Supply chain helps to boost innovation

Customer expectations present challenges for technology developers, reports Maija Palmer

W hen Target, the US dis-
count chain, lost much
everything last year in a
breach whose financial
losses were partly to blame. Shelves in stores that are
high risk and customers
complained about lack of choice.

Though Target’s problems were in
part to do with rapid expansion into a
new territory, they also reflected the
difficulties many companies face in
managing complex and fast-changing
supply chains.

In the cosmetics group, a
third of products are new each year.
“Consumers and retailers now expect
that level of innovation,” says Patrick
Lorenz, consumer relations vice-
general at Kipling, a technology
company that helps it centrally manage its
supply chain. “The speed in the demand side is putting pressure on
us.

At the same time, companies are evov-
ning rapidly on their suppliers. Many of
the latest innovations in cars, for exam-
ple, are coming from upstarts that
are leapfrogging the established
players, which are being developed in-house. Boeing and Airbus have also
brought their supply chains significantly for the production of
aircraft around the 787 and A3500
respectively, with a shift to new types of
lightweight materials. The difficulties in
becoming “supplier-ready” has led to
delay in production of the aircraft.

There is also growing scrutiny of
supply chains. An independent review in
the UK last year's horse meat scan-
dale in the human food chain involved
complex, transistor networks that
shipped meat between abattoirs and
wholesalers. In response the govern-
ment is to set up a food crime unit to
help police the industry.

In the US, meanwhile, many manufac-
turers are still struggling to comply
with the Dodd-Frank act, which
requires companies to know whether
their products contain “conflict miner-
als” — gold originating from the Democratic
Republic of Congo.

Technology has often been called on
to help meet supply chain needs, but not
all the developments have brought the
evened widespread benefits. It’s a
problem of some of the past, present
and probable future technology trends.

Present: Automation software and
 inauguration platforms. Companies are
experiencing with software and plat-
forms that increase efficiency. Some
manufacturers are looking at how
they can add value to products by
building into those products by
building into unpartnerships, which
will make the items unique and
not that easy to source.

Outsiders are greatest risks
data security

Criminals can gain
access from those you
put trust in.

Regulation
A new industry is growing
around the complex audit
process, writes Maija Palmer

The next time your mobile phone
browsing in your pocket, check tightness.
The hard, grey mineral is crucial to
many of the latest innovations in cars,
and chaotic. When the law was first pro-
duced, the US Securities and Exchange
Commission estimated that 40,000
companies, and almost 300 suppl-
ies were potentially affected by it.

The US, Canada, and 100 US
companies have filed reports, says Lina Ramos, senior vice-
general at Source Intelligence, a
company that helps businesses monitor
their supply chain compliances programs.

“We have the most affected. We are not
sure, the cost was not that high and there
were few customers that were affected by it,” she says.

Auditing a supply chain that stretches
through several layers of component
manufacturers, refiners and smelters is
not a simple task.

“When tracking products across borders,
“although we are managing with a
manual system, we have been using
Excel spreadsheets that include every-
thing from raw material location, the
ECSC information to our tracking
information. It is very labour-intensive,” says
William Johnson, manager of environmental compliance and sustain-
able responsibility at Motorola Mobility.

The company worked with FPJ, a
Massachusetts-based software com-
pant to create an automated and
scalable solution for tracking supplier
compliance. This allows Motorola Mobility to examine the data from var-
ious perspectives, for example to see
whether a particular model of mobile
phone contains conflict minerals.

FPJ and other companies such as
Celero, Actian and Infor all offer
solutions for services or conflict
minerals tracking.

Source Intelligence, meanwhile, has
created a Lanai-style social media
platform that allows companies to pull
together conflict mineral information
from their suppliers. Rather than
manufacturers asking questions about the
same questions about conflict mineral
origins and origin, suppliers can go
to the platform and fill in a “profile” that
contains information on their sourcing.

Mr Ramos says there are hundreds of
thousands of suppliers on the network,
with 2,000 joining every week.

Research and development
Disruptive technologies

walt in the wings for logistics

Data analytics
Programs can apply what they learn to make predictions

Product shelf life
The internet of things is getting ready to deliver and wearable technology can help

How effective is your company’s approach to

Highlights from the 2014 FT-Bowen Craggs

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The Connected Business

Wednesday October 22 2014

ft SPECIAL REPORT

Regulatory

Supply chain risks: five years ago versus in five years

Source: Conflict Minerals Report, Source Intelligence

Regulatory

Complexity of compliance

High

Decreased risk

Consistent

High risk

Natural
decision

Low risk

Globalisation (emerging trends)

Geopolitical events

Product

Economic

Environmental
crimes

Consequence of operations

Consequence of operation

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Drones and 3D printing may have less to do with present applications than the future, writes Paul Soloman

The term “disruptive technologies” innovations that have established a new business frontier is not a new one. But there can be little doubt that new technologies being developed could well and truly shake up logistics businesses designed for the past.

