Increasing market share by improving SLA (Service Level Agreement): a case report in lubricants' distribution

Valmir Adelino de Moura
CEETEPS – Centro Paula Souza, São Paulo – SP / Brasil
valmirmoura@uol.com.br
Eliane Simões
CEETEPS – Centro Paula Souza, São Paulo – SP / Brasil
Hellen Xavier das Chagas
CEETEPS – Centro Paula Souza, São Paulo – SP / Brasil
Marcelo Paranzini
CEETEPS – Centro Paula Souza, São Paulo – SP / Brasil
Sérgio dos Santos Neto
CEETEPS – Centro Paula Souza, São Paulo – SP / Brasil
Caio Lago
CEETEPS – Centro Paula Souza, São Paulo – SP / Brasil

Abstract
This study aims to report the significant increase in market share obtained after improving the Service Level Agreement (SLA) by remodeling the distribution network in the countrywide lubricants' distribution. The process consists in defining, measuring and monitoring of lead-time targeting continuous improvement of service delivery.

Keywords: SLA – Service Level Agreement, Market Share, Demand Cluster

INTRODUCTION

The concept of Service Level Agreement (SLA) was extensive and originally deployed in the IT (Information Technology) related to users who were expecting to have a resolution as quickly as possible to an open call; it must be considered that the Service Level Agreement is essential for the final-user satisfaction.

It is a fact that the relevance of the response time to opened calls in Service Desk is recognized as a differentiation for logistics activity (Ballou 2005; Bowersox *et al.* 2006; Christopher 1997 and Novaes 2001), especially when it's related to needs and dependence to a good and proper control of storage by the WMS (Warehouse Management System) and transport by the use of the TMS (transportation Management System), naming the two most used tools in logistics management.

This importance of WMS and TMS in logistics exemplifies what Wanke (2003 p. 12) stands out as a factor that has substantially contributed to the reduction of fixed costs and response times in the production and distribution operations: the spread of information technology (IT).

Secondly, the concept would also be applied in the segment of call center companies in order to guarantee "some" minimum time for prompt service and response, whether it was in active functions such as telemarketing or passive ones as the response to consumer in public services companies (energy, health, etc.) or in private ones (telecommunications, banks, etc.).

However, this account of practical experience with the concept of SLA between 1996-2002 in a large multinational company in the lubricant sector, allows the understanding of how the application of the concept can actually be a powerful strategic tool for leveraging Market Share.

The main lessons learned in this process, were that successful outcomes resulted from the implementation of an integrated logistics (management of storage and transport) and the unceasing search for achieving excellent levels of service, measured and evaluated with high frequency (some daily), as according to Biazzi (2006), it's necessary to define, measure and monitor indicators to improve the competitive performance by using information technology applied through the processes such as routing systems software and shipments management for auto subsequent conference as the shipping volumes and values freight, WMS (Warehouse Management System) to control inventory in multiple locations at a national level and other applications that were developed in Excel and Access spreadsheets.

In the case reported, a centralized distribution model in lubricants processing plant in Cubatão-SP was switched to the availability of these products in five strategically distribution centers established in national territory, through a demand cluster study.

This strategy has proved to be highly effective since it`s almost doubled the market share of the company after 18 months of the start of the project in Brazil, this model even prevailed when the company went through one of its largest merger in 1998, and it has been adopted to all Latin America.

THEORETICAL REFERENCE

Service Level Agreement (SLA) is characterized by Sturm *et al.* (2000) as an instrument that defines what service levels are considered acceptable by the users and which are supplied by these users, acting as an expectation aligner.

Along the same lines, Freitas (2013) mentions that the IT departments of the organizations seek to demonstrate a commitment to the business area to providing customer-oriented services, the management of service level is essential. As Faria and Costa (2005 p.43) said, "In essence, the service level is the fulfillment of specificity and needs defined by the customer, with a pre-established objective of creating value to these customers."

