
9 APPLICATION AND COMMERCIALISATION OF THE INDIRECT SUPPLY CHAIN IN THE MATERIALS HANDLING EQUIPMENT ENVIRONMENT

9.1 INTRODUCTION

This chapter seeks to demonstrate the application and commercialisation of the indirect supply chain using the DNA EAM service offering and DNA SC fulfilment service. This application is based on a business solution that the author presented to a company faced with a common challenge in the asset management environment. This chapter includes a high-level business impact assessment and a financial model.

The financial model was structured in a specific manner in response to the client's financial situation (predicament) at the time. Although the author believes that the financial arrangement was viable to all parties concerned and the business solution exciting, sound, and refreshing, Company Y declined the offer to enter into a joint venture.

9.2 THE CHALLENGE

Company Y is one of South Africa's leading designer, manufacturer and installer of large and small electric overhead cranes, wire hoists and related mechanical handling equipment. It is the largest provider of on-site maintenance, repair, and refurbishment of materials handling equipment. It is well represented in South Africa and has branches in Secunda, Richards Bay, East Rand, Benrose (Head Office), Cape Town, Welkom, Kuruman, Durban, and Port Elizabeth. The services division (maintenance and repairs) is the backbone of the organisation as it provides a steady income and allows the company to absorb the highs and lows (spikes) of the manufacturing division. Each branch in the services division employs approximately 20 to 25 people.

The materials handling environment has stringent statutory regulations – as stipulated in the Occupational Health and Safety Act (OHSA) - regarding safety, maintenance performed and certification. The OHSA requires a certified technician to maintain and witness all tests performed after which the handling equipment is certified for the next year. Maintenance tasks include but are not limited to:

- Monthly crane / hoist inspections.
- 3 Monthly crane / hoist preventive maintenance tasks.
- Yearly crane / hoist statutory load tests.

The industry operates on the principle of appointed service providers to maintain their materials handling equipment. Contract durations are in the order of 1 to 3 years and automatically renewed or placed on

tender if the performance of the service provider is unsatisfactory. In recent times the services division has been losing against the competition by losing current contracts when due for renewal and losing more bids than usual. Monthly turnover has been dropping steadily from R10 million to R7 million over the past year. Company Y realised that its services division was not reaching its full potential and this was impacting on the:

- Growth within the industry.
- Competitive advantage.
- The company's financial results.

The symptoms of the problem included:

- A lack of financial control: M&R materials procured to perform maintenance were not being invoiced to a client. Over and under invoicing created havoc in the financial system.
- Low labour productivity: Being a services company with no assets, income is derived from selling (billing) labour hours to a client. Low productivity meant there was a discrepancy between the hours billed and hours paid to technical staff.
- Inventory management and stores infrastructure: Having no inventory management system to keep track of stock, the total stock holding cost for the company was estimated at between R20 million and R40 million. A lack of a store keeping policy and system resulted in M&R material found lying around the workshops, offices, and scrap yards.
- Maintenance execution: The quality of maintenance execution resulted in a high comeback due to asset failure. Company Y lost credibility each time that a materials handling equipment failed, especially in the production environment.
- Maintenance scheduling: Due to a lack of a CMMS, clients inform Company Y when to come out to site and perform the required statutory and preventive maintenance tasks.
- Call-out maintenance: When a failure occurs a technician is dispatched to the client. An inspection is performed to identify the problem after which he returns to the workshop to draw spares. If spares are not available they are procured and delivered to the workshop. Only then does the technician return to repair the failure. Good repair turn around times for Company Y is in the order of 8 to 12 hours.
- Management information: Information required for management to make informed decisions simply did not exist. Decisions were left to a manager's "gut feel".

As a services company this situation was unsustainable and had to be changed. The question was how?

9.3 THE DNA EAM BUSINESS APPROACH

Company Y had two options. Resolve its problems and maintain the run-of-the-mill service offering that all service providers sell, or redefine the market through a radically different approach, a true asset management service offering.

