

Supplier Automation Solutions

Background	Pantellos offers advanced capabilities for supplier integration with the Pantellos Marketplace, enabling suppliers to receive and respond to electronic documents originated by buyers in the Pantellos Marketplace.
Issue	In order to assist suppliers in making a strategic decision on their integration approach to the Pantellos Marketplace, Pantellos must communicate its technology standards and the available options for document-based integration to the Pantellos Marketplace.
Approach	<p>Pantellos' Marketplace solution is based on an open technology platform and XML document interchange architecture. Within the Marketplace, all document transactions are XML-based.</p> <p>Pantellos currently supports the xCBL 2.0 document standard for transactions in the Marketplace:</p> <ul style="list-style-type: none">• Purchase Order• Purchase Order Response• Purchase Order Status Request and Response• Availability Check and Response• Price Check and Response <p>In the future Pantellos will support numerous additional xCBL and other XML-based transaction types for integration with the full suite of Solutions and Services available in the Pantellos Marketplace.</p> <p>Pantellos provides integration options for suppliers who are compliant with either of the following two electronic document standards for suppliers:</p> <ul style="list-style-type: none">• The xCBL 2.0 specification• The ANSI X.12 EDI specification* <p>* Using one of the EDI Solutions outlined in this document</p>
Solution	<p>Suppliers have the following options available to exchange documents with buyers in the Pantellos Marketplace. This document presents each of these options in detail, along with information to assist suppliers in making their strategic integration decisions.</p> <ul style="list-style-type: none">• Hosted Solutions:<ul style="list-style-type: none">• Supply Order• XML Integrated Solutions:<ul style="list-style-type: none">• webMethods*• Independent Software vendor products• Commerce One XPC connector• EDI Solutions:<ul style="list-style-type: none">• The Pantellos XML-EDI Gateway• webMethods* and other Integration Platforms <p>* webMethods is the preferred Integration Framework for the Pantellos Marketplace.</p>
Next Steps	Suppliers can contact Pantellos to learn more about these solutions. Pantellos will continue to publish documents that provide more detailed information on webMethods, the Pantellos XML-EDI Gateway, and other solutions referenced in this Position Paper. All of these documents will be available in the Pantellos Marketplace at https://www.pantellos.com/marketplace .

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Overview: Document-Based Electronic Transactions

Marketplace Transaction Flow

The Pantellos Marketplace currently supports five automated procurement transactions:

- Purchase order
- purchase order response
- Price check request/response
- Availability check request/response
- Order status request/response

Note: Additional transactions such as Invoice, Advance Ship Notice, Order Change and Cancellation are currently under development.

The following figure depicts a typical procurement transaction flow through the Pantellos Marketplace, including in this case both purchase order and purchase order response transactions:



Marketplace Transaction Standards

Each Marketplace transaction consists of an exchange of electronic documents between buyers and suppliers. In order to transact through the Pantellos Marketplace, the documents used in these transactions must conform to Pantellos' transaction standard.

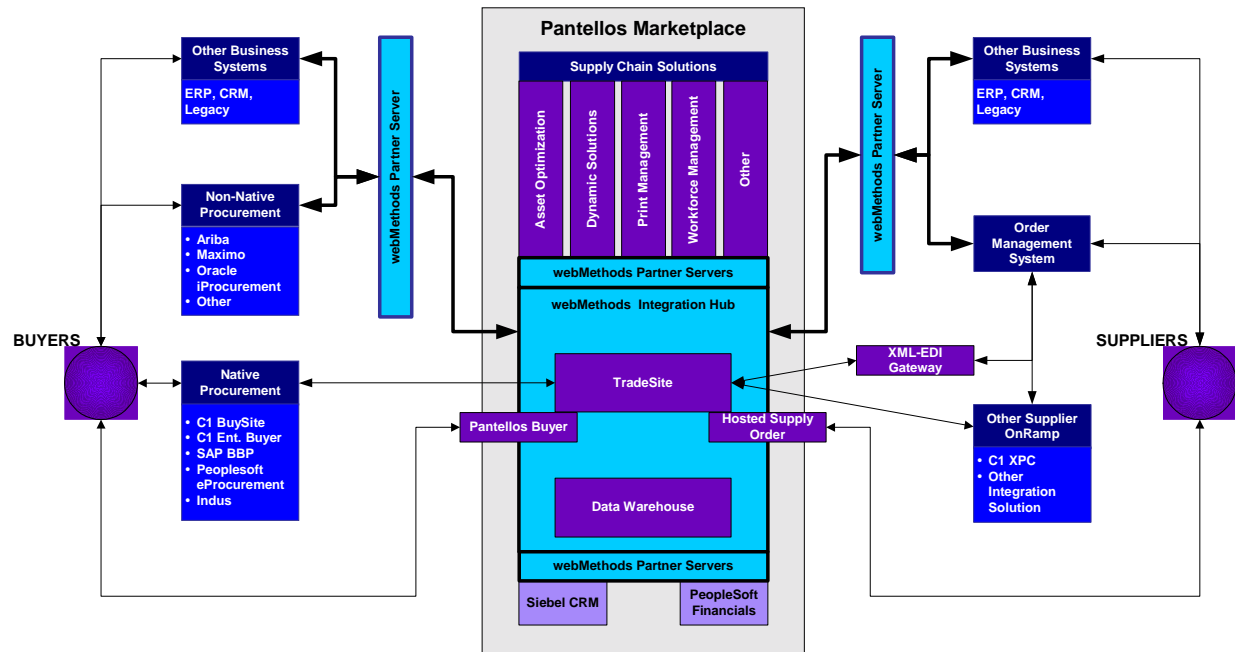
The Pantellos Marketplace uses XML (extensible Markup Language) to define and standardize all automated transactions. The power of XML as a standards definition language is that it creates uniform transaction documents, ensuring that all trading partners in the Marketplace can interoperate successfully, while allowing for future extensions to transaction documents as well as definition of new documents.

