Awarding tenders on the basis of price-performance benchmarks

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If each item number can be awarded to the lowest bidder, tenders and auctions are a tried and tested means to get good purchase prices for larger quantities of item numbers. However, if this is not possible or the providers do not participate in auctions, the question immediately arises as to how the procurement portfolio should be awarded most skillfully. The solution: Purchasing evaluates the price-performance ratio of each supplier and product according to the so-called performance pricing method. It sounds quite simple: in order to determine the cheapest supplier for each item number, tenders and auctions are carried out. The winning supplier is then chosen based on price. At least in theory. In practice, things are often quite different. Price cannot be used as the sole decision criterion because often the offers cannot be directly compared. Quality features, specific requirements of the respective specialist department, service aspects, and delivery times must also be taken into account. So how can a buyer evaluate the tender quickly and easily despite this complexity?

There is an effective means to do just that: software-supported evaluation according to the performance pricing method, which analyzes the price-performance ratio of each individual supplier. In this way, benchmarks can be calculated that show the purchaser whom to award the contract to generate the greatest benefit. Robert Bosch GmbH is one of the pioneers of performance pricing, having successfully applied the method for several years now. Strategy is replacing Excel

As part of an effective tender process, the part numbers are strategically assigned to suppliers. The buyer should examine various issues, including:

- What savings can be are realized by the awarding the tender to supplier A or B?
- Which target prices must be negotiated for each supplier and part number?
- How can the number of variants be reduced so that fewer part numbers exist and thus better terms become possible?

In addition, the following framework conditions must be considered:

- How is the purchasing volume fragmented by the decision, thus reducing the possibility of bundling?
- How does awarding contracts to different suppliers affect quality, procurement time, and operational handling in relation to the savings effect?

Presenting these complex correlations is extremely tedious, but necessary for discussion within the team. For lack of alternatives, many buyers rely on Excel to perform an evaluation. But ultimately, their analysis often results in a giant, confusing table with questionable validity. In most
cases, only the tender prices of similar item numbers are used as a basis for comparison, without taking into account the properties of the parts in relation to the price or the price-performance ratio.

To ensure a more effective process for evaluating and awarding contracts, a smart methodology has been developed: Performance pricing (PP) makes the price-performance ratio of many item numbers comparable at a glance and can be applied widely today thanks to software solutions such as NLPP by the Swiss company Saphirion AG.

The key: benchmarking against performance and price drivers in relation to price

In performance pricing, the evaluation of the various tenders follows a clear structure. First, the purchaser defines which technical service and price drivers are relevant to the evaluation. The software then calculates the price-performance ratio for each part number based on this selection.

By clearly defining the properties to be considered, the evaluation is performed absolutely objectively from the available data with the help of a proven mathematical procedure. This is fully automatic when using a software solution. Thanks to the comprehensive analysis capabilities implemented in the software, the purchaser can easily identify the existing correlations and evaluate the aforementioned what-if scenarios.

Markus Milbich, a purchaser at Robert Bosch GmbH in Karlsruhe, is fully convinced of the advantages of the software-based performance pricing method. “NLPP gives me the opportunity to analyze a complex material field quickly and in detail,” explained Milbich.

A practical example:

Evaluation of the tenders from five suppliers for 500 part numbers each:

With the NLPP software, the prices offered by five potential suppliers are evaluated in order to make the best possible choice when awarding the contract. The buyer uses the content of the invitation to tender that the suppliers would have received as the source of the right performance and cost drivers. In the case of a metal part, these could be:

- Weight (kg)
- Cast quality
- Qty. (pc.)
- Coating (yes/no)

Target price calculation

Based on this information, the software calculates a target price formula. This is possible using regression analysis a proven, statistical analysis method. The NLPP software performs all the necessary calculations automatically without the user having to intervene. In this example, the target price formula calculated by the software uses 18 parameters.

The target price for each part number is then automatically calculated by the software by inserting the values for the performance and price drivers of each item number in the formula. After a few seconds, the purchaser can see the target prices for each item number.

Influence of performance drivers on the price

Compared to other solutions, the NLPP software offers a special feature: NLPP also calculates the magnitude of the impact of each performance driver on the price, and identifies performance drivers that do not affect the price. The software sorts these out automatically. As a result, the buyer can be sure that the best mathematical model is always used in the calculation.

A direct comparison shows the significance of the numbers: For example, the weight (36.092) has about a 4.5-fold greater influence on the price than the quantity (8.102), because:

\[ 4.5 \cdot 8.102 = 36.459 \]

Based on such figures, the buyer can thus determine in which ratio property A and B affect the price.

Please refer to graphic 1 for an idea about the target price formula and the individual impacts of price drivers.

Simple interpretation of results thanks to graphical representation

In order to evaluate a comprehensive tender, it is indispensable that the result is represented graphically.

The current actual price and the calculated target price are entered in a coordinate system by the NLPP software. Each item number is represented by its X and Y coordinates of actual and target prices.

Furthermore, the software calculates three different benchmarks and displays them as reference lines in the data point cloud. These reference lines immediately indicate which products differ by what amount from the corresponding market benchmark.

By coloring the data points according to various criteria, in this example by supplier, the purchaser...
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The performance pricing method has an additional advantage: a similar target price will be calculated for parts with similar properties. As a result, part variants can be identified which may be covered by a single part number, making effective bundling possible.

**Using the results in negotiations**

The calculated results can be used in negotiations in a number of ways:

- If the target prices of similar item numbers are very similar but the actual prices differ greatly, the buyer can ask the supplier to explain the price differences. This approach results in a “reversal of the burden of proof”, strengthening the buyer’s negotiating position.
- For certain part specifications it is obvious that one supplier’s prices are too high compared to the others. The reason could be that the supplier is unable to manufacture this type of specification cost-effectively. Bundling the affected part numbers and assigning them to a supplier with a low price level therefore makes sense. With NLPP, the buyer can immediately calculate the resulting cost savings.
- Suppliers whose parts prices are close to the “best practice benchmark” are good candidates for a more intensive partnership with real added value for both sides.
- Suppliers identified as “low performers”, with parts prices are well above the benchmark, could be confronted with the target price. Depending on the progress of the negotiations, moving contracts to suppliers in the “champion” category might need to be considered.

**Conclusion**

With the NLPP method, you have a universal tool at hand, which covers many daily use cases and provides you with profound new insights. Take advantage of such a great information advantage for yourself.

For more information about NLPP or a NLPP test analysis of your data please visit our web site or get in contact with us at info@saphirion.com

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Figure 1: Presentation of the calculated regression formulas and detailed key figures for the regression model.

Figure 2: Color-coded tenders by supplier: Each supplier is represented by a color. It can be clearly seen that the overall price level of the red supplier is below the price level of the other suppliers.