

1. Supplier assessment - Introduction

Within the framework of permanent improvement of the relationships between KOSTAL and its suppliers, we have now comprehensively reworked and extended the *Supplier Assessment* which has been in use up to now.

The changes are related both to the evaluation criteria which are already used today and to extension of the entire system and methods which are employed. In particular, an ABC system will be introduced for evaluation of supplier performance within the areas of quality, logistics and purchasing and for overall evaluation of supplier performance. Building on these ABC grades, escalation scenarios have been defined, which are also described in the following text.

The supplier evaluation will in future be sent out every six months.

2. Overall weighting

The *supplier assessment* is carried out for the three participating areas of *Quality*, *Logistics* and *Purchasing*. A difference is basically made between suppliers of production materials (*01 to *03) and operating equipment and materials (*04). The relevant percentages can be seen in the following table.

Criterion	Weighting (*01)	Weighting (*02)	Weighting (*03)	Weighting (*04)
Quality	33%	33%	33%	0%
Logistics	33%	33%	33%	0%
Purchasing <i>of which</i>	33%	33%	33%	100%
<i>price transparency</i>	10%	10%	30%	30%
<i>Evaluation / R&D</i>	15%	30%	20%	0%
<i>Risks</i>	25%	25%	25%	0%
<i>Other factors</i>	50%	35%	25%	70%

The relationship of the product groups to the weighting codes can be seen in the following table.

Product groups	Weighting (*01)	Weighting (*02)	Weighting (*03)	Weighting (*04)
Metal	-Semi-finished products -Microswitches -Springs -Turned parts -Standard parts -Subcontractors		-Punched parts -Cast parts	-Production equipment supplier
Non-metallic materials		-Switching mats -Seals -Granulates	-Plastic parts -Cables -Cable looms -Punched parts	
Electronics	-Resistors -Batteries -Throttles/Filters -Thermistors -Res./Quartzes -Varistors -Transistors -Diacs/Triacs -Thyristors -Coils	-IC -Optical components -Lighting components -Diodes -Relays -Condensers	-PCBs without components -PCBs with components	

In order to calculate the results, grades of fulfilment are first determined for each subcriterion. These are assessed at the weighting allocated to each of these criteria. The maximum grade which can be given is "100% fulfilled".

The ABC grade for each area is given depending on the results for the main criteria. In order to calculate the overall ABC grade, the grades for the main criteria are multiplied by their weighting.

The values in the *supplier assessment* are given in terms of percentages, with a high percentage representing a positive result.

3. Content

3.1 Main criterion: Quality (33%)

Fulfilment of quality requirements of series deliveries are assessed, along with the accompanying documentation. Handling of complaints and reaction to them is also assessed.

Supplier evaluation in the area of quality is made up of two criteria. These are "**ppm**" and "**Response to test reports**". In the overall assessment of quality, the results from both criteria are combined into an overall quality characteristic number.

3.1.1 Subcriterion: ppm (27%)

The quality characteristic number is formed from individual grades between 0 and 100 for each product group. If all articles of a product group are supplied without defects or nonconformities, the grade 100 is given. If supply is not free of defects, points are deducted in stages and in linear form, starting at the agreed ppm number. A weighted average is formed from the individual grades so formed. The result of this calculation is the ppm quality characteristic number.

3.1.2 Subcriterion: Response to Inspection Reports (7%)

The second criterion relates to the response to test reports or statements in the form of 8D reports within a stated time.

Each statement which is requested is evaluated individually. The number of points for the subsidiary criterion is calculated as the average of all statements which are assessed within the period of observation. If a response is given within the stated time, 100 points are given for the statement. If the deadline is exceeded by more than 2 weeks, a quality characteristic number of 1 is given. Within the two weeks points are deducted on a linear scale from 100 to 1.

