

Process improvement at Romaks hardware distributors

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## **Introduction**

The highly competitive business environment in the 21<sup>st</sup> century demands that organizations must optimize their processes so as to achieve more efficient results. The term business process improvement was first used in IBM in the 80's when the then president required that the organization's operational processes should be at least as good as their production processes. This was at a time when organizations were at an overdrive to improve efficiency in their production processes, with little effort being dedicated to operational efficiency. Business process improvement, according to Harrington (1995), is a systematic approach that helps organizations to optimize their underlying processes in order to achieve efficient results. Improvement in efficiencies in organizational functions such as supply chains, sales and marketing, accounting and finance, operations etc are key areas that benefit from process improvements. According to studies, business process improvement, which anchors operational management concepts such as business process reengineering and process redesign, is responsible for improvements in costs and time up to 90% and quality by over 60% (Armistead, 1996). Process improvement, therefore, is an organizational development aspect in which a series of actions are taken towards identification, analysis, and improvement of the organization's existing processes in order to meet new objectives. According to Radnor, (2010), process improvement works best by first defining the organization's strategic goals, vision, and purposes, determining the organizations' stakeholders and designing the business processes in such a way that they align with the defined organizational goals.

In this paper, we analyze the business processes of Romaks hardware distributors, one of the leading hardware dealership company based in Australia. The company has been expanding rapidly, with operations in the main cities of Melbourne, Queensland, and Perth, supplying products in the region and abroad. Despite this expansion, the company's bottom-line continues to shrink, in the face of rising operational costs occasioned by inefficiencies in its operations. This paper identifies the current operating scenario, identifying the challenges

facing the current business processes before suggesting solutions on ways to improve the current business processes so as to attain the efficient results and customer satisfaction.

### **The company**

Romak hardware distributors have been in operation for the last 25 years, becoming one of Australia's key players in the construction industry. As one of the leading hardware suppliers, Romak hardware is involved in the supply and distribution of an extensive range of hardware products spanning categories such as building hardware and accessories, household hardware, storage and cleaning, garden and outdoor, fasteners and fixings among others. The company's product range is available both locally and internationally. The company boasts of invaluable domestic and overseas networks that offer control in the design, sourcing, and manufacturing of products hence the wide range of product categories. It also has unfettered access to trusted manufacturers and suppliers who can supply products, even custom made and unique products within specified record time.

