Four steps to attain an integrated end-to-end supply chain

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Achieving supply chain excellence and maximising business performance

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Introduction

Is your organisation's supply chain prepared for growth?

Reports from the Office for National Statistics (ONS) indicate that the UK economy is growing at its fastest rate since 2007. In fact the UK economy grew 1.9% in 2013 and this growth is forecasted to continue into 2014 at a rate of 2.4%.

While the prospect for a period of sustained growth brings relief and lucrative revenue opportunities for many UK organisations, the forecasted escalation could also present a number of challenges to businesses that do not have the correct supply chain systems in place to support rapid expansion.

"We are still functioning in uncertain economic conditions, with ever demanding customers across a complex supply network. This results in volatile demand patterns and the need for greater agility in our supply chain processes to do more with less." Richard Howells, SAP.

Some of the common pitfalls include a lack of operational flexibility or access to management information across the entire supply chain, which in turn can lead to ineffective processes that impact upon the entire organisation.

In 2013, large UK manufacturers reportedly lost more than £58m dealing with the fall-out from supply chain disruptions, many of which could be prevented . Not only does this prove that an ineffective supply chain can cost a company money, ultimately it could turn the promise of successful growth into failure.

How can you prepare your supply chain for future growth?

In this white paper, we will discuss how to approach the implementation of new mobile computing solutions that will enable collaboration between different areas of the supply chain, improve flexibility and scale to support your future growth.

We will endeavour to share some of the experience and insights we have learned while delivering integrated supply chain management solutions to our customers over the last 30 years.

Broken down into four steps, we will cover everything from planning through to selecting hardware and software, implementation and finally ongoing management and review.

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"The Perfect Storm is Forming for Sales and Operations Planning", Forbes.com, April, 2012
"Supply chain disruption costs manufacturers £58m", Supply Chain Standard, April, 2014

Step 1:

Planning for end-to-end integration

It probably goes without saying that the first and arguably the most important step in implementing any new technology in your business is planning. The outcome of the planning step will define the rest of the project and will help you to monitor and measure the effectiveness of the chosen solution throughout its lifetime.

Where does mobile computing fit?

The possibilities and applications for mobile computing solutions within the supply chain are vast. However, we'd be pretty confident to bet that you don't have a bottomless budget to spend on new technology and we know, whatever technology you do implement, has to deliver a measurable return to your organisation.

Many organisations already have 1st if not 2nd generation mobile computers, scanners and data capture software in place to manage parts of their supply chain. The challenge for the majority of businesses is that these existing solutions are 'point' solutions, operating in a specific area of the supply chain. While these solutions enable one area of the supply chain to work efficiently, they don't always integrate with other areas of the chain to deliver maximum impact. Organisations now need to explore how to expand mobile and data capture technologies such as rugged mobile computers, barcode scanners, voice and the latest warehouse management and logistics software into other areas of the supply chain to reap the full potential of a growing economy.

With these two points in mind, the first act of the planning stage should be to define what you need your supply chain solution to deliver in order to help manage and achieve sustained business growth. Perhaps your goal is to maximise productivity and throughput or to enhance customer service. You might want to obtain better visibility of your processes across the operation, or improve collaboration between different areas of the supply chain to reduce time-to-invoice and ensure cash-flow is maintained throughout any period of growth.

Many of the customers we work with have found it beneficial to physically map out the entire supply chain process from end-to-end. This enables organisations to visualise how and where technology is currently used and helps them to identify areas where additional, or alternative technology could be used to enhance or change those existing processes. It also enables you to think about how the different technologies will need to be integrated in order to work together today and in the future.

To gather a clear and unbiased view you may want to consider including other stakeholder groups in the mapping process. Your employees, for example, are likely to hold a very different view on how technology could be implemented to improve the day-to-day demands of their jobs. In addition to receiving their input, involving some employees at an early stage could help to lay the foundations for implementation and in many cases has shown to be a crucial aid in gaining employee acceptance for the final solution.

