From the Silk Road BCE to Silk Road AD: The Connected Supply Chain Strikes Back

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Russell

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Over the course of 3,000 years (120 BCE – 1450s CE), the Silk Road was the central trade route between East and West until its decline after the collapse of the Mongol Empire, where it lay forgotten until now.

For the Silk Road recently found itself centre stage as the eyes of the world turned to China where Chinese President Xi Jinping launched the *Belt and Road Action Plan*. The growing relevance of the Silk Road holds lessons not just for Governments but also for risk managers, underwriters and insurers adjusting to a new reality: connected supply chains.

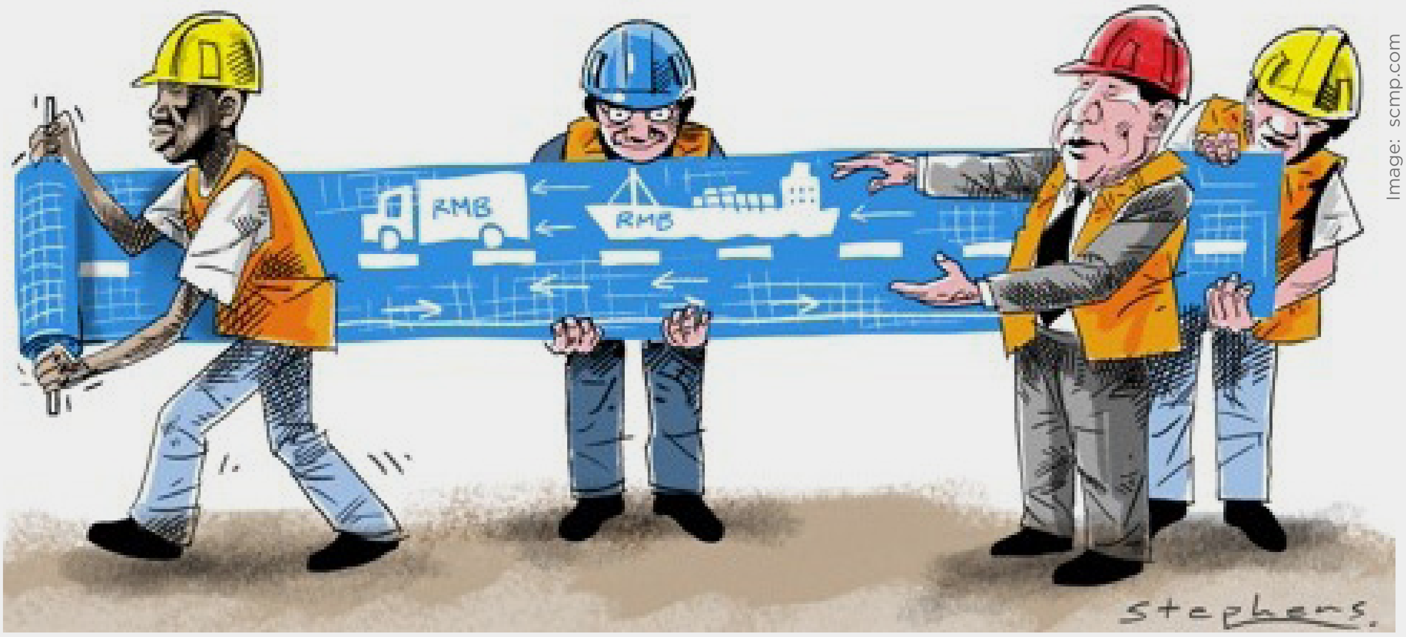


Image: scmp.com

At the heart of this new reality lies a simple but radical concept. Modern supply chains are hubs that connect manufacturers, traders, financers and consumers. This brings benefits such as reduced production time but also brings with it greater risk. For now, an organisation is vulnerable not just to traditional risks in their supply chain such as their key suppliers but new risks. For instance, what happens if the suppliers who supplies the key suppliers of an organisation goes out of business?

Pax Romana

The long prosperity of the Pax Romana once created strong demand in the Roman Empire for the luxury products that were imported from China and India. Chief among those products was silk, a product in such demand, wars were fought over it and a trade route was created.

The Silk Road was approximately 4,000 miles from its origin in China to its end on the shore of the eastern Mediterranean. For some perspective, this compares with 2,440 miles between New York and Los Angeles, and 1,760 miles between Paris and Moscow.