The current Pantellos document standard is based on the xCBL 2.0 document standard. xCBL (XML Common Business Language) is an open standard for business documents, enabling business-to-business commerce over the Internet. All of the solutions outlined in this document fully support this standard. Comprehensive information on xCBL can be found at the xCBL website: <http://www.xcbl.org>. Pantellos' xCBL Specification Standard is available in the Pantellos Marketplace at <https://www.pantellos.com/marketplace>.

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Transaction Solutions

The following diagram provides an overview of the Pantellos Marketplace Integration Framework.



Pantellos has selected webMethods as its preferred Marketplace Integration technology. In addition to webMethods, there are many solutions available to suppliers to allow them to automate their processes and transactions with the Marketplace. Pantellos supports each supplier's choice of the transaction solution best suited to their needs, subject to them conforming to our transaction document standards, and meeting our Certification requirements.

The remainder of this document will describe the solutions available to suppliers to automate their transactions with the Marketplace.

Hosted Solutions

Hosted Solutions provide the supplier with web-based applications to interact with the Pantellos Marketplace. This application resides at the Pantellos Marketplace and a supplier connects to it via the Internet to receive and process the electronic documents. No infrastructure (other than a web browser) is required.

SupplyOrder

Many suppliers begin to transact with Pantellos Marketplace using SupplyOrder. SupplyOrder is a web-based application that enables suppliers to interact with the Pantellos Marketplace in the following ways:

- View, print, and download purchase orders
- Update purchase order status
- Receive email notification of Purchase Orders requiring attention

To use SupplyOrder, suppliers need the following:

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- Internet access
- Web browser (Microsoft Internet Explorer 5.0 or Netscape Navigator 4.5)
- Individual(s) assigned to respond to orders, upload catalog content, and update price and availability information

SupplyOrder offers manual Purchase Order processing and the ability to respond to price and availability requests automatically with no initial integration investment. This option is suitable for suppliers who:

- Have a low transaction volume
- Need a solution to transact immediately through the Pantellos Marketplace

Integrated Solutions

Integrated Solutions allow the supplier to send and receive electronic XML-based documents directly with the Pantellos Marketplace, and map those documents to transactions in their enterprise systems for processing. This is accomplished via an integration platform that resides in the supplier's enterprise.

The options available for suppliers to integrate to the Pantellos Marketplace are:

- Integrating using webMethods, the preferred approach for integration to the Pantellos Marketplace
- Integrating using other Commerce One-certified independent software vendors' products
- Integrating using Commerce One's XML Portal Connector (XPC)

Integration using webMethods

Pantellos has selected webMethods as its preferred Marketplace Integration Framework for the Marketplace. Pantellos has a number of programs in place to assist suppliers with integration using webMethods, such as access to technical information & resources, and preferred Systems Integrators.

A webMethods Partner Server, implemented within the supplier's enterprise, provides the supplier with the capability to:

- Connect to the Pantellos Marketplace to exchange xCBL documents
- Connect to the supplier's order management system
- Translate their order management system's internal document format to Pantellos' xCBL document format

webMethods provides a wide variety of "connectors" to allow integration between almost any supplier's system and the Pantellos Marketplace.

In addition, the webMethods platform can easily be scaled to support additional documents, and to integrate multiple supplier systems and multiple marketplaces. As an example, this capability would allow the supplier to become an integrated Buyer on the Pantellos Marketplace. This option is suitable for suppliers who:

- Have a large transaction volume
- Have automated Order management systems

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More information on webMethods is available in the Pantellos Marketplace at <https://www.pantellos.com/marketplace>.

