E-COMMERCE & SUPPLY CHAIN INTEGRATION

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Single word which excites anyone in today's world is E-Commerce. It is changing the every aspect of the way we communicate & transact the business. The E-Commerce is expanding & will touch every man on the street.

80% of the business in the world has to incorporate the process of Supply Chain Integration for the Business of flourish. Supply Chain Integration is the main area of concern for every business establishment.

In simple words, if a company has to make a product, it must be sure that the store has the stocks of the required components. As the stock level diminish, they must be sure that they order the next lot at the right time. Sometime there can be immediate orders to be completed & there may be sluggish times for the product.

Keeping all these parameters in the mind, the companies has to have a Supply Chain Integration (SCI), so that they have the optimum levels of stocks & supplies.

The Complicity at the manufacturer's End

The manufacturer does not want to lose its shareholders in the process of implementing an expensive SCI.

The technology which is currently running is EDI (Electronic Data Interchange). It was better then the historical manual processes & Other hotch-potch solutions but E-commerce offers still better ways to do things.

Now we put In lace the requirements of Manufacturer X:

1. The System must integrate with Manufacturer X's existing MRP system.
2. Manufacturer X must communicate with its suppliers & customers over the internet. Private network solutions are too costly.
3. Access to manufacturer data must be Secure & accessible to registered users.
4. The efforts & expenses required of both manufacturer X & its suppliers must be minimized.
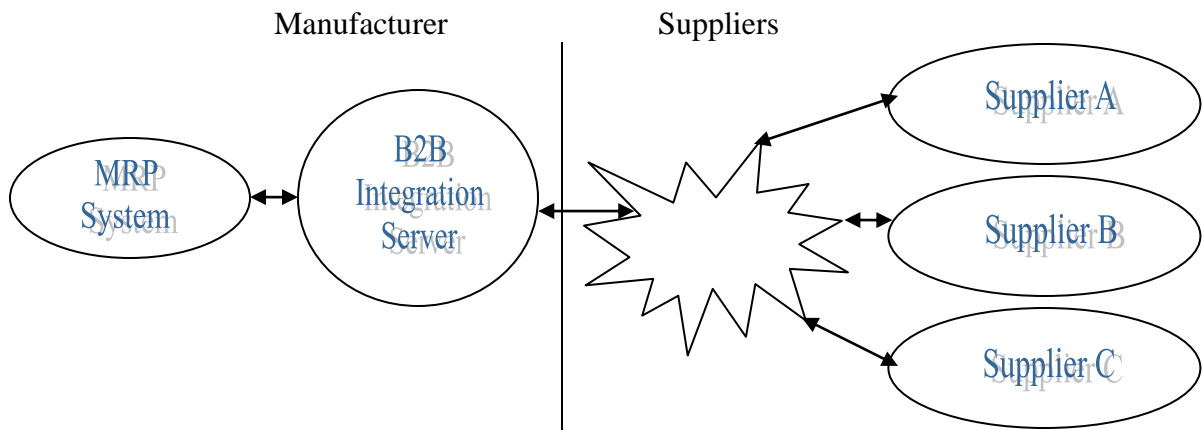   So, what we need is actually a tool which allows disparate applications to interoperate over the web.

B2B integration server:

The companies worldwide are employing different databases, tools & products at the front-end & Back-end of their applications, so there must be a server which must enable the different applications to communicate between themselves on the net despite all the difference.

There must be an abstract agreement on the services offered by the server & server can use some kind of Web Interface definition Language (WIDL) which can be a subset of SGML (Standard Genralized Markup Language).

It will make existing databases accessible though the web. We will say it web data.

Manufacturer   Suppliers

Supply Chain Integration Architecture

Providing Suppliers with Manufacturer Services

Here B2B (Business-to-Business) Integration Server sits on the manufacturer's site and Mediates all exchanges between suppliers and the manufacturers. B2B assumes responsibility for hiding network, protocol, and security issues from the supplier and manufacturer systems, and hiding differences that how the system is interfaced.	This request/reply mechanism for accessing services is called Remote Procedure Call (RPC).
	Plug-In
The supplier issue requests into calls to the MRP system. It then translates responses from the MRP system into XML reply messages that it sends back to the supplier.	The plug-in code that Manufacturer X wrote to communicate with its MRP system. It is written in Java and exposes an interface to the B2B server, Server Stub.
	It is a portion of code that links into the plug-in and that allows the B2B server to invoke an API that the lug-in exposes.

The Supplier Services will Comprise the second half of the complete Integration Solution. These services give the manufacturer access to supplier inventory levels & delivery schedules.

Client Stub

Client stub provides APIs (Application Programming Interfaces). That the Plug-in calls to access the information found on these ages. The plug-in runs a background thread that periodically invokes these APIs to retrieve supplier parts information

Resources for above project will be:

For the developer

A System with multimedia & Internet enabled having softwares JDK 1.2. The interfacing protocol & databases information.

For the user:

The system the user already using in the organization having internet availability & proper planning softwares of the company choice. Also the required authentication & password information.

Conclusion

The above displayed technology will help the manufacturer's MRP system to communicate with the supplier planning systems without requiring the MRP system to have any knowledge of the Internet, or of the supplier system Interfaces.

The above technology provided manufacturer X with a significantly simpler, faster and less expansive way to get the job done.