DNA EAM's solution was to move away from a traditional business model presented in figure 34 [DNA EAM] to a business model illustrated in figure 35 [DNA EAM].

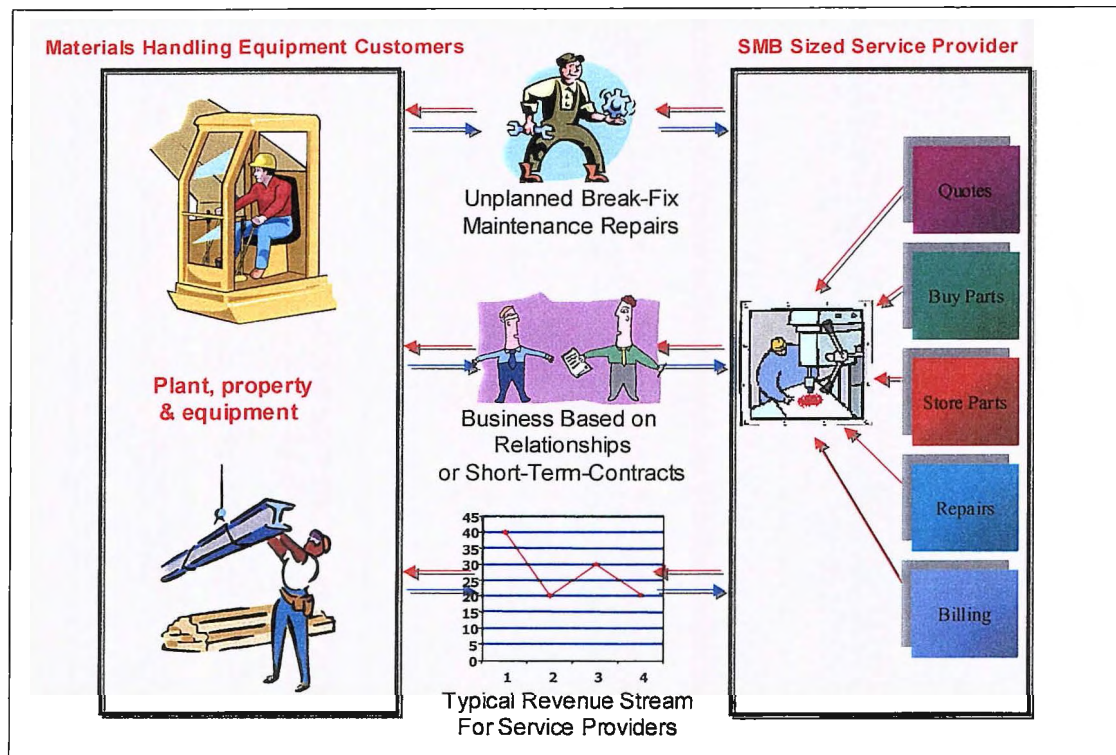


Figure 34: The Current Small Medium Business Service Provider Offering

The current way of business was short term based and gave an erratic revenue stream. The DNA EAM approach was to take away the client's worry of asset management to a point where he pays a fixed price with a guaranteed service level. In short a partner that looks after a client's material handling equipment in full and a service provider that takes on the risk of the performance of the asset. The benefit to Company Y would include a captured client that provides a stable and predictable revenue and profit stream. The idea is not to sell a maintenance service but an asset management service that:

- **Guaranteed asset availability** according to the client's needs. A high availability where material-handling equipment is used in a production environment and acceptable asset availability for non-essential equipment.
- **Retain an asset in the condition** required by the law (OHSA)

- A fixed price contract per asset so that the client can budget for his maintenance support costs.
- Make management information available to the client with regards the performance, utilisation, etc. so that he can gain a better understanding of his asset.
- Share in the consequences of an asset service level agreement (downtime) that is not met.

