

ECOLE DES HAUTES ETUDES COMMERCIALES

EHEC

**Thesis Submitted in partial Fulfillment
Of The Requirements for Master's Degree in Commercial Sciences**

Major: Logistics and Supply Chain Management

**Supplier selection through E-Tender,
and best practices**

CASE STUDY: Henkel Algerie

Submitted by:

Mr. Aymen KHITER

Supervised by:

Mr. Mustapha BOUKHATEM

Senior Lecturer

4th promotion

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ABSTRACT

Supplier selection plays an important role in any organization, yet currently there is a trend towards increased focus on the importance of the purchasing function and costs of maintenance, repair, and operation. This has led to companies investing in electronic procurement tools in order to reduce those costs and increase efficiency.

However, E-Procurement is more than just a system for making purchases online. Some companies implement e-procurement and succeed while others fail. This study was carried out to identify the best practices of e-procurement in Henkel Algeria with a focus on service purchasing. The aim is to validate and assess the relevance of a framework covering the required criteria for project phases of an electronic procurement implementation.

All in all, the study had three objectives:

1. To investigate the prospects of e-procurement in the company;
2. To identify best practices;
3. To explore the potential challenges of implementing e-procurement by the company.

After a literature review and interviews, the development of a conceptual framework and a number of hypotheses were put forward. To achieve a study, Henkel Algeria was chosen as a case study. An interview was used as the main instrument in gathering data. It is principally concerned with the understanding of supplier selection and its criteria.

The findings of this research conclude that the influencing criteria to service supplier selection in Algeria are supplier delivery performance standards and supplier relationship management even when considering the remainder of the above mentioned elements. The price factors were found to be less important. Most of the criteria are also interrelated to each other and affect the supplier selection decision.

Procurement department should endeavour to establish e-procurement systems to promote continuity of procurement as well as achieving value for money and the independence of procurement entities should be upheld and freed.

Keywords: Supply Chain Management, Supplier Selection Criteria, Procurement strategies, Supplier Relationship, Supply Base, Sourcing, E-Tender, Business Ethics, Negotiation.

ملخص:

لعب اختيار الموردين دورا هاما في أي مؤسسة، ولكن حاليا هناك اتجاه نحو زيادة التركيز على أهمية وظيفة الشراء وتكاليف الصيانة والإصلاح والتشغيل. وقد أدى ذلك إلى قيام الشركات بالاستثمار في أدوات الشراء الإلكتروني للحد من تلك التكاليف وزيادة الكفاءة. ومع ذلك، الشراء الإلكتروني هو أكثر من مجرد نظام لإجراء عمليات الشراء عبر الإنترنت. وتنفذ بعض الشركات المشتريات الإلكترونية وتنجح بينما تفشل شركات أخرى. وقد أجريت هذه الدراسة لتحديد أفضل الممارسات في مجال المشتريات الإلكترونية في **هنكل الجزائر** مع التركيز على شراء الخدمات. والهدف من ذلك هو التحقق من مدى ملاءمة إطار عمل يغطي المعايير المطلوبة لمراحل المشروع. وإجمالا، كان للدراسة ثلاثة أهداف:

1. التحقيق في آفاق الشراء الإلكتروني في الشركة؛

1. تحديد أفضل الممارسات؛

2. استطلاع التحديات المحتملة أثناء اعتماد نظام الشراء الإلكتروني من قبل الشركة.

بعد مراجعة الأدبيات و بعد اجراء المقابلات، تم وضع إطار مفاهيمي وعدد من الفرضيات. ولتحقيق هذه الدراسة، تم اختيار هنكل الجزائر كدراسة حالة. واستخدمت المقابلة بوصفها الأداة الرئيسية في جمع البيانات. وتم التركيز أساسا على فهم اختيار الموردين ومعاييرهم. وخلصت نتائج هذا البحث إلى أن معايير التأثير على اختيار الموردين للخدمات في الجزائر هي معايير أداء تسليم الموردين وإدارة علاقات الموردين حتى عند النظر في ما تبقى من العناصر المذكورة أعلاه. وقد وجد أن عوامل السعر أقل أهمية. كما أن معظم المعايير مترابطة فيما بينها وتؤثر على قرار اختيار الموردين.

وينبغي لإدارة المشتريات أن تسعى إلى إنشاء نظم للمشتريات الإلكترونية لتعزيز استمرارية عمليات الشراء، فضلا عن تحقيق قيمة مقابل المال واستقلال كيانات المشتريات.

الكلمات الرئيسية: إدارة سلسلة التوريد، معايير اختيار الموردين، استراتيجيات الشراء، العلاقة مع الموردين، قاعدة الإمداد، مصادر، مناقصة الكترونية، أخلاقيات العمل، التفاوض.

RÉSUMÉ

La sélection des fournisseurs joue un rôle important dans toute organisation, par contre il existe actuellement une tendance accentuée vers l'importance de la fonction d'achat et les coûts d'opération, de réparation et de maintenance. Cela a conduit les entreprises à investir encore plus dans les outils électroniques d'approvisionnement afin de réduire ces coûts et d'accroître l'efficacité.

Toutefois, le E-Procurement (l'approvisionnement électronique) est plus qu'un simple système d'achat en ligne. Certaines entreprises mettent en œuvre l'approvisionnement électronique et réussissent alors que d'autres échouent. Cette étude a été réalisée pour identifier les meilleures pratiques de l'approvisionnement électronique dans Henkel Algérie en mettant l'accent sur les achats de services. L'objectif est de valider et d'évaluer la pertinence dans un cadre couvrant les critères requis durant les phases d'un projet d'implantation de l'approvisionnement électronique.

Dans l'ensemble, l'étude a trois objectifs principales:

1. Enquêter sur les perspectives d'e-procurement dans l'entreprise;
2. Identifier les meilleures pratiques;
3. Explorer les défis potentiels dans la mise en œuvre de l'approvisionnement électronique par l'entreprise.

Après des entretiens, le développement d'un cadre conceptuel et d'un certain nombre d'hypothèses ont été avancés. Pour réaliser cette étude, Henkel Algérie a été choisie comme étude de cas. l'interview a été utilisée comme principal instrument de collecte de données. qui s'intéresse principalement à la compréhension de la sélection des fournisseurs et de ses critères.

Les résultats de cette recherche concluent que les critères d'influence pour la sélection des fournisseurs de services en Algérie sont les normes de performance de livraison des fournisseurs et la gestion des relations avec les fournisseurs, même si l'on considère le reste des éléments mentionnés ci-dessus. Les facteurs de prix étaient moins importants. La plupart des critères sont également liés l'un à l'autre et affectent la décision de sélection des fournisseurs.

Le service des approvisionnements devrait s'efforcer d'établir des systèmes d'approvisionnement électronique afin de promouvoir la continuité des achats et de créer une

valeur monétaire, ainsi que l'indépendance des entités d'approvisionnement devraient être maintenues et libérées.

Mots-clés: Gestion de la chaîne d'approvisionnement, Critères de sélection des fournisseurs, Stratégies d'approvisionnement, Relation fournisseur, Base d'approvisionnement, Sourcing, E-Tender, Ethique commerciale, Négociation.

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Abbreviations

Item	Description	Item	Description
AHP	Analytic Hierarchy Process	JIT	Just in Time
ANP	Analytic Network Process	LT	Lead Time
AVL	Approved Vendor List	MCDM	Multi-Criteria Decision-Making
BO	Best-to-Others	MFN	Most Favored Nation
BWM	Best-Worst Method	MNC	Multinational Corporation
CI	Consistency indicator	MODM	Multi-Objective Decision-Making
CIF	Cost, Insurance and Freight	MOQ	Minimum Order Quantity
COD	Cost of Delivery	MOF	Ministry of Finance
DEA	Data Envelopment Analysis	CFI	Comparative Fit Index
FB	Flexi Bag	OTIF	On Time in Full
SOR	Schedule of Rate	OW	Others-to-Worst
FOB	Free On Board	QA	Quality Assurance
HST	Henkel Standards Template	QC	Quality Control
i.e.	That is to say	RM	Raw Material
ISO	International Organization for Standardization	IMS	Indirect Materials and Supplies
GMP	Good Manufacturing Practice	RT	Road Tanker
TCO	Total Cost of Ownership		

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Introduction:

Introduction:

Procurement is quite a very important activity with a crucial impact on the value chain, and in a technology driven world e-Procurement is a sound solution for companies to initiate e-business initiatives since it promises several distinct benefits, such as process cost and lead time reduction, improving strategic sourcing of commodities and enabling companies to negotiate better prices. Procurement is a broad term that touches on internal and external aspects of the company, complicating the decision to choose the most suitable e-procurement solution. An evaluation framework is proposed to assist in evaluating the susceptibility of a company's products to e-procurement and choosing the most suitable e-procurement solution.

Research has now gone beyond studying procurement in an abstract administrative context, to meticulously figuring out the ways it functions in very specific environments. Within the company or other productivity oriented fields, the studies plainly shifted towards the mechanisms that link procurement and computer sciences with performance. And while progress is being made in other parts of the world, we notice that Algeria has not even undertaken such projects or brought up related subjects into the light.

Apart from some precast works that treat upstream logistics management themes regarding multinationals setting offices in Algeria, or others that mainly speak about digitalization, no other documents were found during the literature search while and before elaborating the current work. That is why the goal was to set a reference – even if a broad one – for the following studies to come.

This thesis aims to examine the critical success factors in e-tendering implementation, focussing on the people and process issues in the operation. The results ought to be of interest to any organization interested in setting up etendering practices using internet-based collaborative environments.

The choice of the company HENKEL was after a very long quest to find an adequate enterprise. This choice however turned out to be very suitable considering that HENKEL is the multinational that is recording a very good results concerning savings on purchasing, and that implies its pioneering in this field.

That been said, the research is here to answer the following primary question: “How to select suppliers through E-Tenders?”

So for this question to be answered, it is more than necessary to pass by the following sub-questions:

1. What is the process of implementing an E-Tendering process?
2. What are the challenges facing the implementation of such a procurement method?
3. What are the best practices in regard to E-tendering?

As a starting point, after initiating prior documentary research, and from the basis of some personal remarks and perceptions, two main hypotheses were conceived:

- **H01:** To implement E-Tendering, Algerian companies should rely on a universal framework, after adapting it to the Algerian ecosystem.
- **H02:** Security, ethics and communication, are the most recurrent factors that once well managed will meet the procurement objectives more efficiently.

The adopted methodology was both descriptive, and analytical through a qualitative study that included interviews for a better data collection. The final work was therefore divided into three chapters as follows:

Chapter I: The first chapter was to draw a general theoretical framework for Upstream Logistics in Supply Chain Management, narrowing the circle to reach procurement with which this research is most concerned. The first section is to define the general concept of procurement, highlight its main processes, and recite its most important models. As for the second section is to outline procurement strategies and methods, and about its future prospects.

Chapter II: This second theoretical chapter will then cover the core element of the research which is eTendering. Beginning with the first section that enumerates its dimensions and states the repercussions that directly impact performance, then finally a second section to speak about e-procurement in the Algerian context.

Chapter III: Finally, the sole practical chapter is here to present the company, the interviews process, and come out with results from the collected data. The first section of the chapter gives us a general idea about the company Henkel Algeria in which the interviews were conducted. The second section recites the interviews process and the followed methodology. Then at last, the third section is to give us the results presentation and data analysis of the conducted practical study.

Chapter 01: Upstream logistics and procurement

I. Chapter 01: Upstream logistics and procurement

1. Section 01: general concept of procurement

1.1. Clarification of terms and their definitions:

Theoretical concepts in both purchasing and supply management and general management are often manifold and diverse. In fact, already basic terms such as purchasing, procurement, sourcing, or supply management can be confusing because different researchers and practitioners associate different meanings with them. Similarly, at least two different ways of defining the concept of competitive advantage exist in literature.

Moreover, the central concept of this thesis, i.e., fit or alignment can be conceptualized very differently. Hence, the following section will clearly define these key terms and concepts in order to ensure a common understanding in subsequent chapters.

Here are the most agreed-on definitions for terms that are frequently referred to within most reliable books:

Logistics

Logistics can be defined as the process of planning, implementing and managing the movement and storage of raw materials, work-in-progress inventory, finished goods and the associated information from the point of origin to the point of consumption¹.

Contract logistics

Contract logistics is used to define the logistics activities that relate to ware-housing, distribution and other associated activities that are outsourced. The term refers to the asset-intensive nature of the activity and the need for a contract to be in place between the third-party logistics provider and the customer².

¹ SIXTA, J. The dictionary of Logistics and Supply Chain Management, 2009, Vol. 4, pp.17.

² Reformulated from: Ibid., p.21.

Fourth-party logistics

A fourth-party logistics service provider can be defined as an integrator that assembles the resources, capabilities and technology of its own organization and other organizations to design, build and run comprehensive supply-chain solutions³.

Outsourcing

Outsourcing can be defined as the strategic use of external specialized service providers to execute and manage activities or functions that are normally seen as non-core to the business. Outsourcing should not be, but often is, confused with off-shoring⁴.

Supply chain

Supply chain can be defined as the flow of materials and products through the process of procurement, production, storage, distribution and disposal⁵.

Supply-chain management

Supply-chain management may be defined as the integrated management of all parts of the supply chain from the originating supplier to the final customer⁶.

Tender

Means an offer, proposal or quotation made by a supplier, contractors or consultant in response to a request by a procuring entity⁷.

Tendering process

Tendering process is a continuation set of actions or events that opted in order for supplier/bidders to give an offer, proposal, and a quotation by a request of a procuring entity⁸.

³ SIXTA, J: Op cit, p 23 -24.

⁴ SHAPIRO, J.F. Modelling the Supply Chain. 2nd Edition. Boston: South-Western College Pub, 2006. p 680 p.

⁵ SIXTA, J: Op cit, p 33.

⁶ Ibid, p 37.

⁷ Suchánek, P. Business Intelligence as a Support of E-commerce Systems in Connection with Decision, Kogen, 2009, p.44.

⁸ Suchánek, P: Op cit, p 62.

The competitive tendering process

The main objective of the tendering process is to ensure the “best fit” supplier is selected to supply goods and/or services to the customer which offers best value for money. Such a supplier is likely to be sound commercially, technically competent, financially sound and perceived as best for the task⁹.

The stages and steps of the process are listed in this thesis and will be referred to and expanded.

E-procurement:

*“E-procurement is a specific area of e-business that covers both internal processes as well as Be To Be processes”*¹⁰.

E-procurement allows companies to leverage Internet technology in the purchasing process. According to Kavelis Persian¹¹ any technology designed to facilitate the acquisition of goods over the Internet can be defined as e-procurement.

E-procurement solution:

There are several different e-procurement solutions for companies to choose from: E-procurement solution is a web-based client / server which automates the buying process and captures the necessary data from purchases for spend analysis. Different solutions can be used for indirect purchases, auctioning, sourcing, tendering and many other procurement related tasks¹².

Procurement process:

Procurement process refers to the purchasing of goods and services. However, it does not only comprise out of buying and paying but involves many other activities too, such as need clarification, purchase order generating etc¹³.

⁹ SUPPLY CHAIN PLANNING UK LTD. (SCP). Logistics Strategy & Supply Chain Strategy. [on-line] Retrieved March 25, 2017. URL: <http://www.scp-uk.co.uk/index.html>

¹⁰ Ibid.

¹¹ Kavelis, P.; Chambers, C. *Supply Chain Management Research and Production and Operations Management: Review, Trends, and Opportunities*. In: Production and Operations Management, Vol. 15, No. 3, pp. 449.

¹² Lavassani K., Movahedi B., Kumar V. (2009) *Developments in Theories of Supply Chain Management: The Case of B2B Electronic Marketplace Adoption*, The International Journal of Knowledge, Culture and Change Management, Volume 9, Issue 6, p 85.

¹³ Lavassani K., Movahedi B., Op cit, p 98.

The goal of the procurement process is to satisfy the need of the company by acquiring goods and services from preferred suppliers for the most favorable price.

Indirect purchases:

Indirect purchases comprise from goods and services that are not involved in the manufacturing process e.g. office supplies, computers, cleaning equipment, consulting services and telecommunications. Indirect materials are also often referred in the literature as maintenance, repair and operation (MRO) and non product related (NPR) materials¹⁴.

Sourcing:

To obtain materials or parts from another business or country for manufacturing. Usually used with Supply Base with means the selection of preferred supplier forming a group that will supply a buyer¹⁵.

¹⁴ Mentzer, J.T. *et al.* (2001): Defining Supply Chain Management: *Journal of Business Logistics*, Vol. 22, No. 2, 2001, p 123.

¹⁵ *Ibid.* 123–125.

1.2. Purchasing and supply management (PSM):

The term purchasing and supply management (PSM) has been used in various connotations in the past.

Theory and practice have so far not been able to develop a common agreement on the definition of this concept.

In fact, many definitions of closely-related terms exist. Specifically, the terms purchasing, sourcing, procurement, and supply management are often used almost interchangeably¹⁶.

Accordingly, it is vital to clearly define the concept of PSM and to discuss its relation with these similar terms.

