

IMPORTANT STEPS IN PURCHASING PROCESS

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Abstract: The last century brought significant changes to the automotive industry and represents a significant economic and technological force in the life of countries connected to the industry. The automobile manufacturing fabricates its products primarily through mass production however, the segment producing exclusive vehicles executes manufacture type production many times due to the small-scale volume. These effects highly impact the international supply chains.

Keywords: *globalization, logistics, supply chain, automotive, supplier relationship*

1. INTRODUCTION

Today, international competition and the appreciation of the life cycle of products shortened greatly affect the operation of enterprises, the fundamental objective is to meet the customer demands a higher standard of quality and a lower price [1]. In response to the requirements, downsizing and concentrating on their core business of the company. The manufacturing companies are looking for suppliers who can supply good quality raw material and components at low cost [2].

Purchasing up to the seventies had a largely administrative role in corporate operations [3], but later recognized the function of reducing corporate costs. Nowadays, procurement activity has become strategically important as it has a serious impact on the company's performance and therefore plays an important role in corporate strategy.

2. THE CONCEPT OF PURCHASING

Purchasing is the process which is usually handled by the corporate logistics, it can be divided into three parts: purchasing, production and sales logistics. The purchasing logistics stands at the beginning of the processes of material flow: it provides those input inventories, which are required to complete the production (or the service, in a broader interpretation).

The average industrial company spends 55–85% of its income on these, so the most economical and secure execution of this task is vital. Purchasing can be listed into two main groups [4]:

- raw material/manufacturer purchasing: so-called direct purchasing,
- purchasing of services/additional materials: indirect.

The task of the purchasing agent includes tracking down, qualifying, competing and assessment of the suppliers. The bigger the ratio of the purchasing costs, the bigger importance the purchasing gains in the company, and thus it is placed at a higher organi-

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zational structure. But no matter where the decision is made, it is very important that it is conceived integrally with the other organizational units, it should not create a separate function from other logistical units [5].

The goal of purchasing in the strategy: to acquire products and services of adequate quality in the adequate quantity, at the proper time, from the proper supplier, at the proper price. These are known as the „five adequate” factors.

Centralized purchasing: a central body purchases the necessary raw materials for all the units, it carries out organizing the whole task of purchasing.

- Advantage: it is cheaper being a single unit.
- Disadvantage: it is less able to meet individual requirements.

Decentralized purchasing: each individual unit purchases the materials needed for them individually.

- Advantage: almost complete fulfilment of individual needs.
- Disadvantage: they fail to get a price discount, which comes by ordering large quantities.

3. STRUCTURING STEPS OF PURCHASING PROCESS AND POSSIBLE MISTAKES IN PROCUREMENT CYCLE

The effectiveness of company’s purchasing ability depends on the procurement system. An inefficient system leads to a whole host of purchasing problems. These mistakes aren’t all that difficult to correct.

1. Determining a need	<ul style="list-style-type: none"> • <i>Wrong transmitted marketing needs</i> • Well prepared cooperation with marketing research and customer demand forecast
2. Communicate /Reviewing the need	<ul style="list-style-type: none"> • <i>Isolating major decision and not looping other departments in n purchasing decision</i> • Keep communication open and involve other departments and make benefit the whole company
3. Finding potential supplier	<ul style="list-style-type: none"> • <i>Being too rigid</i> • Need to find a balance between agile and lean with flexible
4. Negotiation	<ul style="list-style-type: none"> • <i>Not negotiating just request</i> • Be professional about request and maintain a long term relationship
5. Select supplier	<ul style="list-style-type: none"> • <i>Rapid decision because of timeliness</i> • Very important to take time for double check in case of oder request
6. Formalizing the commitment / Follow up	<ul style="list-style-type: none"> • <i>Not sharing company policy</i> • Importnat to communicate the company standards

Figure 1. Purchasing process steps and possible mistakes in procurement cycle

The most common procurement mistakes have fairly simple solutions. Many problems in the purchasing department can be solved with technology. Others are a result of human error or organizational shortcomings. Even when using purchase order software, there are still some tasks that need a human touch. It’s easy for purchasing managers to get into the habit of doing

things a certain way and overlook areas where the purchasing department can improve. Here are some of the common procurement mistakes.

4. RANKING OF SUPPLIERS, PREPARATION OF THE SUPPLIER DECISION

One of the most important steps of companies is to be able to create a structured image using the already existent and potential supply networks. With the help of a supplier model we can create a reviewable supplier ranking. But which are the aspects worth considering? Firstly, the structuring of suppliers is happening based on groups of materials. At factory level, the local professional purchasers are responsible for the operative tasks [6].

The middle and long term strategically decisions are the tasks of the so-called commodity team leader, who sits at the top of the organizational structure. It is of basic relevance that a price offer can be issued only to those suppliers, who are already present among the company’s suppliers. Only in specially justified cases (a technical specialist) can such a supplier be chosen who is not among this circle of suppliers. For the sake of reviewability, the company places its partners (Figure 2.) into a supplier pyramid according to the following structure.