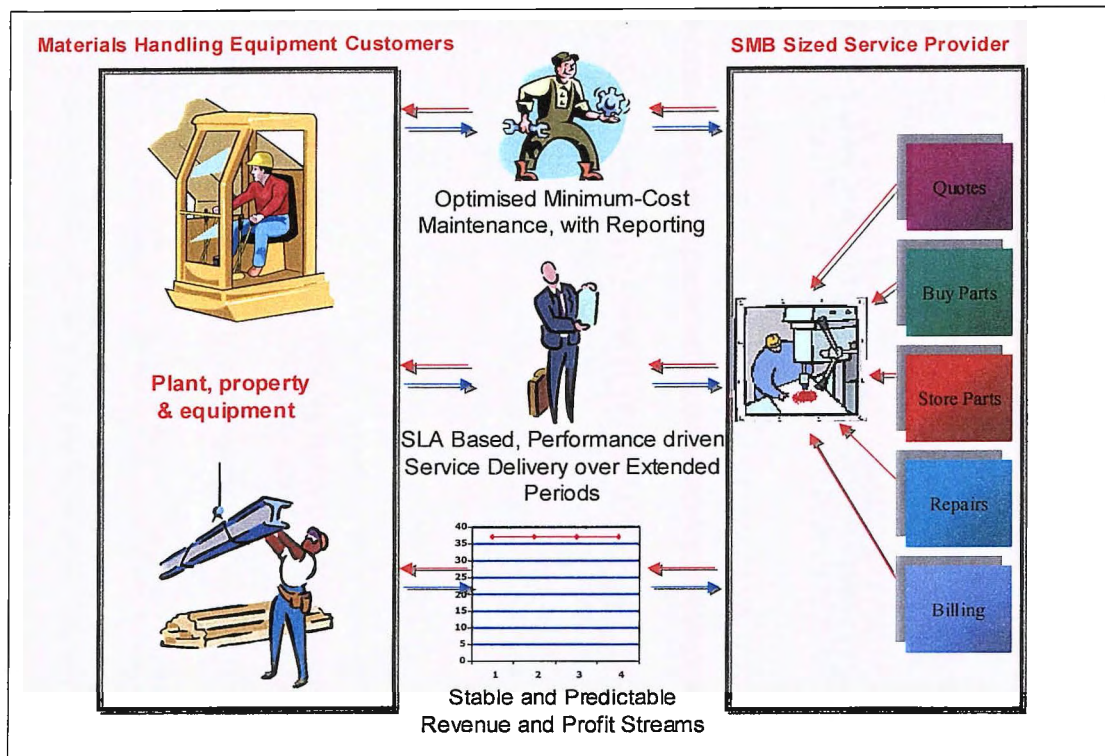


Figure 35: The DNA EAM Small Medium Business Service Provider Offerings

9.4 CORE VERSUS SUPPORT PROCESSES

The indirect supply chain puts asset management at the forefront of its service. It is the perfect fit for Company Y. What value could DNA EAM and DNA SC provide Company Y? DNA EAM specialises in the establishment and optimisation of asset management principles. DNA SC specialises in supply chain fulfilment (procurement, inventory management and logistics). The companies are a perfect fit because their service offerings complement each other based on the principle of core and supporting processes (non-core).

Company Y's core business is asset management through an outsourcing service provider offering. Due to Company Y's distribution and resourcing at branches (20 to 25 people per branch) the function of procure and move of M&R material is an expense account. Although important to business it is not a service that the Company Y can sell or pass the costs on to the client. It is therefore a support process.

The recommendation of DNA EAM was to outsource the procure and move function. The value proposition for Company Y was that a company such as DNA SC could do the supply chain fulfilment cheaper and more effectively than Company Y could. The mechanism used is illustrated in figure 36 [DNA EAM].