The term purchasing can be defined as “the day-to-day management of material flows and information”¹⁷. It refers to a chain of a contract-centered, transactional tasks that focus on the administration of supply and thus only, if at all, have a short-term impact on performance.

Identifying suppliers, buying, negotiating, contracting, and optimizing terms and conditions represent typical purchasing activities¹⁸.

Very similar in nature, the term sourcing is defined as including the core activities or processes necessary to acquire the inputs to create products or services¹⁹.

In contrast to purchasing where activities are carried out more or less exclusively by the purchasing function, sourcing is conceptualized as “*a cross-functional process that involves members of the firm other than those who work in the purchasing department*”²⁰.

The term procurement is often defined as being even broader in scope. Procurement “*includes specification development, value analysis, supplier market research, negotiation, buying activities, contract administration, inventory control, traffic, receiving, and stores*”²¹.

Hence, besides being seen as a company wide process, procurement encompasses not only the economic but also the technical aspects of securing supply and involves some activities that are of strategic relevance²².

¹⁶ Leenders, M. R., Fearon, H. E., Flynn, A. E., & Johnson, P. F. (2002). *Purchasing and supply management* (12 ed.). New York: McGraw-Hill. P 12.

¹⁷ Landeros, R., & Monczka, R. M. (1989). Cooperative buyer/seller relationships and a firm's competitive posture. *Journal of Purchasing & Materials Management*, 25(3), P 4.

¹⁸ Kaynak, H. (1997). *Total quality management and just-in-time purchasing: their effects on performance of firms operating in the U.S.* New York: Garland. P 5.

¹⁹ Ibid, p 06.

²⁰ Ibid, p 07 – 08.

²¹ Ibid, p 08.

²² Kaynak, H. Op cit, p 12.

Despite this different perspectives, procurement – just as purchasing and sourcing – remains focused primarily on tactical aspects and is not regarded as an integrated management concept. Given this lack of strategic focus, authors such as Monczka et al. or Kaufmann use these terms interchangeably – and this is what will be followed in this study.

In contrast, the term supply management is strategic by nature²³. It describes all tasks related to the “identification, acquisition, access, positioning, and management of resources the organization needs or potentially needs in the attainment of its strategic objectives”.

Supply management is dominated by the management perspective, i.e., starts on a strategic level, and aims at optimizing complex value chains by analyzing, configuring, and coordinating supply.

Based on this strategic foundation, the operational firm internal and -external sourcing processes are then implemented²⁴. It is this holistic perspective on the enterprise level – as opposed to an optimization of specific lower levels – and the contribution to the achievement of competitive advantage that constitute the decisive aspects of supply management.

Although supply management itself incorporates tactically-focused purchasing activities, the term ‘purchasing and supply management’ is applied to underscore the comprehensive nature of the concept in this thesis. In this sense, the term covers all clerical and strategic activities ranging from traditional purchasing to state-of-the-art supply management²⁵.

PSM thus includes all aspects necessary for the optimal supply of a firm and the generation of competitive advantage through the supply base.

Moreover, the definition sees PSM as a functional activity such as buying goods and services rather than as a functional group, i.e., as a department on the organizational chart.

To distinguish the functional department from the functional activity, this thesis will refer to the functional purchasing department as ‘purchasing function’.

²³ Burt, D. N., & Soukup, W. R. Purchasing’s role in new product development. *Harvard Business Review*, (1985). P 90-97.

²⁴ Johnson, F., & Leenders, M. R. Evolving roles and responsibilities of purchasing organizations. *International Journal of Purchasing & Materials Management*, (1998), p 34.

²⁵ Burt, D. N., & Soukup, W. R, Op cit, p 42.

1.3. Procurement:

Every organization, whether it is a manufacturer, wholesaler, or retailer, buys materials, services, and supplies from outside suppliers to support its operations.

Historically, the process of acquiring these needed inputs has been considered somewhat of a nuisance, at least as compared to other activities within the firm. Purchasing was regarded as a clerical or low-level managerial activity charged with responsibility to execute and process orders initiated elsewhere in the organization.

The role of purchasing was to obtain the desired resource at the lowest possible purchase price from a supplier. This traditional view of purchasing has changed in the past two decades²⁶.

The modern focus on supply chain management with its emphasis on relationships between buyers and sellers has elevated purchasing to a higher, strategic level activity. This strategic role is differentiated from the traditional through the term procurement, although in practice many people use the terms purchasing and procurement interchangeably.

The increasing importance of procurement can be traced to several factors. The most basic of these factors has been the recognition of the substantial dollar volume of purchases in the typical organization and the potential dollar savings from a strategic approach to managing the activity.

The simple fact is that purchased goods and services are one of the largest elements of cost for many firms. In the average manufacturing firm in North America, purchased goods and services account for approximately 55 cents of every sales dollar²⁷.

By way of contrast, the average expense of direct labor in the manufacturing process accounts for only about 10 cents of every sales dollar. While the percentage spent on purchased inputs does vary considerably across manufacturing industries, it is clear that the potential savings from strategic management of procurement are considerable.

Related to the cost of purchased inputs is the emphasis on outsourcing, which has dominated many industries over the last two decades. The result is that the amount spent on

²⁶ Johnson, F., & Leenders, M. R., Op cit, p 34 – 38.

²⁷ Kannan, V. R., & Tan, K. C: Attitudes of US and European managers to supplier selection and assessment and implications for business performance. *Benchmarking: An International Journal*, (2003). P 489.

procurement has increased significantly in many organizations. Firms today purchase not only raw materials and basic supplies but also complex fabricated components with very high value-added content. They spin off functions to suppliers to focus resources on their core competencies. This means that more attention must be focused on how the organization interfaces and effectively manages its supply base.

For example, General Motors uses its first-tier supplier network and third-party logistics providers to complete subassemblies and deliver finished components on a just-in-time basis for incorporation into automobiles on the assembly line. Many of these activities were once performed by General Motors itself. Developing and coordinating these relationships are critical aspects of effective procurement strategy²⁸.

The logistical requirements related to effective procurement strategy are identified below²⁹.

1.3.1 Procurement Perspectives

The evolving focus on procurement as a key capability in organizations has stimulated a new perspective regarding its role in supply chain management. The emphasis has shifted from adversarial, transaction-focused negotiation with suppliers to ensuring that the firm is positioned to implement its manufacturing and marketing strategies with support from its supply base. In particular, considerable focus is placed on ensuring supply, inventory minimization, quality improvement, supplier development, and lowest total cost of ownership.

1.3.2 Continuous Supply

Stockouts of raw materials or component parts can shut down a production plant and result in extreme cost to an organization. Downtime due to production stoppage increases operating costs and results in an inability to provide finished goods for delivery to customers. Imagine the chaos that would result if an automobile assembly line had all parts available but tires. The almost completed automobiles would have to wait until a supply of tires was received and, in fact, production would have to be halted until tires were available. Thus, one of the core objectives of procurement is to ensure that a continuous supply of materials, parts, and components is available for use.

²⁸ Kannan, V. R., & Tan, K. C, Op cit, p 490.

²⁹ Kannan, V. R., & Tan, K. C, Op cit, p 500 – 530. (reformulated).

1.3.3 Minimize Inventory Investment

In the past, downtime due to material shortages was minimized by maintaining large inventories of inputs to protect against potential disruption in supply; but maintaining inventory is expensive and utilizes capital that might be used elsewhere in the organization.

One goal of modern procurement is to maintain supply continuity with the minimum inventory investment possible. This requires balancing the costs of carrying excessive materials against the possibility of a production top page.

The ideal, of course, is to have needed materials arrive just at the moment they are scheduled to be used in the production process, in other words, *just-in-time*.

1.3.4 Quality Improvement:

Procurement can play a critical role in the quality of an organization's products. The quality of finished goods and services is obviously dependent upon the quality of the materials and parts used in producing those items. If poor-quality components and materials are used, then the final product will not meet customer quality standards. Simply ensuring that each individual item purchased is of the appropriate quality level may not be sufficient. If a standard part is sourced from many different suppliers, and each supplier meets specified quality requirements, it is still possible that the final product may encounter quality problems. Industry Insight describes the quality failures encountered by Tenant, a manufacturer of floor-cleaning machines.

Ultimately, Tenant discovered that the key to improving quality of its products lay in a different approach to procurement.

Quality improvement through procurement also has substantial implications for cost in an organization. If defective materials are the cause of poor-quality finished products, the costs of scrap and rework in the production process go up. If the problems are not detected until customers receive the product, costs associated with warranties, guarantees, repair, and replacement increase substantially. Ultimately, procurement must maintain a quality perspective in dealing with suppliers to ensure that customer requirements are met in a cost-effective manner.

1.3.5 Supplier Development

In the final analysis, successful procurement depends on locating or developing suppliers, analyzing their capabilities, and selecting and working with those suppliers to achieve continuous improvement." Developing good supply relationships with firms that are committed to the buying organization's success is critical in supplier development.

The next step is to develop close relationships with those suppliers, working with them through sharing of information and resources, to achieve better results. For example, a manufacturer might share a production schedule with suppliers, which allows them to better meet the buyer's requirements for delivery. A retailer might share promotional plans to ensure that a supplier will be able to meet its needs for increased quantities at a specific time. This perspective on effective procurement stands in stark contrast to the traditional mode of purchasing which inherently created adversarial relationships with the supply base.

1.3.6 Lowest Total Cost of Ownership

Ultimately, the difference in perspective between traditional purchasing practice and contemporary procurement strategy can be summarized as a focus on **Total Cost of Ownership**.

Instead of a focus on purchase price, procurement professionals recognize that although the purchase price of a material or item remains very important, it is only one part of the total cost equation in their organization service costs and life cycle costs must also be considered.

1.3.7 Purchase Price and Discounts:

Whether established through competitive bidding, buyer-seller negotiation, or simply from a seller's published price schedule, the purchase price of an item is obviously a concern in procurement. No one wants to pay a higher price than necessary. Related to the price quote is normally a schedule of one or more possible discounts that the buyer may receive. For example, quantity discounts may be offered as an inducement to encourage buyers to purchase larger quantities or cash discounts may be offered for prompt payment of invoices.

Consideration of suppliers' discount structures immediately takes the buyer beyond simple quoted purchase price. Other costs associated with purchasing must be considered. For quantity discounts to be factored in, the buyer must also consider the costs associated with

holding inventory. Larger purchase quantities increase inventory of materials or supplies. Size of purchase also impacts administrative costs associated with purchasing. Lot-size techniques such as **Economic Order Quantity (EOQ)**, discussed fully above, can help resolve this rather simple cost trade-off.

Supplier terms of sale and cash discount structures are also an aspect of purchase price. A supplier offering more favorable trade credit terms is, in effect, impacting the purchase price from the buyer's perspective. For example, a discount for prompt payment of an invoice offered by one supplier must be compared with other suppliers' offers, which may have different percentages or time periods involved.

What normally is not considered in traditional purchasing practice is the impact of such pricing and discount structures on logistics operations and costs. For example, while traditional EOQ does include consideration of inventory carrying costs, it generally does not include such factors as the impact of order quantity on transportation costs or the costs associated with receiving and handling different size orders. Many of these logistical considerations had been ignored or given cursory consideration as buyers attempted to achieve the lowest purchase price of the goods and services acquired for the organization but there is now increasing recognition of the importance of these logistics costs.

1.3.8 Service Pricing and Debundling:

Sellers typically offer a number of standard services that must be considered in procurement. Additionally, a wide variety of value-added services must be evaluated as organizations attempt to find the lowest TCO.

Many of these services involve logistical operations and the logistical interface between buyers and sellers.

The simplest of these services is delivery. How delivery will be accomplished, when, and to where are all aspects for cost consideration. As discussed above, in many industries it is standard practice to quote a price that includes delivery to the customer's plant, warehouse, or store location. Alternatively, the seller may offer the buyer a pickup allowance if the buyer picks up the merchandise at the seller's location and assumes responsibility for transportation. The buyer may be able to reduce total costs, not only through taking advantage of the allowance but also by more fully utilizing its own transportation equipment.

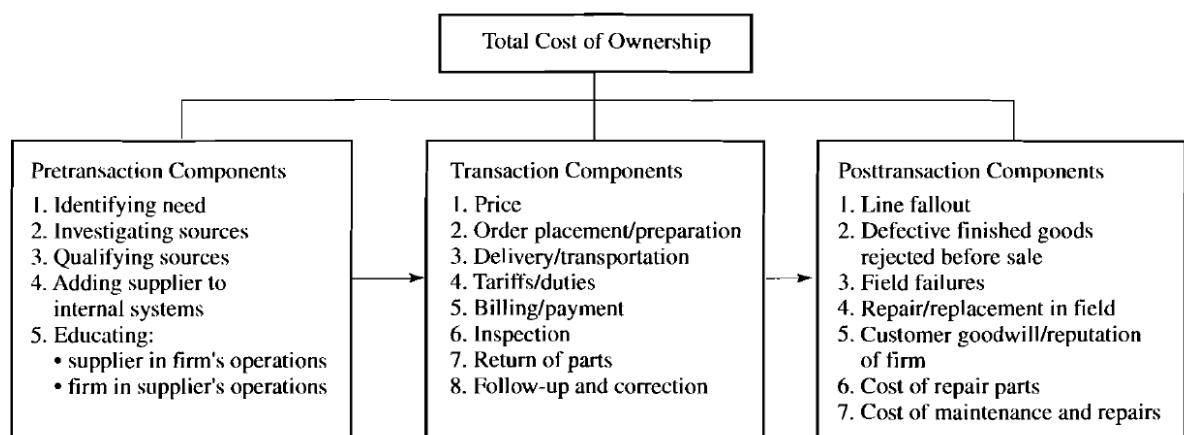
The buyer may even find it beneficial to use a common carrier for these pickups, if the economics of the pickup allowance justify it.

There may also be different prices depending upon the destination preferred by the buyer. For example, delivery of a single large load to a retailer's distribution center might represent one level of service, whereas delivery of smaller quantities to individual store locations represents another. Each alternative service involves different costs for the seller and the buyer.

In Chapter 2, numerous other potential services are discussed, ranging from special packaging to preparation of promotional displays. Performance of subassembly operations in a supplier's plant or a third-party distribution center represents a further extension of potential value-added service. The point is that each potential service has a cost to the supplier and a price to the buyer. A key aspect of determining the TCO for purchased requirements is to consider the trade-offs involved in terms of value added versus cost and price of each service. To do so, the purchase price of an item must be *debundled* from the price of services under consideration; that is, each of the services should be priced separately so that appropriate analysis can be made.

This practice was referred to as menu pricing. Where traditional purchasing might overlook value-added services in seeking lowest possible purchase price, effective procurement executives consider whether such services should be performed internally, by suppliers, or at all. Debundling allows the buyer to make the most appropriate procurement choice.

Figure 01: Major categories for the components of total cost of ownership.



Source: Michel Leenders and Harold Feraon, *Purchasing and Supply Chain Management*, 11 ed. (Chicago. IL: Irwin, 1997), p. 334

1.3.9 Life Cycle Costs:

The final aspect of lowest TCO includes numerous elements known as **life cycle costs**. The total cost of materials, items, or other inputs extends beyond the purchase price and elements of value-added service to include the lifetime costs of such items. Some of these costs are incurred before actual receipt of the items, others are incurred while the item is being used, and some occur long after the buyer has actually used the item.

One aspect of life cycle costs involves the administrative expense associated with the procurement activity itself. Expenses related to screening potential suppliers, negotiation, order preparation, and transmission are just a few of the administrative costs of procurement. Receiving, inspecting, and payment are also important. The costs related to defective finished goods, scrap, and rework, which are associated with poor supplier quality, must also be considered, as well as related warranty administration and repair of items that consumers have purchased. Even the costs associated with recycling or recovery of materials after the useful life of a finished product may have an impact on TCO.

Figure 5-2 presents a model of the various elements that comprise TCO. When each of these elements is considered in procurement, it is clear that numerous opportunities for improvement exist in most companies. Many of these opportunities arise from closer working relationships with suppliers than is possible when adversarial price negotiation dominates the buyer-seller relationship. When working cooperatively with suppliers several strategies may be employed to reduce both the buyers' and the sellers' costs, making the total supply chain much more efficient and allowing it to more effectively meet the requirements of downstream partners. Such strategies are discussed next.

2. Section 02: procurement strategies and methods

2.1. Procurement strategies:

Effective procurement strategy to support supply chain management concepts requires a much closer working relationship between buyers and sellers than was traditionally practiced.

Specially, three strategies have emerged: **volume consolidation, supplier operational integration, and value management**³⁰. Each of these strategies requires an increasing degree of interaction between supply chain partners; thus, they may not be considered as distinct and separate but rather as evolutionary stages of development.

2.1. 1 Volume Consolidation

The first step in developing an effective procurement strategy is volume consolidation through reduction in the number of suppliers. Beginning in the 1980s many firms faced the reality that they dealt with a large number of suppliers for almost every material or input used throughout the organization. In fact, purchasing literature prior to that time emphasized that multiple sources of supply were the best procurement strategy.