The city of Xi'an was where the Silk Road started. It is the city where the first great emperor of China built his capital.The other source of exotic merchandise was the Indian cities to the south. The Indian city of Indraprastha (Delhi) on a tributary of the Ganges River is the place where spices and jewels and other products began their journey north and west.

It was said that the Silk Road ended in the city of Palmyra, better known today for being at the heart of the ISIS global propaganda terror machine. Palmyra was located in the biggest oasis between the Euphrates River and the city of Damascus. Beyond Palmyra were the cities of Damascus, Tyre and Antioch where the products imported on the Silk Road were exported to the rest of the Empire.

Setting out on a journey along the Silk Road created huge opportunity and, of course, huge risk. Bandits, local warring territories, perils such as floods, disease and numerous hazards stood in the way of merchants seeking to prosper on the good they were supplying.

Pax Sinica MMXVII?

Now the Silk Road is being resurrected. Announced in 2013 by President Xi Jinping, a brand new double trade corridor is set to reopen channels between China and its neighbours in the West: most notably Central Asia, the Middle East and Europe.

According to the *Belt and Road Action Plan* released in 2015, the initiative will encompass land routes (the "Belt") and maritime routes (the "Road") with the goal of improving trade relationships in the region primarily through infrastructure investments.

The aim of the $900 billion scheme, as China recently explained, is to kindle a "new era of globalization", a golden age of commerce that will benefit all. Beijing says it will ultimately lend as much as $8 trillion for infrastructure in 68 countries. That adds up to as much as 65% of the global population and a third of global GDP, *according to McKinsey*.

There's no doubt that China is growing into a geopolitical heavyweight, stepping into the breach left by the United States on matters of free trade and climate change. "As some Western countries move backwards by erecting 'walls', China is contriving to build bridges, both literal and metaphorical," ran a recent commentary by *Xinhua*, a Chinese state-run media agency.

Xi Jinping's goal of reviving China (referred to as the 'Chinese Dream') took a step closer to reality with the announcement of the new Chinese Politburo committee. For many, the lack of a younger committee member (all committee members are over the age of 60) signalled Xi Jinping's desire to continue to rule beyond the standard ten-year term. This would mark Xi Jinping as the most powerful Chinese leader since Mao Zedong.

Perhaps the route's most vocal critic so far has been India's Prime Minister Narendra Modi.

Vehemently opposed to the $46 billion China-Pakistan Economic Corridor, which runs through a part of Kashmir claimed by India, he has called the route a "colonial enterprise" that threatens to strew "debt and broken communities in its wake". He even boycotted the recent *One Belt One Road* summit in Beijing. The geo-political risk of the initiative is clear.

Belt and Braces Approach to Supply Chain?

As the Belt and Road project grows, bankers and analysts warn of the risks to policy banks, commercial lenders and borrowers, all of whom are tangled in projects with questionable business logic. According to *SCM Globe*: "Simulations show the best way to support a continuous flow of merchandise on the ancient Silk Road was to have large stocks of inventory at key locations. They would act as buffers to absorb the fluctuations in product supply inevitably created by the bullwhip effect."

Update to 2017 and a new

University of Tennessee-sponsored survey of leading supply chain executives helped quantify the continued reluctance to understand the assessment and management of supply chain risk. According to the survey, none of the companies surveyed use third parties to independently assess their risk. At the same 90 per cent do not quantify the risk themselves. 66 per cent acknowledged the existence of corporate officers focused on managing legal compliance, however, none of these professionals touched the supply chain.

The question is, if HR can mitigate the cost of a potential employee discrimination suit, why are global companies unable to realise the benefits of protecting themselves against a potential supply chain disaster?

Let's take the Port of Tianjin, China's third largest, which is rapidly turning into a supply chain case study par excellence. To recap, in 2015, a series of explosions at a container storage station in the Port of Tianjin killed 173 people and injured hundreds more. A post-event investigation concluded that the cause of the event was an overheated container of dry nitrocellulose, which is highly flammable.

For companies that rely on that port and that didn't have a crisis playbook in place, the impact could have been fatal.

Tenuous Supply Chain Link

Imagine a similar disruption in a U.S. port. An article in *Forbes* asks us to do just this: "if the Longshoremen at the Port of Long Beach decided to strike unexpectedly next week, the business effects for those without contingency plans could be strikingly similar". That's how tenuous multi-tier supply chains can be.