In a more extensive way, Hiles (2002, p.5) defines: "An SLA is an agreement between the provider and its customers, that establishes a minimum service quality that the company needs." Thus an SLA should take into consideration a set of indicators mutually agreed between the parties to ensure the quality of services, while maintaining the focus on evaluation performance for these services.

Performance Indicators (KPI - Key Performance Indicators) applied to logistics

As suggested by Mintzberg *et al.* (2000), it should be understood that companies are in a highly unstable environment, influenced by factors beyond their control, but to which they have to adjust themselves by changing their strategies when necessary.

In many companies there is no alignment between what is defined as mission, vision and strategy, what actually occurs on a daily basis and what is measured to evaluate the company's performance, according to Epstein and Manzoni (1998).

Performance evaluation processes can be considered as an integration of resources time and energy strategy, providing the organization and its various areas the analysis of their performance in the market in order to correct possible performance deviations and can even provide some advances.

To identify the organizations reasons for success or failure would be a major motivation for analysis, which, when applied, allow organizational synergy and can be identified as sustained competitive advantage.

Many methodologies identified for performance evaluation are usually standard models created to assist in the development of organizational activities. However, most of them give priority to financial analysis, as the core of the organization's performance of its market. By contrast, the analysis of different performance perspectives becomes complex, incurring costs, which often prevents the application of such model (Zago *et al*. 2008).

From the perspective of marketing and commercial area, the emphasis should be on identifying customer segments and markets on which the business unit will compete defining the unit's performance measures on these target segments, tracing performance indicators which should include specific measures from the value proposals that the company will offer to its customers, seeking to measure results and specific objectives, knowing that the driving elements of the essential results for customers are the critical factors to keep them loyal to the company or to ally themselves to the competition.

So in this case report, the "Lead Time" delivery, that should be considered by shippers as one of the main performance indicator from the supplier to the client within the supply chain concept, was applied by the company and eventually resulted in an increased market share.

The Concept of Cluster Applied to Demand

On Wikipedia, a cluster is an Anglo Saxon term to refer to a **concentration of companies, institutions related to the same product or service within a geographical area [emphasis of the authors** [highlighted by the authors].

In his theory of national competitiveness, Porter (1999), gives an important role to clusters, which are, in his own words, [...] geographic concentrations of interconnected companies, specialized suppliers, service providers, companies in related industries, and other specific institutions (universities, standardization agencies and trade associations) that compete but also cooperate with each other. [...] A cluster is a geographically concentrated group of interrelated companies and related institutions in a particular field, linked by common and complementary elements. The geographical scope varies from a single city or state to an entire country or even a network of neighboring countries. (Porter 1999 p. 209-211).

The cluster, still on Porter's (1999) words, is a form of spatial organization that is capable of becoming a more efficient and effective way to gather inputs - provided that there are local suppliers. If these local suppliers do not exist, then the supply from outside of the cluster becomes necessary, although it does not represent the ideal solution.

Obtaining inputs from the own cluster participants (local supply) generally results in lower transaction costs when compared to suppliers that are far away. The local supply minimizes the need for inventory and eliminates the costs and lead times related to imports. [...] Thus, all the

other factors being equal, the local supply generally exceeds the distant supplier, especially for advanced and specialized inputs involving technological content, information or services (note that "local" refers to companies with substantial investments in the cluster, including technical resources, even if the head office is based elsewhere) (Porter 1999 p. 227).

THE CASE REPORT

The above concepts were the ones which in 1995 guided and motivated hiring a study to review the Logistics Network, along with one of the largest consulting companies of the time, by the North American lubricant manufacturer, in which one of the authors was the L&D Manager of Brazil and the Southern Cone for six (6) years.

The production plant (blending) was established in Cubatão-SP, on which were shipped and distributed all products for the country on a daily basis, with the use of 23 independent drivers leaving for deliveries in the itinerant model, whereby the customers loading would obey an itinerary, the vehicle would perform deliveries from first to last in sequence and with no interruption. A number of problems with scheduling loss, returns and damage due to this model, and thus there were many customer complaints for this service delivery.