3.2 Main criterion: Logistics (33%)

Evaluation of logistics is aimed at measuring and improving the operative performance of our suppliers with regard to logistics processes. The evaluation is based on suppliers' links to all individual KOSTAL companies. The evaluations are carried out by the individual companies and summarised at the mother company. The evaluation portfolio is composed of the following subsidiary criteria:

1. Correct quantities
2. Adherence to deadlines and schedules
3. Flexibility and speed and manner of reaction
4. Delivery and transport

Information referring to the first two criteria is recorded automatically. Evaluation is carried out in depth on the material and delivery levels. Evaluation of flexibility is carried out by the goods in departments considering purchasing disposition or quality of delivery. The evaluation is carried out on a one-off basis over a period of 4 months.

3.2.1 Subcriterion: Correct quantities (10%)

This measurement is based on a comparison between the quantity delivered and the quantity ordered (and confirmed by the supplier). Each individual item which is delivered is assessed. Depending on the period over which the evaluation is carried out, a final average is created from all the individual grades.

Partial deliveries are therefore allocated greater weighting within the overall grade, as an individual grade is given each time. Over- and underdeliveries are not shown separately.

Individual grades are given in accordance with the following assessment scheme:

Deviation in per cent:	Assessment	Type
<- 5%	100 Points	Underdelivery
- 10%	90 Points	
- 15%	80 Points	
- 20%	70 Points	
- 25%	60 Points	
- 30%	50 Points	
- 35%	40 Points	
- 40%	30 Points	
- 45%	20 Points	
<= 50%	10 Points	
> 50%	0 Points	

< + 5%	100 Points	Overdelivery
+ 10%	90 Points	
+ 15%	80 Points	
+ 20%	60 Points	
+ 25%	40 Points	
+ 30%	20 Points	
+ 35%	10 Points	
>= 40%	0 Points	

3.2.2 Subcriterion: Punctuality (10%)

This criteria assesses the supplier's ability to deliver on time. The yardstick is the difference between the date when the goods are delivered and the delivery date confirmed by the supplier. Basically each consignment which is received within the calendar week which has been confirmed as 100% fulfilled.

Non-fulfilment is measured from the first day of the week confirmed for delivery backwards in the case of early delivery, and from the last day of the confirmed week forwards in the case of late delivery.

In the same way as the quantity assessment, each item on the delivery note is assessed individually. The grades which are given within the period of assessment are averaged out into a final overall grade.

Individual grades are given in accordance with the following assessment scheme:

Deviation in per cent:	Assessment	Type
0 days	100 Points	Late delivery
+ 1 day	80 Points	
+ 2 days	60 Points	
+ 3 days	40 Points	
+ 4 days	20 Points	
+ 5 days	10 Points	
>+ 5 days	0 Points	
- 1 day	90 Points	Early delivery
- 2 days	80 Points	
- 3 days	70 Points	
- 4 days	60 Points	
- 5 days	50 Points	
- 6 days	40 Points	
- 7 days	30 Points	
- 8 days	20 Points	
- 9 days	10 Points	
>= 10 days	0 Points	

Weekends and public holidays are not included.

3.2.3 Subcriterion: Flexibility and reaction (7%)

The two subcriteria of flexibility and reaction and supply and transport are assessed manually. Assessment is carried out by the responsible purchasing disponent.

The following aspects are taken into consideration:

- Communication behaviour, transfer of information
- Reaction to questions
- Processing of backlog lists
- Availability of a contact for communication
- Flexibility when items are required at short notice.

The aim and background of this criterion is to consider the availability of the supplier and the possibility of reacting to varying requirements in a flexible way as a decisive aspect, in order that we in turn can react flexibly to the needs of our customers.

If no goods are received in any given month, the grade of the previous month is taken over automatically.

3.2.4 Subcriterion: Delivery and Transport (7%)

In order to control supply and logistics processes (disposition) in a clear and positive way, it is essential that suitable documentation is provided and that terms of delivery are adhered to. Problems within communication media and interfaces can therefore be avoided as potential sources of error for the supplier and for KOSTAL. The following criteria are used to evaluate the logistical quality of delivery and transport:

- Adherence to delivery guidelines
- Adherence to packaging guidelines
- Presence of KOSTAL material number and revision status
- Transport damage
- Condition and presence of delivery documents

If no goods are received in any given month, the grade of the previous month is taken over automatically.