Numerous advantages were seen to this approach. First, potential suppliers were continually bidding for the buyer's business, ensuring that prices would be quoted as low as possible. Second, maintaining multiple sources reduced the buyer's dependence on any one supplier. This in turn served to reduce the buyer's risk should a specific supplier encounter problems such as a strike, a fire, internal quality problems, or other disruptions in ability to supply. For example, when UPS drivers went on strike in

1998, numerous shippers were unable to deliver their products to customers because of their extreme reliance on UPS for delivery service. Although other suppliers of package delivery service exist, none had the available capacity to cope with large volumes of shipments that had been handled by UPS. While other reasons for multiple supplier relationships exist, these reasons constitute the primary rationale.

By consolidating volumes with a reduced number of suppliers, procurement is able to leverage its share of a supplier's business. At the very least, it raises the buyer's negotiating strength in relationship to the supplier.

More importantly, volume consolidation with a reduced number of suppliers provides a number of advantages for those suppliers. As working relationships with a smaller number of

³⁰ Kaufmann, L: Purchasing and supply management - a conceptual framework. In D. Hahn & L. Kaufmann (Eds.), (2002), p 87.

suppliers are developed, those suppliers can, in turn, pass these advantages to the buying organization.

The most obvious source of advantage is that by concentrating a larger volume of purchases with a supplier, the supplier can gain greater economies of scale in its own internal processes, partially by being able to spread its fixed costs over a larger volume of output. Reduction in hydraulic hose suppliers from 16 to 1 meant that the preferred supplier's increased sales to this one customer allowed economies in marketing, delivery, and production.

Additionally, if a supplier can be assured of a larger volume of purchase, it may be more willing to make investments in capacity or in processes to improve customer service.

When a buyer is constantly switching suppliers, no one firm has an incentive to make such investment.

Clearly, when a single source of supply is used risk increases. For this reason, supply base reduction programs are almost always accompanied by rigorous supplier screening, selection, and certification programs. In many instances, procurement executives work closely with others in their organization to develop such preferred or certified suppliers. It should be noted that volume consolidation does not necessarily mean that a single source of supply is utilized for every, or any, purchased input. It does mean that a substantially smaller number of suppliers are used than was traditionally the case in most organizations. Even when a single source is chosen, it is wise to have a contingency plan in place.

The savings potential from volume consolidation is not trivial. One consulting firm has estimated that savings in purchase price and other elements of cost can range from 5 to 15 percent of purchases.¹ If the typical manufacturing firm spends 55 percent of its revenue on purchased items and can save 10 percent through volume consolidation, the potential exists to deliver a \$5.5 million improvement on revenue of \$100 million to bottom-line, pretax income!

2.1. 2 Supplier Operational Integration

The next level of development in procurement strategy emerges as buyers and sellers begin to integrate their processes and activities in an attempt to achieve substantial operational performance improvement in the supply chain. The integration begins to take the form of alliances or partnerships with selected participants in the supply base to reduce the total costs and improve the operating flows between the buyer and the seller. Such integration can take

many specific forms. As one example, the buyer may allow the seller to have access to its sales and ordering information system, giving the seller early warning of which products are being sold and what future purchases to expect.

Such information allows the seller to be better positioned to effectively supply requirements for materials at a reduced cost. Cost reduction occurs because the seller faces more certain demand from the buyer and can reduce the need for cost-inefficient practices, such as expediting.

Further operational integration can occur by buyer and seller working together to identify the processes involved in maintaining supply, searching for ways to redesign those processes. Establishing ED linkages to reduce order time and eliminate errors is a simple form of such integration. More sophisticated efforts may involve eliminating redundant activities that both parties perform. For example, in some sophisticated relationships, activities such as buyer counting and inspection of incoming deliveries have been eliminated as greater reliance is placed on the supplier's capabilities. Many firms have achieved operational integration focused on logistical arrangements, such as continuous replenishment programs and vendor-managed inventory. Such integration has considerable potential for reducing TCO.

Some of the efforts in operational integration strive to reduce total cost through two-way learning. For example, Honda of America works closely with its suppliers to improve those suppliers' capability in quality management. Using its own personnel, Honda visits supplier facilities and helps identify ways that those suppliers can increase the quality of their output. Such improvements ultimately benefit Honda by reducing the suppliers' costs of rework and by providing Honda with higher levels of quality materials.

The primary objective of operational integration is to cut waste, reduce cost, and develop a relationship that allows both buyer and seller to achieve mutual improvements.

The above examples are merely illustrative of some of the ways that integration can aid in this objective. Combined creativity across organizations can provide synergy that one firm, operating in isolation, would be unable to achieve. It has been estimated that operational integration with a supplier can provide incremental savings of 5 to 25 percent above the benefits achieved through volume consolidation.

2.1.3 Value Management

Achieving operational integration with suppliers leads quite naturally to the next level of development in procurement strategy: value management.

2.2 Methods of Procurement

Tender means a request drawn by a procuring entity for offers or quotations to be made by suppliers, service providers, contractors or asset buyers. Or offer, quotation or technical proposal made by a supplier service provider, contractor or asset buyer in response to a request by procuring entity³¹.

All procurement and disposal by tender shall be conducted in accordance with the basic principle set out in the Public Procurement Act (changing from a country to an other).

Procurement and disposal shall be conducted in a manner to maximize competition and achieve economy, efficiency, transparency and value for money.

A procuring entity engaging in the procurement of goods, works or services or disposal by tender shall apply competitive tendering, using the methods prescribed in the regulations depending on the type and value of procurement and in any case the successful shall be the tender offering the lowest evaluated cost.

A procuring entity may select an appropriate alternative methods of procurement which include (turnkey contract, force account, procurement under public private partnership) in case where tendering would not be the most economic and effective methods of procurement and the nature and estimate value of goods, works or service permit.

Public Procurement Act stipulates methods of procurement. The methods of procurement applied by depends the value, nature, time needed, these are³²:

2.2.1 International Competitive tendering

In International Competitive tendering or International bidding, a procuring entity shall invite suppliers, contractors, service providers or assets buyers regardless of their nationality by means of a tender notice that shall be advertised nationally or international to submit priced tenders for goods, works or services or purchase of public assets. In this method payment may be in whole or in the foreign currency or the estimate cost of the goods or works exceeds the threshold for such tenders.

³¹ SIXTA, J: Op cit, p 119.

³² Killen, K. H., & Kamauff, J. W. *Managing purchasing - making the supply team work*. Homewood: Irwin, (1995), p 113 – 145.

2.2.2 National competitive tendering

In this method a procuring entity shall invite supplier's services provider's contractors or asset buyers regardless of their national by means of a tender notice advertised only in the Republic of Algeria to submit priced tenders for goods, service, works or purchase of public assets.

This method is applied when the payment is made wholly in Algerian dinars, the goods, services and works are available in local at price below the international market, works or services are scattered geographical or spread over time.

2.2.3 Restricted tendering

Procuring entity may restrict the issue of tender documents to a limited number of specific suppliers, contractors or service providers. This method is applied when the goods, works or services required are of a specialized nature or can be obtained from a limited number of specialized contractors, service providers or reputable source or if there is urgent need for the goods, works or service such that there would be insufficient time for a procuring entity to engage in open national or international tendering, provided that the circumstances giving rise to the urgency could not have been foreseen by a procuring entity and have been caused by dilatory conduct on its part.

2.2.4 International and national shopping

Shopping is a procurement method on comparing price quotations obtained from several suppliers to ensure competitive prices and is an appropriate method for procuring readily available off the shelf goods or standard specification commodities that are small in value. A tender board may approve for competition to be invited through request for quotations at international or national level where it has determined that:

- (i.) The goods to be procured are so diversified that it would be of no commercial interest for any single suppliers to tender for them.
- (ii.) The goods are readily available off shelf or standard specification commodities.

Chapter 02: Tendering and methods of evaluation

II. Chapter 2: Tendering and methods of evaluation

1. Section 01: e-procurement and e-tendering

2.1 Motivation for an e-procurement framework

The introduction of the Internet has challenged numerous value chain propositions and processes. Its low cost, low barrier of entry and timely distribution of information provides a seamless extension of processes across company borders. Initial skepticism about the business benefits of e-procurement is now being replaced by recognition of the value of e-procurement for business, be it through process improvements, improved management or actual cost savings.

According to Elliff³³, e-procurement is any purchasing-related activity that involves electronic communication, such as the Internet or related software, to help companies achieve increased value. From point-and-click ordering using Web-based catalogues of individual suppliers to marketplaces that bring together in one place the products or services offered by multiple suppliers to live auctions that determine the lowest-price bidder.

E-Procurement is a sound solution for companies to initiate the e-wave as it promises great cost savings³⁴. Savings promised include a reduction in processing cost, reduction in the supply base (which leads to cost savings) as well as negotiating better prices through the availability of sufficient post-purchase information. Maverick spending (off-contract purchasing) is also reduced through better-controlled purchases.

Laub et al.³⁵ conducted research among a number of companies that have implemented e-procurement, but did not achieve the claimed savings or improvements. A large percentage of the respondents acknowledged that they had become involved with e-procurement through management pressure to become involved with anything “e”.

³³Elliff, (S.A):“*New Dimensions in e-Commerce and Supply Chain Management. Technology Evaluation*”, 2001, Internet: www.technologyevaluation.com, Access: 3 March 2017.

³⁴Thompson, (M.), Jones, (G.) and Lawson (A.):“*E-procurement: Purchasing in the Internet based economy*”, Butler Group, report no. 1, 2000, p 71.

³⁵Laub, (R), Woodstock, (R) and Sjöberg, (M):“*Procurement Transformation: A Holistic Approach to Best Practise Procurement*”, White Paper, 2001, p4.

These companies admitted that their implementation revolved more around making the technology work rather than ensuring that it fitted into the current business structure. By following a selection framework such errors would not have been made.

According to Milton and al.³⁶, *“As many companies’ lack experience purchasing e-procurement solutions, it can be helpful to seek objective assistance, ensuring evaluation processes are completed and objective, and allowing for the selection of well suited software.”*

Yet according to Thompson et al.³⁷, businesses are competing increasingly in supply chain management. It is therefore vital that the choice of an e-procurement solution, as well as the planning and installation, should involve much more than only system aspects and should also include:

- Strategic procurement and its process.
- Supplier selection, -management and -relationship.
- System business models.

The system business model chosen has a significant impact in terms of integration of the buyer and supplier, as well as the maintenance and content management to be performed.

2.2 PROCUREMENT AND E-PROCUREMENT DEFINED

2.2.1 What is Procurement?

Whilst purchasing mainly describes the process of buying (learning of need, locating and selecting a supplier, negotiating price and other pertinent terms and following up to ensure delivery), procurement is a somewhat broader term that includes aspects such as stores management, traffic, incoming inspection and salvage³⁸.

Lambert & Stock³⁹ adds that purchasing generally refers to the actual buying of materials and those activities associated with the buying process. Procurement is broader in scope and

³⁶ Milton, (R) and others: *e-Procurement: Boosting the bottom line*, Ernst & Young Expert Paper, 2001, p 15.

³⁷ Thompson, (M), Jones, (G) and Lawson (A): *“E-procurement: Purchasing in the Internet based economy”*, Butler Group, report no. 1, 2000, p 71.

³⁸ Hugo, W.M.J., Badenhorst-Weiss, J.A. and Van Rooyen, D.C: *Purchasing and Supply Management*. 4th edition. Pretoria: J.L van Schaik Publishers, 2002, p 351.

³⁹ Laub, R., Woodstock, R. and Sjöberg, M: *Procurement Transformation: A Holistic Approach to Best Practise Procurement*. White Paper, 2001, p 4.

includes purchasing, traffic, warehousing and receiving materials. Procurement is therefore all actions necessary to close the complete purchasing cycle.

Due to the fact that procurement is an all-encompassing function, an adequate e-procurement solution should encompass all procurement-bordering aspects to realise the full value. The following table indicates the procurement actions that are addressed by purchasing, procurement or e-procurement respectively.

Table 2-1: Addressing Various Procurement and Bordering Actions

Activity	Purchasing Actions	Procurement Actions	e-Procurement
<i>Providing uninterrupted material flow</i>	X	X	X
<i>Vendor selection and management</i>	X	X	X
<i>Procurement process improvement</i>		X	X
<i>Maintaining product quality</i>		X	
<i>Materials handling</i>		X	
<i>Standardising supply</i>		X	X
<i>Improving company competitiveness</i>		X	X

Source: Elliff, (S.A), Op cit, p 46.

From the above table, it is clear that procurement involves several aspects not addressed in purchasing. e-Procurement addresses the bulk of these actions, but does not improve or impact on materials handling or maintaining product quality. e-Procurement is therefore a tool to assist companies to buy the right requirements (quality) in the right quantities at the right time at the right price from the right supplier and does so by empowering the end user to largely control the purchase.

2.2.2 Strategic Sourcing:

“Strategic sourcing is the process of optimising the total acquisition cost of materials and services”⁴⁰.

This implies definitive supplier relationship and -management strategies for each category of materials or services bought. Technology such as e-procurement is therefore tools that can be used to minimise the cost of acquisition materials.

⁴⁰] Louw, G. Op Cit, p 23.

Hence, e-Procurement is merely a catalyst for change, driving compliance and sustaining value delivered to a company's strategic sourcing policy. It is imperative that companies consider e-procurement and its value from a process and strategic sourcing point of view rather than from a technology viewpoint.

2.3 OPERATIONAL IMPACT OF E-PROCUREMENT

Thompson et al.⁴¹, Richardson⁴² and Neef⁴³ mention that e-procurement's benefits are primarily seen in the indirect purchasing domain (goods and services that are not linked direct to the manufacturing systems) with the following major benefits:

- Reach that allows suppliers to access new customers and buyers to find new suppliers.
- The ease of exchange of information that provides supply chain partners with a "dashboard-type of view" of orders and service performance.
- Increased accuracy of information by reducing the number of data-entry points within the process. Key information is only entered once.
- Electronic routing that eliminates the problem of lost documents and the requirement for manual tracking. This makes for increased control and accountability for business procurement.
- Real-time tracking of order status.
- Payment for purchases can be automatically triggered upon matching of the invoice with the delivery note and the purchase order (occurs automatically). Although it does not necessarily imply automatic payment, integration with Electronic Funds Transfer (EFT) or Procurement Card (P-Card) solutions would automate the total procure-to-pay process.
- Reduced administration cost, as well as reducing the administration burden of purchasing professionals in an organisation.

⁴¹ Thompson, M., Jones, G. and Lawson A: E-procurement: Purchasing in the Internet based economy, Butler Group, report no. 1, 2000.

⁴² Richardson, H.L: Hi-tech procurement, Transportation and distribution, Volume 41, 2000, p 4.

⁴³ Neef, D: e-Procurement, From Strategy to Implementation. New Jersey: Prentice Hall International, 2000, p 162.

The following table lists a number of unnecessary costs associated with the procurement process (Laaper⁴⁴ summarises how e-procurement aims to reduce these costs).

Although e-procurement automates some actions in the procurement process, it also provides tools for measuring and management procurement in broader terms in organisations.

According to Thompson⁴⁵ one of the main reasons for an e-procurement venture is to reduce costs. The average cost of stationery orders at First Rand Bank was reduced from R210 (sometimes larger than the total order value) to R50 per order. Of the initial R210 cost per order only about R15 refers to consumables. The rest is the cost of employees previously allocated to the process who can be applied elsewhere (such as with more strategic aspects) after the implementation of an e-procurement solution. Companies implementing e-procurement seldom realise any bottom-line saving and the total financial impact is difficult to justify. This has contributed to the slow initial adoption rate of e-procurement in companies.

Table 2-2: Reducing Procurement Costs Through e-Procurement

Associated Procurement Costs	Solution Through e-Procurement
<i>Maintaining a larger-than-needed supplier base.</i>	With the bulk of e-procurement based on catalogue spending, companies can control from which companies purchases are made. This has a follow-on effect of a reduced supplier base.
<i>Obtaining larger-than-needed volumes</i>	e-Procurement contributes to companies better controlling their purchasing. Through data analysis companies can reduce spending per product type.
<i>Lack of standardisation</i>	Each product type follows a standardised process in e-procurement through approval to requisitioning
<i>The cost of extended lead and cycle times.</i>	Longer-than-necessary lead time results in carrying unnecessary safety stock. e-Procurement provides a vehicle to track fulfilment more effectively, providing MIS for improved supplier management.
<i>The cost of order processing and receiving.</i>	e-Procurement simplifies order processing. Costs associated with receiving can be reduced if the system is integrated with the correct back-end system to ensure a three-way check.

Source: Laaper, B.H: Procurement reengineering. USA: PT Publications Inc, 1998, p 102.

⁴⁴ Laaper, B.H: Procurement reengineering. USA: PT Publications Inc, 1998, p 102.

⁴⁵ Thompson, M., Jones, G. and Lawson A, Op cit, p 23.

