of a percentage of the list.

**Discount Type** A pricing policy that determines whether discounts are to be regarded as percentages or factors.

**Distributed Architecture** When the business logic and database tiers are divided among multiple servers. It is also referred to as n-tiered architecture.

**Dynamic Hypertext Markup Language (DHTML)** An HTML document with dynamic content. The three components of DHTML pages are HTML, JavaScript, and cascading style sheets. The three components are tied together with the Document Object Model (DOM).

**E-market Exchange** An electronic marketplace where many buyers and sellers meet to determine prices and conduct business.

**Electronic Data Interchange (EDI)** A standard format for exchanging business data.

**Enterprise** One and only one company is given the name enterprise. It is the umbrella company in charge of QAD eQ and is responsible for the setup and maintenance of QAD eQ. Every company must have a parent, but the enterprise has no parent.



## Glossary (continued)

**Entry Format** The display format for the sales order.

**Enterprise Resource Planning (ERP)** An accounting-oriented information system for identifying and planning the enterprise-wide resources that are needed to take, make, ship, and account for customer orders.

**Exclusive Discount** A discount which may not be combined with any other discount.

**Extended List Price** The amount that results from multiplying the list price by the quantity ordered and then dividing it by the pricing quantity. For example, if the list price is 2 items for \$5, and 12 items were ordered, the extended list price is calculated by multiplying \$5 by the ordered quantity of 12, and then dividing the sum by the pricing quantity of 2.

**Extended Net Price** The amount that results from multiplying the net price by the quantity ordered or invoiced and then dividing it by the pricing quantity.

**eXtensible Markup Language (XML)** A universal format that allows software developers to easily describe and deliver rich, structured data from any application in a standard, consistent way.

**Facility** A building, group of buildings, or a site that serves as a warehouse for a company.

**Firewall** A set of related programs, located at a network gateway server, that protects the resources of a private network from users of other networks. The term also implies the security policy that is used within the programs.

**Freight** Goods transported by a vessel or vehicle, especially goods transported as cargo by a commercial carrier.

**Freight Charge** An amount demanded by a commercial carrier for transporting goods.

**Freight Terms** The terms of freight charges usually indicate when and from whom (seller or carrier) the customer receives an invoice. It also indicates if the charges are to be paid on delivery.

**Fulfillment Planner** A role that allows a party to determine the source or sources for ordered goods or services.

**Fulfillment Planning Policies** A set of rules set up by an active company that has been assigned a role of fulfillment planner.

**Hypertext Markup Language (HTML)** A universal format that is used for text and multimedia information on the Internet.

**Indirect Material** The materials and supplies that a manufacturer needs to produce products.

**Invoicing** The process of producing a bill for goods or services purchased. The bill, or invoice, includes pertinent information regarding the quantity, price, terms, nature of delivery, etc.

**Invoicer** A role that allows a party, on behalf of a seller, to generate invoices for payment of goods or services ordered and shipped.

**Internet Kanban** A term coined for the Internet from a methodology of inventory control that uses cards to control the flow of parts within work centers on the manufacturing floor.

**Item** A product or service that can be bought, sold, transported, exchanged, or otherwise agreed upon inside the QAD eQ domain.

**Java** A programming language expressly designed for use in the distributed environment of the Internet.

## Glossary (continued)

**Java Servlets** A servlet is an applet that runs on the server side. Written in Java, servlets are server- and platform-independent. They provide a simple, consistent mechanism for extending the functionality of a Web server and for accessing existing business systems.

**JavaServer Pages (JSP)** An extension of the servlet technology created to support authoring of HTML and XML pages. It makes it easier to combine fixed or static template data with dynamic content.

**Limited Discount** An incremental discount that may only be combined with standard price lists.

**Manual Promotion** During order entry, a price list that must be selected to qualify for a manual promotion. All other qualification requirements still apply. A manual promotion can be used when a coupon or proof of participation must be submitted.

**Maintenance, Repair, Operating Supplies (MRO)** Items used in support of general operations and maintenance, such as maintenance supplies, spare parts, and consumables used in the manufacturing process and supporting operations.

**Maximum Allowable Net Price** An upper limit that is associated with a list price on the calculated net price.

**Maximum Quantity** In pricing, an upper limit on the quantity or monetary amount ordered, depending upon the break type. For example, if the accumulated order quantity is greater than the maximum quantity assigned to a price list, then that price list will not qualify.

**Measurement System** A set, consisting of units of differing magnitude along a common scale, together with conversion ratios among these units. See Unit of Measure.