Integration using Independent Software Vendors' Products

There are many Independent Software Vendors (ISVs) who have developed products that will help suppliers automate their transactions with the Pantellos Marketplace. These independent software vendors are categorized into "*Integration Vendors*" and "*Sell Side Vendors*".

Integration Vendors

"Integration" vendors deliver a system integration platform focused mainly on enabling the electronic exchange of documents between the Pantellos Marketplace and suppliers' Order Management systems. These solutions do not typically address the management of content, prices files etc., but provide robust XML-based document integration.

These platforms, implemented within the supplier's enterprise, provides the supplier with the capability to:

- Connect to the Pantellos Marketplace to exchange xCBL Documents
- Connect to the supplier's order management system
- Translate their order management system's internal document format to Pantellos' xCBL document format

The following is a list of some of the vendors that have connectors that enable suppliers to integrate with the Pantellos Marketplace:

- webMethods
- RioLabs
- eXcelon
- Neon
- Progress Software

These Integration Vendors do not provide a full "suite" of applications, but do enable suppliers to integrate by providing the "connector" software that allows the supplier to receive and send electronic documents from a wide range of marketplaces. This option is suitable for suppliers who:

- Have a large transaction volume
- Have automated Order Management systems

Sell Side Vendors

"Sell Side" vendors are those that provide a platform with a full "suite" of applications to enable suppliers to integrate to multiple marketplaces, including the Pantellos Marketplace. This solution may be suitable for suppliers who are seeking a better way to manage their total e-commerce efforts.

These solutions typically provide the following capabilities:

- built-in connectors to Commerce One powered marketplaces for xCBL document exchange
- tools to manage creation and delivery of catalog and price files to multiple marketplaces in required format
- RoundTrip support (not in all cases)

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The following is a list of some of the vendors with Sell-Side solutions compatible with the Pantellos Marketplace:

- HAHT
- Intershop
- InterWorld
- Ironside
- NetVendor
- Pivotal
- Trigo

These vendors have partnered with Commerce One, allowing them to develop and re-sell custom code that communicates with the Pantellos Marketplace providing standard interfaces for Marketplace transactions and catalog operations. The connector solutions offered by NetVendor, Intershop, InterWorld, and HAHT are targeted towards mid-tier to large enterprises and for direct materials procurement, whereas the Ironside connector solution is targeted towards small to mid-tier enterprises.

These Independent Software Vendors have created e-commerce software that meets suppliers' needs for catalog management and integration to Commerce One powered marketplaces such as the Pantellos Marketplace. Many of these products also work with other non-Commerce One marketplaces. This option is suitable for suppliers who:

- Wish to interoperate with multiple marketplaces, and/or support a direct e-commerce website
- Have a large transaction volume
- Require a Marketplace-compatible catalog management solution

Integration using XML Portal Connector (XPC)

XPC is a stand-alone server that connects to the Pantellos Marketplace. It provides file exchange capability with simple Java API's for creating a complete automation interface to back-office systems. It is often possible to incorporate XPC into an existing Internet integration platform, offering the best way to leverage existing tools. XPC is based on Commerce One's XML Commerce Connector™ (XCC), which provides secure, efficient, authenticated and validated communication with the Pantellos Marketplace. XPC is a document-based integration tool that allows suppliers to:

- Connect to the Pantellos Marketplace to exchange xCBL Documents
- Translate their order management system's internal document format to Pantellos' xCBL document format (requires Java programming)

XPC is a basic "framework" that must be configured as part of the integration process, which can be a fairly intensive effort requiring Java programmers and system integration consultants. Suppliers choosing this integration option are those who:

- would like to control the integration tool themselves and might have special needs not handled by an independent software product
- Have a large transaction volume

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EDI Solutions

For suppliers who have existing EDI-based Order Management systems, Pantellos offers solutions to enable those systems to transact through the Marketplace with minimal impact to the supplier. These solutions offer a transition path for suppliers from EDI to XML.

The Pantellos XML-EDI Gateway

This solution, powered by GE Global exchange Services (GXS) offers a network-based document translation service for EDI-based suppliers, allowing these suppliers to continue to send and receive EDI documents while transacting through the Pantellos Marketplace.

The GXS Services Electronic Commerce Service Center (GXS ECSC) acts as the “gateway” between the Pantellos Marketplace and the supplier’s EDI VAN. At this gateway, translation is done between xCBL and EDI. The EDI documents are then routed between the gateway and the supplier using normal EDI VAN mechanisms, appearing to the supplier as any other EDI transaction.

