

Reduction Supplier Tale through Systematic Vendor Management: A Study on Purchase and Vendor Management

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ABSTRACT

Supplier tale reduction is a process to control over the spend. This is one of the major process of vendor management. The tale spend refers to an organisation's spend that forms the lower and niche areas of spend that is typically unaddressed due to the insignificant nature of spend. Usually direct/indirect spend categories or low-value products that require a large number of suppliers form the tale spend of the company.

Keywords: Vendor Management, Spend Analysis, Purchasing

INTRODUCTION TO PURCHASING & VENDOR MANAGEMENT¹

Purchase is the procurement of goods or services from some external sources and acquisition of some kind in lieu of accepted price on consideration in return.

“Purchasing is the procurement of the materials, supplies, machines, tools and operation of a manufacturing plant.”

Alford and Beatty

In manufacturing industry purchasing process involves around 50 to 60% or more cost of the total manufacturing cost, Thus in manufacturing industries different methods and strategies are used to get cost advantage as more as possible which directly adds to companies bottom-line.

Types of Purchasing

1. **Purchase made as per Requirement:** No purchase is made in advance. Purchase is done as need arises. This method is usually applied for emergency requirement or infrequent goods.

Contract Purchasing: Contract of material is given to an agency. It has an advantage that low price of those materials whose cost fluctuates highly.

2. **Market Purchase:** Purchase is made from the market to take advantage of price fluctuations.

3. **Schedule Purchasing:** It is a cyclic purchase model. A schedule of purchase is made and it is used for those commodities whose price does not fluctuate.

Purchasing Procedure

1. **Purchase Requisition:** All the departments of the organisation are asked to make a requisition for purchase.
2. **Decision of Purchase:** It includes collecting requisition from various departments and handing it to Purchase department/committee head. Purchase head decides what to purchase and in what quantity.
3. **Study of Market conditions:** Market trends are analysed to generate an idea of price and availability of product.
4. **Selection of Vendors**
5. **Placing of Purchase order**
6. **Receiving material**

Functions/Responsibilities of Purchase Department

1. Obtaining quotations
2. Selecting vendors
3. Placing purchase order
4. Settlement of complaints

¹ www.undp.org.in/work_with_us/procurement-

5. Making and maintaining harmonious relations with vendors.
6. Vendor follow up, negotiation & relationship.

There are many ways to run a purchasing department. What business functions are included is one of those ways. Some companies include various material management responsibilities, inventory control, warehouse, and logistics in the one department. In larger companies you might find all of these functions as separate departments.

PURCHASING & VENDOR MANAGEMENT: AN IMPORTANT ELEMENT IN SUPPLY CHAIN²

A growing trend among businesses is to reduce costs through vendor consolidation. Businesses often find themselves burdened by hidden fees. These fees might appear to be savings one day, only to become higher costs later. For instance, companies often jump at the opportunity to save money on the purchase price of a product, without taking into consideration the added cost of freight. Consolidating suppliers, into a select few companies, can not only lower the price on parts, and improve service levels, but can also lower freight bills. So, what are some other benefits of vendor consolidation, and how can consolidation allow businesses to better manage vendors?

HOW DOES VENDOR CONSOLIDATION LOWER COSTS?

By amalgamating volumes spread across multiple suppliers, into larger volumes for a select few suppliers, companies can not only use their economies of scale to negotiate lower pricing, but can also lower the overall freight costs on incoming parts and materials. Instead of having large volume spread across a large supplier base, companies will combine these volumes to improve their position of negotiation. Properly managed, companies can then use these volumes for prompt payment discounts, additional price reductions, and negotiate favourable inventory agreements.

Vendor Consolidation Takes Time and Practice

Vendor consolidation is not a simple and straightforward

process. It takes both time and practice before finding the right companies to call partners. However, this is essentially what's taking place. By reducing the supplier base, companies can weed out the weaker performers, improve their position of importance in their vendor's eyes, and ultimately lower their lead time for parts with contractual agreements. Doing this will not only reduce costs, but allow the company to improve its own service capabilities by lowering its own delivery times. It's all about reducing costs, not affecting service capabilities, and improving business operations.

To ensure that the supply chain is operating as efficient as possible and generating the highest level of customer satisfaction at the lowest cost, companies have adopted Supply Chain Management processes and associated technology.

OBJECTIVES OF PURCHASING

- ◆ To procure at competitive price the needed material of right quality, quantity, and at right time from right source.
- ◆ To maintain continuity of supply to ensure production schedule at minimum inventory investment.
- ◆ To suggest better substitutes to material being used with a view to lower cost but at same quality.
- ◆ To render assistance in standard, variety reduction, value analysis & cost reduction programme.
- ◆ To advise on probable prices, deliveries & performance of items under consideration by design development & estimation department.
- ◆ To develop good and reliable supplier and ensure satisfactory relationship with them.
- ◆ To enable company to maintain competitive position and each a fair return on investment
- ◆ To avoid duplication, waste and obsolescence w.r.t. material.