Another group you may want to consider involving in the planning stage are your customers. Again, these individuals will provide a very different perspective, especially as they will have limited, or more likely no knowledge of the inner workings of your business. If one of your objectives is to improve the service levels you are able to offer your customers, it's definitely worth getting their opinion on what you do well and where you can improve.

Finally, it often pays dividends to involve a mobile solutions provider in your initial planning discussions. Not only can they provide insight from previous installations, they can also help you determine what is possible in terms of the technology and inject different ideas into the planning process that will help you reach your overall strategic objectives.

While planning is an essential stage in the overall project, it is important to take in to consideration the likelihood that your solution will need to change over time. We all know that there are circumstances that you cannot plan for, however your mobile solutions provider should help you to ensure that your chosen solution is flexible and scalable enough to cope with future demands and the peaks and troughs associated with any seasonality in your business.

Step 2:

Choosing a solution that's fit for purpose

Once you have made an assessment of your current operational processes and finalised the strategic objectives, it's time to select the hardware and software that will make it all possible.

The reason why we've called this stage 'choosing a solution that's fit for purpose' is to highlight that whatever your specific goals are, it's very unlikely that just one piece of hardware and or software will solve all your business challenges.

Throughout your supply chain you will have identified a number of processes where technology could be used. For nearly all of them there will be different solutions, particularly where hardware is concerned, that best suit the variety of environments and applications that they will be involved in.

For example, a mobile computer could be used in a variety of scenarios throughout the supply chain process. It could be used at a receiving dock to take inventory of goods coming into the warehouse, it could also be used to assist the picking and put away process or to check goods out of the warehouse at the shipping dock. How about using a mobile computer to assist with logistics? Drivers could use a mobile computer to facilitate the onward transportation and delivery of goods. Sat Nav can be used to guide a driver to his next scheduled delivery using the most economic route, and could even record electronic proof that a delivery has been made.

While all of these tasks could be completed with the assistance of one type of mobile computer, many organisations find that it is in fact a mixture of different devices that provide them with the best overall solution to cover the broad range of applications they are faced with.

For a driver in the field, you may need to provide voice and data communications (3G/4G etc.) to give that individual the ability to transfer delivery data in real time, that will in-turn reduce the time to invoice and improve cash flow. However, for an employee recording receipt of goods at the dock door of the warehouse, perhaps it's only necessary to have Wi-Fi capability so that data can be transferred to back office systems in real time.

It is also important to think about the form factors of the hardware that you choose. If you are using fork lift trucks in your warehouse, you may want to consider a truck mounted form factor to keep your employee's hands free while operating the machinery. For scan intensive applications such as inventory audits or goods in processing, you may want to have a gun shaped terminal to reduce user fatigue. To improve the time and efficiency of picking and put away, other peripheral technologies such as voice may pay dividends.

It is easy to be tempted by the price tag of consumer grade 'shiny' smartphones that offer the same promises in terms of business benefits. However, these devices were not designed to be operated in the supply chain environment. Here, devices get dropped, bumped and scratched every day. Rugged mobile computers have been specifically designed and tested with this rigorous use in mind and can withstand the everyday wear and tear that your devices are subjected to. Smartphones are not prepared and can ultimately end up costing your organisation far more money across their lifetime. We call this the Total Cost of Ownership (TCO) and this is definitely something that you should be considering when making your initial hardware selection.

It's not all about the hardware either. Software is a vital element of the solution. As you'd expect the options here are plentiful too. From warehouse management systems that provide the ability to know where stock is and where it needs to be when, to telematics solutions that enable you to track a fleet of delivery vehicles at any point in time and measure performance, to electronic proof of delivery software that completes the cycle. It is important to get these different systems working in harmony with each other and with your back office systems to enjoy the full benefit.

If you haven't already sought the consult of a mobile solutions provider, now is definitely the time. The input of an expert advisor that understands the challenges your business is trying to overcome and the technology that can solve them is invaluable. Using this guidance you will be able to select hardware and software that will not only integrate with each other, but that will also join together with you back office processes to provide you with real-time business intelligence.