Increased control over purchases is one of the benefits that are difficult to quantify. Low-value high-volume purchases (usually in purchasing for consumption) frequently have a higher cost to procure than the value of the actual items being procured. Figure 1 indicates the control e-procurement has brought about (Shift A), while a further shift in control is required (Shift B) for “hands-free” procurement. (Adapted from ⁴⁶)

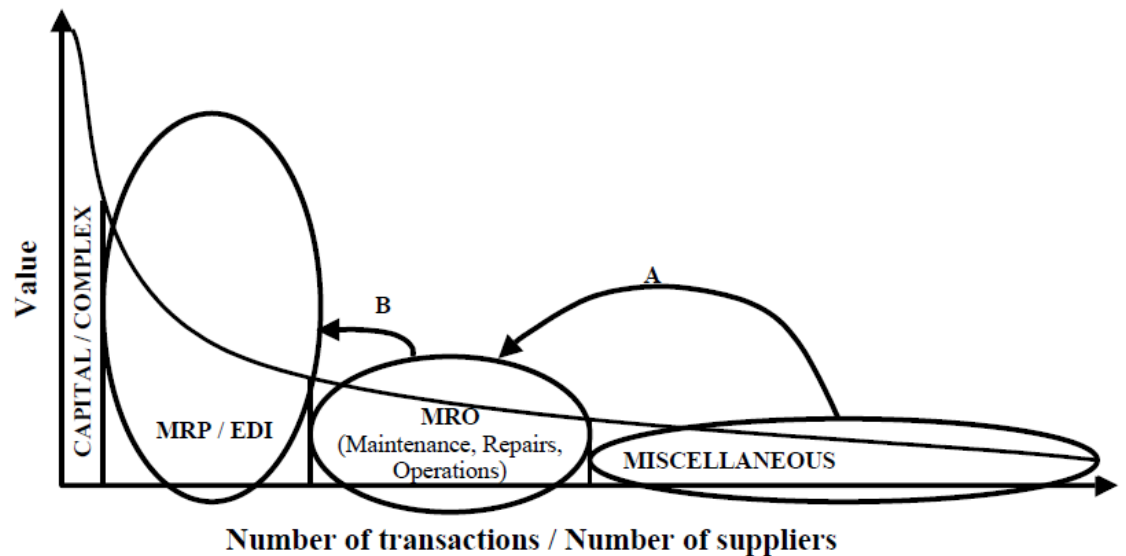
e-Procurement systems currently aim to control the uncontrolled maverick purchases (which according to Neef⁴⁷, in some companies total 30% of the total number of purchases) through increased contract usage and purchasing leverage with suppliers (shown as shift A in the above figure). e-Procurement systems should advance to use the contracted prices and make use of system-initiated transactions (shown as Shift B in Figure 1 below).

In summary, the value created by an e-procurement system falls into one of the following three categories:

- **Improving process efficiencies.** This includes automated requisitioning, automated workflow, eliminating double handling and less paperwork, shorter cycle time which results in less inventory.
- **Compliance.** This results in a reduction in maverick spending.
- **Leverage.** The system provides better management information on category and supplier spending. This will create leverage for negotiating better prices with suppliers.

⁴⁶ Thompson, M., Jones, G. and Lawson A, Op cit.

⁴⁷ Neef, D, Op cit, p 165.

Figure 1: Focus of e-Procurement

	Capital/ Complex	MRP/EDI	MRO	Miscellaneous
Number of transactions	Small	Large	Large	Huge
Number of suppliers	Small	Large	Large	Huge
Purchasing Characteristics	<ul style="list-style-type: none"> • High value, once off • Complex and hands-on 	<ul style="list-style-type: none"> • Product and retail based purchases • JIT and Kanban 	<ul style="list-style-type: none"> • Consumption based • Contract pricing 	<ul style="list-style-type: none"> • Unplanned, emergency or "maverick" purchases • Uncontrolled pricing
Order processing	Manual	Automated	Manual	Manual

Source: Neef, D, Op cit, p 165.

2.3.1 The Procurement Process:

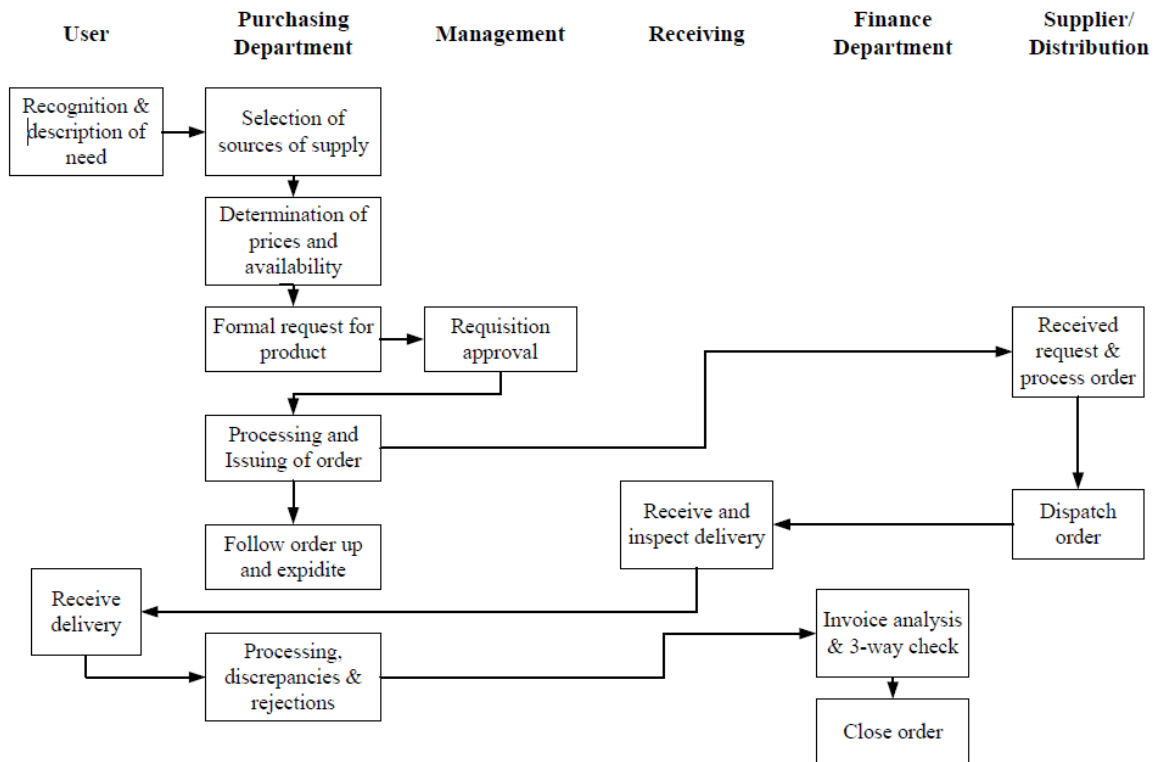
Figure 3 represents a generic purchasing process before the implementation of e-procurement⁴⁸.

It is clear that the traditional procurement process comprises numerous steps involving many people with different roles and responsibilities. If carried out on a large scale, purchasing processes easily become cumbersome, wasting valuable time and obliging personnel to carry out a constant fire-fighting approach to keep track of the paperwork generated at each stage. Especially the internal escalation of the order is frequently bypassed

⁴⁸ Jooste, M.V: A Framework for the Implementation of e-procurement. Master's thesis, University of Pretoria, 2002, p 23.

in companies by an informal approach in the hallway, telephone call or e-mail and complicates the purchasing function⁴⁹.

Figure 2: The Traditional Procurement Process



Source: Jooste, M.V: A Framework for the Implementation of e-procurement. Master's thesis, University of Pretoria, 2002, p 23.

Implementing e-procurement not only radically reduces the number of process steps, but also automates a number of the remaining steps (7 of the 14 process steps in the e-procurement scenario are automated). The generic purchasing process when implementing e-procurement is presented in Figure 4 below.

⁴⁹ Hough, H.E. and Ashley, J.M: Handbook of buying and purchasing management, New Jersey: Prentice Hall, 1992, p 67.

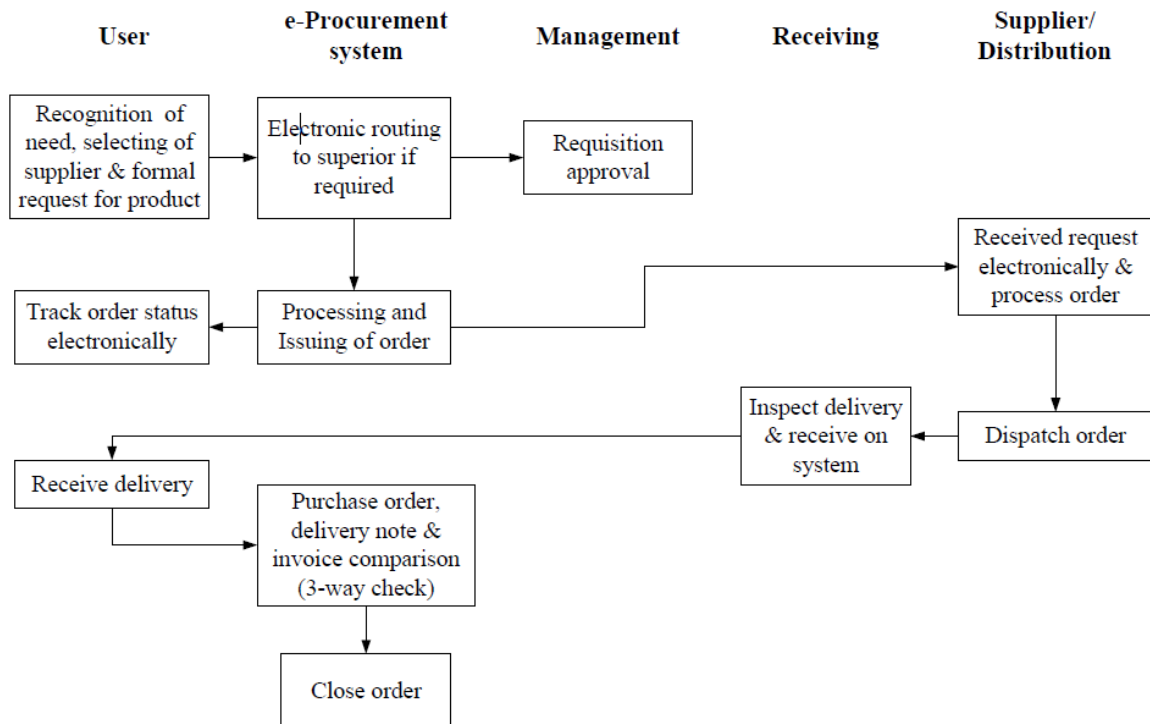
2.3.2 e-Procurement and e-Business:

According to Lee & Whang⁵⁰, e-business is the use of the Internet for computing and communications to execute both front-end and back-end business processes.

e-Business has emerged as a key enabler to drive supply chain integration, of which e-procurement forms a part. e-Business impacts on supply chain integration in the following four key dimensions:

1. **Information integration.** This involves information sharing and transparency across the supply chain which is accessible in real time.
2. **Synchronised planning.** This involves collaborative planning and replenishment across the supply chain.
3. **Workflow co-ordination.** This focuses on automated business processes and coordinating them .
4. **New business models.** These include different supply- and sell-side models that were previously not present in the off-line world.

⁵⁰ Lee, H.L., Whang, S: E-Business and Supply Chain Integration. Stanford Global Supply Chain Management Forum, November 2012, p 20.

Figure 3: The e-Procurement Process

Source: Lee, H.L., Whang, S: E-Business and Supply Chain Integration. Stanford Global Supply Chain Management Forum, November 2012, p 21.

Table 3 indicates the impact procurement has on each of these integration dimensions (adopted from Lee & Whang book⁵¹).

⁵¹ Lee, H.L., Whang, S, Op cit, p22.

Table 3: Impact of e-Procurement on Supply Chain Integration

Dimensions of Supply Chain Integration	Contribution of e-procurement
Information Integration	Supplier information sharing. Both buyers and suppliers have the ability to access information in real time to track order progress.
Planning Synchronisation	Co-ordinated replenishment. e-Procurement with an efficient forecasting system could initiate orders automatically rather than manually, which will result in a pull rather than a push model.
Workflow co-ordination	Paperless procurement, auctions, auto-replenishment, auto-payment. e-Procurement automates the bulk of the ordering process. Integrating this with an automated payment system (such as EFT) could automate the total procure-to-pay process.
New Business Models	Market exchanges, auctions, secondary markets.

Source: Lee, H.L., Whang, S, Op cit, p22.

The Internet has allowed companies to develop innovative solutions that accelerated the adoption of supply chain integration principles. If implemented correctly, this promises not only to change supply chains from being adaptive to being responsive, but also promises savings across company borders that can result in less inventory and in improved fulfilment time in the supply chain.

2. Section 02: e-tender implementation and methods of selection

2.1 e-Procurement Potential in Algeria:

Algeria has very unique problems regarding the implementation of “first-world” technologies such as e-procurement. The following are typical problems (adapted from Mohssen. M⁵²):

- Limited and monopolised supply base. On-line communities are most successful when they involve a large number of participants. Algeria has a relatively small supply base per commodity group and this is usually controlled by a few large participants. This reduces the possible impact of an on-line solution such as e-procurement.
- Limited bandwidth. Bandwidth is a precious commodity in Algeria. This negatively impacts on both the download of information and the upload of web pages. Consequently, users frequently abandon on-line processes before completion.
- Social Responsibilities. One of the acclaimed benefits of an e-procurement solution is a reduction in the supply base, which conflicts with North African BEE and SMME development objectives and legislation. Also, these smaller players tend to be unsophisticated with very few having on-line access and being e-procurement ready.
- e-Procurement affordability. e-Procurement technology is advanced and costly to North African companies. Usually only large corporations with large expenditure on indirect purchases (such as MRO) consider such systems. This results in a very small percentage of potential “e-procurement purchases” being made on line. Also, implementation is usually not integrated with suppliers’ systems and the advantages of a totally integrated solution are seldom realised.

The reasons listed above give some explanation why Algeria has had a slower than average (compared to other countries) adoption rate of e-procurement solutions. To overcome the problems stated, a staggered implementation process is proposed. Companies should start with automating part of the process, such as using on-line auctions to negotiate some of their commodities’ contracts or implementing procurement cards. A procurement card is a solution that gives users permission to buy from certain suppliers within a spending limit. The result is improved control over purchases and automated payment, but does not promise all the collaboration and process savings associated with e-procurement.

⁵² Mohsen. M: Beware the pitfalls of Internet procurement, Communications News, volume 37.

2.2 Product Susceptibility To E-Procurement

Thompson et al⁵³ and Neef⁵⁴ distinguish between direct and indirect products procured in the business-to-business (B2B) procurement arena. Direct goods are items that contribute direct to company sales, being for production or resale. From the above categories, production material (raw material or components) and finished goods for resale reside here. Indirect goods support the main line of business and can be seen as enabling goods. MRO, capital equipment, services, construction contracts and office supplies (also known as ORM or operating resource management) are included in indirect goods.

Fearon et al.⁵⁵ adds that products can be further distinguished into standardised or differentiated. A standardised (or homogeneous product) is one that is exactly like those produced by all the other producers of that product. Sellers of standardised products know that the market is very sensitive to price because it is relatively easy for buyers to comparison-shop. A truly differentiated product is different from all the other producers' products in some respect. That is, the product has some feature that no other product has.

Jooste⁵⁶ adds that the product value (ranging from very low to high item value) and the number of suppliers (a large or small supplier base) also influence the characteristics of a product.

All four of these different characteristics are not independent of each other. Product characteristics and the number of suppliers, for example, are directly proportional (homogeneous products are normally supplied by a large supplier base and vice versa).

