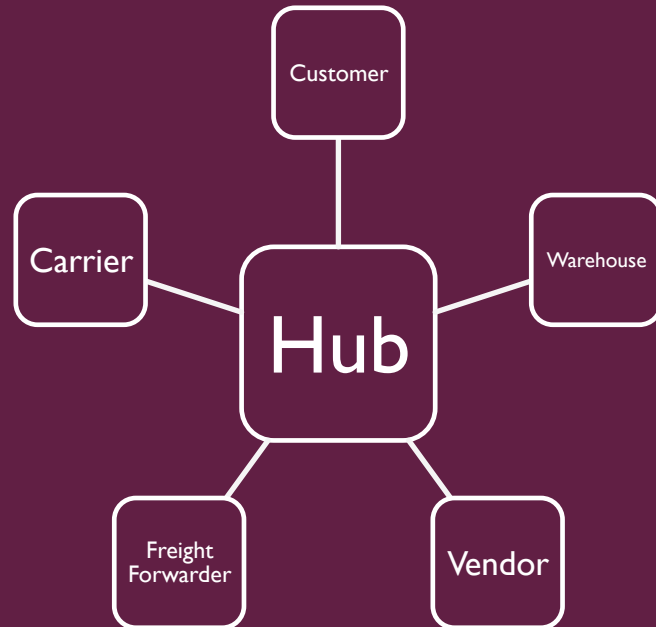# EVOLUTION OF THE B2B BUSINESS NETWORK

THE RISE OF SUPPLY CHAIN OPERATING NETWORKS

WHERE HAVE WE BEEN?

Henry Ford or Samuel Colt have historically been credited for the creation of the modern manufacturing process that included integrated supply chains and interchangeable parts.

- In the beginning raw materials were fashioned to intermediates and processed into finished goods but the rise of interchangeable parts allowed an industry to rise up to supply these finished goods manufacturers intermediate and interchangeable parts (like tires).

- These interchangeable parts have created tremendous competition to create better and more able competitors that compete on price, quality and ability to serve more parts of the supply chain.

- These same forces have driven these new partners to collaborate stronger and make them willing to locate close by or far away depending on their value proposition. This drove many of the modern supply chain concepts we take for granted.

WHAT HAVE WE DONE?

Exchanging business messages

- This basic requirement drove the creation of standards based messaging like purchase orders and invoices, which were universally accepted and eventually these same concepts drove the creation of electronic counterparts and EDI (electronic data interchange). Whatever the format these basic concepts are observed all around the world but the messages themselves don't create a work process, which has many more concepts that revolve around timing, responses and partner obligations.

Consolidation and automation of purchasing

- Along with the rise of web-based consumer ecommerce (Amazon, eBay, etc…) in the late '90s came the push for large companies to purchase indirect materials online. This push was accompanied by some new concepts including web-based user interfaces, XML (Extensible Mark-up Language) mostly replacing the traditional EDI formats and bigger focus on partner networks.

Focus on vertical markets

- With the success of indirect materials being purchased on the web came the first hybrid model that encapsulated both the basic tenants of standards based messaging and the web-based ecommerce of partners like Ariba. These initial B2B (Business to Business) hubs were typically industry focused to attempt gain traction and offered EDI-like messaging, integrated industry specific work processes (like RosettaNet) and web-based applications to facilitate direct material purchasing and sales of finished goods.

WHAT HAS CHANGED?