The consulting company mapped the sales of the two years prior to the study and plotted on a geographic map of Brazil, allocating sales volumes for each zip code of the country shown briefly by each state code in the Figure 1 below.

Regional Distribution (packed) — Mobil Oil — year base: 1996

State	Volume (Tons) Metropolis	Country	Total
AC	45	5	50
AL	1.057	264	1.322
AM	450	50	500
BA	1.028	440	1.468
CE	857	367	1.224
DF	357		357
ES	826	207	1.033
GO	906	226	1.132
MA	404	45	449
MG	3.046	1306	4.352
MS	396	264	661
MT	397	265	662
PA	553	98	650
PB	238	42	280
PE	670	287	958
PI	434	48	482
PR	2.327	1551	3.878
RJ	2.199	1184	3.383
RN	388	43	432
RO	297	33	330
RR	209	11	220
RS	2.807	1511	4.319
SC	3.047	538	3.584
SE	169	19	188
SP	6.182	4121	10.303
TO	43	2	45
	Metr.	Country	Total
Grand Total	29.331	12.928	42.259

Regions	Volume	% Tot.BR.
North	1.795	*4,2%*
Northeast	6.801	*16,1%*
Midwest	2.811	*6,7%*
Southeast	19.070	*45,1%*
South	11.781	*27,9%*
Total	42.259	*100,0%*

DETAIL by REGION SE and S (High Importance)

		% Total BR	% Total Region
SP	10.303	24,4%	*54,0%*
RJ	3.383	8,0%	*17,7%*
ES	1.033	2,4%	*5,4%*
MG	4.352	10,3%	*22,8%*
		45,1%	*100%*
PR	3.878	9,2%	*32,9%*
SC	3.584	8,5%	*30,4%*
RS	4.319	10,2%	*36,7%*
		27,9%	*100%*
SE + S		*73,0%*	

Figure 1: Map of Sales Distribution in 1996 (by: Authors)

The result of this mapping was the map illustrated by Figure 2 bellow.

