Summary
Part complexity and a large supplier portfolio make purchasers in all industries deal with a wide range of challenges. Nevertheless, procurement professionals are expected to make strategic purchasing decisions and realize savings even in the most difficult market environment. At this point, it is essential to have a methodical approach that brings transparency into the data jungle.

Identifying savings by making complexity manageable
An effective means for evaluating purchasing decisions is the nonlinear performance pricing method (NLPP). In contrast to traditional cost analysis, it considers the appropriateness of prices and costs of a procured object in relation to its value and benefits. After all, the low-priced supplier is not necessarily the best but the one with the best price/performance ratio. NLPP® hot-spot analysis is used to condense characteristics of components and products as well as their procurement quantities and prices into a target formula that precisely describes the relationship between price and performance/specification parameters. The target prices, which correspond to the value of the product, are then generated from this target price formula.

Benefits
• Discover savings and potential price cuts within individual products or groups of products
• Leverage hot-spot analysis results as a solid basis for discussions and negotiations with suppliers
• Save processing time by rapidly applying the method to several thousand items
• Create valid price forecasts for new products without having to conduct a detailed analysis

Features
• Automatically calculate savings based on freely defined targets and scenarios
• Real-time zooming to identify even minimal price variation
• Support using an integrated mathematical expert system to achieve the best results
• Extensive automatic hot-spot analysis possibilities
• Automatically benchmark comparisons
• Export of all results and visualizations

The similarity analysis
In addition, thanks to its integrated hot-spot advisor, the NLPP software facilitates the identification of identical or similar parts with a large price difference (See figure 2). They are highlighted based on the assumption: Objects with the same or similar properties should cost approximately the same and have the same target price. Thus, NLPP helps the procurement departments in consolidating the diversity of part variants and recognizing alternative parts.

When the NLPP method is embedded in a software application, not only can many thousands of individual parts be compared rapidly and easily, but price analysis of complex assemblies can be easily carried out. NLPP hot-spot analysis software uses six multi-dimensional linear and nonlinear regression methods to compare procurement objectives against their specifications and actual prices and automatically calculates the target price formula that outputs the most realistic, realizable target prices in the market. In addition to market target price, the solution also determines the worst-case target price as the upper price limit and the best-practice target price as the ideal desired price (See figure 1). Based on these meaningful benchmarks, a target price corridor for purchasing negotiations emerges, which shows savings potential for individual products, product groups or larger projects.

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Combining NLPP with Teamcenter Product Cost Management
Managing requests for quotation for a large variety of parts can be a real time waster. The NLPP target price formula helps you get a precise price estimate. The purchaser simply inserts the parameters of the part into the target price formulas and calculates the benchmark target prices — either by NLPP software or by integrating the target price formula into Teamcenter® Product Cost Management, which is part of the Xcelerator™ portfolio, the comprehensive and integrated portfolio of software and services from Siemens Digital Industries Software.

Expanding the Teamcenter Product Cost Management solution with a top-down methodology opens new opportunities for Teamcenter users. With the integration of the NLPP method and its algorithms, users of the Teamcenter Product Cost Management solution can further strengthen their competitive edge. The findings are the basis for faster and more comprehensible decisions as well as better negotiation results.

Figure 1. Representing actual price (vertical axis) against calculated target price (horizontal axis). With the calculated benchmark lines red (worst practice), blue (market benchmark) and green (best practice), the buyer can immediately assess how good a price is in relation to performance. If one point is above a specific benchmark, it is too expensive in comparison to that benchmark.

Figure 2. The hot-spot analysis in the NLPP software has discovered three products that differ only by 0.1 percent in the specification but have a huge price difference. The large price range could be based on the fact the expensive item numbers are obtained from a supplier who is not optimally positioned for this type of part. The consequence would then be to check whether the parts that are too expensive can be purchased from the supplier with the lower prices for similar parts.