Global competition, low cost Chinese manufactured products (derived from cheap labor), the desire for companies to have closer relationships with key suppliers, regional advantages for raw materials and supply chains that extend around the globe.
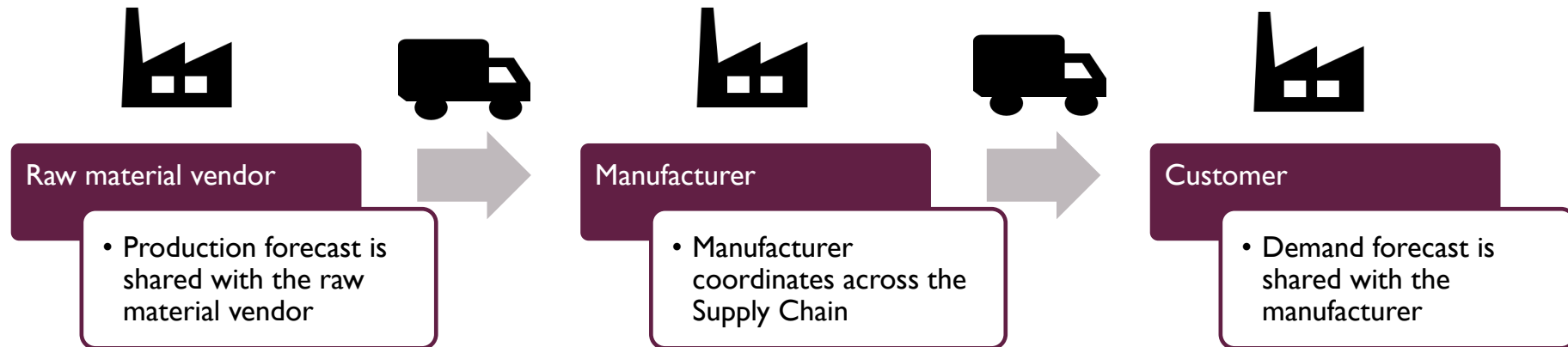
- These changes have stressed the traditional and post-internet ways of communicating with partners.

- A requirement to lower overall cost but at the same time to increase connected nature of our partner relationships from exchanging business messages to open collaboration.

IT'S ALL ABOUT THE WORK PROCESSES, BUT WHICH ONE?

- Source to Pay – The new way to think about the procurement process from finding the best vendor, sending a purchase order, receiving the materials, to payment for goods received.

- Forecast to Fulfill – The new way to think about the order to cash cycle, where fulfilment includes shipping execution, invoice and payment.

Source to Pay is part of the holistic process of locating new vendors but Forecast to Fulfill is the work process cycle observed on both side of the manufacturing process.

FORECAST TO FULFILL…

Raw material vendor
- Production forecast is shared with the raw material vendor

Manufacturer
- Manufacturer coordinates across the Supply Chain

Customer
- Demand forecast is shared with the manufacturer

Forecast to Fulfill > Manufacture > Forecast to Fulfill

SO HOW IS THIS ENABLED?

- The iterative process in the below diagram is really a series of sub-processes like planning, manufacturing, order processing, shipping execution, billing and payment.

- Each of these sub processes is controlled in a different manner, as many companies will choose to perform planning internally, but maybe out-source shipping execution especially when it involves export orders or shipping overseas, so this is why the ability to collaborate externally is key.

- What has developed as a prime requirement is the ability to manage across the traditional process boundaries to shorten cycle times, prevent manufacturing outages, stock-outs on high demand finished goods and reduce the cost to carry (the interest paid on raw materials or unsold finished goods).

- The need to operate faster, more accurately and ultimately for less money has necessitated electronic integration and collaboration in the sub-processes and across the entire supply chain.

Forecast to Fulfill > Manufacture > Forecast to Fulfill

WHAT DOES A SUPPLY CHAIN OPERATING NETWORK LOOK LIKE?

- Characteristics of a typical SCON (supply chain operating network) include B2B partner connectivity (includes EDI), ERP (enterprise resource planning solution) integration, web and mobile applications for smaller partners, threshold based alerting, a cloud hosted environment, dashboard style analytics and the ability to collaborate on a variety of processes including demand planning and shipping execution (for both vendors and customers).

- A variety of vendors are in this space but the typical large company is probably building a best of breed approach and coordinating the results inside their ERP system.

- Some of the vendors in this space include GT Nexus, Elemica, E2Open and SAP (who owns Ariba and is an ERP vendor as well).

- The barrier to entry is high so expectations are that traditional vendors will attempt to migrate by crossing over from a process or industry specific focus into this space, as opposed to brand new vendors attempting to break-in.

DASHBOARDS TO VISUALIZE THE DATA

Old style, tabular data interface

New style, rich graphical interface

QUESTIONS?

BIO

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Larry Weiner, a 20 year IT professional, has spent the majority of his career working in the Chemical Industry for the Rohm and Haas Company and The Dow Chemical Company. Larry is a Philadelphia native and Temple University graduate specializing in SAP, eCommerce, eBusiness, system architecture and related integration technologies. In his current role, Larry leads a global team of more then 20 implementation specialists who provide integration services for Dow Chemical and their partners to automate the work process for customers, vendors, warehouses, carriers, and other 3rd party logistics providers.