3.3 Main criterion: Purchasing (33%)

The area of purchasing is divided into the following four subsidiary criteria with their relevant subcriteria and weightings. Please note that the percentage distribution should be considered relative to the respective higher-level subsidiary or main criterion.

	Weighting (*01)	Weighting (*02)	Weighting (*03)	Weighting (*04)
Overall purchasing of which	33%	33%	33%	100%
Price transparency	10%	10%	30%	30%
Advice / R&D	15%	30%	20%	0%
Risks	25%	25%	25%	0%
<i>of which tool and component-related flexibility of supplier</i>	40%	40%	40%	0%
<i>other risks regarding production failure</i>	30%	30%	30%	0%
<i>transport time, emergency logistics chain</i>	30%	30%	30%	0%
Other factors	50%	35%	25%	70%
<i>of which cooperation</i>	35%	35%	40%	50%
<i>availability/ease of contact</i>	35%	35%	30%	50%
<i>technical equipment</i>	30%	30%	30%	0%

3.3.1 Subcriterion: price transparency

The price transparency or ease of understanding the makeup of the component price. Here, the presence of individual cost types is evaluated, so that, for example, personnel or material costs can be compared. The following cost types should be shown in offers:

Price transparency	Points
Material costs	20
Manufacturing costs	20
Overhead costs	20
Freight costs	20
Packaging costs	20
Maximum points	100

3.3.2 Subcriterion: Advice / R&D

In this subsidiary criterion the supplier is evaluated as to how far the supplier fulfils KOSTAL requirements within the framework of his R&D services, but also in the advice he offers, and if he offers suggestions for improvement.

Advice / R&D	Points
Can the supplier comply to the KOSTAL technical standard as regards data exchange?	40
Has the supplier his own R+D department?	20
Adapts to KOSTAL requirements and fulfils them?	20
Draws attention to potential for improvement and makes suggestions for reducing costs which are economically viable?	20
Maximum points	100

3.3.3 Subcriterion: Risks

Secondary subsidiary criterion: Flexibility of supplier with regard to tools and components

The capacity of the supplier as regards the complete component production process is assessed here. It is also possible that the supplier's capacity is partially taken up by other customers etc. The important thing is the general possibility of being able to cover KOSTAL requirements both on a regular basis and short term at peak times (e.g. by running extra shifts).

Tool and component-related flexibility of supplier	Points
Is spare capacity available?	40
Is less than 20% of capacity used by KOSTAL?	20
All 3 shifts not taken up by production?	20
Keeps buffer stock?	20
Maximum points	100

Secondary subsidiary criterion: Other risks related to production failure (act of God, risk of strike etc.)

Other risks related to production failure	Points
There is no increased risk of strike	20
Production not in political crisis area	20
Production not in area of geological risk	20
Can fulfil product liability obligations (manufacturer's liability insurance if appropriate)	20
Is certified to ISO 14001 "Environmental Management System" and has supplied corresponding Certificate	20
Maximum points	100

Secondary subsidiary criterion: Transport time, emergency logistics chain

The duration of transport over emergency transport routes, measured between the dispatch location of the supplier where there are manufacturing facilities or minimum stocks and the KOSTAL factory. This should be a worst case study (weekend, difficulties with customs etc.).

Transport time, emergency logistics chain	Points
Less than 120 hours	20
Less than 96 hours	20
Less than 72 hours	20
Less than 48 hours	20
Less than 24 hours	20
Maximum points	100

3.3.4 Subcriterion: Other factors

Secondary subsidiary criterion: cooperation

The supplier draws attention to his own problems. He tries to hold constructive discussions about problems.

Cooperation	Points
Accepts KOSTAL conditions of purchase	20
Accepts KOSTAL warranty conditions	20
Supplies necessary supplier declarations as requested by KOSTAL	20
Communicates problems and is prepared to take special measures	20
Communicates problems in good time and is open to suggestions for solutions and special measures	20
Total points	100

Secondary subsidiary criterion: Availability / ease of contact

The supplier is ready to respond to queries at short notice and is willing and prepared to meet shorter delivery times than is his normal practice. The contact person is available personally at short notice.