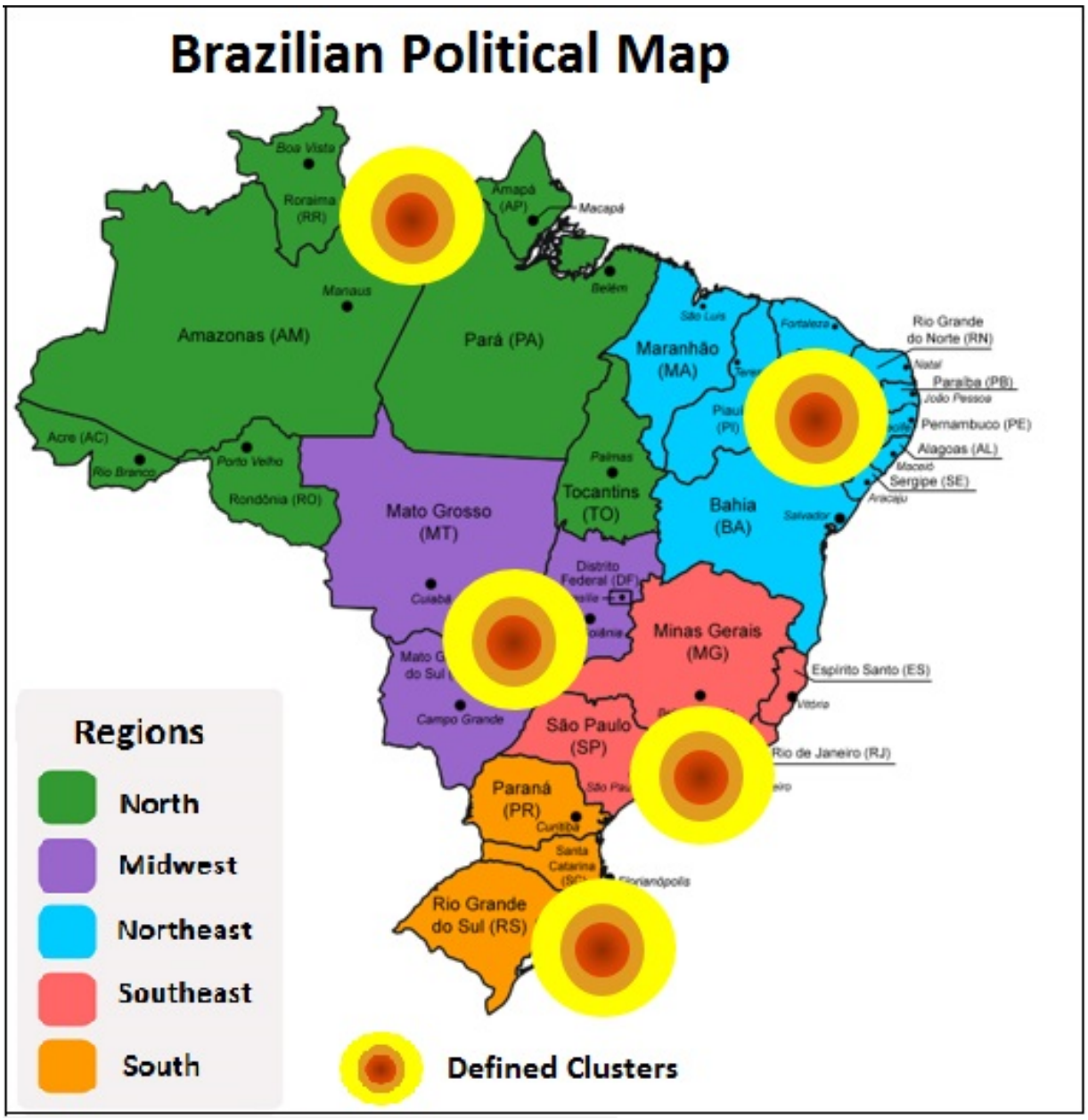

Figure 2: Geographic Demand Map (Cluster Demand) by: Authors

The circles that start from a darker red in the center to yellow zones at the ends, indicated the concentration of sales volumes in Brazil, with its center (dark red) indicating the cities or regions with the highest concentration of lubricant consumption and as the consumption declined, it was indicated with orange and yellow tones. According to Faria and Costa (2005 p. 23), the main issues of supply logistics "are related to the process of obtaining materials and inventory control at multiple sites (space and storage systems)" and often the success or failure of the company is determined by the efficiency of this control and the choice of the best distribution mode. So, empirically, through this approach logic and still considering a number of factors such as availability of warehouses or spaces that would be leased, models and municipal tax types, road networks infrastructure and even the offer of regional carriers that are specialized in their acting

areas, the cities that should host the advanced distribution centers in the new distribution network were selected with a high degree of assertiveness.

As soon as the results from the analysis of the factors were completed, an Excel spreadsheet tool that simulated the national consolidated Service Level Agreement (SLA) was developed, taking into account both the historical basis for the study, as well the forecast sales volumes for the next years to crossing them with the lead time service of the logistics network proposed and by doing so, they would get the SLA weighted average level for the different scenarios proposed (indicated as "routes" in the simulator), as outlined in Figure 3.

National Road Lead Time (Capital/Country Side) (working days)

