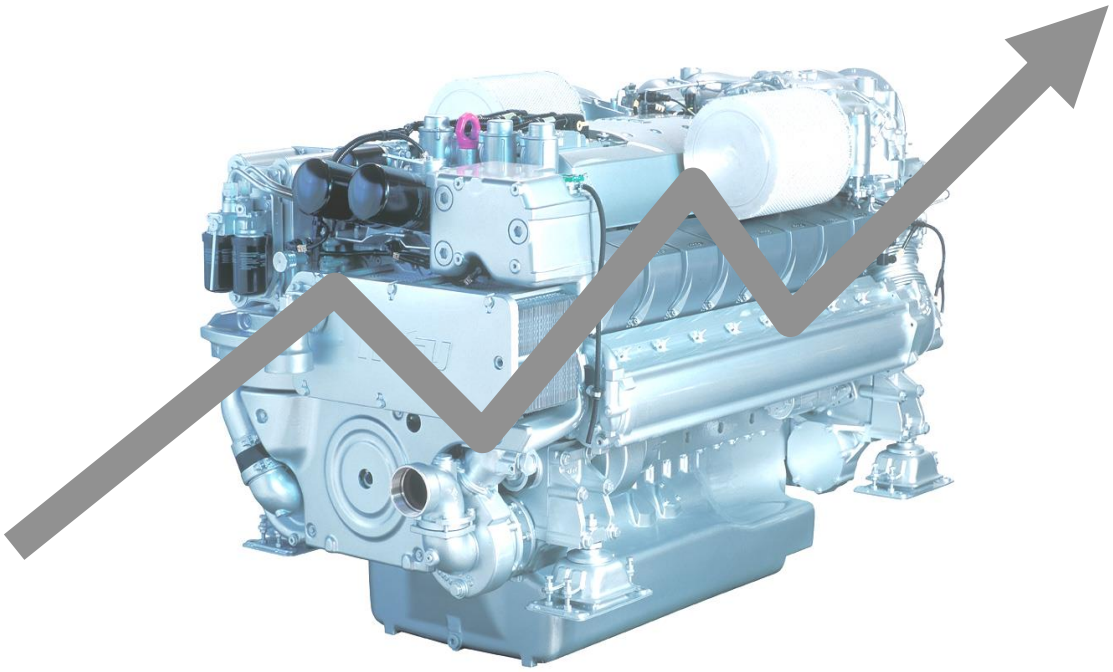
Power. Passion. Partnership.

SES

Supplier Evaluation System



Q L P E

Definition

The Supplier Evaluation System (SES) of MTU Friedrichshafen GmbH is used for target suppliers. With these suppliers, MTU intends to cover most of its future procurement volume. This system was developed to form a standard basis for the evaluation of existing and potential target suppliers. Evaluation is based on major criteria including purchasing, quality, logistics and environment which are again detailed in sub-criteria. Fulfillment of these criteria is measured on a scale between 0 and 100 points by applying specific definitions. Taking into account weighting factors, this results in rates for the fulfillment of the main criteria on which the overall assessment is based. Depending on the point score, a supplier is evaluated as **A, AB, B or C-supplier** (A = 100-90 points, AB = 89-80 points, B = 79-60 points, C = 59-0 points).
B-suppliers are asked to correct any existing deficiencies. C-suppliers are asked to introduce urgent corrective measures. Repeated assessment as a C-supplier jeopardizes the target supplier status. MTU aims at maintaining long-term supplier relations with A or B suppliers.

Philosophy

This supplier evaluation system is based on a philosophy which intends to find solutions, uncover potential and develop existing strengths in cooperation with the suppliers and on the basis of the results and comparative figures determined; on the other hand, it also provides for the development and implementation of solutions and alternatives for existing weaknesses. Suppliers are regarded as partners who can help counteract the ever-increasing competitive pressure.

Target

The target of this supplier evaluation system is the objective and standardized evaluation of suppliers by applying the criteria referred to above. This objectivity makes it possible to directly compare suppliers with each other and thus reveals the strengths and weaknesses of individual suppliers. The system of specified evaluation criteria facilitates achievement of this target.