Step 3:

Implementation - achieving a smooth roll out and getting employees on-board

Once you have made a decision on what hardware and software to put into operation, it is time to start implementation.

Let's face it, your supply chain doesn't stop for anyone and so you can't afford to halt all your operations while you roll out new technology. The answer to this conundrum could be a phased deployment, to bring the various areas of your business online one at a time, or a pilot programme where a small number of devices are deployed in each area to check the solution is working from end-to-end. Your chosen mobile solutions provider should be able to advise on the different methods that are available to you and help you to select the right one to minimise disruption to your business.

We have already mentioned the importance of gaining user acceptance from the employees who will be operating the new technology on a daily basis. By this stage of the process, the level of user buy-in you have achieved will begin to have a direct impact on the success of your deployment. Therefore it's vitally important to provide the right level of support and guidance to ensure that the solution is correctly and effectively used from day 1.

Before you start rolling out the technology, think about what training and support you will provide to your employees. For some, the technology could present a steep learning curve and is a potential barrier to achieving a successful roll out.

Some organisations have found it beneficial to nominate 'champions' or 'super users'. You may decide to involve these individuals in the decision making process in the hope that they will act as evangelists for the solution and promote the benefits that it will deliver to their colleagues. Super users can also aid the training process, providing a first line of support for other users and consequently lessen the burden on your IT teams.

You may also want to consider monitoring your users to see who is and who isn't using the technology correctly. This will enable you to offer additional support and training to those who may be struggling with the changes.

Step 4:
Ongoing management and review

The final stage of the process in our eyes is ongoing management and review of your supply chain processes and the technology in place. Measure the effectiveness of the solution against the strategic objectives that you set out to achieve. If something isn't working as you would like it to, seek guidance from your mobile solutions provider to find out why and what can be done to improve the situation.

As part of the ongoing management of the solution, you might want to consider an ongoing maintenance and repair programme. It's not possible to guarantee that you'll never experience any problems with you hardware or software, and like many of your competitors, the threat of something going wrong poses a significant risk to your business.

You may be surprised at the number of options that are available to help you reduce the risk of downtime. Mobile device management could help to reduce outages caused by software updates or minor faults. Using this technology, devices could be fixed remotely without the need for them to be returned.

In the case that a device does have to be returned, many suppliers offer a variety of different SLAs for providing repairs. This is your opportunity to choose a support package that fits with your business requirements and the urgency by which you will need your devices returned to site. Many mobile solution providers can offer support from the UK so you only have one company to deal with or "one throat to choke".
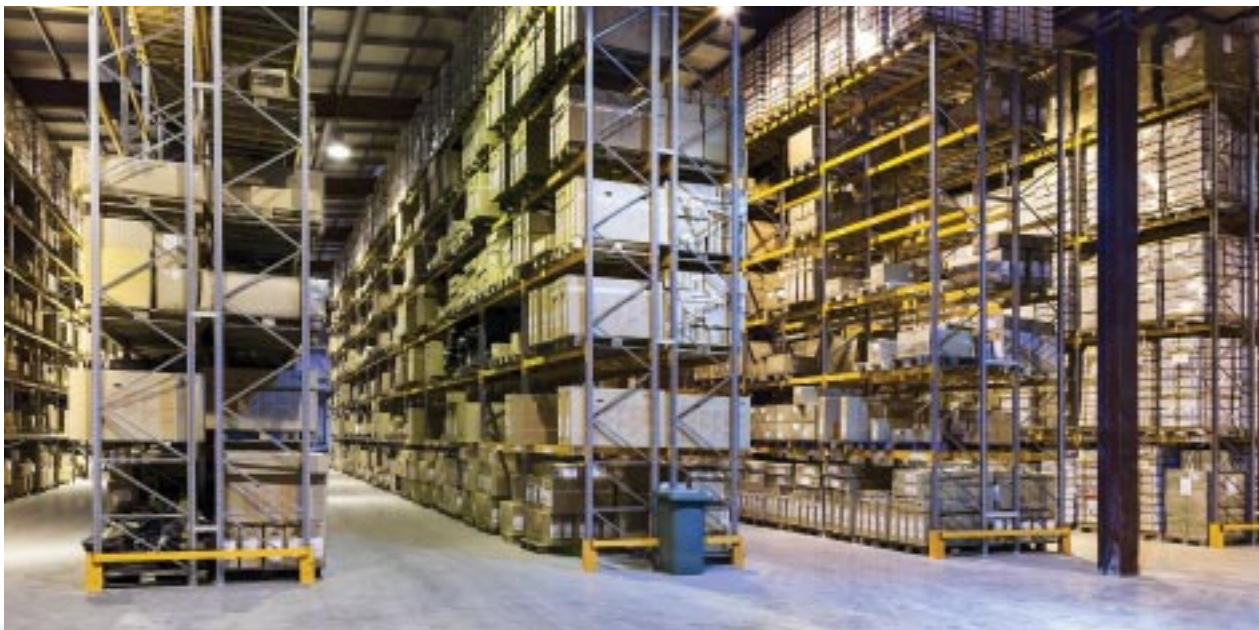
From rhetoric to reality

