

Product report: Integration of the Qualicision Service in interaction with the ERP system PSIpenta

Supplier Evaluation Powered by Qualicision AI

As companies' procurement functions become increasingly important, systematic data-based evaluations of suppliers are becoming more and more important in industrial production, too. While in the past it was enough to compare a few quotes and award the contract mostly based on the lowest price, today suppliers' performance and capability are often extensively evaluated. PSIpenta's ERP supplier evaluation with its integrated AI-based Qualicision Service is used to identify the top performing suppliers based on multi-criteria decision support in accordance with ABC categories. The other suppliers are objectively evaluated and put forward for a comprehensible selection. This ensures that decisions are made fairly, objectively and efficiently based on the performance profile of each supplier.

ber of deliveries, order quantity, order value, total quantity deviation, total deadline deviation. Based on the decision and evaluation criteria configured in this way, additional integrated AI analysis functions are available with the AI-based Qualicision Service, enhancing the supplier evaluation of the ERP system with learning intelligence. Qualitative Labeling of business process data is the core of the AI analysis, which makes the eval-

One goal of supplier evaluation is the pre-selection of suppliers in a quality-preserving manner, thereby simplifying the subsequent award process by avoiding the need to enter into negotiations with all suppliers without losing decision-making quality. Simultaneously, the focus is on optimizing supplier relationships, meaning that the goods to be procured are optimized in terms of the individual company-specific characteristics.

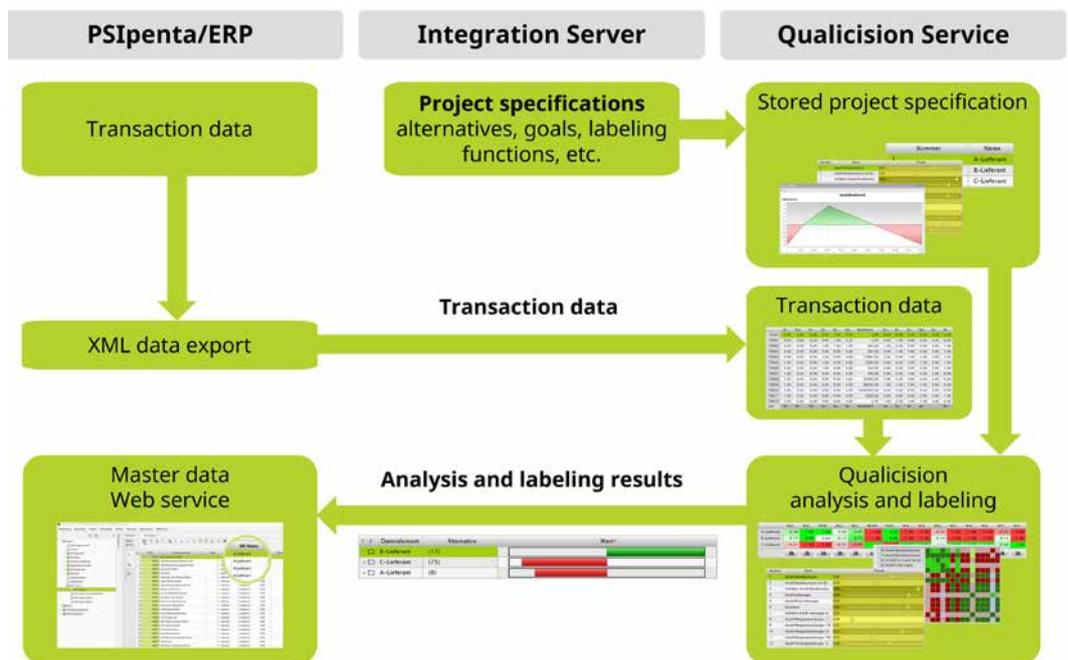


Figure 1: Qualicision Service Integration Procedure.

ABC Classification

A combination of supplier characteristics allows a statement regarding the overall performance. Suppliers can be classified accordingly in an objectified manner, using qualifying categories such as "preferred supplier", "supplier to be developed" and "prohibited supplier" or an ABC classification. The individual characteristics can be se-

lected differently in practice and adjusted, for example, by means of the desired level of detail such as the number of existing classes.