**Message-Oriented Middleware (MOM)** A class of software that provides data or message transport services between applications, when the source and destination applications are typically distributed on different platforms and development/run-time environments. Software that exchanges asynchronous client/server messages using message queues.

**Minimum Allowable Net Price** A lower limit that is associated with a list price on the calculated net price.

**Net Price** The amount charged for a product on an order after all discounts have been deducted.

**Object-Oriented Technology (OO)** A set of principles guiding software construction, together with languages, databases, and other tools that support those principles. The defining principles are encapsulation, polymorphism, and inheritance.

**Order** A buying or selling transaction between a company and its business partner, in which goods or services are exchanged for payment.

**Payment Method** The way in which a seller receives payment from a purchaser.

**Payment Terms** A clause describing how payment should be made, including conditions that may indicate the discount time frame, early payment discount and time frame, and/or other specifications for the delivery of the payment. An example is 2/10net30, which means that the buyer receives a two percent discount if he/she pays in 10 days; otherwise, the buyer must pay within 30 days.

**Permission** A set of related actions, such that assigning a permission to a user assigns the associated action types as well.

## Glossary (continued)

**Person** A role that people can perform in QAD eQ.

**Persistent Data** Data that stays until it is explicitly deleted.

**Planning Item** An item associated with a fulfillment planner.

**Platform Independence** The ability of a program to run on nearly any kind of computer. Java programs are platform-independent.

**Position Type** The role a person plays in using the QAD eQ system.

**Postal Address** A customer or company's location, which includes information such as the street, city, state, country, and postal code.

**Price Break** The lowest level of detail for a price list, in which a particular discount or net price is tied to a particular quantity or monetary amount, depending upon the break type. For example, the greatest price break for a price list, if it is no greater than the quantity or monetary amount ordered, is the price break, that determines the discount or net price.

**Price Break Amount** The quantity or monetary amount (depending upon break type) of a price break which is compared to the quantity or amount ordered.

**Price List** A set of list prices, discounts, or net prices set up for specified sets of customers and items to implement all or part of an organization's basic pricing structure or a promotion.

**Pricer** A role that allows a company, operating on behalf of the seller, to price goods or services.

**Pricing Categories** Groupings of pricing structures.

**Pricing Customer** A customer type that allows a company, operating on behalf of a Sold-To Customer, to bargain with a pricer so that goods or services ordered by a Sold-To Customer may be priced.

**Pricing Item** An item associated with a pricer.

**Pricing Method** A technique for calculating or controlling the lowest available price on an order line or order. QAD eQ offers two choices: best pricing or priority pricing.

**Pricing Policies** A set of business rules that a pricer uses to manage price lists and to calculate and display prices. Pricing policies are:

- Round Net Prices (before extending/after extending)
- Discount Rounding Factor
- Default Pricing Date (order date/delivery date/shipping date/requested date)
- Discount Type (factor/percentage)
- Pricing Method (best pricing/priority pricing)
- Calculation Type (cascading/cumulative)
- Allow Manual Overrides (yes/no)

**Pricing Quantity** The quantity of an item to which a price is applied, as in 50 cents per 100.

**Priority Pricing** A policy to provide a controlled but not necessarily the lowest price, such as a contractual price, to an order or order line. A technique for controlling such a price.

**Product Line** A specific designation for one or more related products.

**Promotion** A marketing technique that usually involves reducing prices to increase the sale of items under a set of conditions.

## Glossary (continued)

**Purchase Order (PO)** The purchaser's authorization that is used to formalize a purchase transaction with a supplier.

**Purchaser** A role that allows a party to buy goods or services.

**Relational Database Management System (RDBMS)** A methodology for storing and retrieving data from disk storage.

**Replenishment** The process of replacing material that has been consumed in a business operation. QAD eQ automatically generates orders for replenishment.

**Request for Proposal (RFP)** A document that describes requirements for a system or product and requests proposals from suppliers.

**Request for Quotation (RFQ)** A document that describes requirements for a system or product and requests quotations from suppliers.

**Reverse Auction** A technique used by a purchaser on public and private exchanges to secure the best price among candidate suppliers.

**Role** A set of capabilities that enables a company or person to perform a particular business function.

**Sales Order Line Status** The state of an order line during the order entry process.

**Sales Order Status** The state of an order during the order entry process.

**Sales Order Type** Whether or not the order is a quote or regular sales order.

**Scalability** In Information technology, scalability has two uses: 1) It is the ability of a computer application or software product to continue to function well as it is changed in size or volume to meet a user's need. 2) It is the ability not only to function well in the rescaled situation, but also to actually take advantage of it.