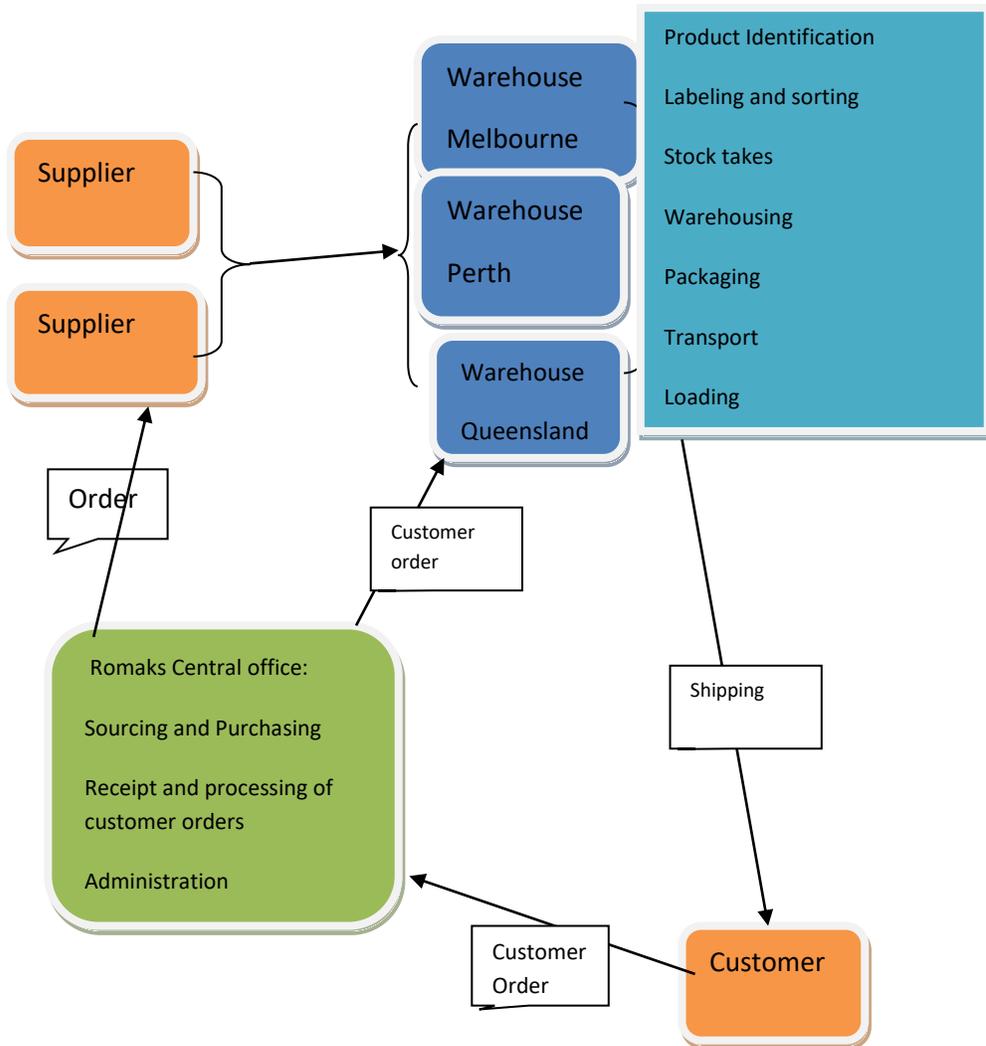
Romak hardware's range of products is sourced from all over the world and distributed throughout Australia from the company's warehouses that are located in Melbourne, Queensland, and Perth. The company has been making a significant effort towards ensuring that deliveries are done on time, prices are competitive and products are of the best quality by offering retailers quality and innovative brands that are backed by market leading warranties. Besides, in order to add value to retailers, the company is involved in creative merchandising, promotional programs and point of sale solutions. The company's revenue for the last one year was \$100 million. Despite such significant sales, the company is confronted with a shrinking bottom line, reducing revenues and customer numbers. This has been occasioned by operational inefficiencies in areas such as merchandising, supply chain, inventory management among others as noted in the following section of this paper.

### **The process**

When a new item of stock is to be purchased, or an existing item that is out of stock is to be replenished, the store's manager makes a list of items to be ordered, using information available from stock records. This list is checked and approved by the operations manager before it's forwarded via email to the purchasing department that sources the items from the various suppliers either through email or fax. The decision on where those items are to be purchased depends on the prices and quality considerations, lead time among others, although most of the products come from specific manufacturers, with whom the company has existing supply contracts.

Goods are received at various warehouses in the various locations Melbourne, Perth or Queensland and stored in different sections in a rather random manner, mostly depending on where they can fit. It's at the warehouses that product descriptions and identification is done through bin cards. Routine stock takes are done at specific intervals and any variances reconciled. Slow moving inventory items are a common occurrence, and some stock items get destroyed in store, making it difficult to sell them.

Customer orders are received and processed by the sales team in a central office location before they are transmitted to the warehouses for further processing and packaging. The warehouse team locates the items, picks, and packs before loading to trucks and shipping to the intended customer. Before loading, customer orders are verified by a client service manager to ensure that items are of the right quantity and as per the order. The choice of the warehouse from which to pick the items depends on the proximity to the client for maximum efficiency concerning time and cost considerations. The process map below details the current operational process at Romaks hardware limited.



**Evaluation of the process**

The evaluation of any operations process is anchored on the five key pillars of performance which include cost, speed, flexibility, dependability and quality. Because the company does not have, or in the minimum, does not enforce a specific location for each product, when products come in, they are often stocked at the

warehouse section where they can fit, which makes picking a more random and inefficient process. It also makes miscounting during stock take a common thing, sometimes items are missed altogether in the stock take cycles. So severe is this issue that in some cases, customer orders are not filled because although products may be in stock, they may have either been miscounted or missed and so not shown on the inventory reports. This often leads to reorder, which piles to the already existing product inventory thus negatively affecting the storage costs and product quality especially for products that have shorter expiry dates. Cases of incorrect product identification are rampant, often leading to errors since it makes picking and shipping a difficult exercise. This means that the existing system is not only inefficient and costly but also grossly unreliable.