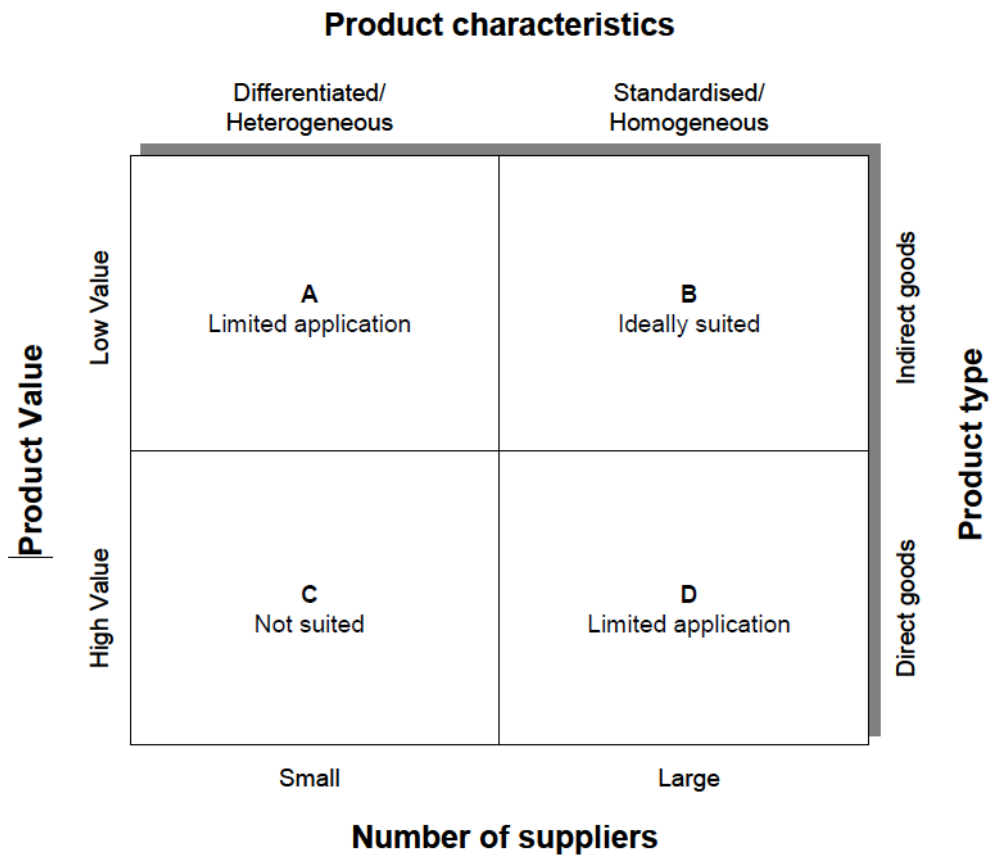
Figure 4 summarises the applicability of the above characteristics towards on-line buying or the tendency towards e-procurement.

⁵³ Thompson, M., Jones, G. and Lawson A, Op cit.

⁵⁴ Neef, D, Opcit.

⁵⁵ Fearon, H.E., Dobler, D.W. and Killen K.H: The purchasing handbook, New York: McGraw-Hill, 1993, page 97.

⁵⁶ Jooste, M.V, Op cit, p 30.

Figure 2-1: Product Suitability for e-Procurement

Source: H.E., Dobler, D.W. and Killen K.H: The purchasing handbook, New York: McGraw-Hill, 1993, page 98.

Products are either well suited, not suited or have limited application to e-procurement. The four influencing factors contribute to a product's susceptibility to e-procurement as follows:

- **Function within the business:** Due to the uncontrolled spending as well the large procurement cost vs. the cost of the items procured, indirect goods are better suited for e-procurement.
- **Product characteristics:** Standardised products can be bought from a catalogue and require little manual intervention. They are therefore better suited for on-line buying.
- **Product value:** Items of lower value tend to require less negotiation compared to higher-value items.
- **Number of suppliers:** Products supplied by a larger supplier base achieve critical mass much easier than one with a smaller supplier base.

2.3 Role-Player Susceptibility To E-Procurement:

2.3.1 Buyer and Supplier Roles:

Procuring items involve at least two parties, the buyer and the supplier. According to Churchill & Peter⁵⁷, a number of different buying role-players are involved, such as the initiator (person who initiates the need for the product or the service), the user (person who will use the product or service), influencers (people who will affect the buying decision), deciders (people who will formally or informally approve the purchase or supplier) and buyer (the person who will select the supplier and negotiate contractual agreements).

Parkinson & Baker⁵⁸ mention that behavioral aspects of these role-players such as their demographics, personality traits, attitude towards buying and perceptual patterns will all influence their decision and preferred way of purchasing.

The role-players involved on the supplier's side very much depend on the channel strategy chosen.

⁵⁷ Churchill, G.A. and Peter, J.P. Marketing: Creating Value for Customers. 2nd edition. Boston: McGraw-Hill, 1998, p 486.

⁵⁸ Parkinson, S.T. and Baker, M.J: Organisational Buying behaviour. London: Macmillan Press Ltd, 1986.

Haas⁵⁹ distinguishes between numerous channel relationships which can be grouped as either direct (the manufacturing company uses salespeople to sell direct to its customers) or indirect (the manufacturing company uses an intermediary to sell its products on their behalf).

Although the Internet has the potential to disintermediate sales channels by opening direct connections between manufacturers and end customers, Martin⁶⁰ is of the opinion that intermediaries will not completely disappear. According to him, they will be replaced by infomediaries acting as brokers between buyers and sellers, shifting value from vendors to customers.

These infomediaries will predominantly be systems providing information rather than dictating purchases and will also enable lower commissions to be paid to middlemen.

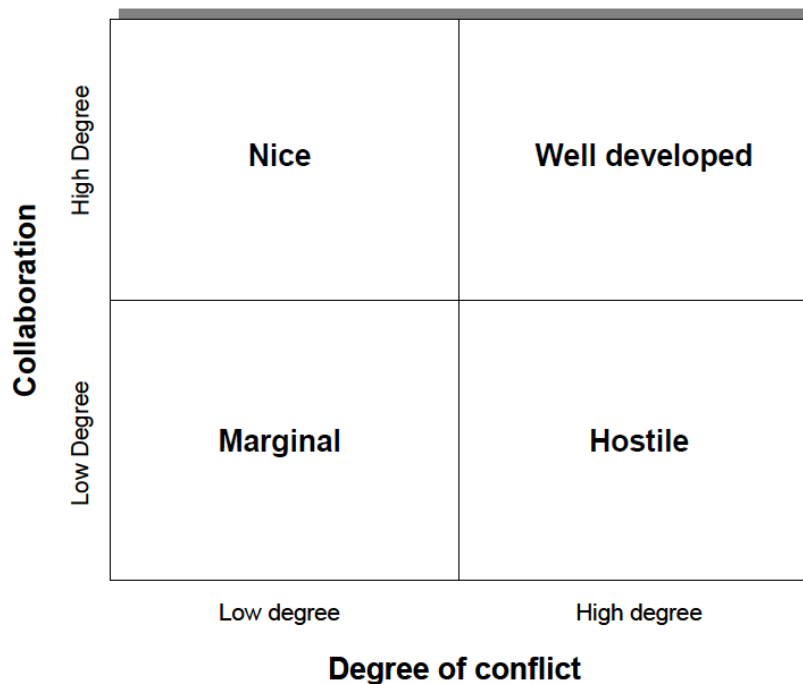
2.3.2 Relationships between Role-players:

Different parties within the value chain are involved in different relationships based on the role-players and relationship characteristics. Gattorna & Walters⁶¹ distinguish between two types of relationship, namely vertical (between one or more supplier or buyer) and horizontal (between a buyer and a supplier). These relationships can in turn be characterised by either co-operation or conflict, which in turn will determine how keen especially suppliers will be to participate in a buyer's e-procurement venture. These relationships are categorised in Figure 5:

⁵⁹ Haas, R.W: Business marketing management: an organisational approach. 5th edition. Boston: PWS-KENT Publishing Company, 1992, P 47.

⁶⁰ Martin, J: The great transition: using the seven disciplines of enterprise engineering to align people, technology and strategy. New York: Amacom, 1995, p 332.

⁶¹ Gattorna, J.L. and Walters, D.W: Managing the supply chain - a strategic perspective. London: Macmillan Press Ltd, 2003, p 279.

Figure 2-2: Collaboration and Degree of Conflict between Role-players

Source: Gattorna, J.L. and Walters, D.W: Managing the supply chain - a strategic perspective. London: Macmillan Press Ltd, 2003, p 279.

Relationships with a low degree of collaboration will not be meaningful to either party - such relationships are either marginal (associated with a low degree of conflict) or hostile (associated with a high degree of conflict). Significant relationships come into being with a high degree of collaboration. A relationship with a low degree of conflict tends to be somewhat too 'nice', as the parties make too few demands from one another. Provided that it can be handled well, raising the degree of conflict in such a situation enables a better climate for innovation and development.

2.3.3 Market forces and industry-related purchasing:

Viljoen⁶² distinguishes between two broad groups of market competitiveness, namely perfect and imperfect competition (which includes monopolistic competition, oligopoly and monopoly).

As e-procurement solutions favour buying of homogeneous products (mainly sold through perfect competitive and oligopolistic competitive markets), e-procurement will best suit perfect competitive and oligopolistic markets.

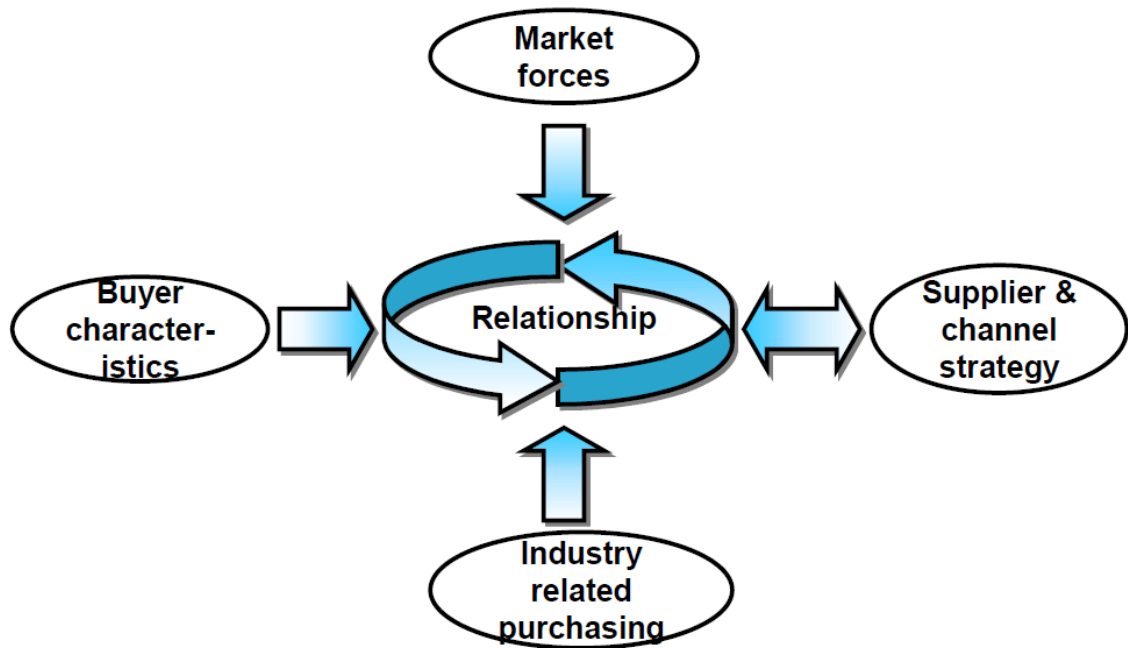
Each industry (such as manufacturing, service and retail) has a different approach to purchasing. On the one hand, the service industry mainly buys indirect goods such as office stationery, while the retail industry buys goods for resale in a market that is very volatile and changing continuously.

e-Procurement prefers a stable environment where largely the same products are purchased continuously, making its applicability less likely in the retail environment compared to the service and manufacturing sectors.

All the above characteristics influence the decision on an e-procurement solution.

The following figure summarizes the applicability of the above characteristics to on-line buying (tendency towards e-procurement).

⁶² Viljoen, R.P : Microeconomics, Pretoria: Unisa Press, 1998, p 176.

Figure 2-3: Role-players Influencing the e-Procurement Decision

Source: Viljoen, R.P : Microeconomics, Pretoria: Unisa Press, 1998, p 176.

The aspects indicated in the above figure (buyer characteristics, market forces, supplier and channel strategy and industry-related purchasing) all impact on the relationship between the buyer and supplier. The relationship in turn also influences the supplier and channel strategy (the significance of the relationship, as well as the value generated for buyers, will determine if buyers would seek new relationships to buy similar products). All five the above forces will impact on a company's decision to implement an e-procurement solution.

2.4 E-PROCUREMENT BUSINESS MODELS:

Before the advent of the electronic means of exchanging information, most items purchased by companies were displayed in printed catalogues, depicting all relevant information pertaining to the item for sale. Thompson et al. mention that the rise of databases and the increasing sophistication of interactive technologies have created a scenario where the benefits of hosting a catalogue are equally attractive to the purchaser. Unlike printed catalogues, which are effectively obsolete the moment they leave the printer, the hosted catalogue remains reliable on a 24-hour by seven-day basis if maintained effectively.

Berryman et al.⁶³, Welty⁶⁴ and Thompson et al.⁶⁵ mention three different e-procurement business model solutions for buyers to access suppliers' information on line:

1. **Do it yourself. (Buy-side solution):** They compare the sell-side solution to a shopper who visits the various vendors of interest to look at the offerings and prices. According to Welty, the main advantage is that buyers avoid the “headache” and investment of reformatting their suppliers' product data themselves. Content-management is the problem of the vendor. Controlling purchases and comparison-shopping is, however, very difficult.
2. **Have your suppliers do it for you (Sell-side solution):** They compare this to a travelling salesman where the sellers have to bring their wares to the buyers. Berryman et al. and Welty add that managing the electronic supplier catalogue in house gives the advantage of control, but requires a full maintenance team to perform content management. Yet according to Neef⁶⁶, this model is more e-commerce than e-procurement.
3. **Neutral marketplace (centralised trading portal owned independently):** Berryman et al.¹ mentions that in the e-marketplace (also referred to as a portal), third parties set up department stores to connect buyers and sellers (and to match many buyers and sellers).

According to him, this marketplace enables consumers to link to a single portal and gain access to products, services, and information from multiple vendors.

But he emphasises that products best suited for an e-marketplace are those that can easily be compared.

Therefore standardised products fit better to a catalogue and are much easier compared to one another other.

⁶³Berryman, K., Harrington, L. and Layton-Rodin, D. 1998. Electronic commerce: Three emerging strategies. McKinsey Quarterly, 8 pages.

⁶⁴ Welty, T: Beware the pitfalls of Internet procurement, Communications News, volume 37, 2000, p 4.

⁶⁵ Thompson et al: Op cit.

⁶⁶ Neef, Op Cit, p 124.

Thompson et al. also explain that the direction in which the solution is facing makes a significant difference to its functionality. Sell-side systems face outwards from the vendor towards the consuming companies and buy-side systems face out from the purchaser towards its supply chain trading partners. The marketplace resides in the middle, facing outwards to both the buyer and vendor. Buy-side solutions streamline the corporate purchasing process whereas sell-side solutions syndicate vendor product information in order to streamline the transaction processes of the seller.

Of the three solutions, marketplaces hold the most advantages. One of the main advantages is the reduction in possible relationships (all relationships pass through the marketplace as opposed to direct between buyers and suppliers). Another advantage is the reduction in cost if compared to the buy-side or sell-side models. Users only have to pay a subscription fee that is far less than half of what it would cost to manage the process themselves⁶⁷.

2.5 Framework for e-procurement implementation:

The aspects discussed throughout the article support the establishment of a framework in one of two important ways:

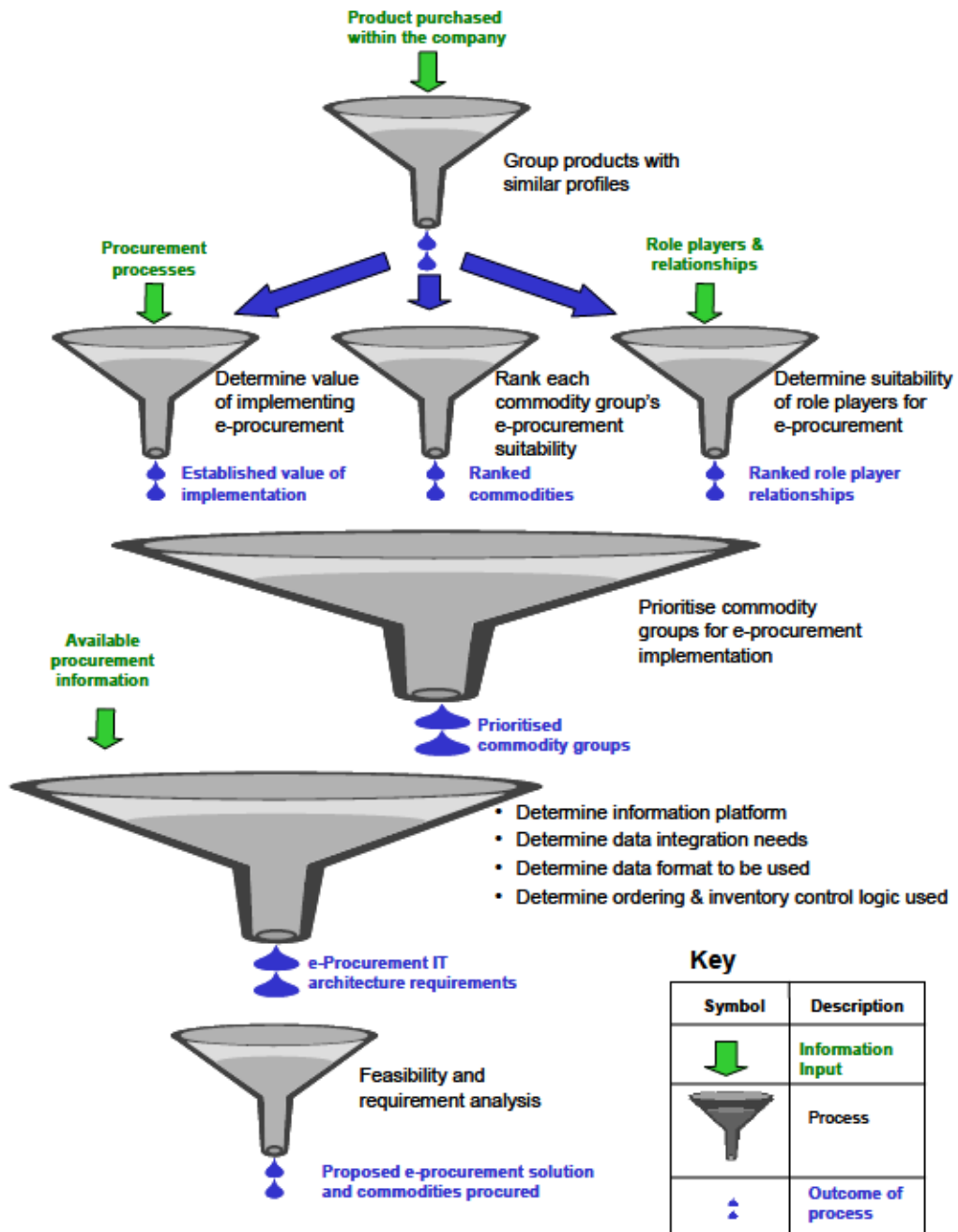
- i) assisting in deciding if the purchasing aspect is relevant to e-procurement, and
- ii) choosing the correct e-procurement delivery solution. It is therefore important that the chosen framework should first rank and determine which products are suited for e-procurement and develop a suitable solution for the selected product groups.