White paper 'theory' is all well and good but what is the experience of those organisations who have made a heavy commitment to IT within their supply chain? Have they really secured the operational gains that were targeted in their strategic plans? Encouragingly the following comments typify the experience;

Commenting on the effectiveness of their system Chris Iveson, Inventory Team leader for leading UK kitchenware company Lakeland says, "The benefit of the system means that I have real-time information to hand on every facet of the operation such as allocated tasks, picking rates and stock location. All this information helps provide our customer with a speedy and responsive service which is critical in ensuring complete customer satisfaction and company growth".

Chris Gribben, Ambient Goods Manager for food and grocery distributor Musgrave expresses a similar viewpoint, "A state of the art warehouse would be incomplete without a high technology supply chain management system. Customers have commented on a dramatic improvement to our complete service offering. Accuracy of deliveries, and greater product availability have been the greatest improvements. However, many little things, such as the tidier presentation of deliveries have also greatly improved customer satisfaction."

For many, the key motivation for the adoption of real-time technology is to support a growth strategy. Without appropriate and effective supporting technologies, sales growth derived from operational improvements can be difficult or near impossible to secure. Daniel Hamburger, of Searchlight UK and grandson of founder Sir Sidney Hamburger company's provides a comment on the success of their multi-million pound capital outlay in new IT systems and supply chain facilities: "What we have actually implemented is incredibly progressive for our industry as the majority of our competitors are still operating in very antiquated premises and with outdated systems. The level of overall operational transparency that we now have with the TouchStar system is staggering. Our managerial controls and the required skill sets within the previous operation were reasonably tight but entirely inappropriate for a real-time environment. The level of available information has proved critical in improving the communication and overall service levels that we can provide to customers. With key accounts the real-time element of the system has enabled an even closer integration of our respective statistical processes and systems. We have EDI and intranet facilities in place to ensure a seamless two-way flow of sales, order fulfilment, despatch and invoicing data.

The new facility has been designed to allow for a continued expansion of our customer base. However, this was not just a case of adding floor space and racking capacity. It's easy to do this but it's equally vital to have the appropriate dynamic governing systems in place. In turn, the dynamism and instantaneous nature of the information we now acquire from the system has led to our management culture becoming far less reactive and far more proactive. This can only bode well for our continued growth."

Conclusion

Implementing an integrated end-to-end supply chain solution is no easy feat. There are a number of different factors to take into consideration and a number of solutions that could be suitable for your organisation. The key is finding a single supplier who can help you throughout the entire process from business mapping to provisioning of hardware and software, roll out and long term support.

The reality is that today's supply chains need to be more responsive to change than ever before. Collaboration and end-to-end integration is key to achieving the flexibility and scalability that is required to meet these demands. It is imperative that organisations explore how they can expand and integrate existing and emerging technologies into their supply chain, to maximise the growth opportunity and minimise the potential risk brought with it.

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