Availability / Ease of contact	Points
Contact persons or representatives are available or phone back immediately, agreements are reached quickly and are binding	20
The supplier is ready to offer unconventional solutions in exceptional cases	20
It is always possible to communicate in English	20
The contact person is always competent to deal with the matter in hand	20
Has all necessary communication media	20
Total points	100

Secondary subcriterion: Technical Facilities

This assessment deals with the age, condition and completeness of production equipment.

Technical Equipment	Points
Production equipment corresponds to the current state of technology	20
Supplier can repair production equipment with own staff	20
Supplier can manufacture production equipment in-house	20
Supplier can measure accuracy of production equipment in-house	20
Supplier can develop production material in-house	20
Total points	100

3.4 ABC Classification

Classification is by means of categories (A), (AB), (B) and (C). Depending on the grade awarded, different escalation scenarios are used whose first stage results from the descriptions of the grades given below. It must be the aim of all suppliers to achieve grade (A) in the medium term and then to retain it.

3.4.1 Departmental classification

The meaning of area classifications is explained below:

- Grade A: Your company currently fulfils the requirements in this area fully.
- Grade AB: Your company fulfils the requirements in this area with some reservations. Please make use of the results of the supplier evaluation within the framework of your continuous improvement process. Please contact the relevant personnel at KOSTAL if you have any questions.
- Grade B: Your company does not fulfil the requirements in this area. In order to rectify this state of affairs we ask you to present an action plan to us by DD.MM.YYYY.
- Grade C: Your company does not fulfil KOSTAL requirements. At present we see no reason to continue our cooperation.
In order to rectify this state of affairs we ask you to attend a supplier's meeting at KOSTAL. Please make an appointment with the relevant member of our staff by DD.MM.YYYY.

The following table is used for classification of supplier performance in the individual areas:

Grade	Quality	Logistics	Purchasing
A	≥ 90	≥ 90	≥ 80
AB	≥ 80	≥ 80	≥ 60
B	≥ 60	≥ 60	≥ 30
C	< 60	< 60	< 30

3.4.2 Overall classification

The meaning of the overall grade is explained below:

- A Supplier: Your company currently fulfils the requirements of our company to a satisfactory extent. This means that your company has supported us in fulfilling the requirements of our customers and to implement these, and we would like to thank you. KOSTAL assumes that you will continue to provide this good performance in the future so that we can continue to cooperate and make use of optimisation potential in both our companies.
- AB Supplier: Your company fulfils KOSTAL requirements with certain reservations. We can see clear potential for improvement which would help to cement our partnership.
- B Supplier: Your company does not fulfil our requirements. Continuation of our partnership is considerably endangered. We urgently request you to fulfil the requirements in specific areas which we have described in cooperation with us.
- C Supplier: Your company does not fulfil KOSTAL requirements. At present we see no reason to continue our cooperation. We urgently request you to fulfil the requirements in specific areas which we have described in cooperation with us.

The following table is used for overall classification of supplier performance:

Overall classification	Condition
A	Average grade ≥ 86 and at least AB grade in all three area grades
AB	Average grade ≥ 73
B	Average grade ≥ 50
C	C classification in one or more areas

The overall assessment therefore basically results from the weighted average of the area classification, in part combined with other factors.

4. Escalation scheme

	Step 1 (supplier assessment)	Step 2	Step 3	Step 4
A	- Demands are fulfilled	- Consideration as strategic supplier - Observation	- Integrate knowledge of suppliers - where applicable development supplier	
AB	- request for removal from negative list			
B	- submittal of an action plan	- Supplier meeting	- Threat of "No future business" '- Threat of "Outsourcing"	- where applicable continuation of C-Escalation
C	- No future business - Supplier meeting - Implementation plan	- Internal coordination - Blocking of supplier as necessary - de-blocking through new audit		