Looking at the aspects discussed in the article thus far, the discussions on procurement and its process, as well as those on products and role-players, are used to rate and rank the delivery of e-procurement. Looking at the supply chain of these products as well as the trading exchange necessary for the system will assist in determining which is best suited for e-procurement. All these factors are combined into a proposed framework shown in Figure 7.

The framework follows a top-down logic with decisions made in higher “funnels” as an input to lower decision points (or “funnels”). The functioning of each of these decision points is discussed individually in the following paragraphs.

⁶⁷ Welty, T: Op cit, p4.

Figure 7: Framework for E-procurement Implementation



Source: Welty, T: Op cit, p5.

2.5.1 Grouping Similar Products:

As companies usually buy a vast array of SKUs, it is suggested to group products with similar characteristics into commodity groups. Different strategies can be used to group the commodities, of which the following are probably the most common⁶⁸:

- Products with similar physical characteristics (e.g. bearings)
- Products with similar end users (e.g. stationery)
- Products with similar suppliers (e.g. electronic components)

2.5.2 Commodities Feasible for e-Procurement:

The most important characteristic that determines if a commodity group is suited for e-procurement is the product itself. It is therefore important to rate each of the commodity groups' susceptibility to e-procurement. It is suggested to rate each commodity group according to the criteria discussed in Section 4, namely product value, product characteristics, product type and the number of suppliers. It is recommended to give each criterion a qualitative rating between 1 and 5. Although product value is quantitative, it has to be converted to a qualitative value between 1 and 5. Finally the average feasibility of the criteria needs to be determined.

2.5.3 Procurement and process feasibility:

Each of the identified commodity groups probably has a unique procurement process, is purchased by different individuals and has a different consolidation process. It is important to understand the value proposed by using e-procurement. The following important criteria have to be considered:

- Transaction value. For each of the commodities, the average transaction value (total spent per commodity divided by the number of transactions for the same period) has to be determined. A qualitative value needs to be assigned, ranging from 1 (low transaction value) to 5 (high transaction value).
- Process inefficiency. Determine the current process's inefficiency, compared to that of the proposed e-procurement solution. Although a quantitative approach of activity-based costing can be used, a qualitative rating based on the evaluator's opinion would suffice. A rating from 1 (all products in the commodity group are purchased through a

⁶⁸ Welty, T: Op cit, p6.

very efficient process) to 5 (all products in the commodity group are purchased through a very inefficient process) should be assigned.

- Contract purchasing. Determine what part of the commodity spend is on-contract vs. what part is off-contract. A qualitative value ranging from 1 (no products in the commodity group are ever purchased off-contract) to 5 (all products in the commodity group are frequently purchased off-contract) is suggested.

An overall rating for all three criteria should be determined and it is recommended to use the average rating for the three aspects.

2.5.4 Role-player Feasibility:

For each of the identified commodity groups, the criteria as discussed in Chapter one should be used to determine the role-player feasibility, i.e. the following:

- Buyer characteristics. Each of the commodities' buyers involved has to be evaluated. Aspects such as their susceptibility to e-procurement and the existence of purchasing control have to be evaluated. A qualitative value ranging from 1 (buyers of the products in the commodity group will realise little value through using e-procurement) to 5 (buyers of the products in the commodity group will realise a large amount of value by using e-procurement) is suggested.
- Supplier and channel strategy. For each commodity group, the relationship with its suppliers has to be evaluated (being either cohesive or conflicting). The existence of any horizontal or vertical relationships in which the buying company is involved should also be considered. Scoring of the supplier and channel strategy pivots on the existence of a constructive relationship (high rating) vs. deconstructive relationship (low rating). A qualitative value ranging from 1 (a deconstructive relationship exists between buyers and suppliers of the products in the commodity group) to 5 (a constructive relationship exists between buyers and suppliers of the products in the commodity group) is suggested.
- Market forces. Each commodity is purchased in a market where certain forces prevail (or are absent). It has to be determined whether each commodity is purchased in a perfect (high rating) or imperfect competitive market (low rating). A qualitative value ranging from 1 (all products in the commodity group are

purchased in an imperfect competitive market) to 5 (all products in the commodity group are purchased in a perfect competitive market) is suggested.

An overall rating for all three criteria should be determined and it is recommended to use the average rating for these criteria.

2.6 Prioritise commodity groups for e-procurement:

Different aspects of the susceptibility of a commodity group to an e-procurement solution are discussed in paragraphs above. All three of these aspects have to be combined into a single rating for the commodity groups. Weighting of each of the three sets of criteria depends once again on the company, but an equal weighting is recommended.

2.6.1 Information exchange and order initiation solution:

Each of the commodity groups has received three ratings in terms of its susceptibility to e-procurement. Before it is decided which products to procure through an e-procurement solution, the systems and data requirements for such a system should be identified. The following should be considered:

- **System platform:** Depending on the number of users and suppliers, a choice has to be made between the Intranet, Extranet or Internet. Due to its reach and ease of access the Internet will in most instances be the platform of choice.
- **Systems integration:** The current systems used for purchasing the different commodities have to be evaluated. These could include ERP or legacy systems, EDI solutions, etc. that will determine the integration that would be required should e-procurement be implemented.
- **Information and data format:** Based on the system integration needs, the data format requirement should be established. Where EDI solutions exist, the possibility of using XML and its impact should be evaluated.
- **Business model:** Companies have to choose between buy-side, sell-side or marketplace solutions. Also choosing between catalogue solutions vs. ERP/legacy-based solutions has to be considered.

- **Order initiation:** Analyse if orders are generated on demand or forecast and how orders are generated (JIT, MRP, by end users, etc.). Also determine if inventory of the commodity is centralised or decentralised and if any inventory information is available. Based on this, determine how orders will be initiated.

From this analysis, the preferred solution is derived for each of the dimensions discussed and it should be combined with the prioritised commodity rating as discussed in Paragraph 7.5 to determine, first, the preferred e-procurement solution and secondly, which products to purchase using the solution.

2.6.2 Commodity Feasibility and Recommended e-Procurement Solution:

Based on the results of the previous two sections, the most feasible solution for each of the aspects should be derived. This will indicate the most preferred platform (Internet, Extranet, Intranet), the integration required (with ERP, legacy, etc.), the preferred data format (XML vs. EDI for instance) and the recommended e-procurement business model (buy-side, sell-side or marketplace).

Using the recommended e-procurement solution, information should be used to research current e-procurement offerings and determine which solution addresses the IT requirements best. Should no solution adequately fit the requirements, the possibility of developing a new system should also be considered.

2.7 Framework comparison:

2.7.1 Existing Frameworks:

Two frameworks assisting e-procurement implementation were encountered during research. The first is a proprietary model used by Sasol during their CommerceOne implementation (which was coined the Funnel Model) and the second a procurement transformation model developed by Accenture⁶⁹.

⁶⁹ Laub, R., Woodstock, R. and Sjöberg, M: Op cit, p4.

The Funnel Model had a similar approach to that of the proposed framework and had the following mechanics:

- **Prioritise commodity groups:** Similarly to the proposed framework, it prioritises commodity groups in terms of the savings potential through implementing e-procurement solution, as well as the IT integration required.
- **Rank business units:** Each of the business units is ranked in terms of their susceptibility to procurement using an e-procurement solution (taking cognisance of aspects such as business readiness, commodities procured and current IT infrastructure).
- **Formulate roll-out strategy:** Using the commodity group profiles and the business unit sequence, a roll-out strategy is formulated. The commodity group sequence is plotted against the business unit sequence and a high-level project plan is formulated.
- **Supplier take-on:** For the selected commodity groups, the suppliers are ranked taking cognisance of price and quality, quality of business processes, catalogue quality and the length of relationship with the buying company.

Although Sasol encountered more stumble blocks than initially expected, they have successfully implemented the CommerceOneBuySite™ solution at three sites in the Sasol group. Without the existence of some structure in strategising product, IT and supplier adoption, the process would definitively not have realised the significant savings experienced to date. Sasol will also use the model to prioritise further rollouts of the CommerceOne e-procurement solution within the group.

The Accenture procurement transformation model, as discussed by Laub et al.⁷⁰, is a high-level model that aims to ensure that the structures in place also support the transformation necessary for an e-procurement purchasing approach. The model suggests that companies should start off by first ensuring that highly skilled buyers with excellent category knowledge should drive procurement and use the e-procurement system to deploy and enhance the experts expertise.

The model suggests a thorough analysis of each of the commodity groups and identifying possible cost-saving areas. The model also suggests establishing best-of-breed sourcing strategies and through the savings realised, develop capabilities such as the implementation of a new system.

⁷⁰ Laub, R., Woodstock, R. and Sjöberg, M: Op cit, p 04 - 06.

2.7.2 Comparison of the proposed and existing frameworks:

Although the proposed framework has similarities to the Funnel Model used by Sasol, the Funnel Model is primarily an implementation tool whereas the framework developed in this research is an evaluation tool.

Unlike the Funnel Model, the developed framework does not initiate with a set solution, but rather analyses a company's total procurement (focusing on aspects such as products, processes and existing systems) to determine the susceptibility to e-procurement. Criteria developed also assist in recommending the required integration as well as data format and information architecture. The proposed framework establishes the most important criteria to evaluate e-procurement solutions. Should no "off-the-shelf" solution adequately fit the set criteria, a new solution can be based on the specifications set out by the framework.

The choice of solution, as well as outputs from the proposed model, can be used as input to the Funnel Model (removing the first product rating stage). This will enable the formulation of a roll-out plan for the solution. The proposed framework therefore does not aim to replace the existing Funnel Model, rather it aims to complement it and function as an extension in choosing and rolling out the most feasible e-procurement solution.

The procurement transformation model is not an implementation or evaluation model, but rather aims to ensure that procurement is business rather than system driven. With the model, however, it is possible to derive a number of different systems for each of the different commodities procured within a company. Although the proposed framework may set out with an e-procurement system in thought, it ranks each of the commodity groups and will only implement the system for the chosen groups with savings potential.

2.8 Overall:

E-Procurement solutions present significant potential through a number of tangible and intangible benefits and will also help drive on-line supply chain collaboration processes between companies. A number of implementations have not achieved the promised results as they considered e-procurement from a solution rather than a business and strategy point of view.

Before the e-procurement solution decision, companies should have a sourcing strategy for each of the commodity groups they procure.

The proposed framework will then assist in aligning the susceptible commodity groups with a potential e-procurement solution and will also assist in choosing the most suitable solution. An e-procurement solution should be viewed as a catalyst to control and improve efficiencies of a category of a company's purchases.

Algeria, however, has a number of unique problems facing the implementation of a first-world solution such as e-procurement. Aspects such as a limited and monopolized supply base, limited bandwidth and importation policies all complicate the feasibility and achievability of savings and improvements generally accepted with the implementation of such a solution.

Companies opting for an e-procurement solution should therefore consider a staggered-process automation approach. Starting with the implementation of on-line auctions for some of the commodities could be first steps before a full-fledged e-procurement rollout.

Chapter 03: Practical case

III. Chapter 03: Practical case.

1. Section 1: Overview of the host organization:

This section about the company presentation is mostly based on internal information provided by the company, translated and rephrased by the student.

we will present the Henkel Group and its business sector in the world, and then we will move on to the presentation of Henkel Algeria.

1.1. Presentation and business line of the Henkel Group:

Henkel is a German multinational founded on September 26, 1876 by Fritz Henkel.

The Henkel Group operates in three strategic areas:

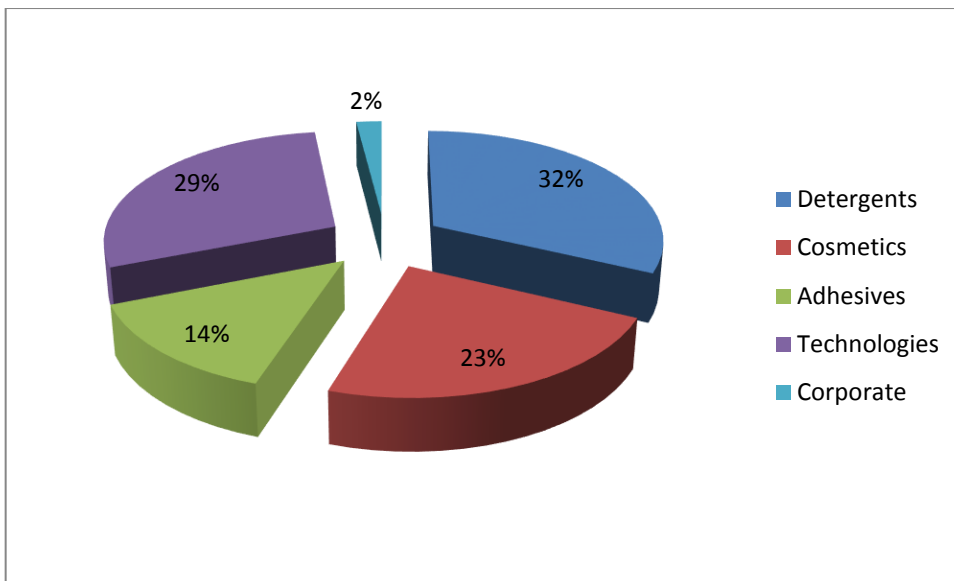
- Detergents and cleaning products
- Cosmetics
- Glues and adhesives

1.1.1 The detergents and cleaning products sector:

In this sector the Henkel Group have tried during these years to better develop, manufacture and market quality products that meet the requirements of the general public throughout the world including laundry detergents, strong detergents, special detergents, Softeners, home improvement products, dishwashing products, household cleaners, bathroom cleaners and kitchen cleaners.

1.1.2 Turnover:

The turnover of the Henkel group has reached 20.074 billion euro at the end of 2016, the breakdown of which is as follows:

Figure 08: Breakdown of Henkel's sales by sector of activity

Source: company's internal data

We notice that Henkel achieves 32% of its turnover in the sector of detergents and cleaning products. Moreover, he is a leader in this field.

Technological innovation is the key to the development of Henkel Group, thanks to its know-how and innovation, the group generates 29% of turnover in this sector.

In the field of cosmetics, Henkel is the leader in Europe with 23% of turnover achieved.

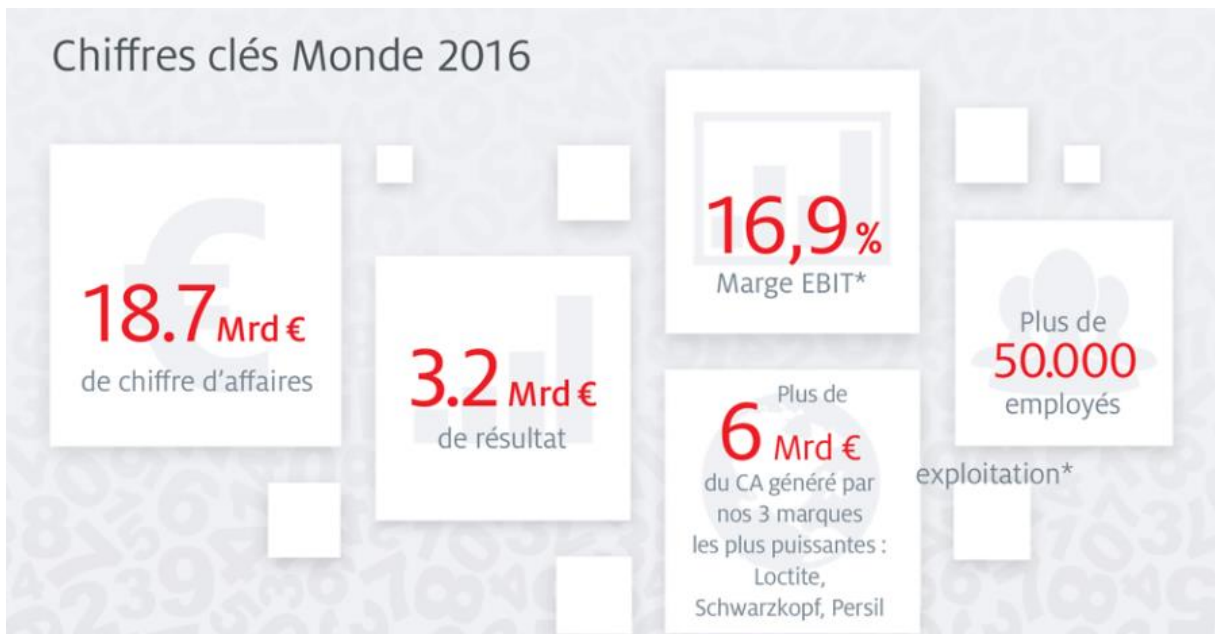
In addition, the company dominates the market of adhesives and surface technologies by realizing 14% of its turnover.