COMPANY PROFILE

Industry Overview³

The Indian hydraulic industry started in early sixties primarily with an objective of import substitution of some of the hydraulic products being used by the industry in

² http://logistics.about.com/od/supplychainintroduction/a/into_scm.htm

³ <http://www.dsir.gov.in/reports/techreps/tsr147.pdf>

various applications. Since most of the Indian industries have been set up, based upon the variety of technological sources, the range of their specifications is very wide. Due to this the range of products in the oil hydraulic industry is also quite wide resulting in a very small batch for each product. It is, therefore, difficult to specify a minimum economically viable capacity for the industry. While there has been a continued overall growth in the oil hydraulic products business due to large variety of specialised products to meet specific individual applications, volume growth in individual products has been very low. With low volumes and high development costs concerning tooling, casting, and forging, the industry has not been able to adopt modern production methods.

Current production technology in use is largely dictated by production volumes, quality requirements and costs. Since the Indian industry has to manufacture a large variety of products with low volumes, the industry is not able to use the modern high production lines. Most the manufacturers, with exception to some (who have installed dedicated SPM's and CNC Machines for the manufacture of components), are currently using general purpose machines with special tooling's and some special purpose machines for specialised metal cutting operations.

Although the industry has shown a reasonable growth over the years, it is still far away from the volumes which would lead to adopting modern production methods. Also the limited demand is being shared by over 20 firms resulting in uneconomical volumes for most of them. It is unlikely that the situation would change drastically in the coming decade due to variety of factors mentioned above.

IMPORTANCE OF STUDY

Purchasing methodology and strategies plays an important role in supply chain and firm's profit as there is huge cost is involved in process.

Purchasing is procuring of materials, tools, supplies, stores & services, required for the manufacture of product, maintenance of machines and uninterrupted running of manufacturing plant in a manner that guarantees the sales & marketing of a company's products in the quantities desired at the time promised and at competitive price and at desired quality level. With the help of various tools the company can save huge cost as every saving in cost adds to the bottom line and improves the profitability of the company. Purchasing, as a major part of supply chain, is applicable in every sector and the project deals with

the study of Purchasing & Vendor Management at. The project mainly focuses on the vendor reduction, customer evaluation, and to implement strategies.

OBJECTIVE OF THE STUDY

1. Study of Suppliers
 - a. To categorize suppliers on basis of value and criticality.
 - b. To find out possibilities for vendor consolidation
 - c. To find out suppliers for long term strategic partnerships
2. To improve methodology in purchase strategies to get price & negotiation advantage.
3. To suggest different ways for good purchasing procedures for companies benefits.
4. To categorise vendors for raw material, consumables, & packaging material and find out ways to reduce vendors & cost savings.

LIMITATIONS OF THE STUDY

1. The data are collected for the last year only for the suppliers' analysis.
2. The study mainly focuses on the inbound logistics of the organisation

PURCHASE PROCEDURE

The procedure for procurement of raw material is as shown in Fig. 1 which shows interlink between procedures of different departments. The chart shows eight different procedures from getting customer order to payment of bills to the supplier.

DESCRIPTION OF PURCHASE PROCEDURE

Data Collection

Data are collected in the form of primary and secondary ways as follows:

Primary Data Collection

- ◆ Meetings with all departments are conducted.
- ◆ Data from all departments are procured:

Fig. 1: Purchase Procedure

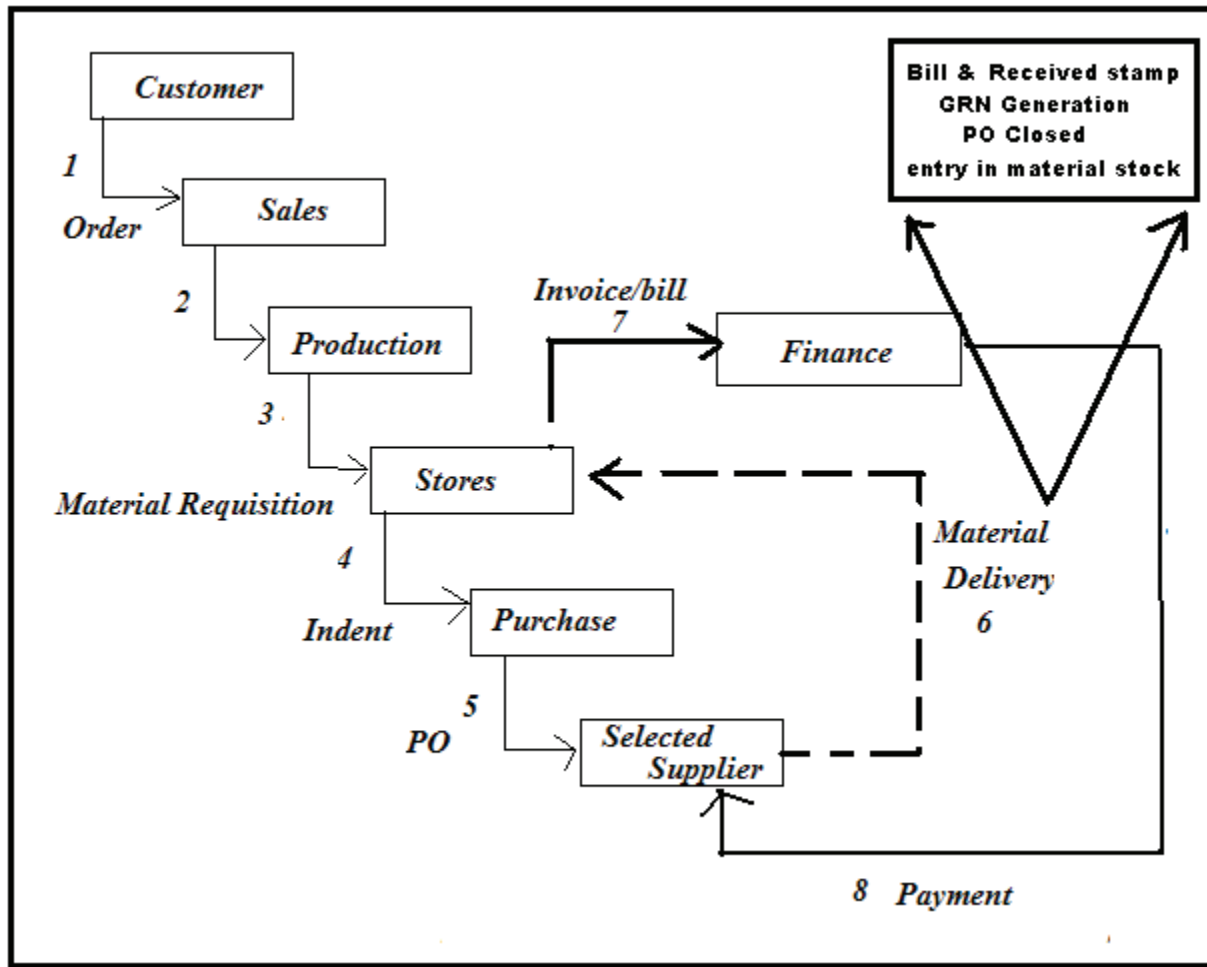


Table 1: Purchase Procedure

Process No.	Description
1	Customer gives order through Internet, other electronic media or personally to marketing/sales department
2	Sales Dept. informs Production Dept. regarding requirement of customer for product.
3	Then according to requirement, Production Dept. gives material requisition to Stores Dept. to check whether raw material for production is present in stores or not
4	If raw material is not present in Stores Dept., the Stores Dept. raises indent to Purchase Dept. to inform that this material will be required for production.
5	The Purchase Dept. selects supplier from alternate suppliers of raw materials and raises purchase order for materials.
6	In the specified delivery period, supplier delivers material to Stores Dept. at location specified in PO <ul style="list-style-type: none"> ◆ GRN (goods received notice) is generated ◆ PO closed ◆ Entry of stock is updated in material stock and ERP
7	Stores Dept. give invoice or bills to Finance Dept. with Payment details, credit period to Finance Dept.
8	The Finance Dept. makes payment through cheque to the supplier

- Purchase data of FY 2013-2014 with vendors & materials supplied by them with total amount
- Quality manual
- Employee details
- Daily meetings with all departments

Suppliers Classification on basis of Value & Criticality

Vendors are classified on the basis of value and criticality to find out vendors value and importance to the organisation.

Value of Vendors

A generic study on few hydraulic organisations is carried.

High Valued Vendors

High valued vendors are classified on the basis of following criteria:

- ◆ Value of purchase in a year is more than Rs 50000/-
- ◆ Same vendor provides more than 10 different types of items for the company.

There are 123 vendors in this quadrant. The value for all these vendors during last year was 66208916. Some examples of vendors in this quadrant are as follows.

Table 2: High Valued Vendors

Vendor Name	Value
Wurth Service Supply Inc	7135054
Pontiac Coil Inc	6954586
Koyo Corporation of Usa	4846976
Dupage Machine Products	4716534
Grede Foundries Inc	3595873
Engineered Machined Products	3449621
Duall Precision	3025493
Aerostar Manufacturing	2845967
Castwell Products Llc	2786244
Nebraska Aluminum Castings Inc	2470823
Impro Industries Usa Inc	2287218

These are vendors which are required for such variety of raw materials for which we may pay more value, so these

are the more valued vendors for company. Thus strategic relationship for long term with all these vendors is much better for getting negotiation advantage and mutual benefit. When company needs raw materials then these vendors should be preferred first before any other so that value and criticality will increase and better will be the relationship.