Due to the above operational challenges that the company experience in most of the sections, there are significant errors that arise within the operations, leading to significant losses and inefficiencies for the company. A deeper analysis of the company's operations reveals that daily stock counts reveal at least 25 items missing out of inventory; as a result of the above challenges, shipping errors have been the norm, with products that have been loaded and shipped to clients not reaching them in at least 30 cases a day; the company experiences at least 65 picking and shipping errors in a day. The multiplicity of errors witnessed in the existing system poses a significant threat to the profitability of the company by compounding operational costs.

A review of the company's inventory management system reveals that the same product is in most cases stored in multiple locations, in different warehouses which exponentially increase the risk for errors and omissions in ordering and stock counts. The company has problems with consistency in the identification of inventory either physically or in the existing inventory management system.

Finally, it's evident that even the existing company processes are either not clearly documented or not always followed on a consistent basis which makes errors to be synonymous with the existing processes. A case in point is the fact that there is no clear loading procedure, thus loading is in most cases not done in an organized manner, which means that while a customer order may actually be loaded onto delivery trucks, it may not be easily found when the truck gets to the client location due to the bulkiness of most hardware items, thus compounding problems of costs and inefficiencies as well as the ability of the company to deliver on time.

The existing process clearly needs to be improved, if the company is to meet the necessary performance objectives and attain its vision of being the preferred hardware distributor in the region. In the minimum, the company needs to organize its warehouses to ensure that items are properly identified and arranged for ease of stock take, picking, packaging, and loading; shipping routes need to be evaluated for efficiency and profitability and ensuring that there is a working quality control mechanism that ensures that company procedures and processes are properly documented and followed through.

### **Recommendations and expected results**

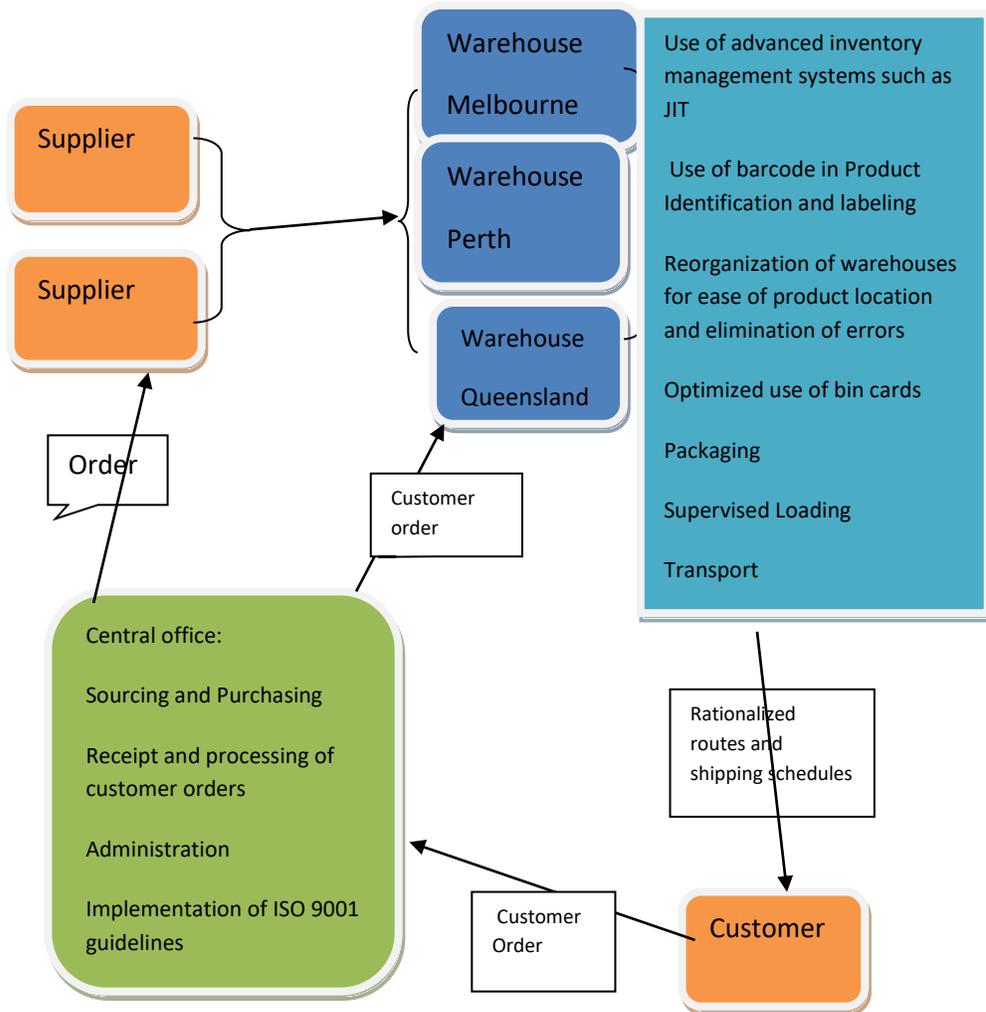
In pursuit of process performance improvements, this paper recommends a four-pronged approach. First, there is need to reorganize the warehouses in such a way that products can be easily located for maximum efficiency and accuracy. Such reorganization should be based on parameters such as product size, the frequency of purchase, usage among other relevant metrics. Reorganizing the warehouse will not only make it easy to pick random products at a request but will also optimize space usage while making it customer friendly especially for walk-in customers. The existing errors that result from the haphazard manner in which inventory is stored in the warehouses will also significantly reduce the company's operating costs and improve efficiency. As such, overall customer experience would improve as a result of reduced picking and shipping errors which would not only improve the delivery time.