1.1.3 Brands of high-consumption products:

- **Detergents and cleaning products:** Persil, Bref, Le chat
- **Cosmetics:** Fa, Schwarzkopf
- **Glues and adhesives:** Rubin, Super Glue, Pattex, Roller

1.1.4 Staff number:

Henkel has 57303 employees worldwide.

Figure 09: Key figures for Henkel in the world

Source: www.henkel.com

1.1.5 Henkel's objective:

Creating sustainable value for its customers, consumers, employees, shareholders, as well as for the rest of its stakeholders and the communities in which it operates.

1.1.6 Henkel's mission:

Serving its customers and consumers around the world, establishing itself as a trusted partner, with leading positions in its key markets and categories.

1.1.7 Henkel's Values:

- **Customers and consumers:** Henkel's customers and consumers are at the heart of its activities.
- **The team:** Henkel values its teams, encourages them to take up challenges and rewards them.
- **Financial performance:** Henkel strives to achieve an excellent sustainable financial performance.
- **Sustainable development:** Henkel is committed to being a leader in sustainable development.
- **Family foundations:** Henkel is building a strong future with a strong entrepreneurial spirit, based on a family-oriented corporate culture.

1.1.7 Presentation and history of Henkel Algeria:

After independence the SNIC (National Society of Chemical Industries) was made up of factories inherited from the nationalizations.

In 1982, the government decided to restructure all state companies, and from this restructuring was born, among other companies, the ENAD.

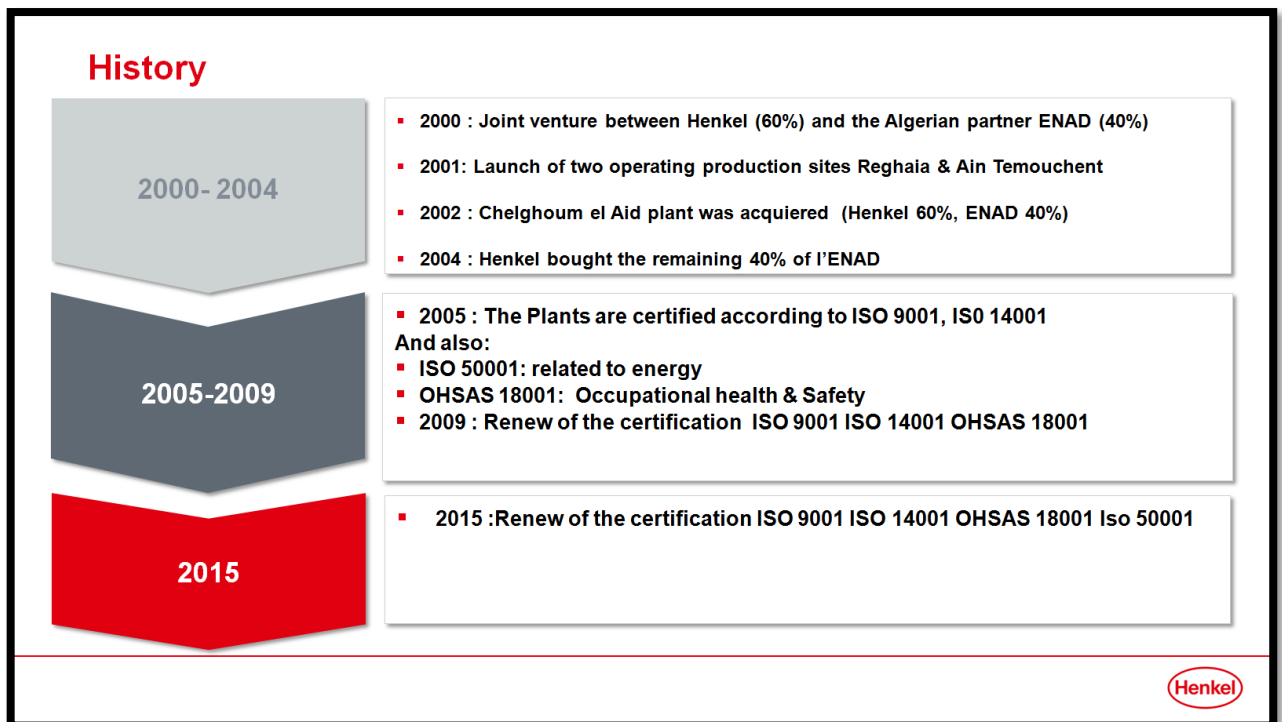
1.1.8 Presentation of the ENAD:

It should be reminded that the National Enterprise of Detergents and Maintenance Products (ENAD) is the result of the restructuring of the SNIC in 1982 under Decree 82-416 of 04/12/1982.

In 1997, the government decided to restructure businesses again, and ENAD already had a desire to move towards a partnership by developing its restructuring plan because the restriction was insufficient.

On 19 December 1999 a protocol of understanding was signed between the Henkel group and the ENAD group, the signing of the partnership agreement between Henkel and ENAD took place on 19/12/1999 giving birth to the Algerian Company of Detergents (SDA) on 01/05/2000, and which lasted only 23 days to ensure the transition and to allow the transfer of the ownership of the units concerned by the partnership (Réghaia and Ain Timouchent) and by the same , Henkel's participation, after this deadline, the SDA was transformed into Henkel ENAD Algeria (HEA) with 60% of the capital held by Henkel and 40% by ENAD.

On December 8, 2004 Henkel purchased the 40% owned by the ENAD group, and since then the group has been named Henkel Algeria.

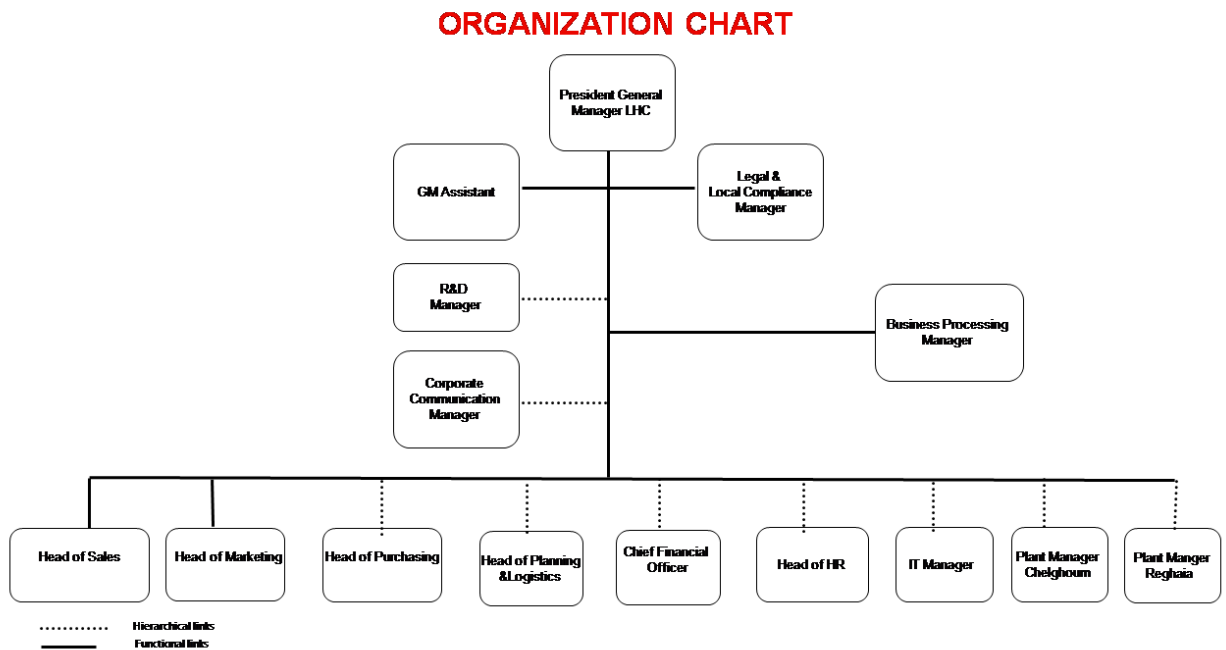
Figure 10: the history of Henkel Algeria

Source: company's internal data

1.1.9 The organization chart of Henkel

We will define the missions of each department in order to better understand the internal organization of Henkel Algeria:

- **Commercial management:** it is divided into four directions:
 - **The marketing department:** it deals with everything related to the marketing of products from their packaging to their promotion
 - **The financial department:** it is responsible for the financial management and accounting of the company
 - **The human resources department:** it ensures the recruitment and management of the human resources of the company
 - **The safety department:** it is responsible for the safety of the company and its production sites
 - **Industrial management:** it coordinates production at the various production sites
 - **The logistics department:** it manages the logistical means used to ensure the smooth functioning of the company.

Figure 12: Organization chart of Henkel Algeria

Source: company's internal data

1.1.10 ISO certification:

Henkel Algeria obtained its first certification in accordance with ISO 9001 "quality management system" and ISO 14001 "environmental management system", at the end of December 2005, which have been renewed in 2009 and 2015, these certifications witness on the important progress made by Henkel Algeria and testify on the considerable progress of the company.

2. Section 02: Methodology of study and survey process:

2.1. Qualitative study: The Interviews:

2.1.1. Purpose of the run interviews:

Two different interview guides drew the broad lines of two different interviews:

- The first guide contained questions that aimed to clarify the company's positioning towards procurement, and understand from two of the IMS managers the process of E-Tendering as well as the recorded effects of purchasing on the company's performance. Also to cover the lack of documents related to purchasing management or the broad orientation of the purchasing policy, the first guide was to extract relevant information using the semidirective method in order to create a frame for the given responds and redirect the interaction into the desired course, which is to point out the process of implementing an e-tendering system.
- The second interview guide was applied during the session with an anonymous former purchasing manager that represents a more cumulated experience in the field of tendering. The questions given were much more punctilious than the ones in the first interview, and the semi-directive method played the same role as in the previous two cases. And the very aim was to extract the secrets and the most relevant tips that can make the e-tender such a success. More interviews of this second kind were hoped to take place and were after that aborted for the absence of adequate and willing candidates, and also due to the time.

2.1.2. Running the interviews:

The first interview was with the RPO Maghreb Manager, Ms Amina GHIT. It was on March 2nd 2017, at 12h45. The second interview was with the Jr. Purchasing manager Indirect Material & Services, Mr Djamel TAMOUD. This interview was held to days later at 13h15.

Both interviews contained almost the same set of questions following the first interview guide attached to the annex section of this memoire. The questions were previously sent by e-mail to the interviewees in order to enable them preparing the right amount of information,

yet for reasons of a crowded schedule they only reviewed the guide moments before the meeting and still have given adequate information in relation to the research.

The same procedures were followed with the third interviewee who answered the questions on the second guide regarding the tips of a good e-tendering.

No information regarding the second interviewee or the time and date of the meeting are to be disclosed in order to maintain full confidentiality.

All three interviews were audio-recorded with the consent of the interviewees in order to permit later for content analysis. This however did not include the whole meetings but only the core Q&A part.

2.1.3. Content analysis:

The recorded speech was transcribed word by word into a document of 12 pages in total. Having both supports gave the chance to do a more detailed keyword analysis, in addition to a word by word analysis, taking in consideration the speaker's voice pitch and tempo variations, in order to detect the unspoken language and put an adequate frame to each expressed idea in terms of certainty and credibility.

3. Section 03: Results presentation and data analysis of the conducted survey:

3.1. Qualitative study: The Interviews:

3.1.1 First interview guide:

Q01: “Every organization whether profit making or non-profit making, has a requirement for purchasing. The value of spends and the degree of sophistication can vary greatly with the nature of the product or service and with the complexity of the business itself. Today’s competitive demands require the procurement or purchasing process to be accomplished in a capable and professional manner. According to you, Sir/Madame, what are the first starting points an E-Sourcing process should begin with?”

Both interviewees disclosed that the starting point before launching an E-Tender is to define the background of the operation and the new approach meant to be fulfilled from such an operation. Defining the background as the very motive of the operation that can emanate for example from a lack in the current supplier or in a change in the local market (Such as Algerian financial law 2017), whilst the new approach is the outcome or the value that the company strives to fulfill, like Identifying the most suitable professional service provider at best cost, or locale-sourcing using Henkel standard template, or Implementing KPIs for supplier service level evaluation and Aligning with global process and contracts including best practices.

Q02: “Before the tender stage is reached, it is essential to have a management team in place to deal with the Tender Process, thus ensuring the legalities observed and they keynotes of the process are established, once this is done, what to do next?”

The answers explained that the human element is so important and crucial in any purchasing operation, and that priory to inviting tenders, Henkel should have some idea as which organisations are likely to be potentially suitable supply sources, or at least have knowledge of the contenders in the market place. This is achieved by reference to historical data on past performance of supply, and from vendor rating systems, as well as by a review of

technical sources, such as magazines and company annual reports, and so on. Sometimes they use simple computer programmes and databases to aid the selection of a number of likely suppliers but it's disadvantageous to rely on this because the systems need to be kept continuously up-to-date.

Information available on collected data should include information such as: full trading name and address, product group, specific products by type, turnover and past performance, if available, any specialist knowledge or expertise, references ...Etc.

They substantiated that care must be taken at this initial stage, otherwise some problems of eligibility to the required standard may result.

Q03: "Invitation to E-Tender –as the next step- should include some specific information, can you please unveil some of those?"

Ms. Ghit helped to unveil for us an internal document comprising 10 parts of the invitation to Tender process, that I will sum up within the synthesis bellow. (Original document attached to Annexe 03).

Q04: "Would you please give us a summary of the very gist of the content of such documents?"

The purpose of this question was to put a finger on other possible dimensions than those in the hypothesis. However the received information was redundant and mostly about how the fact that Henkel is a relatively an old multinational to set in Algeria and that makes its Data not quite visible in the time being. And that It became a normal and automatic procedure to conduct invitations to tender under the sealed bid process. Where Bidders must describe in full how they will fulfil the requirements of the purchasing organisation, with details of delivery and payments.

The bid must also include a signed confidentiality agreement that there has been no collusion between themselves and other bidders (a bidding ring), and that there has been no improper contacts or discussions with any of the customer's staff. It would be advisable to also contain details of insurance cover for all requirements, for the safe completion of any contract which may be confirmed.

Q05: “Tender opening is a very crucial step as well, can you give us an idea about this?”

No details were given regarding this question. Mr Tamoud’s answer was based on the fact that the company’s values are the diode that guarantees the honesty and sincerity in the workplace. Further details were given by Ms Ghit,

- The Tender Board can be a standing group. It might consist of a board member as chairman, the purchasing director, probably a technical expert, and a non-aligned person to act as secretary.

To ensure equality of treatment of all tenders, the Tender Board meets on the nominated day, at the nominated time, in a location suitable to accommodate all interested parties, if a public opening. If not, in a closed office. All bids are date and time stamped and recorded, with total costs noted.

- Late tenders or bids should preferably not be opened but should be date and time stamped and returned to the bidder with a letter of explanation. It may be that in some companies ALL tenders are opened and those which were late, annotated as such, and kept separate from valid bids, submitted within the timescale stipulated.

Q06: “What are the results after the implementation of these practices, I mean how the E-Tender is evaluated?”

Since the company is relatively new to integrate the Algerian market, Mr. Tamoud explained that until very recently, the bid analysis team, have now to assess all components of all bids. Firstly to ensure the bid is compliant, and that all parts are complete, then to compare and assess all parts, to identify the best value for money bid overall. It is most important to ensure that the necessary skills are included in the team. For example, a financial expert, a technical expert, a purchasing expert and, if necessary, a commercial or legal expert.

The process must follow a defined pattern to which all participants subscribe, to ensure all bids are dealt with in exactly the same way. The methods for comparison have to be fair, thorough and demonstrably so, should inspection take place.