State	Place of Shipment						
	LOBP - Santos (1996)			Multi Cenary DC's (1998)			
	Capital	Country	SLA	ROUTES	Capital	Country	SLA
Acre - AC	8	10	8,2	SP/UDI**	5	7	5,2
Alagoas - AL	7	10	7,6	REC *	3	5	3,4
Amazonas - AM	18	21	18,3	MAO *	1	3	1,2
Bahia - BA	5	8	5,9	REC *	3	5	3,6
Ceará - CE	8	9	8,3	REC *	2	3	2,3
Distrito Federal - DF	4	4	4	SP/BH**	3	3	3
Espirito Santo - ES	3	4	3,2	SP *	2	3	2,2
Goiás - GO	4	6	4,4	SP/BH**	3	4	3,2
Maranhão - MA	11	13	11,2	BEL **	7	8	7,1
Minas Gerais - MG	3	5	3,6	SP/BH**	2	4	2,6
Mato Grosso do Sul - MS	5	7	5,8	SP/UDI**	3	5	3,8
Mato Grosso - MT	6	8	6,8	SP/UDI**	4	6	4,8
Pará - PA	6	7	6,15	BEL **	1	2	1,15
Paraíba - PB	7	8	7,15	REC *	2	3	2,15
Pernambuco - PE	6	7	6,3	REC *	1	3	1,6
Piauí - PI	10	12	10,2	REC *	5	7	5,2
Paraná - PR	4	6	4,8	SP *	2	3	2,4
Rio de Janeiro - RJ	3	5	3,7	SP *	1	3	1,7
Rio Grande do Norte - RN	8	9	8,1	REC *	3	4	3,1
Rondônia - RO	8	10	8,2	SP/UDI**	5	7	5,2
Roraima - RR	19	22	19,15	MAO *	3	5	3,1
Rio Grande do Sul - RS	5	7	5,7	SP *	2	4	2,7
Santa Catarina - SC	4	6	4,3	SP *	3	5	3,3
Sergipe - SE	6	9	6,3	REC *	3	5	3,2
São Paulo - SP	2	3	2,4	SP *	1	2	1,4
Tocantins - TO	8	9	8,05	SP/BH**	4	6	4,1
Weigthed Delivery Lead Time		Before	4,72			After	2,46

(*) with DC (Distribution Center)
(**) Crossdocking

Figure 3: Average Level Service Simulator (SLA) by: Authors

METHODOLOGY

The research method used was the case report from the practical experience of one of the authors who worked in the company between January-1996 to April-2002 as a L&D Manager (Logistics and Distribution) of Brazil and Southern Cone. For theoretical foundations, some

bibliographic research was made in already published materials such as books, magazines, publications in journals, scientific papers, monographs, internet, etc.

The following keywords were searched in databases (Google Scholar and CAPES Journals Portal): SLA - Service Level Agreement; Market Share; Demand cluster.

RESULTS AND DISCUSSION

Meeting the needs of its customers - more than a vague promise - is a key commitment of the logistics, explicit in its mission to supply and in the principle of mutual trust that must exist between suppliers and customers (Gasnier 2015).

As it could be seen in the consistent data from the charts and maps provided, when the company started the implementation of the new distribution network in mid-1996, its lubricants sales volume, which was 42,259 tons / year, placed this company in 7th place of the sector with 4% market share. In mid-1998, two years later, its lubricants sales volume was already 82,849 tons / year, an increase of 95% in volume, leading to the disputed 5th position in the market and now with 7.8% market share.

Unquestionably, the increase in market share happened due to improved customer service levels, Figure 3 demonstrates that the weighted average level of delivery, went from 4.72 to 2.46 days or virtually half of the previous one. The new distribution network had at that time four other Distribution Centers and other two cross docking stations (temporary consolidation charges) and even a manufacturing plant in Cubatão which now hold only consolidated shipments (Full Loads) to supply transfers to the distribution centers and assistance to the sales channel through "Distributors" that as a premise, could only place full load orders.

By delivering their products on time and perfectly suitable distance to customer expectations, the company not only kept the old customer base but its sales force, now has exceptional arguments to convince even from other banners service stations to buy their lubricant, because at that time, this company did not have its own service station with its brand, but for possessing an well-known high performance product and excellent quality, it didn't take too long to gain and increase its consumer base, counting now with an excellent service level (SLA) distribution.

Although this is not the focus, one has to question the total cost of freight (transfers (+) distribution), however, when replacing the itinerant service model in national level by a short distance one starting from the Distribution Centers, the total cost fell by $ 600,000 / year, but this is already a subject to an upcoming article.