Low Valued Vendors

Low valued vendors are classified on the basis of following criteria:

- ◆ Value of purchase in a year is less than Rs 50000/-
- ◆ Same vendor provides less than 10 different types of items for company in a year

There are 159 vendors in this quadrant. The value for all these vendors in last year is 1797739. Some examples of vendors in this quadrant are as given in Table 3.

Table 3: Low Valued Vendors

Vendor Name	Value
Precision Resource Canada LTD	5900
Melling Sintered Metals	330
Castle Metals	7650
Atscott Mfg co	504
Scot Industries Inc	1450
State Line Foundries Inc	350
Jmt Auto Ltd	2000
Zatkoff Seals & Packing	2950
Earle M Jorgensen Co.	6157
General Bearing Corp	2320
Donaldson Company Inc	3648
Microprecision Inc	8750
The Timken Corporation	484
Sti Products Co Ltd	320
Trico Inc	9383
Itso Company Inc	5625

Criticality of Vendors

Criticality should be carried out by collecting data like product price, quality, delivery period. This method is time consuming, so it is mostly preferred for high valued items or bulk purchase to get advantage.

Criticality of vendor should be calculated on the basis of parameters as shown in Table 4, with specific ratings according to importance of these parameters.

Table 4: Points to Measure Criticality

Points	Parameter	Points
A	Delivery period	20
B	Possibility of alternate vendor	10
C	Past relationship, experience whether preferred by customer	25
D	Quality of material	25
E	Price of material	20

Example of criticality of vendors is shown in Table 5, considering that corrugated box is required and there are 4 suppliers.

As all vendors are alternate to each other with same product specifications, so there is no importance of this point or criticality is very less.

But in some cases criticality becomes important. For example, Drives are provided by both FENNER DRIVES & HERKER INDUSTRIES, but their specifications are different which cannot be provided by any other vendor. So, both of them are unique in their business. In such case

we can give 25 points as these vendors will become more critical.

Thus vendors who get more than 60 points will be more critical and vendors with less than 60 points can be considered as low critical. After categorising value and criticality, all these vendors must be plotted for value and criticality on graph as shown in Fig. 2. In this graph axis X & Y represent criticality and value, respectively.

X Axis (Criticality): Criticality is based on number of different types of item we purchase from vendor. More the variety in items we purchase, more is the criticality and vice versa.

Y Axis (Value): Value is the amount which we pay to vendor in a year for raw material, More we pay more the value of vendor and vice versa.

On basis of value and criticality plotted in the graph we can find vendors with

- ◆ High Value High Critical (Quadrant 1)
- ◆ High Value Less Critical (Quadrant 2)
- ◆ Low Value High Critical (Quadrant 3)
- ◆ Low Value Less Critical (Quadrant 4)

Table 5: Criticality of Vendors

Supplier	Point A	Point B	Point C	Point D	Point E	Total
CROWN PACKAGING CORP	10 (4 week delivery period)	0	20 (preferred by XYZ Customer)	20	18	68
EXPORT PACKAGING	15 (2 week delivery period)	0	15	20	15	65
CARTRUCK PACKAGING	20 (8 days delivery period)	0	25 (More items purchased last yr)	22	14	81
PROSEALS USA INC	13 (3 week delivery period)	0	18	22	16	69

Fig. 2: Value and Criticality Graph

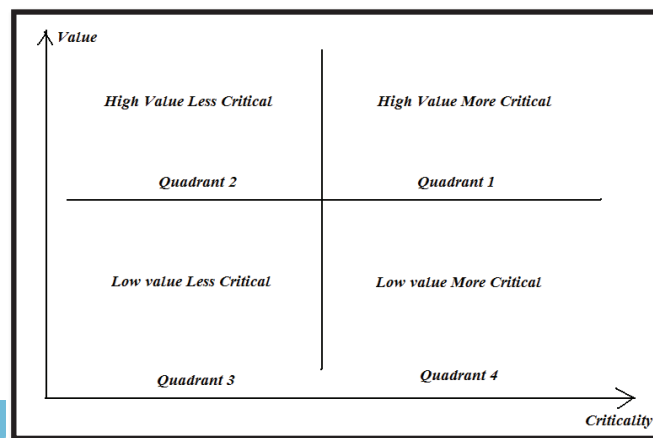
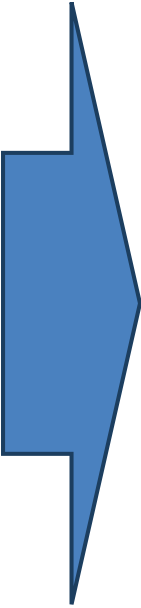