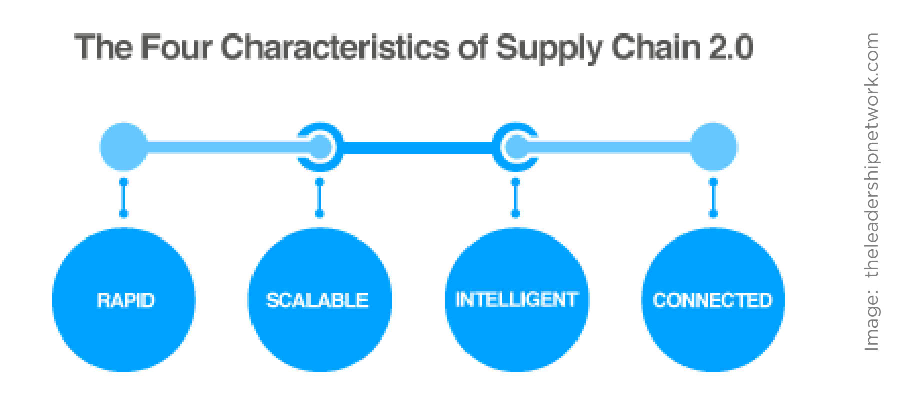
"For example, think of the impacts to the other ports in China as a result of Tianjin being out of commission. Do they have the capacity to deal with the oncoming surge? What will be the disruption timeframes for the smaller shippers and carriers who don't have the capacity and transit options of the Wal-Marts of the world?"

Globalization era

The movement of supply chain management development in the global era, can be characterized by the focus on global systems of supplier relationships and the expansion of supply chains beyond national boundaries and into other continents.

The use of global sources in organisations' supply chains can be traced back to the oil industry post WW2, but it was not until the late 1980s that many organizations started to integrate global sources into their core business. This era is characterized by the globalization of supply chain management in organizations with the goal of increasing their competitive advantage, adding value, and reducing costs through global sourcing.

In the 1990s, companies began to focus on "core competencies" and specialization. They abandoned vertical integration, sold off non-core operations, and outsourced those functions to other companies. This changed management requirements, by extending the supply chain beyond the company walls and distributing management across specialized supply chain partnerships.



Supply chain management 2.0 (SCM 2.0)

Building on globalisation and specialisation, the term "SCM 2.0" has been coined to describe both changes within the supply chains themselves as well as the evolution of processes, methods, and tools to manage them in this new "era".

Web 2.0 is a trend in the use of the World Wide Web that is meant to increase creativity, information sharing, and collaboration among users. At its core, the common attribute of Web 2.0 is to help navigate the vast information available on the Web in order to locate what is being bought. It is the notion of a usable pathway.

SCM 2.0 replicates this notion in supply chain operations. It is the pathway to SCM results, a combination of processes, methodologies, tools, and delivery options to guide companies to their results quickly as the complexity and speed of the supply chain increase due to global competition. Rapid price fluctuations; changing oil prices; short product life cycles; expanded specialisation; near-/ far-/ off-shoring; and talent scarcity are part of this new supply chain scenario.

Ten years ago supply chain risk was primarily focused on supplier failures, commodity price volatility and component shortages. Managing these threats was possible with closer supplier cooperation, collaborative planning around upstream constraints, and dual-sourcing. The aim was essentially about identifying potential weak links in the chain and shoring them up with shared ownership of supply continuity.

This is no longer enough. In the world of Industry 4.0, where once we worried about localized mistakes or oversights upstream, says Forbes, "now we worry about cataclysm, potentially at the hands of actors bent on destruction. The new world of supply chain risk means preparation for widespread, systemic disruption in our immediate future."

War and More

The *Forbes* report says that the share of supply chain practitioners "very concerned" about war, terrorism or other geopolitical threats is now nearly one in five. This is the same level of worry attached to financial failure of a critical supplier, breach of intellectual property rights and counterfeit products. It is also a huge jump from 2013 when only 8% were "very concerned."

Russell Group has written in a number of white papers about the general trend toward protectionism. Brexit and the policies of the current U.S. administration, has caused some companies to shift supply network design decisions and create contingency plans in anticipation of new trade policies.

Continued investment in innovative supply chain capabilities will be required to meet this changing landscape," says *Gartner* which outlines in a recent report how *Unilever* topped the *Supply Chain Top 25* ranking for the second consecutive year in 2017, followed by *McDonald's, Inditex, Cisco* and *H&M*.