Criteria and weighting

Main criterion	Weighting	Objective [points]	Sub-criteria	Weighting	Manual/ automatic determination
Quality	**40%**	**100**	PPM	60%	automatic
			Sample complaints rate	10%	automatic
			Rate of residual quality costs	10%	automatic
			Audit	10%	manual
			Support quality	10%	manual
Logistics	**25%**	**100**	Meeting delivery deadlines	70%	automatic
			Supplying agreed quantities	10%	automatic
			Logistical supply quality	10%	automatic
			Support logistics	10%	manual
Purchasing	**25%**	**100**	Price level	30%	manual
			Price development	30%	manual
			Proposals for cost reduction	20%	manual
			Financial stability	10%	manual
			Support purchasing	10%	manual
Environment	**10%**	**100**	_____	____	manual

Handling

Criteria which can be determined automatically are updated each month. Manual criteria are evaluated once per year (January) for the previous year and continue to be applicable for the current year until the next evaluation.

Description of Criteria

Main criterion: **Quality** Weighting: **40%**

Sub-criteria		Points	Evaluation basis
PPM - rate	60%	100	0 PPM
		0-99	PPM rate >0 (for a description refer to page 4)
Sample complaints rate	10%	100	Complaints rate 0 %
		0-99	Complaints rate >0 % (for a description refer to page 4)
Rate of residual quality costs	10%	100	No residual quality costs
		0-99	Rate of residual quality costs proportional to incoming-goods value >0 % (for a description refer to page 4)
Audit / Preliminary evaluation Audit grade assigned only if entire process chain has been audited.	10%	0-100	This criterion is evaluated by the respective audit heads based on the following aspects: ▪ Number / type of complaints ▪ Organization, tidiness, cleanliness at supplier´s facility ▪ Cooperation during audit ▪ Intensity of follow-up of measures (not possible with initial audits) ▪ Activities for quality improvement ▪ Certification
Support quality (The following are taken into account: warranty claims*; response time and quality of 8D reports; reduction of repeating faults; information of process changes; information provision/handling; pro-active approach re. quality problems; reaction to enquiries; contacts and their availability; flexibility.)	10%	100	Excellent cooperation and flexibility
		80	Good cooperation and flexibility
		60	Average cooperation and flexibility
		40	Below-average cooperation and flexibility
		20	Poor cooperation and flexibility
		0	Very poor cooperation and flexibility

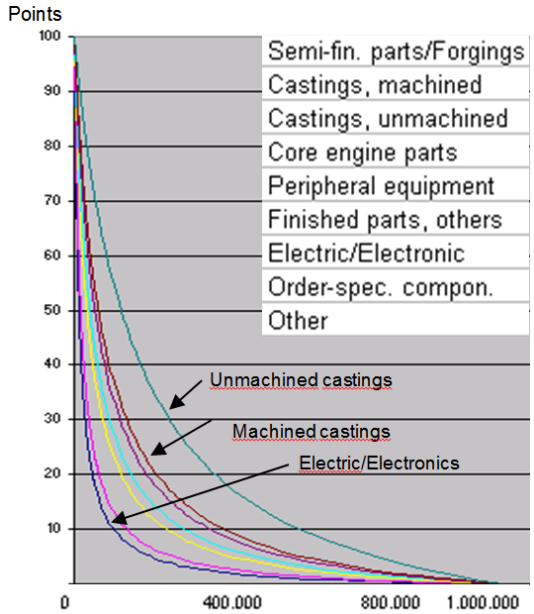
*In case of warranty claims >10k€ during the calendar year, the Q-Support will be reduced by 20-50% independently of the cooperation

Note: Points in between the shown points can also be given.

Determination of point score for PPM rate:

The PPM rate is determined for each supplier on the basis of major goods groups. Using degressive conversion tables which orientate themselves to the average PPM rate per goods group, a point score is determined for each goods group which is then calculated proportionally to the value of incoming goods of the respective goods group before being added.

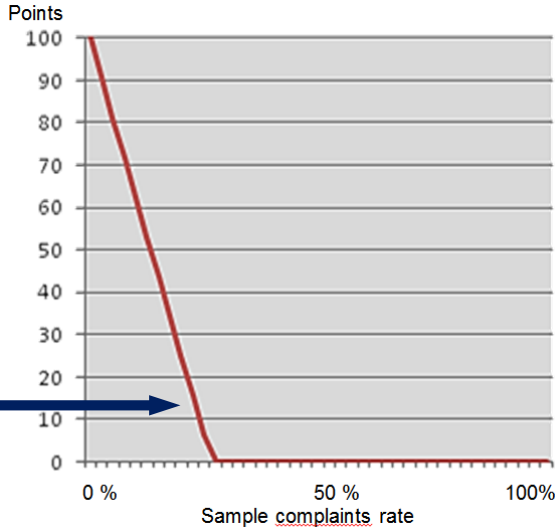
Example: 50.000 ppm for unmachined castings = 70 pts.
50.000 ppm for machined castings = 53 pts.
Sales share of machined cast. = 25%
⇨ 70*0.75 + 53*0.25 = 65.75 pts.