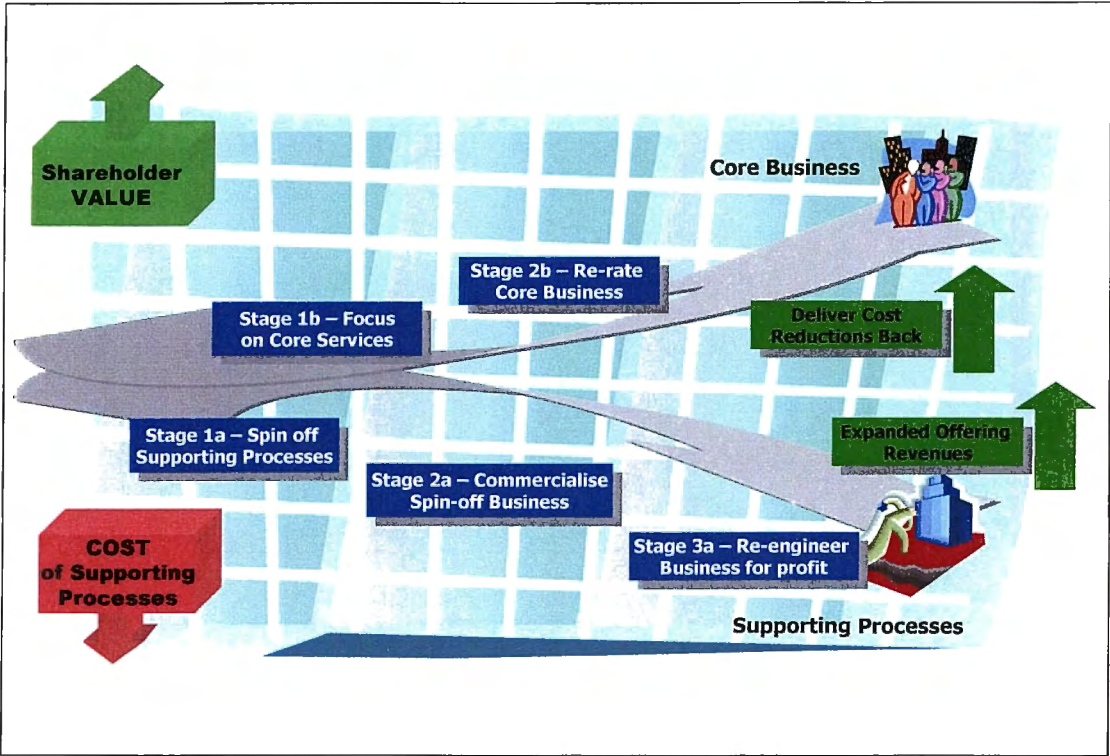


Figure 36: Separating Out Support Processes from a Core Business

Separating out the support processes from a company’s core business - stage 1 - allows Company Y to focus on its revenue stream and what it does best. Stage 2b presents the opportunity to adopt an improved service offering and turn around its business.

Companies such as DNA SC makes a living by taking over supporting processes – stage 1a – and has the critical mass to commercialise it. This critical mass is obtained when enough customers procure similar commodities and require a service to move it. In the case of Company Y, procured M&R materials will be added to a road transporter that runs along existing logistics route for established clients. The costs work out to a fraction of present costs if a dedicated (often near empty) transporter would move M&R materials exclusively on behalf of Company Y between suppliers and branches.

9.5 THE ASSET MANAGEMENT APPROACH

DNA EAM recognised the problems experienced by Company Y as a lack of a proactive asset management approach on behalf of the client's assets. The author approached the solution using the four steps of strategy, people, process and technology as a foundation.

1. Strategy:- The new asset management strategy would be based on the concept that the core competencies of the three parties concerned are:

- Company Y – outsourced asset management and customer service.
- DNA EAM – establishment of asset management practices and asset management optimisation.
- DNA SC – fulfilment of the supply chain functions of procure and move of M&R materials.

The new strategy followed a progressive service offering of:

- Maintain assets according to statutory requirements only (fixed price contract).
- Maintain assets according to statutory and preventive maintenance schedules (fixed price contract).
- A full maintenance service including breakdown maintenance (fixed price for scheduled maintenance and time and material for breakdown maintenance).
- Asset availability service as specified by a client. All statutory, preventive and breakdown maintenance to be performed at a fixed price and a guaranteed asset availability and reliability. Reward / profit sharing by all parties concerned.
- Ownership of asset on behalf of the client on his site. Buy up assets found on client's site and be paid a production fee for the use of the asset.