Two new companies made the *Supply Chain Top 25*, with *Nokia* re-joining after a seven-year hiatus and *Diageo* making the list for the first time. *Amazon* joined *Apple* and *P&G* in qualifying

Image: Pinterest

for the "Masters" category, which *Gartner* introduced in 2015 to recognize sustained leadership over the last 10 years. According to *Gartner*, "Apple continues to improve and innovate both its solutions and the means of producing them. While the company has backed off plans to produce its own cars, it is still actively working on autonomous vehicle technology and experimenting with augmented reality (AR) technologies."

Aerospace Case Study

As Russell Group has written previously, one example of supply chain risk is the Aerospace & Defence industry, which is under pressure from price, risk and expansion according to *PwC's* report *A&D Insights: Programmes Under Pressure*. The report explains that A&D companies are experiencing more pressure from more directions than ever before — on price, supply chain risk, the need to expand globally, and broader macroeconomic uncertainty.

The report advises risk managers that: "Programmes generally stand or fall on how well companies succeed in managing an inherently complex network of interlocking platforms and technologies from different suppliers. Unless you can get integration of this jigsaw right, don't make it even more complex by extending it further. If you can't get it right, then maybe a greater degree of vertical integration is what is needed."

Share Risk and Information

One point in particular, stands out: "Get good at sharing risk information, taking coordinated action to manage risks and being more open about vulnerabilities." Mairead Lavery, vice president, strategy, business development and structured finance, *Bombardier*

Image: logisticsplus.net

Aerospace, now the target of U.S. regulators in 2017, says in the report.

"The risk management associated with the supply base is huge and volatility in the economy is a change from the past. Cycles are getting shorter and more volatile, putting pressure on previous reliance on existing core long-term business, which is needed to support programme development. International competition and the whole trade environment is also one of the biggest challenges we face today."

The connected risk occurs because, alongside market globalisation, supply chains have internationalised, giving companies opportunities to source production at optimal cost and locations for offsets and subsequent exports. The problem for risk managers and their underwriters is that this adds to supply chain complexity and significantly increases the profile of risks such as geopolitical, international trade and business conduct compliance.

Greater complexity is another connected risk problem. This is not only a problem for aerospace Boardrooms, it is central to understanding the challenge facing risk managers and their insurance partners in 2017. It is not just about having access to data, effective risk management is increasingly about getting the data into a consistent format that can be shared accurately and in real time with partners and other stakeholders in the corporate supply chain as well as the (re) insurance value chain.

As if the Silk Road and associated trade risk was not enough of a problem, the supply chain revolution is now being digitised. *Yahoo's* 2013 data breach impacted three billion accounts. Coming in the wake of the *Equifax* disaster and allegations of Russian interference in the 2016 U.S. election few will be surprised to learn how rapidly the threat of data security problems has risen as a worry for supply chain leaders.

Just a Little Domestic

Even domestic supply chains are extensive, according to the *The Economist*, which reports a new study by Mercedes Delgado of *MIT Sloan School* and Karen Mills of *Harvard Business School* finding that American firms supplying other firms employ 44m people. Of those, employers of 26.8m are involved in international trade.

The *Asian Development Bank* estimates the annual global "finance gap" in trade finance, a related field, at $1.5trn. Anand Pande, head of supply-chain finance at *iGTB*, which provides technology to banks, calls supply-chain finance "a land of unrealised promise."

The Economist says that more is in the pipeline: banks are exploring, for example, how Blockchain technology might align the flow of data and money more closely with the flow of goods. *Bain's* Mr Olsen sees several business models emerging, some led by single banks, some by groups of them, and others by platforms, big companies and e-commerce firms such as *Amazon* and *Alibaba*.