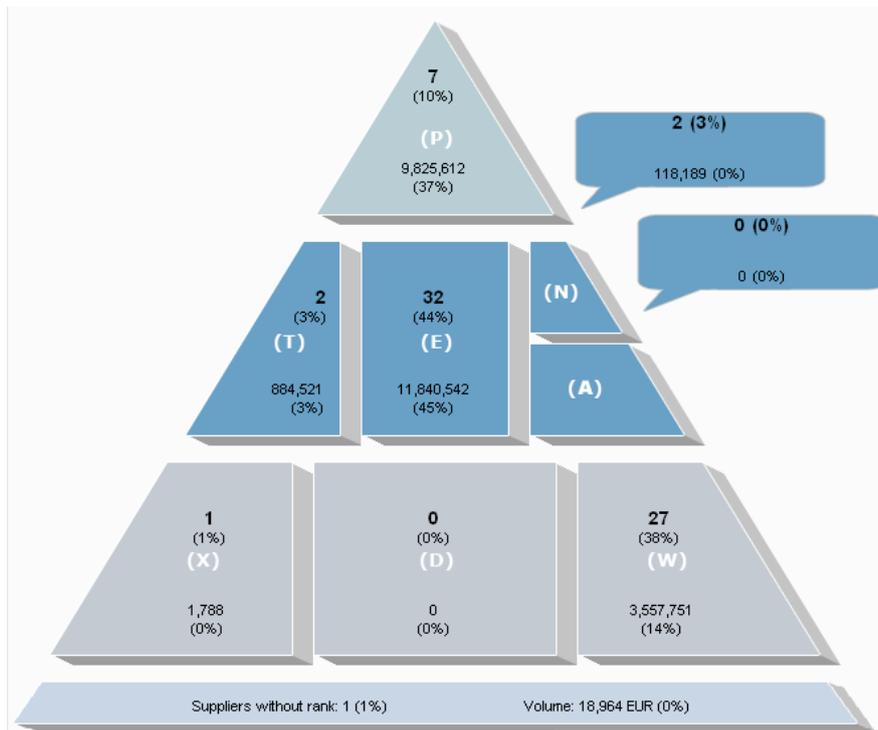


Figure 2. Supplier pyramid

As a main rule, it can be said that it is needed to acquire information well before the price offer request about the current state of the suppliers classified into the given component group. Regarding each component group, the individual so-called commodity manager is finalizing the classification based on the discussions with the professional purchasers of

various factories. A supplier, who held a position with priority status can also lose its position if one of the factory units' negative experience can duly confirm this [7].

This database is realized in the so-called supplier pyramid, which has the following meaning.

- P: "preferred supplier" as the name suggests, the preferred suppliers of the given component group are part of this circle, in the event of a favourable price offer they can get new business without any reservation. This ranking can be obtained based on the performance, reliability, quality and other favourable characteristics proven through long years.
- T: "technical specialist" technical specialists, partners who are specialized on a given production technology's special field. Only in justified case (the competitors are not technically able to produce the given product) do they get business.
- E: "essential" everyday partners: most suppliers belong to this group, among whom there is stiff competition going on. They are reliable partners, but from strategically reasons further ramp-up increase is not justified (it is at the limits of its capacity, its price level is not exceptionally favourable, etc.).
- N: "new" suppliers: they do not get new business. In case of supplying serial components undisturbed for one year, they will step up to rank „E”.
- A: "acquired": a theoretical group, until this very day none of the suppliers ended up in this category.
- X: "to be actively eliminated": the group of those suppliers, with whom the business has to be laid off as soon as possible, the production equipment has to be transferred to a different supplier. There is a deliberate strategic decision lying in the background, based on which the company does not desire to continue further cooperation.
- D: "determined by customer": the group which is required by the customers. When THE OES buyer obliges that the spare parts shipped to him can contain exclusively the units produced by the sub-supplier required by him.
- W: "without new business": supplier that cannot get new business for some reason (problem with capacity). This ranking can be declassified after e. g. expansion of capacity. Experience shows that partners listed into this ranking will receive after longer-shorter time „essential" qualification once again, so we are talking only about a temporary state.

5. PARTICIPANTS IN THE PURCHASING PROCESS

Supplier decisions belong exclusively to the purchasing's competency. All the other departments can, of course, give suggestions, can share their experience (e. g. if there are continuous quality issues with one of the suppliers) which are weighted by the purchasing and it makes the decision on signing the contract afterwards. With this knowledge, although in a small measure, all departments can give a suggestion to the supplier decision, but the final decision belongs to the purchasing circle's responsibility.

The examples below show what kind of risks and mistakes can emerge in connection with the given supplier. The partner departments can influence/"take part" in the supplier evaluation and selection decision based on their experience and opinions the following way.