Table 6: Analysis of Consumable Materials

MATERIAL	ALTERNATE SUPPLIERS	LAST YEARS PURCHASE APPROX AMOUNT
NUT, BOLTS, SCREW, SPANNER, RIVET, SPACER, SPACING PILLARS, WASHER PLAIN, HSS DRILLS & WASHER SPRING, TAP	WURTH ADAMS NUT AND BOLT	
	TEMPER CORPORATION	
	PACIFIC RIM	
	STAFFORD MACHINE INC	
	EPCOR FOUNDRIES	
	CLEVELAND OAK INC	
	EPCO PRODUCTS INC	
	WALVOIL SPA	
	CE TURNER ENGINEERS LTD	
	GEMS SENSORS INC	
STUD	WM F HURST CO INC	2015244
	ROTOR CLIP CO INC	
	PUROLATOR FACET INC	
	MPI INTERNATIONAL	
	BALDWIN FILTERS	
KENDRION, INC		
GAS (ARGON Gas ACM - T & Gas Argon CO2 Mixture)	FREEWAY CORP	78782
Carbon Brush /Armatures	KOBELT MFG CO LTD	9200
Grinding Cutter/Grinding Paper Zirkon G-60 Zc-	FASTENAL COMPANY	145649
	GEAR CO OF AMER	
Nozzle Abrasive 0.8 Long Life	FHBC AMERICA INC	442329
PAINTS & THINNERS	DAYTON ROGERS	41648
	METAL SPINNERS INC	
	CUSTOM ACTUATOR PRODUCTS	
Seal Assembly HP	BEST STAINLESS & ALLOYS LP	390797

Total Amount of all Materials	3123649
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For quadrants 2, 3, and 4 it is not totally possible to reduce all vendors due to different parameters or unavailability of alternate vendors.

But in these quadrants there are some vendors whose task can be completed by vendors present in quadrant 1, so we can directly use vendors from quadrant 1 as much as possible to avoid dealing with less valued or less critical vendors. On other hand quadrant 1 vendors will become more critical and more valued for long term relationship.

Now for vendors in quadrant 2,3,4 we can use consolidation method (by making group of 2 or more vendors or using concept of Tier 1, 2, 3) as much as possible to avoid complexity in procurement procedures.

Thus if company is not using the purchasing power it has to gain the best prices from vendors.

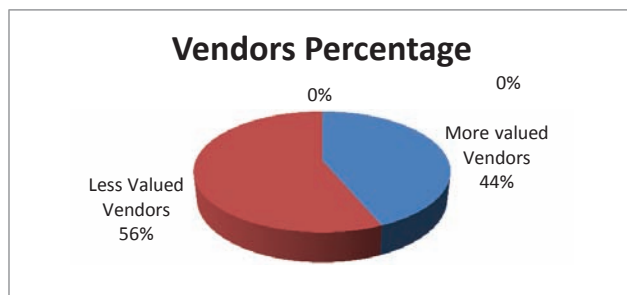
Graphical Analysis

Vendors Graph

There are total 282 vendors with 123 as more valued vendors which accounts 44% and 159 as low valued vendors which accounts 56% as shown in Fig. 3.

Fig. 3: Graph Showing Vendors' Percentage

More valued vendors	123
Low valued vendors	159

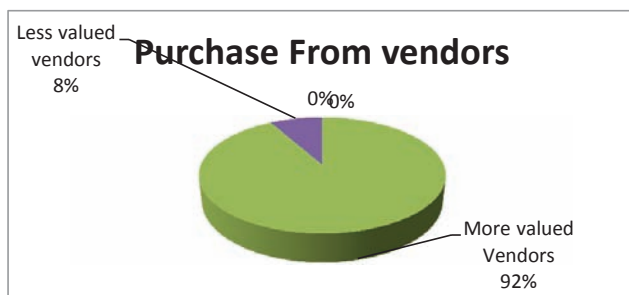


Purchase Graph of Vendors

- ◆ 56% vendors are low valued from whom we purchase 8% of total amount.
- ◆ 44% vendors are more valued from whom we purchase total of 92% of total amount, as shown in Fig. 4.

Fig. 4: Graph Showing Purchase Percentage of Vendors

Purchase from	Value of purchase
More valued Vendors	172623447
Less valued vendors	15368526
Total Purchase	187991973



Analysis for Consumable Materials

Observation

Table 7: Observation for Consumable Materials

➔	It will be more beneficial if we select 1 or 2 potential vendors for nuts, bolts, screws, spanners, rivets, spacers, spacing pillars, washer plains, hss drills, washer springs, taps, studs & other tools
	↓
	All these materials are consumables & it becomes difficult to predict their future requirements. So many times there is delay due to unavailability of some materials like adhesive tapes, welding wire Etc., so for such generally required items we must keep some safety stock which should be updated time to time. As this stock is regularly required so there is no risk of getting it waste in future. It will also reduce complexity in procurement procedures.

