
10 CLOSURE

10.1 A SUMMARY OF THE MAIN CONTRIBUTIONS TO THIS STUDY

This study presents the unification of asset management with the supply chain. Having been involved with asset and supply chain management for a number of years the discovery and formulation of the indirect supply chain was a great revelation. Most of the integration concepts, how they work, and their benefits, are known to asset and supply chain managers as individual optimisation or leverage techniques. Everybody knew that they were part of a broader business picture or application and discipline but they could never quite put it all together. The power of the indirect supply lies not with the value proposition or commercialisation of it, but the understanding, clarity and ring fencing that it provides.

The discipline of asset management, inventory management, sourcing and procurement, and logistics require full integration with each other so that they can continue with the individual optimisation efforts in the functional silos. Most disciplines can only achieve their KPI's through integration with other disciplines. The most noticeable examples are enterprise asset - and inventory management. Some companies may never move away from their silo structures but the indirect supply chain approach facilitates integration across the verticals and provides a far more holistic and competitive environment.

The study proves that the traditional supply chain model does not suit or fit the M&R materials supply chain. To this extent, the market itself has stopped thinking of the supply chain as a sequence of simplified series of events, but has recognised that it is a complex network of related supply chains required to manufacture a finished product.

DNA EAM found a second supply chain in the Make function of the traditional or production supply chain. It is a supply chain that is initiated only when the plant is in operation. The supply chain is in the service of assets to Buy, Move, and Store M&R materials. DNA EAM established the relationship between the maintenance of assets and their demand for materials. A reactive approach to asset management results in an erratic and unpredictable demand for M&R materials. A proactive approach results in a predictable M&R material usage and frequency. DNA EAM calls the supply chain that consists of the Operate, Buy, Move, Store and Maintain function, the indirect supply chain.

The M&R demand signal is the integrator between asset management and the supply chain. There are several ways that the demand signal can be enhanced, most noticeably by changing to preventive maintenance, using scientific optimisation techniques such as RCM and the correct implementation of an EAM software solution.

10.2 RECOMMENDATIONS FOR FURTHER RESEARCH

DNA EAM followed a commercial approach when it formulated the indirect supply chain. This is reflected in the contents of this study. A literature study by Croom, Romano and Giannakis concluded that there is a serious lack of theoretical work, knowledge, and research in the field of SCM and the integrated EAM SC model. The author believes that most of the articles published originated in a commercial environment where time and money is of the essence. This environment is not conducive for the research and development or the documentation of theoretical work. It is therefore important to capture the theoretical work and knowledge of people in the industry. On the theoretical side further research is required to fully understand and document the implications and benefits of integrating asset management with inventory management, sourcing and procurement, and logistics. Not enough is known of the financial benefits and ways to quantify savings or costs. This became evident in the ROI calculations for Client X as the full benefit of asset management integrated with supply chain management could not be calculated due to the complex financial mechanisms.