Assessment touches the following aspects The Financial Assessment, The Technical Assessment, The Capacity Assessment - closely linked with the Technical Assessment, and

often taken as part of it, is to check all aspects of the bidders' capability to perform according to the contract -

The Assessment Group should be aware of any additional costs which may occur as a result of their decision as to whether to accept or reject a particular bid. For example: have the costs of any long-term agreement, such as those for telecommunications installation and copier rental or items which may no longer be required, been included?

Any clarification sought during the process must be recorded, as must any change to specification, or terms and conditions. As noted above, major changes must be notified to all bidders, with equal opportunity being given to all to amend their bids, if they wish.

Q07: Having discussed and agreed all matters relating to the bid, it is now time to write and agree the contract and its terms and conditions?

Mr Tamoud mentioned so many details that can be overallly summed up in the following points:

Having agreed which tender provides best overall value for money, taking into account price, quality, timing, and costs in use, a decision can be taken about the award of the contract
Other points to discuss and agree at this time could be:

- **Discounts:**
 - negotiated and hidden
- **Payment Terms:**
 - timing
 - how by (modality)
 - documentation
 - responsibilities
 - insurance
 - transfer of ownership

3.1.2 Second interview guide:

Q01: “A contract can stand or fall on the expertise and performance of the Purchasing Manager or Buyer, who must always be striving to obtain goods and/or services at best overall value for money. Much more is involved than simply issuing requests for quotations, receiving bids and choosing the lowest as being the more appropriate. “During your many years of experience, what general observation and what importance do you make about the role of managers in Algerian companies, or the companies set in Algeria, and especially the way it is managed?”

The overall impact of introducing e-tendering in collaborative environments is significant. Organisations using e-tendering enjoy better efficiency, accuracy and productivity in their tendering activities. Resistance from the employees was apparent when e-tendering was initially introduced in the organisation. Steps taken to resolve this issue include the introduction of free training to employees, readily available resources and top management support in ensuring job security. In one instance, the organisation employed specific personnel to act as the implementation champion to other employees, to raise employee motivation and encourage interest in IT. The case studies show that the tender process was not changed to embrace the power of technology, but rather technology was used as a tool to record and accelerate the communication process.

Q02: “What do you think is the most important question a manager should ask before launching an E-Tender?”

The anonymous interviewee replied in a consistent and brief phrase: Is your business ready? And then added: Regularly review your business position and strategies to assess if tendering is the right approach for your business now, before making a serious commitment. And Identify business strengths and weaknesses as well as identifying actions to be taken to close any gaps. “*Businesses should be very honest with themselves at this stage*”; he said and implied that it is better to be patient and wait until the business is ready rather than waste valuable resources.

Q03: “Getting prepared for the E-Tender is a must, can you please give us more insights regarding this, from your personal experience?”

The terms and words used by the interviewee were not so formal, that’s why I found it unavoidable to rephrase them, and those answers can be summed up as follows:

Familiarise yourself with the procurement processes commonly used within your sector and by the tendering bodies you wish to target.

By doing so, you will gain knowledge of the different processes and what is expected, and this will help you to make an informed decision:

Understand your business strengths and weaknesses – it is important that you communicate your strengths.

Identify, research and focus on specific target markets. Whether these are geographical, types of Buyers, or specific sectors.

Creating a “library” of tendering information will save considerable time and effort during the tendering process. Information that can be stored includes:

- Staffing details – photos and CVs
- Company background data
- Company policy documents
- Technical specifications
- Quality statements and procedures
- Case studies
- Key financial data
- Copies of previous proposals

Once established, this library should always be kept up to date as part of the tendering closure process and at regular periods through the year.

Q04: “What to consider when writing down the E-Tender contract?”

The interviewee gave three main points, that we summarize in the following:

Focus on what the Buyer wants, always keep in mind that you are the buyer when writing contract – talk about your needs, organisational objectives, clarify the evaluation criteria and weighting, concentrating on areas with the highest percentage.

Keep competitors in mind when you are writing the contract and ensure that you keep the surface of challenge and competition.

Show you’ve thought about – and can manage – potential financial, commercial and legal risks that could cause contract failure.

Q05: It is well known that price is the sole criterion, the contract will be awarded to the lowest priced bid complying with the specified requirements, how to get bidders to give as lower prices as possible?

The interviewee asserted that the key to answer this question is to play being in the shoe of a bidders. For example - when setting the price – bidders make sure that they achieve full cost recovery but also show value for money.

Usually, what increases the charges of bidders are costs related to such as contracting, law related issues, stationery, travel expenditure etc. And by ensuring those services the company may get bidders to propose lower prices.

Q06: The ethics and honesty are not facultative; can you explain this idea more?

The respondent affirmed that according to his experience before considering the detailed stages of the tender process, the buyer should bear in mind the importance of ethics in the tender process, as this is the area where pressure may be brought to bear on the unwary buyer, the Ethical Code is an excellent guideline for staff involved in the purchasing or contractual process. One of the precepts is that both the letter and the spirit of the law should be observed in commercial transactions. This means that legal niceties should not be substituted for the basic principles of honesty and integrity.

The offer and receipt of business gifts and entertainment are sensitive areas for buyers despite being widely recognised as part of traditional business practice. It is prudent to bear in mind that there is seldom any such thing as “**a free meal**”.

A small gift is a gesture, a large gift is considered a bribe. A large number of “small” gifts can give rise to the same connotations as a “large” gift. He said that there are many cases of buyers who accepted gifts and hospitality ending up in court charged with and found guilty of corruptly accepting inducements.

Q08: “And in the other way around, is there any sanctions for employees who tamper with ethics?”

The question was not asked since the answer appeared as a response to previous questions.

Q10: “In conclusion, what are the main challenges that a manager should cope with when E-Tendering?”

The anonymous respondent pointed out that the successful implementation of electronic tendering systems and processes requires careful attention to the needs of the system and the concerns and requirements of the various stakeholders.

3.2. Synthesis and recommendations:

3.2.1. Survey results synthesis:

a) Survey participants: The participants in the three interviews gave a considerable amount of valuable information. A certain number of communication gaps were detected when conducting the interviews because of the novelty of the subject in the Algerian context. This led to driving attention to certain areas which the interviewees saw more fit rather than seeing all aspects of the discussed problematic. This reflects lack of knowledge in some areas despite the general understanding of the theme as a whole.

The respondents also shown great restraint and reticence when answering the questions, and this alone mirrors the discomfort that results from bringing up such subjects which wouldn't be the case if a more open and effective asymmetry was in place to eliminate negative aspects of the ruling Algerian mind-set regarding this matter.

b) Adaption of universal frameworks: On one hand, the interviewees stated that this dimension is very crucial and necessary for enhancing the performance of E-Tendering, as the Algerian ecosystem has its proper traits that make adaption something unavoidable.

On the other hand, they highlighted that the adaptations are made in the central level (i. e. by the regional managers) who still less acquainted with the local reality.

Therefore, if differences are noticed on the executive level, the repercussions within the workplace – and as little as they might be – certainly do exist and ought to be acknowledged first in order to be dealt with.

d) Ethics and security: Interviewees affirmed that the most interest is given to those two factors, since they are overlapped and of a prominent relevance –not only to the revenue model- but also to the reputation of the company. Interviewees substantiated that ethics and security are to ensure and guarantee the principle of “equity of opportunities” and eventually the best running of E-Tendering operations

e) Communication: The nature of answers given by the interviewees themselves make us emphasize on the importance of communication and the role it plays in supplier selection, employees performance and even the ranking of the company strategically speaking.

Generally under comprises the asymmetry of the information and its circulation up and down as well as between the different stakeholders.

3.2.2. Recommendations:

a) How should e-tendering be undertaken? : E-tendering can be relatively easy to implement, as the processes are similar to a traditional paper process. It can be a familiar set of activities, which does not require changes to procurement processes or alterations and upgrades to other systems. Where e-tendering is used as part of a wider e-sourcing solution it can also be implemented relatively easily.

In order to meet legislative requirements, and to demonstrate probity of the tendering process, Henkel Algeria is advised to use e-tendering solutions and services specifically designed for the purpose.

Such as an internal platform that offers a “hosted” service which can be readily accessed by procurers and tenderers. In many cases these e-tendering solutions are available as part of a wider “e-sourcing” or e-procurement solution. Of course, a hosted service can be used without acquiring additional IT infrastructure in-house (inside the company) thus reducing the lead time to implementation (but of course the time taken to procure a solution or service will need to be taken into account).

So what I recommend is a branded “portal” which is specific to the purchasing organisation. Henkel Algeria as a purchasing organization is likely to find a hosted service the easiest solution.

b) Communicating E-Tendering to suppliers: A consistent communication plan needs to be put in place in order to integrate the concept of E-Tendering and all its aspects into the suppliers’ culture.

This plan includes sensitization of its benefits for suppliers as E-tendering potentially serves suppliers the followings:

- Reduced tendering costs.
- Reduced time on completing tender responses.
- Reduced overheads on printing, copying, collating and postage/courier services.
- Online access to all tender documents.
- Easier and swifter response to queries during the tender process.
- Unnecessary reliance on postal or courier services.

c) Security related considerations: There is to be a noted, that digital data is more vulnerable to heist and if strong and consistant cyber security measures were not undertaken. Technically speaking, such measures are way easy to implement, the eTender system should routinely notify the primary email contact whenever a secondary user is detected accessing eTender information.

And each eTender system username and password is to be specific for that tender and a ‘one-off’ for an individual firm.

As for audit purposes, logging of all user access to an eTender system must be available for inspection.

d) Training and education: Before an eTender system is implemented, administrators need to:

- be confident in dealing with the education and training requirements of potential eTender users
- provide technical assistance
- let commercial entrepreneurs take up the training and education opportunity if this appears to be the best way.

The company has no choice but to re-skill with a focus on electronic and Internet-enabled technologies. It must become ‘learning’ organisations to assist the reskilling of its workforce and to capitalise on the rapidly emerging technologies and to accept, evaluate and implement technological change and innovation.

3.2.3. Research Limitations:

The main limitation of this research is the number of interviewees that did not exceed 3. A study of this kind, and especially one that treats such an important topic is known to require a number of interviewees that may at least be considered representative, yet this here could not be achieved.

This was mainly due to the theme of research itself that created a considerable amount of reticence and restraint and caused the employees to demur responding.

Another cause for this that might have less plainly contributed to this reticence, is the busy schedule of employees and the pile of work they had to complete every day.

Conclusion:

Conclusion:

The theoretical framework covered in this research enables us to have a clearer vision over the functions of procurement in general and over e-procurement more specifically.

The first chapter was there to locate the two variables of the current research within procurement and purchasing function and establish the possible platform on which the study will be held.

The second chapter then brought us closer to the concept of E-Tendering, and cleared the fact that it can very well be considered as an asset within modern companies. A direct link was then identified between e-procurement and considerable increase in performance, and how does it describe a phenomenon usually perceived yet unidentifiable to the mere observer.

At last, a third chapter harbored the projection of these theoretical earnings on our host company Henkel, in which we were able to conduct our practical study, and verify if they are applicable in a pure Algerian context.

Since the results of our study were previously presented and synthesised at the end of the third chapter, and since recommendations for possible reforms were then given, we are here to reformulate those results in a trial to answer the sub questions from our general introduction and also verify the veracity of the made hypothesis.

Needless to say, the first hypothesis was primary answer for the first sub question, while the second and third sub question were to be answered through the different e-procurement practices undertaken by the company as part of its outlined policy, in addition to the possible reformatory recommendations the current research was to result.

So the first hypothesis stipulating that “To implement E-Tendering, Algerian companies should rely on a universal framework, after adapting it to the Algerian ecosystem”. According to the current study, this hypothesis is also confirmed and could very well be the answer to the second sub question. The reason is that the Algerian context is not less understood, but some of its dimensions are not even taken into consideration, leading us to question the very existence of the research and development within companies in Algeria. The only measures often taken are those concerned with HEQ and boosting the digitalization.

These policies, however, do not go in the stream of coping with the lack of accustom of employees, but they adopt instead standard plans that vary from a company to another and that refer to the tamper and the management skills of the manager himself.

Our second hypothesis states that “Security, ethics and communication, are the most recurrent factors that once well managed will meet the procurement objectives more efficiently”, is, according to this study, confirmed. These three dimensions were the ones who came up the most when analysing the data of the conducted survey. The interviewees were given the chance more than once, and even pushed to think of other possible dimensions noticed to have an impact of any sort over employees’ behavior or any other factor impacting the efficiency of the E-Tender, yet no other than these was on the table. And apart from continuous evaluation that did not record any relevant data, they did not report any possible dimension in which a real challenge or a best practice might originate. Meaning that most of best practices were the result of a combination related to Security, ethics and communication.

As for “what are the best practices related to E-Tender?”, and to fill the shortage in answering the question from the policy followed by the studied company, possible solutions were given in the recommendations and will here be summarized:

- On the company level, and whether it was external or internal communication, both strategic and operational goals of E-Tendering cannot be met unless measures to communicate the contents and the procedures are instituted.
- Education and training for both employees and suppliers of the company is also inevitable, through an adequate training plan designed for this purpose.
- The adaptation of the framework or platform of e-procurement should outcast all economic, technical and social considerations.

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Annexes:

Annexe01:

First interview guide:

Q01: Every organization whether profit making or non-profit making, has a requirement for purchasing. The value of spends and the degree of sophistication can vary greatly with the nature of the product or service and with the complexity of the business itself. Today's competitive demands require the procurement or purchasing process to be accomplished in a capable and professional manner. According to you, Sir/Madame, what are the first starting points an E-Sourcing process should begin with?

Q02: "Before the tender stage is reached, it is essential to have a management team in place to deal with the Tender Process, thus ensuring the legalities observed and they keynotes of the process are established, once this is done, what to do next?"

Q03: "Invitation to E-Tender –as the next step- should include some specific information, can you please unveil some of those?"

Q04: "Would you please give us a summary of the very gist of the content of such documents?"

Q05: "Tender opening is a very crucial step as well, can you give us an idea about this?"

Q06: "What are the results after the implementation of these practices, I mean how the E-Tender is evaluated?"

Q07: Having discussed and agreed all matters relating to the bid, it is now time to write and agree the contract and its terms and conditions?

Annexe02:

Second interview guide:

Q01: “A contract can stand or fall on the expertise and performance of the Purchasing Manager or Buyer, who must always be striving to obtain goods and/or services at best overall value for money. Much more is involved than simply issuing requests for quotations, receiving bids and choosing the lowest as being the more appropriate. “During your many years of experience, what general observation and what importance do you make about the role of managers in Algerian companies, or the companies set in Algeria, and especially the way it is managed?”

Q02: “What do you think is the most important question a manager should ask before launching an E-Tender?”

Q03: “Getting prepared for the E-Tender is a must, can you please give us more insights regarding this, from your personal experience?”

Q04: “What to consider when writing down the E-Tender contract?”

Q05: It is well known that price is the sole criterion, the contract will be awarded to the lowest priced bid complying with the specified requirements, how to get bidders to give as lower prices as possible?

Q06: The ethics and honesty are not facultative; can you explain this idea more?

Q08: “And in the other way around, is there any sanctions for employees who tamper with ethics?”

Q10: “In conclusion, what are the main challenges that a manager should cope with when E-Tendering?”

Annexe03:

An internal document offered by Henkel (**Invitation to E-Tender Keynotes**)

Invitations to tender should normally consist of the following sections; it will however depend upon the complexity of the requirement.

Part 1 - Defines the contract, giving details of timescales for commencement and completion

Part 2 - Contains the “Conditions of Contract” wherein the commercial details are explained in simple language; where appropriate the draft contract can be included.

Part 3 - Should be a pricing schedule

Part 4 - Will give details of the scope of the work or services or the quantity and frequency of requirements of goods or services to be supplied.

Part 5 - Depending on the size of the contract, should highlight all procedural requirements, such as third party inspection, variations if any, the communication route and names of people involved in discharging contractual requirements and so on.

Part 6 - The specification; if a “Technical” specification this should give full details of the work, supply or service to be undertaken; current preference is for this to be a “performance” or “functional” specification, which allows freedom of choice to the bidder as to how best to meet the requirement.

Part 7 - Any drawings and/or plans required to allow bidders to ensure their offered goods or service comply, not only to the specification, but also to those drawings originally issued as part of the Technical Specification.

Part 8 - Should contain details of free issue goods, if any, and the arrangement for such free issue.

Part 9 - Gives details of submission of bids, such as time and precise location, that late bids will not be accepted, the date of bid opening and whether it will be open or closed. Open bidding is where all bidders have the option of being present to view and note total prices submitted by all bidders.

Often used overseas as a means of avoiding accusations of corrupt practices as only those bids opened, registered, and with their total cost announced, will be considered in the evaluation process. Where appropriate, information should be included on the tender evaluation methods that should be adopted.

Part 10 - Will detail the terms and conditions anticipated in any resultant contract, so that bidders may take any “special” conditions into consideration when compiling their tender. All invitations to tender for a specific product or service must be identical on issue.

Summary:

Acknowledgements

Abstract

ملخص

Résumé

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