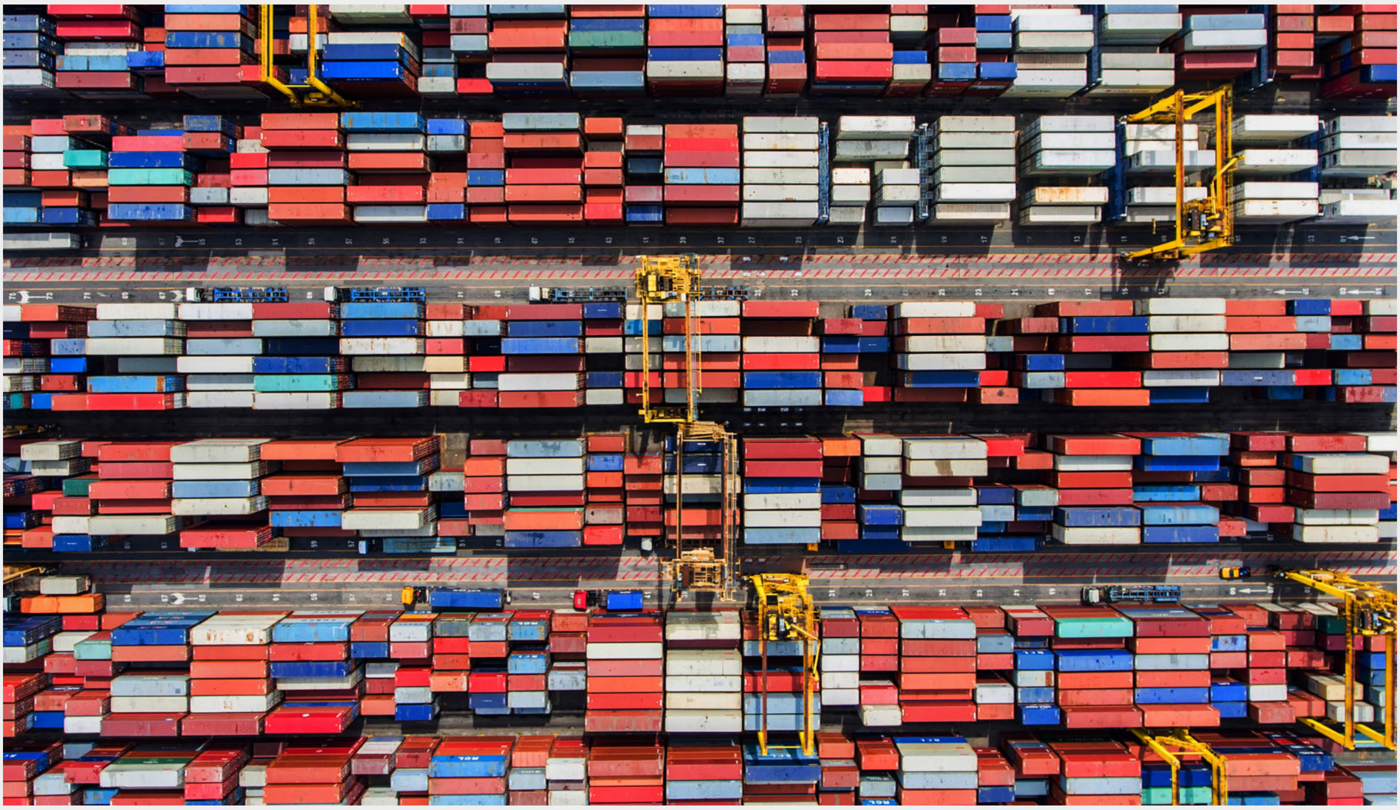


Image: gartner.com

The Art of Supply Chain Management

“In the midst of chaos, there is also opportunity” – so said Sun Tsu, author of the *Art of War*, a great military strategist at the time in 500BC, just as the Silk Road was winding its way West.

So it goes with the supply chain risk and opportunity.

The Russell Group view is that to truly execute business strategy one must understand that we now live in a connected world, in which our markets and clients, suppliers and partners operate in interconnected networks. This is particularly relevant when facing the challenges presented by maturing supply chains.

Given that the connected world is a mesh of interconnected networks, forward thinking enterprises must observe their supply chain landscape first, prior to executing strategies, otherwise they will struggle to find the optimal route to market or combination of markets or suppliers. This thinking will enable businesses to observe, learn and optimize the true business opportunities presented by the strategy they choose when seizing the connected supply chain risk advantage.

Connect with Russell

Russell Group is a leading risk management software and service company that provides a truly integrated risk management platform for corporate risk managers and (re)insurance clients operating in an increasingly connected world.

Connected risk refers to the growth in companies which are increasingly integrating across industrial sectors and geographies, and creating greater levels of risk. This exposes corporates and (re)insurers to a broader range of inter-related perils, which requires a risk management approach built upon deep business intelligence and analytics.

Russell through its trusted ALPS solution enables clients whether they are risk managers or underwriters to quantify exposure, manage risk and deliver superior return on equity.

If you would like to learn more about Russell Group Limited and its risk management solutions, please contact rborg@russell.co.uk or visit www.russell.co.uk/contactus

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