Drones – also known as unmanned aerial vehicles (UAVs) – are increasingly widely available for use such as aerial photography, stocktaking and other applications include reconnaissance and monitoring.

Meanwhile, 3D printing, which has been described as the “third manufac- turing anything from jewellery and furniture to dental prosth- es and parts for the machine industry. Both have yet to be fully exploited, but both have the potential to transform how supply chains design and operate.”

"It’s a big hit like the wild west now when it comes to drones," says Tony Kosiowski, vice-president and manu- facturing analyst at i2, the research group. “It almost seems like we are waiting to see if it’s going to take off. There are no shortages of stories being told. Internet and communications providers such as Google and Amazon have toasted drones for drone range limitations, while Deliv- erPost Deli has been testing "parcels" for delivering input goods such as pharmaceuticals, although the logistics group says it has no plans to introduce a regular service.

"On its emerging concept and there are clearly opportunities that could be seized,” says Kosiowski. "Low-maintenance drones could be delivered and used as high-speed, globally accurate, and efficient last-mile delivery services. If the technology improves, drones could be considered for intra-warehouse and across the shelves of a business.

Jeff Judkins, a vice-president at French distribution software company LogiMat, which specializes in machine learning programs can quickly interpret large volumes of data to increase the accuracy of sales forecasts overall. "What makes these big data is understanding the demand patterns, and we can do that with machine learning," he says. "But the technology has not yet been proven in the logistics sector, and we are in the early stages of its development."

"The technology is still in its infancy, but it has the potential to revolutionize the way we do business," says Judkins. "Machine learning can help us to predict demand patterns, which will enable us to make better decisions."

Peter Williams, an information analytics manager at Marks & Spencer, the distinct retail, uses software from giant IBM, "This is to improve the company's logistics".

"The machine can help to optimise the logistics" of the supply chain, he says. "It can help to identify the right decision at the right time.

"If 3D printing becomes a reality, we could have a major impact on the logistics industry," he says. "It has the potential to change the way we do business, and it could have a major impact on the way we deliver goods."
W hen Lenovo’s factory in Brazil went up in flames at 4am on Sunday, it often depends on human error that a fire can blow out of control. A single idle or asleep employee can trigger the alarm’s mischievous and schedule and delay production.

But if you know exactly where the contaminants are, and when they will be needed, you can act before a problem develops.

For instance, according to a new report at Michael Jones, vice-president of supply chain planning at Lenovo, the company’s factories never ran out of components or supplies. One reason is that Lenovo’s factories use a complex computer program that tracks production, material costs and component lead times. “The goal is to be efficient at every stage, including procurement, manufacturing, transportation, control, warehouse management, demand forecasting and sales,” Mr Jones says. “It allows us to improve overall efficiency and to streamline production processes.”

Gustavo Ghetti, chief marketing officer of GT Nexus, a Californian cloud-based network for global trade, says: “It creates a complex network of systems related to various data points that are needed to be accurate at all times in order to maintain integrity of the supply chain.”

To tackle these challenges, companies are deploying a range of technologies, including data management and analytics, machine-to-machine communications, social media analysis and cloud computing.

Hackers find suppliers are an easy way to target companies

The windows may be blasted and the security gate locked, but security experts know there is always another entrance and exit is secured, cybercriminals can still uncover your company via your supply chain.

In a study of the sub-contracting supply chain of a company’s computer networks through a supplier (or even the supplier’s supplier) — has become a greater concern in the US in recent years.

The details of more than 700 outc-
come of the wide availability of malware, which can be used by a criminal who entered the system by a criminal who entered the system. Cybercriminals are looking for an easy way in to a company’s databases.

The major threat for various companies, says the study, is that a criminals looking for an easy way into a system. Cloud-based systems are much easier to secure than physical systems at the heart of the company. Cloud-based systems are much easier to secure than physical systems at the heart of the company. Cloud-based systems are much easier to secure than physical systems at the heart of the company. Cloud-based systems are much easier to secure than physical systems at the heart of the company. Cloud-based systems are much easier to secure than physical systems at the heart of the company. Cloud-based systems are much easier to secure than physical systems at the heart of the company.

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