CONCLUSIONS

1. It becomes difficult to predict consumable materials' future requirements, thus many times there is delay due to unavailability of some materials like adhesive tapes, welding wire Etc. So for such generally required items, company must keep some safety stock which should be updated time to time. As this stock is regularly required, there is no risk of getting it waste in future. It will also reduce complexity in procurement procedures
2. Bidding methods for purchasing should be used if vendors are not classified according to criticality and value. Thus when company receives order for any project, it can have advantage to reduce cost maintaining good quality and delivery advantages. This will also increase competition amongst vendors and it will be beneficial for organisation.
3. After receiving order, company can use Common BOM method to order in bulk quantity and get negotiation advantage for it, which will reduce complexity in procedures and paperwork. Time and cost can be also saved in transportation to receive materials.

4. Vendors who are more valued & more critical for company should be identified and strategic partnership with them will be the best way for benefit of organisation in long term.
5. The best vendors and vendors with good record should be awarded every year which shows loyalty and mutual good relationship. This also motivates vendors to do business with company.
6. If company's relationship with vendors consists entirely of a stream of faxed or e-mailed purchase orders, invoices, and cheques being sent out, then there's room for improvement. At the time of negotiating a new vendor contract or contract-renewal, sitting down or meeting personally with vendors and creating a performance plan will be beneficial for the company. More business the vendor has from company, the more important this step will be for good vendor relations.
7. Vendor evaluation should be done time to time to know potential vendors for company.
8. More critical and valued vendors should be preferred first while purchasing.

LEARNINGS

- ◆ Importance of quality manual
- ◆ Departmental procedures
- ◆ Importance of vendor evaluation
- ◆ Study of Tally 9 & Microsoft Navigen ERP
- ◆ Rules, regulations and business ethics
- ◆ Importance of vendor consolidation
- ◆ Value and criticality of different vendors for company
- ◆ Inbound and outbound logistics
- ◆ Purchase, stores procedures and their interdepartmental procedures

BENEFITS OF VENDOR CONSOLIDATION

- ◆ **Reduced Costs:** By centralising vendor relationships and contract management, fewer managers need to spend time with vendors. Additionally, strategic purchasing results in lower prices as economies of scale can be leveraged to negotiate favourable terms for competing vendors.

- ◆ **Increased Service and Support:** Having a single partner to outsource product/service will result in deeper relationships and improved service levels.
- ◆ **Improved Quality:** Once company have organised its purchasing and rendered its business to a single vendor, they will improve quality at the risk of losing their contract for the following year. Always expect & demand high quality.
- ◆ If company does a lot of business with a particular vendor, this vendor will reward company for its loyalty by offering discounts and incentives. They will even go out of their way to help company by speeding up the shipment process if company needs to quickly ship some orders, for example, or receive a back order.
- ◆ Thus today's business is more dependent on mutual benefits and strategic partnership with each other than gaining more advantage from our partner. The best way to survive in competitive world is to have good relationship and shared risk.
- ◆ There are a number of hidden costs associated with having too many vendors. For instance, each vendor must be managed independently. The purchasing strategies and methods play a vital role to save company's cost which directly adds to bottom-line.

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APPENDIX

All vendors with their values are shown in Table A1.