Determination of point score for sample complaints rate:

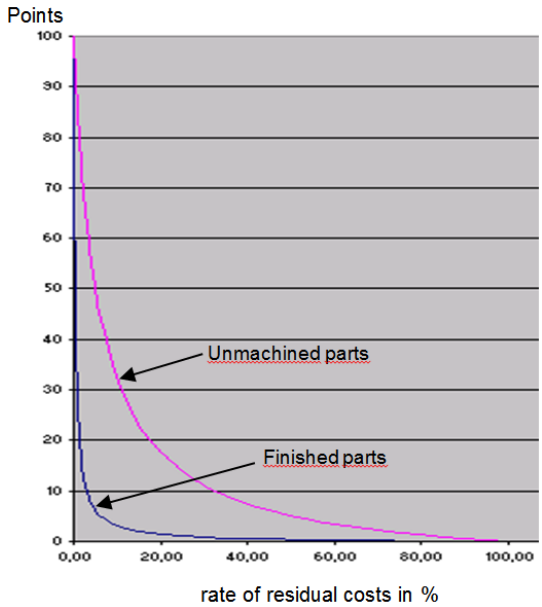
The sample complaints rate is calculated by the number of quality notifications (of sample orders) in relation to the number of sample deliveries.

Example: 5 samples deliveries
1 quality notification (of sample orders)
⇨ **20% sample complaints rate**
⇨ **25 points**



Determination of point score for residual quality costs:

Residual quality costs are determined separately for raw materials and finished parts. Using degressive conversion tables, a pro-rata point score is calculated proportionally to the pro-rata value of incoming goods before the points for raw materials and finished parts are added.



Main criterion: **Logistics** Weighting: **25%**

Sub-criteria		Points	Evaluation basis
Meeting delivery deadlines	70%	1-100	Automatic determination via SAP based on the following criteria: Determination of average schedule compliance of all incoming goods per month. The evaluation of purchase orders and delivery schedules is derived from the following point system: Delay of up to two days* 100 points; 4/80; 6/60; 12/40; 20/20; >20days/1 point(s) Premature delivery up to five days 100 points; 10/80; 15/60; 20/40; 30/20; >30 days/1 point(s) *The aim is delivery exactly on schedule. Due to possible unforeseen problems (e.g. during transportation), a leeway of two days is granted. For delivery schedules, backlog status is also evaluated. The first time backlogs appear in the delivery schedule, 60 points are allocated (compliance with deadline and volume). The second time, 40 points are allocated in each instance. **The objective for approved delivery deadlines is fixed for all suppliers at 100 points!**
Supplying agreed quantities	10%	1-100	Automatic determination via SAP based on the following criteria: Determination of average quantity compliance of all incoming goods per month. The evaluation of purchase orders and delivery schedules is derived from the following point system: ▪ Excess supply of more than 2% 90 points; 4/80; 6/70;8/60; 10/50; 12/40; 14/30; 16/20; 18/10; ≥20% 1 point(s) ▪ Short supply of more than 2% 90 points; 4/80; 6/70;8/60; 10/50; 12/40; 14/30; 16/20; 18/10; ≥20% 1 point(s) For delivery schedules, backlog status is also evaluated. The first time backlogs appear in the delivery schedule, 60 points are allocated (compliance with deadline and volume). The second time, 40 points are allocated in each instance.
Logistical supply quality	10%	0-100	Automatic determination via SAP based on the following criteria: ▪ No. of quality reports „logistic“ in relation to no. of deliveries ▪ 0% - 10% claimed deliveries ⇨ 100 points to 0 points > linear evaluation; ≥10% of claimed deliveries = 0 points
Support Logistics (taken into account: batch size; reacquisition times, packaging requirements; pro-active management of product start-up/changes; process integration - supplier adapts to meet MTU requirements and achieves high level of process consistency; provision/handling of information; pro-active approach to supply problems; reaction to enquiries; processing of reminders/warnings; contacts and their availability / contactability; flexibility re. short-notice requests, delivery call-offs, direct call-offs.)	10%	100	Excellent cooperation and flexibility
		80	Good cooperation and flexibility
		60	Average cooperation and flexibility
		40	Below-average cooperation and flexibility
		20	Poor cooperation and flexibility
		0	Very poor cooperation and flexibility

