

SUPPLY AND VALUE CHAIN NETWORK MAPPING

March 2017

Supplier Relationship Management

We all know that managing your supply chain efficiently will save your company money and time, and reduce risk. But where can you start? If you are considering a realignment of your supply chain or just want to properly evaluate it, then a strategic supply chain map can be beneficial.

REASONS FOR CONSTRUCTING A MAP

Supply and value chain network mapping helps you to understand the network and identify where intervention is necessary or beneficial. There can be many reasons for constructing a map, and it's this which will influence the method used, but at a basic level it will help you gain an accurate understanding of:

- the players, physical structure and the nature of the network to enable you to search for improvement opportunities;
- your exposure to risk where mitigation and contingency efforts need to be targets;
- where to find opportunities to add more value or remove those elements which don't;
- where cost is added and what needs to happen to reduce it;
- any inefficiencies, wastage and opportunities for improvement;
- demand management and information flows, and what you need to change to improve the flow of information and how demand is managed; and
- compliance with the CSR (Corporate Social Responsibility) policy or where an intervention is required.

To help you map the supply and value chain network, there are a variety of models available. One of the most commonly used is the SCOR model (Supply Chain Operations Reference) which is endorsed by the Supply-Chain Council. Whilst this model looks end to end and considers many aspects of performance, its focus is largely around the overall effectiveness of logistics and flow of materials, and the way entities communicate and interact. As such, it provides a basis from which you can drive improvements through integration and better collaboration. This is a good approach if the goal is to make a network more

effective. However, there are more dimensions to good SCM (Supply Chain Management), such as demand management, risk and CSR, which may require a more extensive means of analysis.

FIVE STEPS IN THE PROCESS FOR SUPPLY AND VALUE CHAIN MAPPING

STEP 1- MAP THE PHYSICAL STRUCTURE

If your supply chain is simple, you may already know what it looks like and can draw it on a piece of paper. However, most networks are quite complex and you will need to do some research to complete the map.

Figuring out who supplies whom can be a challenge. We understand our suppliers, but do we know our suppliers' suppliers? The problem is this information may not be readily available and suppliers may be reluctant to share. Outlined below are things you can do to help you understand the structure of a network:

- talk to your supplier;
- break down the product or service into its constituent parts and attempt to identify from where these might be sourced;
- ask an industry, product or logistics expert; and
- create an obligation for the supplier to be as transparent as possible.

STEP 2 - NETWORK ENVIRONMENT AND CONTEXT ANALYSIS

The nature of the environment and context is highly relevant to understanding a network. Key considerations include:

- countries and geographies involved;
- cultural differences;
- prevailing political and economic climates;
- end customer changing needs and aspirations; and
- environmental considerations.

For the environment analysis use the PESTLE Analysis tool (Political, Economic, Sociological, Technological, Legal and Environmental). It will help you consider the forces, drivers, trends or prevailing conditions under

each of the headings both upstream and downstream that could impact on the network.

To understand the context of the network you need to consider all the unique factors that could present challenges or require specific provision and which either exacerbate potential risks or present opportunities. These include:

- the complexity of the network or processes;
- the range variety or lack of standardization;
- any product difficulty or complexity;
- customer requirements and uniqueness of individual requirements;
- market difficulty and inability to switch providers;
- organizational complexity; and
- the flow of information and how difficult it is in actual practice.

STEP 3 - APPLY LENSES AND SEARCH OUT HOT SPOTS

There are two techniques that can help to simplify the mapping process, enabling you to focus your resources more precisely – the use of different lenses to examine the network and the hot spot analysis technique.

Once we understand the physical structure of a network, if we can successively examine it from different perspectives, as if looking through a series of lenses, then we will see the network in a variety of ways. The difference lenses that might be used here include:

- Process flow lens – to examine the flow of materials, information and how demand is managed.
- Cost driver lens – to help see all the cost drivers and where they are introduced into the network.
- Value lens – to look for where and how value is introduced or added, where innovation might come from or how quality is created, assured or possible.
- Risk lens – to see where risk lies or is introduced.
- CSR lens – to examine the network specifically for CSR impacts or potential risks against a corporate policy or framework.

Hot spot analysis is an approach which helps cut through complexity and pinpoint areas to focus on. Instead of trying to study an entire network, it works together with our lenses by looking for areas where we are most likely to find a problem or 'hot spot'. This then allows us to see if there are any opportunities or areas where intervention would be beneficial. As we apply each lens, and identify hot spots the findings should be recorded on the map at each point. If we can quantify something such as what cost is added then we should do this, but where this is not possible, a simple rating system can help. Fundamentally, the more visual we can make it, the easier our map will be to interpret.

STEP 4 - NETWORK RISK AND OPPORTUNITY ANALYSIS

Step four focuses on consolidating and prioritizing all the risks (including CSR) and opportunities identified in the supply and value chain network.

By reviewing the entire supply and value chain network map, extract a list of the opportunities that have been identified using each lens. Quantify the scale of the opportunity, either in direct financial benefits or by attributing a scale according to the value that is possible relative to all the other opportunities.

The next step is to use an opportunity analysis matrix. Each opportunity should be plotted according to the internal and external ease of implementation with the scale of the benefits being represented by the size of the bubbles that are plotted, relative to one another. The result is a visual representation of the potential opportunities that will enable you to effectively agree which ones should be pursued.

STEP 5 - SUMMARIZE AND OPTIMIZE

The final step is focused on summarizing the full map, both in terms of a visual representation and the priority risks and opportunities identified. As for many strategic tools used within purchasing the key question we need to ask here is 'so what?' In other words, so what is this map telling us and what should we focus on moving forward. This can then inform a unique supply and value chain network strategy and approach to optimize it.

A good supply chain map can help identify breakthrough opportunities or areas where intervention would make a dramatic difference. However, mapping a supply chain well is no small undertaking and it would take a small army of people to map all the supply chains, or even just the important ones in a business. Careful thought therefore must be given to which supply chains we most want to understand and how this understanding would help us. If we can prioritize our focus here, then the results can make a great difference to an organization.

Jonathan O'Brien is the CEO of the international procurement and negotiation consultancy, training and tools provider, Positive Purchasing Ltd. As a specialist management consultant with over 27 years' experience in purchasing, he has worked all over the world helping global blue-chip organizations transform their procurement capability. Jonathan is also author of a trilogy regarded by many as instrumental in defining best practice strategic procurement comprising Category Management in Purchasing, Supplier Relationship Management, and the award-winning Negotiation for Procurement Professionals, and The Buyer's Toolkit - all published by Kogan Page.

This article first appeared in Feb 2017 on businessadvice.co.uk.

positivepurchasing.com

© Positive Purchasing Ltd trading as Positive 2017 | All rights reserved

If you want to publish this article or sections of it please contact us at team@positivepurchasing.com or phone +44 (0) 33 00 94 0000