Table A1: List of Vendors With Values

Vendor Name	Value	Vendor Name	Value
Linde Hydraulics Gmbh Co Kg	44556841	Commercial Metal Forming	32710
Tomenson Machine Works Inc	15108876	Kepner Products Company	31946
Indoshell Precision Technologies Llc	9319840	Dubuque Stamping & Manufacturing	31557
Stewart Manufacturing Llc	7135054	Jessen Manufacturing	29747
Wurth Service Supply Inc	6954586	Signicast Corporation Inc	29710
G W Lisk Co Inc	6572186	Wisconsin Coil Springs Llc	29479
Pontiac Coil Inc	4846976	Keystone Profiles	28941
Koyo Corporation Of Usa	4716534	Aw Fraser	28571
Dupage Machine Products	4131330	Belcan Engineering Group	27160
Grede Foundries Inc	3988125	Estherville Pallet	27062
Engineered Machined Products	3595873	Saint Gobain Performance Plastics	25898
Duall Precision	3449621	Pnc Inc	25293
Aerostar Manufacturing	3428142	Schaeffler Group Usa Inc	25050
Castwell Products Llc	3025493	Gear Products Co Inc	24658
Nebraska Aluminum Castings Inc	2845967	Mcm Ind Co Inc	24312
Hhi Formtech Llc	2786244	Beacon Gasket And Seals Co	24263
Ipe Comercial Offshore De Macau Limitada	2673435	Fuzhou Lioho Machinery Co Ltd	23090
Impro Industries Usa Inc	2470823	Ors Bearings Inc	22229
Nn Inc	2287218	Formosa Shinn Yuan Ind	21428
Waupaca Foundry Inc	2268434	Nott Company	20700
Brillion Iron Works Inc	1898081	Northwest Swiss-Matic Llc	20700
Wenling Dazhong Precision Mechanism Co Ltd	1821655	Titan Industries Limited	20400
Duro-Life Corporation	1744126	Daido Metal Usa Inc	20211
Netshape Technologies Inc	1726779	Ohio Fabricators Company	19536
Fujiwa Machinery Industry (Kunshan) Co Ltd	1606850	Krisdee And Associates Inc	19469
Precision Resource Canada Ltd	1334390	Brevini Fluid Power Spa	18601
Maini Precision Products Ltd	1249671	Phoenix Specialty Mfg Co	18351
Doga Cnc Maquinados Sa De Cv	1165579	Motion Industries	18100
Melling Sintered Metals	1012964	Superior Metal Products	17686
Castle Metals	891902	Sbs Industries Inc	17300
Atscott Mfg Co	765954	Dura-Bar Metal Services	17082
Webber Metal Products Inc	746630	Balluff Inc	17045
Copper Brass Sales	719953	Minnesota Rubber & Plastics	16570
Scot Industries Inc	699114	Fenner Drives	16000
Freudenberg-Nok	688480	Arrow Manufacturing Co Inc	15000
Bachman Machine Co	669842	Olympic Steel Inc	14650
State Line Foundries Inc	669280	Herker Industries	14303
Jmt Auto Ltd	624475	Shima American Corporation	13398

Vendor Name	Value	Vendor Name	Value
Zatkoff Seals & Packing	624208	Tsw Products Co Inc	13296
Earle M Jorgensen Co.	615962	Caplugs	13156
Ebsco Spring Company Inc	604382	Riverside Electronics	12849
General Bearing Corp	600660	Micro Lapping And Grinding Co Inc	12826
Dalian Innovation Import & Export Co Ltd	535854	Peerless Steel Co	12811
Donaldson Company Inc	496349	Ntn Bearing Corporation Of America	12799
Microprecision Inc	474000	Shanghai Automobile Imp & Exp Co.,Ltd	12750
Bridgestone Company Inc	460789	Tri-Part Screw Products Inc	12679
The Timken Corporation	437295	Cutting Dynamics Inc	12576
Hota Industrial Mfg Co Ltd	407447	Controlled Turning	12150
Suzhou Tysan Precision Engineering Co Ltd	395341	Interface Sealing Solutions	11777
Aplicaciones Industriales De Calidad Sa De Cv	380542	Alliance Plastics Inc	10991
United Scientific Incorporated	372169	Davco Fastener Co	10460
Bremen Castings Incorporated	353717	Solo World Partners	10000
Gem Manufacturing Inc	348200	Alumalloy Metalcasting Co Inc	9620
Aallied Die Casting	322682	Moog Inc	9383
Sti Products Co Ltd	306994	S & V Industries Inc	9375
Kksp Precision Machining Llc	295236	American Tank & Fabric	8750
Supply Technologies Llc	289100	Douglas Autotech Corporation	8640
Wuxi Yongkaida Gear Co., Ltd	284120	Lomar Machine And Tool	8325
Quality Machine Of Iowa Inc	252039	Draco Spring Mfg Co	7990
Oliver Steel Plate Co	245410	Schafer Gear Works Rockford Llc	7836
Ovako North America Inc	245250	Cheong Bo Industrial Co Ltd	7738
Trico Inc	241146	System Seals Inc	7650
Trelleborg Sealing Solutions	237686	Orlandi Gear Company Inc	7439
Gri Engineering And Development Llc	233875	Grover Corporation	7216
Fullco Industries Inc	228410	Randall Bearings Inc	7040
Itso Company Inc	206912	Trostel Ltd	7000
Columbia Gear Corporation	199877	Wyatt Seal Incorporated	6900
Skf Usa Inc	196074	Kloss Machine Company Inc	6797
Grob Inc	190464	Thermal Transfer Products	6763
V Forge Inc	176803	Herramientas Y Dispositivos Mecanicos Sa De Cv	6157
Parker Hannifin Corporation	173460	Dabko Industries Inc	6125
Bsm North America	172670	Garlock Bearings Llc	6115
Hanel Corporation	170542	Thermotech Inc	5900
Kaiser Aluminum	170480	Tecnoserie Srl	5770
Seinumero Nirman Pvt, Ltd	168949	Screwomatics Of Sc	5625
Bradhart Products Inc	157489	Johnson Mfg Co Inc	5100
Masterform Tool Company	153660	Neway Stamping And Mfg Co Inc	4777
Hydac Technology Corp	147161	Morgan Advanced Material & Technology	4765
Xolox S A De Cv	143630	Pride Electronics Inc	4590
Eto Magnetic Corp	135827	Pacific Rim	4200
Acme Foundry	134678	Sunsource	4200
Process Screw Products	129334	Temper Corporation	4151