This service supports only the Purchase Order and Purchase Order Response transactions. The following document translations are supported:

- From the Pantellos Marketplace to the supplier: xCBL 2.0 Purchase Order to EDI ANSI X.12 850
- From the supplier to the Marketplace: EDI ANSI X.12 855 to xCBL 2.0 Purchase Order Response

A standard map for each of the 2 EDI documents (850, 855) is provided as part of the service. The supplier will be required to implement this map within their EDI systems.

Since the solution is network-based, as long as the supplier currently supports EDI, and is on the GXS VAN or another VAN with interoperability with GXS, no additional infrastructure is required within the supplier’s enterprise.

This solution is suitable for suppliers who:

- Currently use EDI
- Need to support only PO and PO Response transactions

For more information on this solution, visit the Pantellos Marketplace at <https://www.pantellos.com/marketplace>.

webMethods and other Integration Vendors

Integration platforms such as **webMethods** and others provide packaged EDI connectors to allow suppliers’ EDI systems to interoperate (via the integration platform) with the Pantellos Marketplace. These solutions provide the supplier with the capability to leverage their current EDI systems, but add the ability to scale to support direct integration to the suppliers systems, and also to scale to support transactions beyond the scope of the EDI specification.

These platforms, implemented within the supplier’s enterprise, provides the supplier with the capability to:

- Connect to the Pantellos Marketplace to exchange xCBL documents
- Connect to the supplier’s EDI system to exchange EDI documents
- Translate between their EDI document format and Pantellos’ xCBL document format

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In a typical initial implementation of this solution, the Integration Platform would receive xCBL documents from the Marketplace, translate them to the supplier's EDI format, and then transmit them to the supplier's EDI-based Order Management system via file transfer.

While these solutions do require infrastructure within the supplier's enterprise, they support the complete set of transactions and associated xCBL documents available in the Pantellos Marketplace, and can easily be scaled to support future transactions and integration to additional supplier systems.

This solution is suitable for suppliers who:

- Currently use EDI
- Want to support all Pantellos Marketplace transactions
- Plan to transition to XML-based e-commerce

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Appendix

Solution Comparison Matrix

This table provides a summary of some of the Pros and Cons associated with each solution described in this paper. It is a generic list; each supplier should develop their own case for a particular solution based on their unique business requirements.

Solutions		Pros	Cons
Hosted Solutions	Supply Order	<ul style="list-style-type: none"> • Rapid adoption • No infrastructure or systems integration required 	<ul style="list-style-type: none"> • Manual process • Not suitable for high order volumes • Limited documents supported
Integrated Solutions	WebMethods	<ul style="list-style-type: none"> • Pantellos programs in place to assist suppliers with integration • Ability to support many system interfaces 	<ul style="list-style-type: none"> • Infrastructure and systems integration required
	Other Integration Platforms	<ul style="list-style-type: none"> • Ability to support many system interfaces 	<ul style="list-style-type: none"> • Infrastructure and systems integration required
	Sell-side Platforms	<ul style="list-style-type: none"> • Robust solution – typically manages content and transactions 	<ul style="list-style-type: none"> • Infrastructure and systems integration required • Possibly lengthy implementation times
	Commerce One XPC	<ul style="list-style-type: none"> • Minimal software / infrastructure required 	<ul style="list-style-type: none"> • Advanced programming skills required • Possibly lengthy implementation times
EDI Solutions	Pantellos XML-EDI Gateway	<ul style="list-style-type: none"> • No infrastructure required • Minimal impact to EDI suppliers 	<ul style="list-style-type: none"> • Limited documents supported
	WebMethods and other Integration Platforms	<ul style="list-style-type: none"> • All xCBL-EDI documents supported • Easy transition to more robust integration 	<ul style="list-style-type: none"> • Infrastructure and systems integration required

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Integration Project Life Cycle

An integration project typically follows a project life cycle of four phases. The length of this process varies according to the integration documents selected, the supplier's pre-existing infrastructure, and the availability of staff at the supplier site. An existing automated document processing environment and a strong management commitment to an automation project can result in a project length of only a few weeks. The four phases are:

Assessment and Planning:

- Determine the high-level requirements for integration, based on:
 - Which transactions will be supported
 - Which Order Management system(s) will be integrated
 - Your I/T standards and requirements for future functionality
- Select a suitable Integration Solution
- Select a Systems Integrator, if required
- Create a project plan with clear objectives & scope

Integration Design:

- Complete detailed requirements
- Design processes and business rules for data transformation
- Create system architecture
- Develop test plans

Technology Integration and Development:

- Install and configure the required systems
- Design and Develop the necessary data transformation to support the transactions
- Conduct internal systems testing
- Conduct testing in the Pantellos Test Facility

Rollout:

- Train end-users
- Complete the Pantellos Certification process
- Transition from testing to production environment
- Execute transactions through the Pantellos Marketplace

For additional information:

Please contact Pantellos at technology@pantellos.com , or 877 777 4888.