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*Mobilising domestic
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Developments

Europe ash cloud chokes supply chains

Japan

Challenging times for aviation

Dialogue

Hewlett Packard's Asia supply chain

Strategy

The future of IT in supply chain management

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The future of IT in supply chain management

Software can become the critical factor in supply chain success but this is only true for those who take IT to the cutting edge



Visibility is not the target, just the tool

By Dr Torsten Mallée

Talking about trends has always been dangerous. Because of the high probability of failure, this statement surely rings true when it comes to IT. And it rings even truer in the area of supply chain management - one of the most agile branches of business. So probably one of the most hazardous topics you can talk about is trends in supply chain management IT.

But discussing trends always means setting trends, setting stages, setting

scenarios - in other words opening up opportunities for success. So let's be brave and talk about five major trends in SCM IT over the next ten years. Maybe *the* determining trends? Let's not wait - let's see.

1. Cutting costs. Controlling costs. Controlling by cost

We didn't need to experience one of the deepest recessions in history to turn our attention to costs, did we? Be that as it

may, supply chain managers *did* turn their attention to costs over 2008 and 2009. This trend will not only endure, it will separate the best from the rest. Not just in terms of cutting costs - but by better controlling costs and controlling by cost.

- **Cutting direct IT costs**

Software will become cheaper. Globalisation and industrialisation of software production brings lower prices but also a higher differentiation in terms of quality. By and large license fees will shrink, in part because they can be 'shrunk to fit'. They can even shrink to zero and be replaced by a pay-per-use model (see section on cloud below).

- **Cutting internal supply chain-operating costs with IT: Execution. Execution. Execution**

The main cost-saving objective of SCM IT is to reduce execution costs for order fulfillment, stock keeping, transportation planning, customs procedures and so on. There is still a lot to do.

Standardisation and automation in the field of execution will still be the main driver for IT investments. And once again the 'brave' supply chain managers will see the return on these investments in short order.

- **Cutting external costs with SCM IT**

In a world where transport resources and value-added services will become more and more modular and therefore interchangeable, there will be a high potential for efficiency in just picking the right partner for the various stages of your supply chain. Not only can IT support that, IT is the only way to do it affordably. Rate shopping is one example. Freight cost audits are another.

- **Control by cost**

To carry this 'cost thing' to the extreme: think about performance-based billing. There is no other way to realise this strategy than with the extensive use of IT. But it is worthwhile, because this brings us to the point where cutting

costs evolves from an objective to a powerful means of management. You might say, "Come on, we have heard all this before." But believe it or not, we have not yet seen anything. The best is yet to come.

2. Cloudy, with periods of sunshine

If we believe the buzz, the future looks azure. Does it really? Yes and no. And yes again. In the very long-term one can think of an IT world completely 'up in the sky'. But not in this decade. Not for businesses. And even less for supply chain-driven companies.

To be clear, cloud computing is a good approach. (Putting aside for now that 'cloud' is well on its way to becoming another overused term, meaning everything and nothing about Internet applications, operations, infrastructure, online business services, SOA, etc).

Repeat: cloud is good, and there are already good examples of the power and effectiveness of this way of deployment: think once more of transportation rate shopping, think of customs declaration, think of visibility platforms ...

But on the other hand, these smart small-business services can only be integrated into a working network or system. And these systems are no longer standalone systems that can be easily replaced. They are becoming more and more like living organisms. Cloud might be hip but 80 percent of all SCM operations are based on systems that can be categorised with a very un-hip word: legacy. Even if it's 70 percent or 60 percent, this quota will probably remain for the next decade. Because this stable environment is the backbone of supply chain business. And will remain so.

If this is true, cloud services will gain even more impact. The reason is simply that SCM software will be introduced (or exchanged) less and less in big projects (due to their tight budgets). This is exactly why a toolbox of services will help switch them on and off, depending on current priorities and needs. Companies can come to own 'corporate best practices'. Especially in the supply chain.

3. Clarity means more than mere visibility

One of the most compelling concepts in the last ten years has been the concept of vis-

ibility. On the one hand, this trend will gain further impact - as it is still a 'concept' for many companies. On the other hand, the coming decade will also show that visibility is not the target, just the tool.

- **Visibility is king. But insights rule**

The mass of supply chain information gathered in spreadsheets and stored in systems has increased dramatically over the past years. We have actually come to the point where it cannot be handled any more without a means of 'intelligent automation'. But up until now, 'business intelligence' has had less to do with intelligence than the term suggests. This will not change in the next ten years. To be clear: there will be improvements in this area - in semantic search, vertical integration, data matching, even 'prediction markets' or 'crowd decisions'. But the unrestrained growth of data will eat up these improvements in a moment.