Vendor Name	Value	Vendor Name	Value
Senju America	128340	Warsaw Coil Company Inc	3900
Nr Automatics Engineering	121706	Mid States Bolt & Screw Co	3756
Xensor Corporation	114331	Swiss American Screw Prod Inc	3648
O & F Machine Products Co Inc	113579	Northwest Tool & Machine Inc	3600
Ort Tool & Die Corp	107833	Hangzhou Qianjiang Spring Co Ltd	3245
Pacific Bearings Co	107304	Eastern Etching & Mfg Co	3200
Mistequay Group Ltd	105537	Stafford Machine Inc	3100
Air Way Manufacturing Company	103856	Mp Filtri Usa Inc	3000
Continental Automation Inc	102728	General Machine Works	2950
Chandler Industries-Arrow	101834	Mts Systems Corporation	2660
Matzel Manufacturing Inc	101305	Epcor Foundries	2540
Rafi Eltec Gmbh	99330	C & K Box Company Inc	2420
Rol Fab Inc	91676	Cold Flow Corporation	2395
Machine Center Inc	90131	Toolkraft Incorporated	2340
C & S Machine	89533	Climax Metal Products Company	2320
Crown Packaging Corp	89000	Modern Drop Forge Company Llc	2275
Dishon Limited	88222	Inland Broaching And Tool Company	2200
Indoshell Cast Pvt Ltd	81579	Cleveland Oak Inc	2170
World Wide Fittings Inc	81205	Epcor Products Inc	2000
United Non-Ferrous Corporation	78226	Walvoil Spa	2000
Anhui Line Electric Pump	78048	Ce Turner Engineers Ltd	1929
Alro Steel Corporation	75166	Morgan Bronze Products Inc	1700
Tecton Industries Inc	72462	Risher And Company	1636
Sapa Extrusions North America Llc	71510	J.h. Bennet & Company, Inc.	1465
Gerdau	70231	Badgett Corporation	1460
National Tube Supply Co	69763	Gems Sensors Inc	1450
Prospect Foundry	68307	Wm F Hurst Co Inc	1445
Kwong Fai Metal Products Limited	64822	Rotor Clip Co Inc	1435
Connecticut Trade Company	63650	Advanced Labelworx Inc	1400
Ozark Machine Co Inc	62773	Purolator Facet Inc	1283
Specialty Resources Incorporated	59672	Screw Machine Product Inc	1160
Woodward Inc	58725	Delta Power Company	1116
Murray Machine & Tool Inc	58576	Trotter Manufacturing Inc	1060
Infastech Decorah Llc	58492	Manor Tool And Manufacturing Co	995
B-D Cylinder Products Inc	57732	Southern Cast Products Inc	693
Bohler Uddeholm Corporation	56521	Jiangsu Sunway Precision Forging Co Ltd	640
Sugasawa Seiki Company Ltd	55170	Summers Rubber Company	600
Cast Fab Technologies	54192	Bremskerl North America Inc	575
Jagadamba Auto Components Ltd	54150	Walker Machine & Foundry Corp	504
Michaels Machine Co	51625	Seward Screw Products Inc	500
Nca Machining Llc	50409	R And L Spring Company	495
Barile Precision Grinding Inc	49725	Mpi International	484
Preco Inc	46600	Empire Die Casting Co	440
Jem Technical Marketing	46200	Sun Hydraulics Corporation.	438

Vendor Name	Value	Vendor Name	Value
Bodine Aluminum Incorporated	43200	United Gear And Assembly Inc	430
Monroe Rubber And Plastics Supply	40662	Encore Metals Usa Inc	400
R L Hudson & Company	39499	Baldwin Filters	385
Gen Steel De Mexico S A De C V	38467	Everseal Gasket-Stamp	350
Borgwagner Distribution Center	37500	E & A Products Incorporated	349
Precision Manifold Systems Inc	36950	Spaceage Tool And Manufacturing	330
Mountop Precision Industrial Co Ltd	35350	Browns Machine & Hydraulic Corp	320
Dichtomatik North America	34690	Kendrion, Inc	252
Shaanxi Qinchun Machinery Import & Export Co Ltd	34452	Freeway Corp	236
Surgi Mfg Co Inc	34413	Field Fastener Supply Co	125
L & W Tool Machine	34084	Kobelt Mfg Co Ltd	123
Ntk Europe Srl	33175	Lunquist Manufacutring Corp	110
Fay Industries	32878	Clow Stamping	102
Srs Sales Company Inc	96	Molex Connector Corporation	70

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