- Development engineering: Based on previous experience, serious difficulties arose with company XY in the field of communication, originating from the use of non-

compatible CAD systems. The desired corrections/alterations were not completed according to the drawings.

- Logistics department: supplier XY is unable to complete the requests. A reason for that may be a problem with the capacity or possibly a breakage of machinery, non-appropriate production planning or inventory strategy.
- Quality department: supplier XY beside the continuous manufacturing is sending or shipping faulty, non-suitable to fit parts, thus increasing the culling (rejection) costs of reworking.

6. IDEAL PURCHASING PROCESS IN CASE OF A NEW PART

The company is aware of its needs and it can describe these accurately. After finding the suitable supplier, which is not easy, the negotiating phase starts [8]. Here the conditions have to be clarified regarding price, shipping, timeframe and the methods. It is important for the company to know within which timeframes the shipping is needed so that its shelves would not be empty for the customers. By the clarification of conditions and signing the contract, the order has to be traced, so that everything would be adequate. In case of lack of satisfaction, it is worth for the company to look for a new supplier, since neither qualitatively, nor quantitatively, nor because of the lack of time it is not fortunate for the successfulness of the company to make the mistakes.

- The demand comes from the development department: there would be a need for part XY. For this the drawing is necessary, respectively the transmission of various information such as materials used and manufacturing technology.
- Parallel, the Quality department communicates their expectations with the purchasing.
- Based on the surveys of Marketing/Information available to sales department the quantity index numbers of the parts creating the object of the price offer are decided, as well as the expected lifetime of the project.
- Sending the price offer request to the suppliers with the knowledge of the technical and quality requirements. Applying different price request formulae based on part groups. It is easy to admit that there are different technical questions referring to e. g. a machined steel axis, or an injection moulded cogwheel. Corresponding to this, different offer requesting formulae are needed. The offer requests must contain in detail all those points, which influence the interval of the product development e. g. machinery setup time, raw material purchasing time, production line building time.
- Possible fine tuning of drawing requirements, based on the suppliers' recommendations after a technical conciliatory discussion. In this phase, such a significant drawing modification might occur which can influence the price of the product.
- Evaluating of the incoming price offer. During the evaluation, the unit price of the given part has to be considered, respectively the cost of the preparations needed for manufacturing of the spare part, the lead time (equipment cost, production line modification cost), the geographical location of the supplier, its quality indicator number produced to date, the lead time of the parts.
- During the price discussions and technical conciliation, the overview of the calculations of the part, respectively the equipment needed for manufacturing the part, mechanical installations are happening. There is decision aiding target software

at hand for conducting accurate, extensive analysis of these calculations of all influencing factors (where, in which country would be the part manufactured, with what kind and how old installations, from what kind of materials, involving how many direct/indirect workers etc.).

- Choosing the supplier: in spite of the company management's efforts, it is an exceptionally bureaucratic process, during which the purchaser responsible for the given project will validate his prior decision with all his superiors. On some kind of level, it is justified since they are preparing a framework contract possibly running for multiple years, with multiple hundred thousand series quantity.
- Contracting: during contracting, the price and the lead time are already known, which is the interval ranging from receiving the contract until its fulfilment. The contract contains the details of the client and the selling party. It contains accurate description of the given part, fixes the price, deadlines respectively the ownership of the equipment needed to manufacture the part. It is important to highlight that this is a preliminary agreement. In case of mass production, the logistics department will summon the parts, the completion/payment will be made based on these quantities.
- Performing the preparations needed for manufacturing: depending on the manufacturing technology, it is a period covering more months, during which the equipment, assembly line is completed which is needed to manufacture the part (mould injection tool, high pressure aluminium casting mould)
- Manufacturing the sample piece and sending it to the buyer. The buyer's 10-approval happens the following way. After the completion of manufacturing the equipment or manufacturing installation, there is a need for a so-called equipment trial. During the analysis of the parts by installing them into the product, there might be a need for further modifications/corrections. As soon as the part gains its final state, the supplier will hand in a so-called official first sample to the quality department, which will undergo measurements, tests and installation trials. If the part is approvable, then mass production can start.
- Serial shipping: mass production: the parts are summoned/ordered during the mass production by the logistics department, the purchasing is only providing a supporting function. Depending on the evolution of the price of raw materials, it can renegotiate the prices, if needed, it can secure new/alternative purchasing sources.

7. SUMMARY

The companies cannot afford to choose contractors based only on their prices. It must always be a purpose that the material to be purchased have the appropriate quality, arrive in (at a) right time, in appropriate quantity from adequate sources, at correct prices [9]. To realize it, the purchasing strategy must be well planned, which is easier with the Kraljic matrix calculating the importance of the goods to be purchased and the complexity of reaching the contractors. Finally, risk analysis must be made in every case in order to face the least possible problems and unsatisfied partner relations.

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