The success of the service offering centred around the EAM software solution, the implementation according to the strategy, utilisation and acceptance by the people, and processes to sustain the business (technology, people and process).

Technology:- The technology solution was based on the need for an EAM instead of a CMMS software solution. Required was a procurement, inventory and maintenance management module with the flexibility to customise the software to facilitate all the different service offerings. Using a best of breed approach to software an interface would be required between the EAM and Financial system. The loop would be closed, as the financial system would be used to invoice the client based on the financial input from the EAM system (labour hours, M&R materials, fixed price agreements, etc.)

An annual customer support plan (ACSP) would be essential to support any software problems and keep the joint venture abreast of new software technology development through free software upgrades, bug fixes and newly programmed EAM trends.

Company Y's wide area network (WAN) meant a centralised technology solution was possible. It means that the group's EAM solution is located on a fileserver at Head Office. It has the benefit of:

- Simplified software installations and support.
- One database for the group.
- Provides visibility into all branch activities e.g. inventory levels, budgets, purchase orders, etc.
- Simplified management reporting as reports can be drawn for the group and not just for a branch.

The distances between the fileserver and workstations meant using appropriate technology such as thin client technology with Window Terminal Service, Citrix Metaframe and SQL Base as a data platform.

Processes:- Processes are used to translate strategy, in this case the different service offerings into execution steps. It requires a skill referred to as Business Process Engineering (BPE) to do this translation. DNA EAM would supply the necessary skill in the form of a business consultant. Process development would address the main disciplines of procurement, inventory management, asset management, invoicing, etc. The idea was to standardise all processes, document them and roll them out to the remaining branches.

People:- People are what makes the business possible and to gain acceptance for the new way of doing business a formal process of change management, education on the new business processes and formal training in the EAM software solution would be used. As DNA EAM would be responsible to roll out the asset management solution, provision would be made for on-the-job training and hand-holding (support) during the commission phase at each branch.

A Project Executive (PE) would be appointed for the duration of the partnership to maintain the business solution, identify new opportunities and develop the business through the continuous improvement of the software and process solution.

9.6 THE FINANCIAL MODEL

The financial model used was based on the “run” or “ongoing management” principle. As Company Y experienced severe cash flow problems DNA EAM was willing to commit itself to a partnership agreement whereby DNA EAM made a substantial investment in Company Y. The investment made would be in the form of:

- The purchase of a ten concurrent user EAM software solution.
- The purchase of all operating, database and remote support software.
- The purchase of an application and database server to host the software and provide the network solution.
- The cost of the ACSP contract for the duration of the partnership.
- The implementation cost of the EAM solution using 2 consultants.
- A full time Project Executive (PE) to run the project.

The investment would be based on the following arrangement:

- A three-year minimum partnership agreement between Company Y and DNA EAM.
- A requirement of 2 consultants, full time, for 11 months to implement and roll out the EAM solution within the group.
- The appointment of a PE from the start of the project to assist the 2 consultants and liaise with Company Y. After the completion of the implementation the PE would remain behind for the duration of the project.
- An aggressive implementation strategy to have the solution implemented within 12 months at all 9 branches.
- The development of a standardised solution at a pilot site lasting 3 months and the solution to be rolled out to the remaining branches.
- All software and hardware to become the property of Company Y after the three-year period.

The financial structure to be used, would be:

- A monthly user fee per branch payable from the operations expense budget. This meant no CAPEX requirement.
- An initial fee of R35 thousand per site per month during implementation of the EAM solution that dropped to R25 thousand after the completion of the implementation.
- An all-inclusive monthly fee with no hidden cost.
- A monthly fee that made provision for the PE to travel and visit the branches.

Appendix H shows the payment arrangement for the EAM solution, implementation and ongoing management for the agreed 3-year partnership. The bottom line for Company Y was this:

- Once fully running the monthly service fees would equate to 3.57% if the monthly turnover is R7 million.
- At a monthly turnover of R10 million this equated to 2.5% of the monthly turnover.
- At a monthly turnover of R14 million this equated to 1.79% of the monthly turnover. The figure of R14 million was DNA EAM’s estimate turnover after the introduction of the new service offering to clients.
- The DNA SC services would be costed at 5% of a purchase order value to procure and move required M&R material.

