

SUPPLY CHAIN RISK MANAGEMENT

Risk management is part of the portfolio of most firms. For example, contracts are always instruments to share risk between the parties. Or again, risk management should shape audit strategy and be the bedrock of health and safety practices. Product design includes risk management methods such as failure mode effect analysis (FMEA) which is a core tool within TS 16949. Lean and agile product development approaches also aim to minimise risk. Recently the expression 'stress test' has entered everyday speech from contemporary financial sector risk management.



Risk management is growing in importance as new and improved products, processes and services are more and more the bedrock of the growth strategies of most firms. Last year food and drink manufacturers in the UK, the largest manufacturing sector in the UK, introduced some 16,000 new products, part of the reason why food manufacturing is one of the sectors that expanded most between 2008 and 2014. Everyone accepts that there is a significant risk dimension to such market introductions as most new products fail still .

With innovation increasingly based on new technology, especially digital technology, business risks are increasing for other reasons too. Introducing new technology brings important supply chain risks as new technologies usually mean new suppliers. There is now a well established trend for supply chains to become more elaborate, more diverse and more extended. Major organisations, including the U.S. Pentagon for example, have identified this supply chain development as bringing important new capability and skills challenges and needs in supply chain management and strategy to cope .

There are also developments in the business environment which are intensifying risks as it become more volatile, ambiguous, chaotic and uncertain (VACU). The Cambridge Risk Centre last year produced a taxonomy for complex risk management based on twelve categories of threat. These include financial shock, trade dispute, political violence, geopolitical conflict, natural, climatic, environmental or technical catastrophe, disease outbreak and humanitarian crisis. Most if not all of these can disrupt an extended supply chain and it is easy to think of recent examples of disruption which have made the headlines.

Deloitte recently published a review of the factors shaping the investment approaches of US headquartered manufacturers up to 2020. Produced with the Manufacturing Alliance for Productivity and Innovation it examined whether the well established strategy of off-shoring should be balanced in future by more recent developments in the global economy favouring a different strategy. For example with the increasing importance of advanced manufacturing techniques how sound is it to develop the global manufacturing footprint in new territories where the environment involves several significant unknowns? The study recommended that top management ensure that geopolitical risk is factored into global investment decisions over the next five years. In this kind of risk work a strategic risk is one which undermines the fundamental assumptions on which a strategy is based or the organisation's capability to meet its goals.

Massachusetts Institute of Technology's David Simchi-Levi, Cornell's William Schmidt, and Yehua Wei at Duke, have created two new metrics to "help prioritize the financial or operational impact of risk that lets companies focus their mitigation efforts on the most important suppliers and risk areas,"

Time to Recovery (TTR) is the time it would take a network point to become fully functional after a disruption. Ford has used suppliers TTR information combined with its own data to identify risk exposure at each of its network sites. Time to Sustainability (TTS) indicates the maximum duration that the supply chain can match supply with demand after a network disruption.

Evaluating inventory and other available supply, this metric reflects how long the customer can continue to be served while the network point is down. If the TTS is greater than the supplier's TTR, risk is low. By contrast, if the TTS is less than TTR, its disruption creates financial and operational complications.

Another important aspect of strategic risk management is risk monitoring and firms will need to introduce or expand this capability. We can all think of risks that loom large currently but which two or three years were only the concern of specialist communities. The UK is fortunate in the availability of information and expertise on emerging risks, much of which comes at low or zero cost. There are also thriving consultancies in the UK business services sector specializing in area specific political and geopolitical risk analysis. It is important that risk monitoring within firms is elevated beyond media monitoring as part of the marketing function and provides a regular structured input to senior decision-makers.



The new version of the global quality standard, ISO 9001 which has just been published. It incorporates the risk management standard ISO 31000 and brings that standard into an assessment and certification regime for the first time. This change will be carried through to all the sector specific variants of ISO 9001 including medical equipment, aerospace and automotive.

Supply chain risk management has been the subject of important developments by major manufacturing nations outside the UK. There is the German supplier assessment approach VDA 6.3 developed for automotive supply chains. This standard evaluates a potential supplier's capability to be a reliable part of the supply chain for a new product but it is also useful to primes in developing their

In the USA the premier professional association for supply chain management is the APICS who offer a comprehensive, program that will prepare participants to work on the development of a global risk mitigation strategy. To earn the APICS Risk Management Education Certificate one must complete 12 total contact hours of APICS education including 3 from the elective topics which include vulnerability assessment, currency risk and political uncertainty.

Industry Forum can support manufacturers who want to enhance their supply chain risk management capability. We provide services linked to the global automotive quality standard including the core tools such as FMEA, to the German supplier standard VDA 6.3 and to the U.S. professional association for supply chain management APICS.

Supply Chain professionals must consistently update their skills and knowledge to thrive in a competitive environment. As the leading training and consultancy organisation, Industry Forum can offer the right programme and certification in APICS. For further information please visit www.industryforum.co.uk/training or email courses@industryforum.co.uk