**Schema** A description of a database's structure—the tables it contains, the fields within the tables, views, etc.

**Seller** A role that allows a party to act as the vendor of goods or services.

**Selling Item** An item associated with a seller.

**Selling Policies** A set of business rules that a seller uses to manage a sales transaction in QAD eQ.

**Ship-To Customer** A customer type that allows a customer to receive shipped goods.

**Shipping Item** An item associated with a shipper.

**Sourcing** The process of identifying potential firms that could provide needed products or services for the acquiring organization.

**Standard Discount** A standard discount agreement for customers—expressed in terms of discount amount, discount percent, markup, or net price—that serves as the basis for additional discounts and may be combined with combinable or limited discount agreements, but not other standard or exclusive discount agreements.

**Term of Delivery** The way in which the goods or services are delivered based on the monetary exchange between purchaser and seller.

## **Glossary** (continued)

### **Thin Client or Three-tiered Architecture**

Processing is split between: 1) clients run-ning the UI logic, 2) the application server running the business logic, and 3) the database. Also referred to as a three-tiered architecture.

### **Two-tiered or Fat-client Architecture**

The application and database processing is separate. Usually the application logic runs on the client with all the database activity performed on a dedicated database server.

**Unit Category** The name of a specified group-  
ing of units of measure.

**Unit of Measure (UOM)** A designation, used  
in conjunction with an item quantity, to select  
a specific magnitude. For example, a liter is  
a unit of measure of the metric measurement  
system, and a quart is a unit of measure of  
the U.S. weights and measurements system.

**User Interface (UI)** An interface that enables  
information to be passed between a human  
user and the software components of a com-  
puter system. Also, the portion n of an appli-  
cation that is visible to an end-user on the  
computer screen.

**Warehouse** A facility that is operated by a  
company to receive, store, and ship goods.

**Warehouse Item** A business item that is  
stocked or otherwise accommodated in a  
company's warehouse.

**Web Portal** A website or service that offers  
a broad array of resources and services, such  
as e-mail, forums, and search engines.

**Web Server** Although considered part of the  
middle-tiered application server, the Web  
server plays a key role in supporting the pres-  
entation layer or UI. It primarily supports  
the presentation layer by connecting with the  
client and directing all browser-based activity,  
while the application supports the business or  
application logic that runs the application.



Look for us on the World Wide Web at: [www.qad.com](http://www.qad.com)

## QAD Offices

Australia	India	Netherlands	Thailand
Brazil	Ireland	New Zealand	Turkey
Canada	Japan	Poland	United Kingdom
China (PRC)	Korea	Singapore	United States
France	Malaysia	South Africa	
Germany	Mexico	Spain	

## QAD Distributor Locations

Argentina	Finland	Malaysia	South Africa
Austria	France	Mexico	Spain
Belgium	Germany	Netherlands	Sweden
Brazil	Hungary	New Zealand	Switzerland
Bulgaria	India	Nigeria	Taiwan (ROC)
Chile	Indonesia	Norway	Thailand
China (PRC)	Ireland	Philippines	Turkey
Colombia	Israel	Poland	United Kingdom
Czech Republic	Italy	Romania	United States
Denmark	Kenya	Saudi Arabia	Venezuela
Egypt	Korea	Singapore	Zimbabwe

### Corporate Headquarters

**QAD Inc.**  
6450 Via Real  
Carpinteria, CA 93013  
USA  
Tel: +1 805 684 6614  
Fax: +1 805 684 1890

### Major Offices

**QAD Inc.**  
10,000 Midlantic Drive  
Suite 200 East  
Mount Laurel, NJ 08054  
USA  
Tel: +1 856 273 1717  
Fax: +1 856 273 1030

**QAD Asia Pacific**  
3002 Office Tower  
Convention Plaza  
1 Harbour Road, Wanchai  
Hong Kong  
Tel: +852 2827 1283  
Fax: +852 2827 1709

**QAD Europe B.V.**  
Neptunusstraat 23-29  
2132 JA Hoofddorp  
Netherlands  
Tel: +31 23 5695 295  
Fax: +31 23 5623 446

**QAD Australia Pty Limited**  
Level 7  
15 Talavera Road  
North Ryde, NSW 2113  
Australia  
Tel: +612 9857 3000  
Fax: +612 9872 7340

Look for us on the  
World Wide Web at:  
[www.qad.com](http://www.qad.com)