Installation of a bar-coding system will go a long way in improving the accuracy of inventory which reduces the need for having manual cycle counts that are not only expensive but also time-consuming, besides delaying other company operations such as reordering. Having a working inventory management system ensures that at any one given time, stock figures are up to date, which reduces cases of double ordering or excess stocks due to ordering for items that had been miscounted or missed during a manual stock count. Reduction of errors and improvement of efficiency will lead to significant payroll savings. The use of modern inventory management

tools such as Just-in-Time inventory system will ensure that the company maintains just the right amount of inventory which saves on warehousing costs.

Analysis of delivery routes and rationalization based on the profitability of the existing routes is key to driving efficiency, speed and cost reduction. There is need to identify the issues affecting the current transport and delivery systems and reconfigure them in order to maximize efficiency. Advanced tools for optimizing transportation and routing systems such as genetic algorithm can be utilized in finding the path that achieves an optimum routing and scheduling system (Moghdeb, 2007). The rationalization of the scheduling and routing system is expected to reduce the company's fleet and staff by increasing the capacity of profitable routes while scheduling transport in those costly routes.

All the above recommendations will be rendered redundant if the company does not adopt a quality control system based on ISO certification guidelines (Bhatt and Troutt, 2005). This not only ensures that company processes are well documented and consistently implemented in all sections of the company, but will also enhance the company's quality standard which raises its profile among competitors. A management driven requirement for a strict adherence to the newly laid down operational procedures and processes goes a long way in improving the company's commitment to performance-driven- processes leading to significant savings. The improved process map is detailed below:



The new process map mirrors the initial one, save for the improvements discussed above. In this new process map, there is more activity at the warehouse with the introduction of a bar code system for identifying stock items, the introduction and use of bin card systems, reorganization of the warehouse to optimize space utilization and ease product picking and the use of advanced inventory management systems such as the JIT to prevent stock outs or excess inventory (Nickerson, 2014). The new process map also incorporates the

introduction of a rationalized shipping route and schedules for in order to maximize the utilization of optimum routes and schedules.

### **Conclusion**

As Aydinli, Brinkkemper, and Ravesteyn, (2009) suggested, an organization is only as good as its processes. This means that in order to make the necessary changes in an organization that improves efficiency and the bottom line, the key processes of the company must be well understood. To this end, a process improvement plan comprises the following steps’)

- i) identification of the key process (s) that need improvement
- ii) development of the objectives for the process based on its requirements
- iii) selection of members of a cross-functional team that would be responsible for steering the process improvement
- iv) identification and description of the current process
- v) identification of the disconnections or imperfections in the current process (s),
- vi) recommendation of changes that need to be inducted into the current process
- vii) implementation of the suggested improvements.

From the Romaks process improvement case study, operational inefficiencies witnessed as a result of inadequacies in the current process can be remedied with the adoption of the above recommended measures i.e. the introduction of a bar-coding system, introduction and operationalisation of bin cards, reorganization of the warehouse structure and set up to make it easier to identify and pick stock items on demand, the use of advanced inventory management systems and the reorganization, route optimization and scheduling of deliveries. Such remedies shall not only improve operational efficiencies but will also reduce costs, improve the speed of delivery, flexibility, dependability and quality of products and services within the company which will ultimately lead to improved customer satisfaction.

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