

Design, implementation and operation of a transport optimisation project for PPC Cement.

Industry

Building and construction.

Background

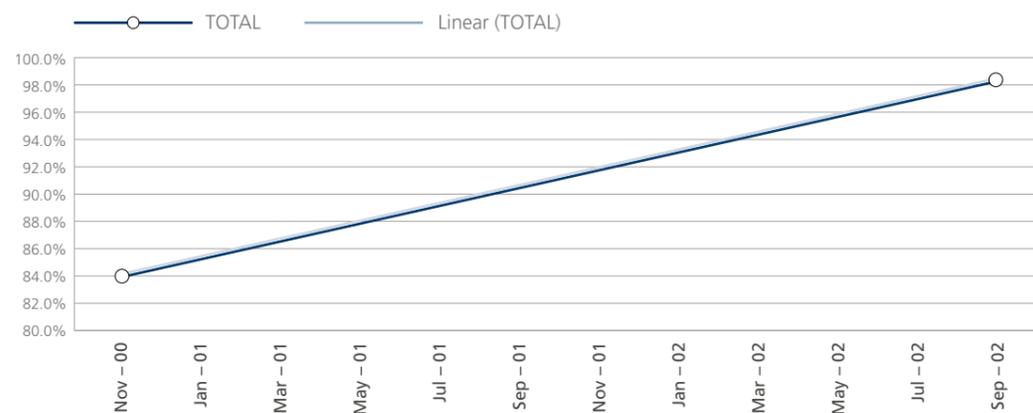
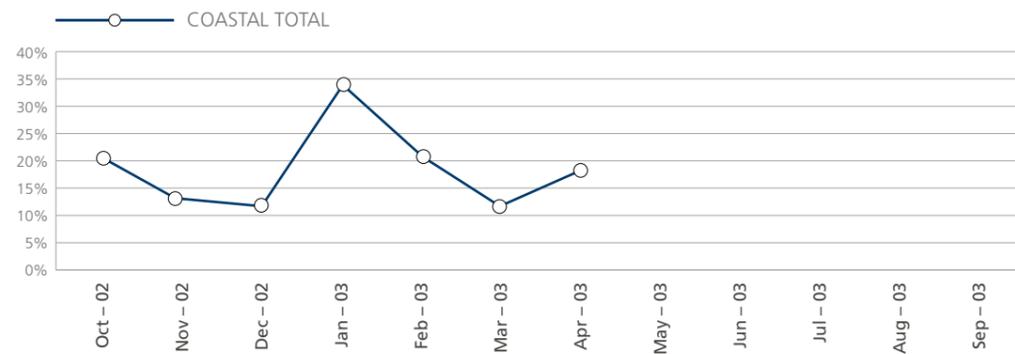
PPC Cement is the largest supplier of cement in South Africa. The company transports three million tons of cement by road each year to 14 000 customer destinations from 12 dispatch points. PPC produces 48 product/packaging combinations, requiring a combination of specialised and standard equipment. Approximately 500 deliveries are made each day within South Africa, and across the border to Zimbabwe, Botswana, Namibia, Mozambique and Swaziland.

A core fleet of contracted vehicles and numerous preferred suppliers are used to move the products.

Problem

PPC Cement has one of the largest volumes of product moved by road in South Africa and transportation accounts for a significant proportion (more than 10%) of the delivered price of cement. Over R200 million per year is spent on road transportation and therefore it is an area of concentrated effort. However, the complexities of PPC's distribution requirements are vast and this, together with the fact that distribution was being managed on a decentralised basis, made optimisation very difficult.

Freight payment of 120 000 supplier invoices was decentralised and manual. There was limited management information indicating turnaround times at delivery sites, vehicle utilisation or on-time deliveries.





Approach

The PPC sales team was managing the distribution while simultaneously selling cement, and this resulted in distribution KPIs not being monitored as closely as sales KPI's.

Barloworld Logistics proposed an integrated logistics solution. This included:

- Design, implementation and optimisation of a new transportation process
- Design, development and implementation of new software
- Daily demand planning and scheduling of vehicles
- Measurement and management of service providers
- Electronic integration between PPC, transport suppliers and customers
- utilising the latest B2B technology
- Production of management information.

At the time of making the proposal, Barloworld Logistics was operating a part of PPC's transport fleet in the Western Cape. Barloworld Logistics' operation was achieving some KPIs that were substantially better than their competitors'. Barloworld Logistics offered their operational efficiencies as the benchmark against which all suppliers would be measured on a national basis.

Following initial agreement, a model was constructed using advanced software to plan and model the expected outcome in detail, using actual customer scenarios based on historical information. The model verified Barloworld Logistics' projected cost savings and improved service level to clients. PPC and Barloworld Logistics concluded a six-year agreement including service level criteria and risk/reward for both parties.

Solution

The solution included:

- Formation of a steering committee, consisting of PPC and Barloworld
- Logistics staff, to keep PPC continually apprised of developments and provide "one-stop shop" access
- Deployment of dedicated, full-time Barloworld Logistics resources
- Negotiations with transport suppliers and signing of agreements on behalf of PPC to cascade PPC's service level criteria
- Establishment of a national centralised planning office and electronic order integration system
- Introduction of an Internet portal to provide simple, error-free communication between PPC, Barloworld Logistics and transportation suppliers

- Implementation of an ERP system:

- To facilitate automated, electronic order processing between PPC and Barloworld Logistics
- To manage the payment of transportation suppliers, including "self-billing" feature
- Financial management and transactional repository from customer demand to supplier payment.

Implementation

Dedicated Barloworld Logistics project teams, consisting of implementation, operation and IS specialists, were appointed to build an integrated system in which transactions are kept as simple as possible, with the minimum of human intervention.

Business processes were aligned and optimised with the overall project objective, before installing software to fit the processes. A phased, region-by-region roll-out approach was taken and a pilot site with the least risk was targeted for the first phase of implementation.

The new processes involved extensive change for the combined PPC and Barloworld Logistics staff. A specialist consultant was brought in to assist with change-management issues.

In the second phase of automating processes, an Internet portal was created. All communication relating to the scheduling, load tendering and feedback of transportation matters is now conducted over the Internet. Seventy percent of transportation suppliers had never used computers or the Internet before and had to be trained in the effective use of this technology. Intensive training of transport operators to achieve the benchmarked KPIs was also undertaken.

Service level agreements which are cascaded from PPC to Barloworld Logistics and from Barloworld Logistics to the transportation suppliers are managed on a daily, weekly and monthly basis to ensure that a world-class service is maintained for PPC.

Operation of the contract involves a large degree of planning and execution of management, specifically service provider rate negotiation, service level management negotiation and management of ongoing logistics solutions. In addition to operational KPIs, Barloworld Logistics has implemented key performance indicators based on flexibility and customer satisfaction with all suppliers.

Results & Achievements

The complexity of the problem, which included the need for human resources solutions and implementation of physical systems, required that Barloworld Logistics' integrated solution involve far more than just the implementation of IT.