Another goal of supplier evaluation is performance-oriented criteria. The evaluation is carried out here by means of customer-specific adjustable evaluation characteristics, which are of importance for evaluating the supplier e.g., number of order items, num-

ber of deliveries, order quantity, order value, total quantity deviation, total deadline deviation. Based on the decision and evaluation criteria configured in this way, additional integrated AI analysis functions are available with the AI-based Qualicision Service, enhancing the supplier evaluation of the ERP system with learning intelligence. Qualitative Labeling of business process data is the core of the AI analysis, which makes the eval-

Process of supplier evaluation

Classification in accordance with the ABC systematics can be carried out by the user by means of a manual inspection of the annual purchasing

statistics of each individual supplier so that, for example, the following relevant questions can be answered and an evaluation made on the basis of these:

- What was purchased from the supplier in previous periods?
- What was not purchased?
- Is the order quantity rather high or rather low?
- How many order items were there within a period?
- What was the value of the order items?
- How were delivery dates adhered to?
- Did deliveries tend to arrive earlier or later and to what extent too early or too late?
- What is the overall impression based on the statistics, rather good or less good?
- What deviations are there in comparison to other suppliers?

These and other questions must be answered consistently for each supplier in the evaluation process.

With the aim of supporting the user in this process step and making the extremely time-consuming and complex individual activity more flexible and simpler, more comprehensible and easier to control, PSIpenta/ERP relies on the multi-criteria supplier evaluation and classification using the AI software Qualicision for analysis and labeling.

The previously described purchasing statistics function as transaction data in the supplier evaluation process. The purchasing statistics of the suppliers to be evaluated are selected via an XML data export and transferred to the integrated Qualicision Service either ad-hoc or via a sched-

uled task, which can be defined for a specific execution time, see Figure 1. The PSIpenta/Integration Server is the active interface software used to transfer the transaction data together with the alternatives, goals, labeling functions and preferences

in accordance with the ABC systematics, see Figure 2.

Conclusion

By integrating the AI-based, multi-criteria Qualicision Service into the supplier evaluation of the ERP system

LF-Nr.	Lieferantenname	Fabr.	ABC-Klasse	Reich.
1	35574 JM Osterreich GmbH	1	A-Lieferant	EUR
2	35485 ABC Kunststoff GmbH & Co. KG	1	A-Lieferant	EUR
3	36936 AbGehls Express Logistics GmbH	1	A-Lieferant	EUR
4	36074 Aeresmuth GmbH	1	A-Lieferant	EUR
5	33698 AG Pulver	1	A-Lieferant	EUR
6	35653 Alexander Schnellinger GmbH	1	A-Lieferant	EUR
7	35619 Alpen Gluehen GmbH	1	A-Lieferant	EUR
8	35673 Alpen Werkzeugtechnik GmbH	1	A-Lieferant	EUR
9	33973 Altmann Aluminium	1	A-Lieferant	EUR
10	35153 Altono PROFISHOP GmbH	1	A-Lieferant	EUR
11	34794 Alu Kaiser Stahl GmbH	1	A-Lieferant	EUR
12	35520 Aluminium AG Oberberg	1	A-Lieferant	EUR
13	36237 Aluminium Katy GmbH	1	A-Lieferant	EUR
14	33015 Amal Swiss GmbH	1	A-Lieferant	EUR
15	33722 Armin Stahlhandel GmbH	1	A-Lieferant	EUR
16	36163 Arturo Vidal, S.A.	1	A-Lieferant	EUR
17	35925 ASIS Phoenix Contact GmbH	1	C-Lieferant	EUR
18	35836 AST Systems GmbH	1	A-Lieferant	EUR
19	36071 AT Service GmbH	1	A-Lieferant	EUR
20	36043 Atlas Elche GmbH	1	A-Lieferant	EUR
21	33862 ALFASS Austria Handels GmbH	1	A-Lieferant	EUR
22	36043 AVVA S.A.S.	1	A-Lieferant	EUR
23	36057 Bachbluete Produktions GmbH	1	A-Lieferant	EUR

Figure 2: PSIpenta/ERP—Suppliers according to ABC systematics in the master data.

from the project specifications to the Qualicision Service. The transaction data, which is made up of the purchasing statistics of the suppliers, is first labeled qualitatively and then evaluated with the goal conflict analysis in terms of KPI compatibility and goal conflicts, as well as classified in accordance with ABC systematics into the alternatives A-supplier, B-supplier as well as C-supplier.

The results of the Qualitative Labeling and the analysis are then made available again as supplier master data with the web service of the ERP system. Suppliers evaluated by Qualicision are clearly displayed in the master data in the supplier list in ac-

PSIpenta, complex supplier master data based on transaction data, such as purchasing statistics, are labeled qualitatively in terms of an ABC classification, evaluated and as a result are manageable and transparent even for non-AI experts. This enhances transparency as well as process quality, saves time in the daily procurement process and increases its quality by means of objectification. ☺

PSI FLS

Fuzzy Logik & Neuro Systeme GmbH

Dr. Rudolf Felix

Managing Director

felix@fuzzy.de

www.qualicision.de