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SHIPPER'S IT

Supply chain cloud formation

The information technology market is infamous for its never-ending parade of acronyms, buzzwords and “next big things.”

On the surface, “cloud computing” is just the latest term put center stage by marketing powerhouses such as IBM and Microsoft. However a deeper investigation shows cloud could be exactly what the supply chain business has been working towards for the last decade.

Technology industry analyst Gartner defines cloud as computing where scalable and elastic IT-enabled capabilities are delivered as a service to external customers using Internet technologies. Gartner’s outlines five key attributes of cloud computing:

- Service-based.
- Scalable and elastic.
- Shared.
- Metered use.
- Internet-based.

“Cloud is more than just the applications,” said Simon Ellis, practice director for supply chain strategies at IDC Manufacturing Insights. “Software as a service (SaaS) has been around for a while and this is much more. This is platform as a service. This is infrastructure as a service. This is analytics as a service.”

The case for cloud can be viewed as three progressive tiers of use. At the most basic level, or “tier one,” cloud computing provides access to applications or computing infrastructure without having to own or maintain it. The benefit here is mainly economical.

“When companies think about the cost differential between cloud and traditional delivery models there are obvious costs you can avoid such as license fees and maintenance,” Ellis said. “But there are also less obvious costs like implementation time, data centers, etc.”

Dennis Gaughan, Gartner’s AMR vice president of research, highlighted the importance of time in assessing cloud computing options. “When I see companies deploy applications in the cloud the benefit is time to value, which leads to higher adoption rate of participants,” he said.

“Tier two” cloud computing plugs multiple users into the same application, platform or infrastructure allowing all the participants to share in the costs and benefit. Users drive improvements and economies through usage.

Customer relationship management system provider Salesforce.com is an excellent example of a “tier two” cloud model. Many customers, including *American Shipper*, use the site regularly, sharing in the maintenance costs and driving improvements.

“Tier three” cloud usage could have revolutionary implications for the supply chain industry in particular, due to the collaborative nature of the business. “Traditional IT automates processes and allows collaboration within a single company,” said Greg Johnsen, executive vice president and co-founder of logistics technology provider GT Nexus. “Cloud allows for automation of hundreds of processes occurring between companies along the value chain.”

“The community aspect is very relevant in the supply chain,” Gaughan said. “When processes exist in the cloud it just makes it easier for two companies to work together.”

In a sense, the supply chain has already been “in the cloud” for the better part of a decade by using multitenant platforms provided by companies such as Descartes Systems Group, GT Nexus and LOG-NET.

“This is not a fringe idea any longer,” Johnsen said.

“Specifically in the supply chain where companies are trying to collaborate and share information cloud becomes more than just good IT economics.”

Con-way Way. Freight transport and logistics provider Con-way Inc. has used cloud computing for a number of years and its approach is worth closer examination.

“We were very specific about what we wanted to put in the cloud,” said Jacquelyn Barretta, vice president and chief information officer at Con-way Inc. “We’ve taken our entire organization, including all the applications and infrastructure, and put them into four categories: commodities, differentiators, core competencies and external novelties.”

These categories are based on Con-way’s evaluation of an application’s strategic value and its internal or external nature. Using this assessment Con-way has placed many “commodity” applications and “external novelties” in the cloud. They continue to run applications deemed “core competencies” and “differentiators” on premise.

“This strategy allows us to focus on differentiators and become a more effective organization” Barretta said. Applications are put into the cloud for a purpose. “With respect to applications we’re talking about better economics, better product and a lot of it is about better time to market.”

Con-way sees an opportunity for cloud computing as it’s related to its computing infrastructure, which they do not consider a core competency. “It’s not a differentiator,” she said. “It’s more like a utility that we can share with other companies.”

Barretta said Con-way’s policy does not necessarily bar a “core competency” or “differentiator” from being put into the cloud. Rather, they have yet to see a core system like transportation management in the cloud that meets their requirements.

Challenges. Cloud computing critics point to data security as an area of concern. Many technologists are more comfortable keeping their applications and their data within their four walls. “The benefits and some of the risks, of cloud are similar to those of on-demand,” Ellis said. “I suspect that cloud vendors will live or die by their reputation for data security and they will become very good at securing data.”

“The challenge that cloud will face in the supply chain is not all players are created equal,” Gaughan noted. Companies of different sizes will demand different levels of preference on the cloud just and they do in every day business. This disparity will create eco-systems within the cloud where trading partners conduct business in specific ways that may not be universally aligned.

However, Gaughan stressed “technology alone does not solve supply chain problems.” Rather, business practices and standards will have to evolve to meet these challenges.

While cloud computing appears here to stay, where does it go next? Con-way keeps its portfolio of core transportation systems in-house. Will retailers hold onto their merchandising systems and put their commodity applications — perhaps logistics execution — in the cloud?

“In two to five years an increasing amount of applications and infrastructure will go into the cloud and things will be done differently,” Ellis said. “Companies will rethink how they do business and they will evolve. There are going to be use cases for cloud technology that we have not thought of yet.”