Main criterion: **Purchasing** Weighting: **25%**

Sub-criteria		Points	Evaluation basis
Price level	30%	100	Supplier´s prices are within target range
		60	Supplier´s prices are outside target range
		0	Supplier´s prices are well outside target range
Price development	30%	100	Price development is within target range
		60	Price development is outside target range
		0	Price development is well outside target range
Proposals for cost reduc-tion	20%	100	Supplier with frequent proposals on cost reduction
		60	Supplier with occasional proposals on cost reduction
		0	Supplier without proposals on cost reduction
Financial stability	10%		**Rating**
		100	Financial stability is proved or ensured via affiliation with Group. AAA
		90	Financial stability seems to be ensured subjectively. AA
		80	No verified information available A
		60	- BBB
		40	Deliveries to MTU only against cash in advance or bank guaranties. Or: Suppliers who have been rated as critical. BB
		20	- B
		0	Supplier is involved in insolvency proceedings! C, D
Support purchasing (SEmL assessment only if relevant)	10%	100	Excellent cooperation and flexibility Very good cooperation with SEmL ; frequently makes own proposals
		80	Good cooperation and flexibility Good cooperation with SEmL; occasionally makes own proposals
		60	Average cooperation and flexibility Cooperation with SEmL, shows own initiative now and then
		40	Below-average cooperation and flexibility Below-average cooperation with SEmL, hardly any own initiative
		20	Poor cooperation and flexibility Poor cooperation with SEmL, no own initiative
		0	Very poor cooperation and flexibility No cooperation with SEmL

Note: Evaluation between fixed point scores is also possible.

Main criterion: **Environment** Weighting: **10%**

Points	Evaluation basis
100	Environmental certification available (ISO14001, EMAS …)
80	Environmental certification aimed for within 18 months or MTU audit re. environment OK.
60	Compliance with legislation, technological status or No information available.
0	No identifiable environmental awareness; supplier development necessary.

Note: A 0-point score for the major criterion "Environment" will not be accepted permanently by MTU. If no activities for improvement can be observed, the business relationship will be terminated.

Conversion table / grade <> points

Grade		Points
1,0	**excellent**	**100**
1,5	excellent – good	90
2,0	**good**	**80**
2,5	good – fair	70
3,0	**fair**	**60**
3,5	fair – needs improvement	50
4,0	**needs improvement**	**40**
4,5	needs impr. – needs signif. impr	30
5,0	**needs significant improvement**	**20**
5,5	needs signif. impr.- unacceptable	10
6,0	**unacceptable**	**0**

Example:

LB Report **Supplier Evaluation**

Vendor	Example Corp.	**Supplier Number**	21123456
Calendar Year	2012	**Value of parts supplied**	
Number of compl. Parts	69	**Number QL Notifications***	30
Last Update	02.03.2012		

Overview

Main criteria	Weighting	Sub-Criteria	Weighting	Points Sub-Criteria	Points Main Criteria
Quality	40 %	PPM	60 %	92	
		Sample complaints rate	10 %	69	
		Rate of remaining quality costs	10 %	87	
		Audit / Priliminary evaluation	10 %	20	
		Support quality	10%	100	83
Logistics	25 %	Meeting delivery deadlines	70 %	91	
		Supplying agreed quantities	10%	83	
		Logistical supplyi quality	10%	100	
		Support Logistics	10%	100	92
Purchasing	25 %	Price level	30%	100	
		Price development	30%	100	
		Proposals for cost reduction	20%	100	
		Financial stability	10%	100	
		Support Purchasing	10%	100	100
Environment	10%				80
Overall evaluation					91

1 - A-Supplier [100-80 Points] 2 - B-Supplier [79-60 Points] 3 - C-Supplier [59-0 Points] classification: **1**

Details

PPM

Main Material Group	PPM / IG-val. per group		Points / Prop. points	
Core engine parts	2.619	12.367.872 EUR	92,1	92,1
Total:	2.619	12.367.872 EUR		92,1

Sample complaints rate 0,08 71

Rate of remaining quality costs	Prop. of IG-Val. / IG-Val.		Points / Prop. points	
Unmachined parts			100,0	
Finished parts	0,1	12.491.872 EUR	87,4	87,4
Total:	0,1	12.491.872 EUR		87

Logistical supplyi quality	No. of QL reports (log)	No. of Inc. Goods	Points
		821	100

*Complaints rate and rate of residual Q-costs includes only test reports concluded and with missing 8D-reports without logistic test reports