What would the deal mean for DNA EAM and the profit margin be on it? Figure 37 [DNA EAM] shows a predicted case flow situation after the three-year arrangement. A straightforward calculation gave a profit of 32% on the deal. The author believes that the profits would be eroded to between 20 and 25% after all expenses were factored in.

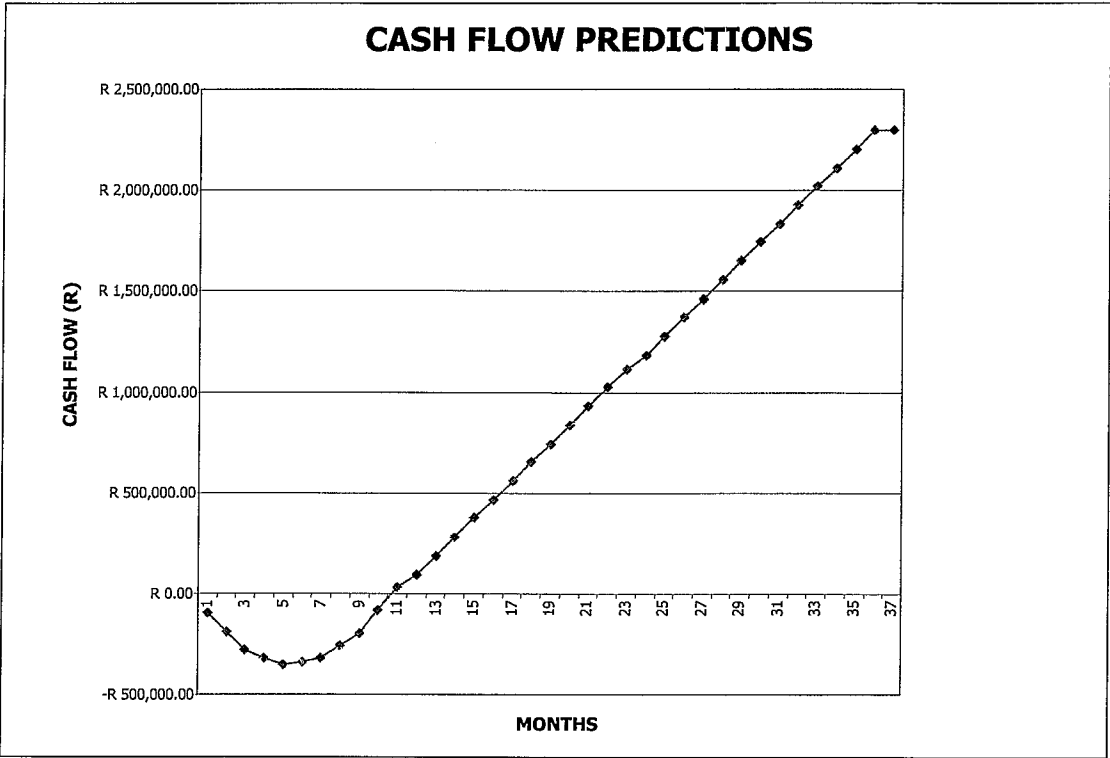


Figure 37: DNA EAM Cash Flow Prediction

9.7 CONCLUSION

The reason why this business application was chosen is to demonstrate that the theory behind the indirect supply chain has an application, definite benefits, and can be creatively structured into a good and sound financial deal for all parties concerned.

How much should one read into the fact that company Y did not take up the opportunity to join forces with DNA SC and DNA EAM? Company Y used the financial arrangement as an excuse to discontinue the business engagement. At face value this may have been the reason but the author believes that the way the deal was structured is several years ahead of its time for South Africa and that Company Y did not fully understand the implication of the indirect supply chain business model. It is now starting to receive acceptance in America and Europe. The South African asset management market will take time to mature and change the way it thinks and operates.