It’s also important to add, that this model was so well recognized inside and outside of the company that it eventually prevailed when one of the largest mergers of the global oil industry took place, and it has been deployed in some of Latin American countries.

FINAL CONSIDERATIONS

This paper aims to demonstrate that some changes in the strategies adopted by companies might impact on great results. To do so, it was reported a case in which the progress in the service level by optimizing the availability of products to the customer, resulting in an improved SLA and it made possible to obtain a significant increase in the market share of the company. A fact that proves these results is that the response time in delivering after improving the SLA has almost halved and the company not only kept the old customer base as its sales force, and convinced even other company’s service stations to purchase its lubricant. For these and other results analyzed, one can consider that this study met its goal of demonstrating the increased market share based on SLA.

To achieve these results, the centralized distribution model in lubricants processing plant in Cubatão-SP was changed, so the products were available in five strategically defined Distribution Centers in national territory through a cluster demand study.

Such strategy has proved to be, in fact, highly effective, including the fact that this model prevailed throughout Latin America, when the company suffered one of the biggest mergers in the lubricant sector in Brazil in 1998.

This report suggests future studies by companies and any institution that is interested to reduce pressures that characterize the search for competitiveness and a consequent increase in market share, placing great emphasis on the possibility of expanding the understanding of the peculiarities inherent to the SLA theme not only related to service sectors but also to IT (Information Technology) and call centers, as for any industrial or other services segment, since having a product or excellent performance service with exceptional quality or a quality that is above average to the ones offered and that meets the target market needs, combined with a commercial and distribution model that allows fast and secure access to this good, being this the goal to be pursued by companies to get more and more consumers and space in the fierce and increasingly competitive markets.

Bibliography

Ballou, R H. 2005. *Gerenciamento da Cadeia de Suprimentos: Logística Empresarial*. Bookman 5th. Edition, Porto Alegre.

Bowersox, Donald J., Closs, David J., Cooper, M. Bixby 2006. *Gestão logística de cadeia de suprimentos*. Bookman, Porto Alegre.

Christofer, M. 1997. *Logística e Gerenciamento da Cadeia de Suprimento: Estratégia para Redução de Custos e Melhoria dos Serviços*. Pioneira, São Paulo.

Epstein, M. J., Manzoni, J. Apr.1998. Implementing Corporate Strategy: from tableaux de board to balanced scorecard. *European Management Journal*, v. 16, n. 2.

Faria, A. C., Costa, M. F. G. 2005. *Gestão de Custos Logísticos*. Atlas, São Paulo, p.431.

Freitas, M. A. S. 2013. *Fundamentos do gerenciamento de serviços de TI*. Brasport, Rio de Janeiro, 2nd Ed.

Gasnier, D. Jul.2015. Gerenciamento do Nível de Serviço. *LOG&MAN Magazine*. Available at <http://www.danielgasnier.com/sla-slm-excelencia-no-atendimento> (Accessed July 13, 2015).

Hiles, A. 2002. *E-Business Service Level Agreements: Strategies for Service Providers, E-Commerce and Outsourcing*. Rothstein Associates Inc., EUA.

Mintzberg, H., Ahlstrand, B., Lampel, J. 2000. *Safári de Estratégia: Um Roteiro pela Selva do Planejamento Estratégico*. Bookman, Porto Alegre.

Novaes, A. G. 2001. *Logística e Gerenciamento da Cadeia de Distribuição: Estratégia, Operação e Avaliação*. Campus, Rio de Janeiro.

Porter, M. 1999. *Vantagem competitiva: criando e sustentando um desempenho*. Campus, Rio de Janeiro.

Sturm, R., MORRIS, W., JANDER, M. *Foundations of Service Level Management*. Pearson Sans, EUA.

Wanke, P.2003. *Gestão de estoques na cadeia de suprimento: decisões e modelos quantitativos*. Atlas, São Paulo, p.176.