4. Collaboration in the time of Facebook

This section may be the most obscure and risky part of this prognostic journey. But it's probably the most promising. No doubt, it's the 'buzziest' of the five trends. But there has always been the trend in the history of technical innovation in which some tools and techniques aimed at consumers or other target groups turned out to be innovation boosters for business.

Think of the Internet, first designed for military purposes, then quickly adopted by science, but ultimately developing its biggest impact in business - changing whole markets and turning the 'old economy' upside down.

Some analysts predict that social media

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are the next link in this chain.

There is a close analogy between the organisation, the structure and the principles of a social network as we see in Facebook and the collaboration in a supply chain. Even the terms are the same:

- The most important tool in Facebook, for example, is the 'status update' - a text field in which users can send an event to their networks relating their current 'status'.
- And the tool that comes in second to that is the option of responding to status updates: leaving a comment, replying, etc.
- There are also automation tools that let you scan status information to look for specific keywords.

Now, doesn't that sound familiar to the SCM community? Just think of replacing people in this concept by goods and tagging an RFID transponder to it. Ever heard of the 'Internet of things'?

Many companies think of Twitter in terms of another advertising channel. More intelligent companies turn to it as a means of communication and 'eavesdrop' on the twitterers to get insight about what the crowd thinks and feels about their products and services.

But the most exciting thing Twitter holds in store for logistics companies may lie somewhere else entirely. One buzzword forms a remarkable link between the two: real time. That's why software companies are working on making the service useful for status updates. Rudimentary trial data already exists. And services such as TrackThis (<http://www.usetrackthis.com>) already show it can work: Twitter users can already have status updates from parcel services displayed directly in their Twitter timeline.

One more brief outlook on another really influential element: user interfaces. If you look at the trend that the user principles and interfaces of business software have taken in years past and compare this to what is going on in consumer services, there is only one possible conclusion to be drawn: both worlds are rapidly moving together.

The more the digital natives age into the labour market, the more significant this trend becomes. Office workers and

“ Twitter users can already have status updates from parcel services displayed directly in their Twitter timeline. ”

software users expect their office and warehouse devices to act like their digital private sphere. Employees don't cease to be digital media users when they sit down at their workstations, which is why companies can gain efficiency simply as a fringe benefit to using good business software. Training costs go down sharply, vacation and absences can be quickly bridged through temporary help, and motivation goes up. Pay attention to the UI in choosing your software solution. There is potential lurking there.

5. The most sustainable trend will be the trend towards sustainability.

Sustainable SCM or green logistics: it seems like a trend, but it is clearly more. It is obvious that climate change is caused by greenhouse gases and these gases arise from the combustion of fossil fuels that will become more and more expensive. The charm of making the supply chain green is that it will help reduce costs.

There are already some logistics service providers publishing CO₂ emissions for transport. This voluntary disclosure will become an imperative. Consumers will become increasingly eco-sensitive. This will be accompanied by an increasing demand for 'green products'.

The greenness of a product will be defined by the *overall* eco-balance of a product and the emissions originating from its supply chain are a part of it. This will require compiling a thorough database with information about the effective CO₂ emissions of the modes of transports broken down by type of carrier. Together with data like the average efficiency, it will be a standard practice to calculate how green the supply chain of a specific product really is.

Future transport management solutions will help take care of green supply chains. They will provide the necessary data to




The most sustainable trend will be the trend towards sustainability

help make green decisions. This will be facilitated by showing the CO₂ emissions associated with different transport options or transport strategies. This will require that SCM solutions support various SCM strategies - for example, aimed at the use of slower modes of transports, more decentralisation of inventory, avoidance of unnecessary transports or optimisation of transport capacities.

What comes next?

Time will tell whether this is right. Still, innovation can bring up completely new topics, ideas and opportunities. But the patterns and demands that determine the trends may be the real constant in this prediction business.

Looking back at the turn of the century, wasn't there the same talk about the same objectives? Managing cost? Obtaining clarity for decisions? Using new technologies? Getting an edge through efficient collaboration with the right partners? And to do all this not only for the short-term but sustainably? Software has

changed. Business has changed. But some things do not change: inventive talent, economic curiosity and entrepreneurial excellence. The SCM IT trends described here are an expression and manifestation of these virtues - and at the same time an effective means of making them work for your business. 

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