

## MASTER

Smarter supply management : "research into supplier performance measurement"

Beurskens, E.S.

*Award date:*  
2001

[Link to publication](#)

### **Disclaimer**

This document contains a student thesis (bachelor's or master's), as authored by a student at Eindhoven University of Technology. Student theses are made available in the TU/e repository upon obtaining the required degree. The grade received is not published on the document as presented in the repository. The required complexity or quality of research of student theses may vary by program, and the required minimum study period may vary in duration.

### **General rights**

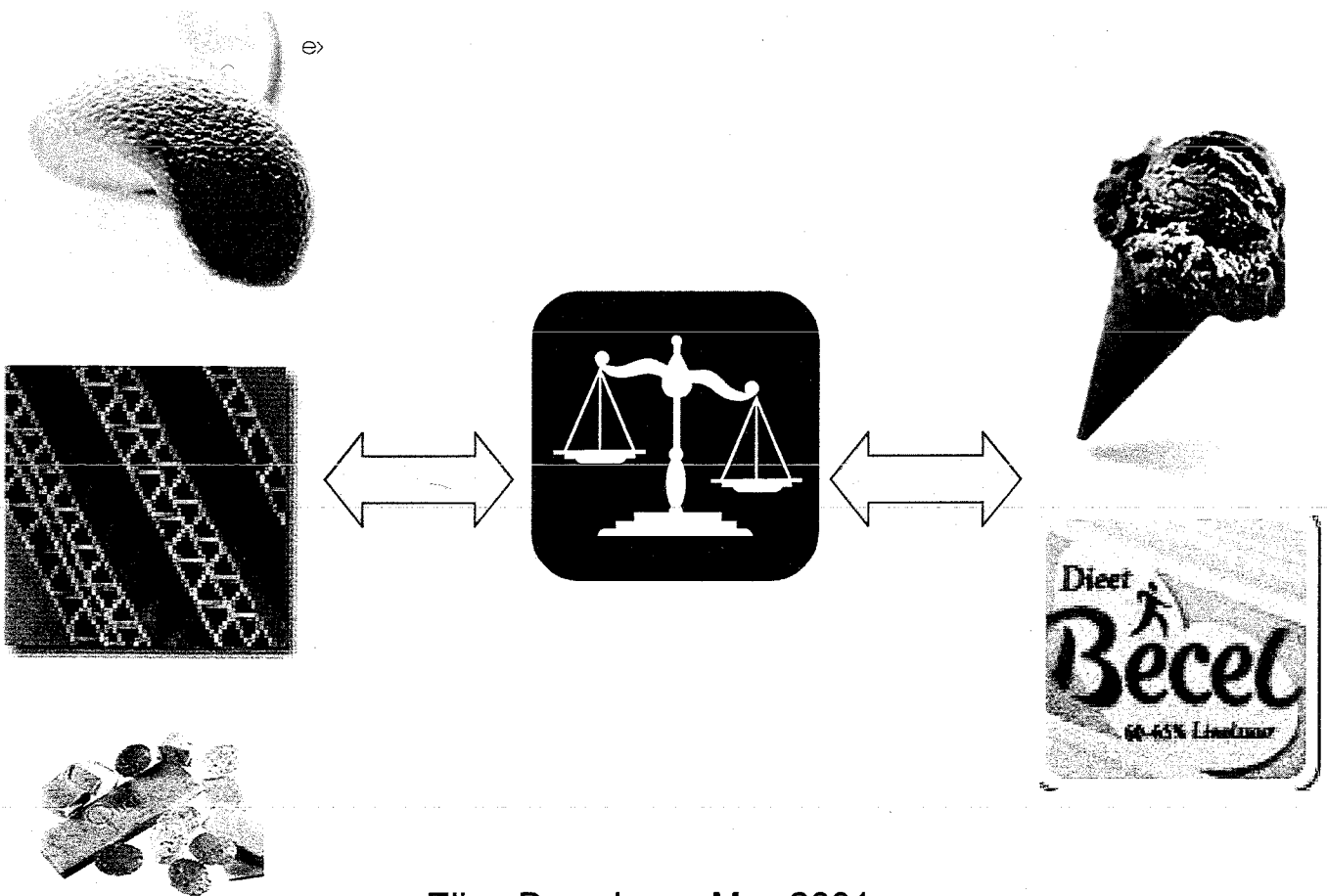
Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain

# Appendix

## Smarter Supply Management

*“Research into supplier performance measurement”*



Eline Beurskens, May 2001

**NIET  
UITLEENBAAR**

# Appendix

## Smarter supply management

“Research into supplier performance measurement”

Eindhoven University of Technology  
Faculty of Technology Management  
Industrial Engineering and Management Science

Student: E.S. Beurskens  
Id-number: 416202  
Primary Supervisor: Dr. J.Y.F. Wijnstra  
Department of Business Economics and Marketing  
Secondary Supervisor: Ir. R.M.F. van Gerwen  
Department of Product and Process Reliability  
Tertiary Supervisor: Prof. Dr. G.M. Duysters  
Department of Organisation Science  
Graduation Company: Unilever, Corporate Centre  
Unilever Bestfoods Europe  
Weena 455  
Postbus 760  
3000 DK Rotterdam  
Company supervisors: Ir. J.W. Dressel  
D.E.Hill BSc. (Hrns), ACMA  
Department of Euro Supply Management

**NIET  
UITLEENBAAR**

## Appendices

Appendix I	Criteria from literature and external analysis.
Appendix II	Target group for internal analysis
Appendix III	Flow chart for filing a complaint
Appendix IV	Responsibility matrix
Appendix V	(Sub) shortcomings
Appendix VI	Consequences and criticalities
Appendix VII	Testing plan
Appendix VIII	Current reporting in SMART
Appendix IX	Flowchart for ESM usage of SMART information
Appendix X	Flowchart for category QA usage of SMART information
Appendix XI	Example of reporting & European roll op
Appendix XII	Criteria for the supplier audit
Appendix XIII	Criteria defined as "good to have"

## Appendix I

Criterion	sub-criterion	objective	target-groups	description
<b>Quality</b>	number of rejects versus total number of deliveries	zero defects	% rejects	number of rejects/ total number of deliveries
	number of corrective actions		% corrective actions	number of corrective actions/ total number of rejects
	responsiveness	minimise the number of days	# days	number of days before supplier offers a solution
	cost of non-quality	zero	# Euro	claims (Euro) * number of rejects/ total number of deliveries
<b>Logistics</b>	on time delivery	100% on time	% on time	orders received on time
	case-fill rate	100% in full	% in full	total case items received on time/ total case items ordered
	line-fill rate	100% line-fill	% in full	total line items received on time/ total line items ordered
	order-fill rate	100% case fill	% in full	total orders received/ total orders requested
	order lead-time	shortest lead time	percentage $\leq 1$	ratio lead time versus best lead time in commodity group
	responsiveness (flexibility)	100% flexible	percentage $\geq 1$	# times that the supplier can meet the (rush) requests/ total number of requests
	inventory level over a period (week)	between minimum and maximum value	zero	(# times that the inventory over the max level or under the min level) * # days/ 5 days (one week)
	maturity of the logistic system	supplier maturity $\geq$ customer maturity		on-site-stock, bar-code systems, kanban systems, ship to line, SMI (very mature) ship to stock (medium) purchase order/ call-offs
cost of non-logistics performance	zero	zero	claims (Euro) * number of deliveries concerned/ total number of deliveries	

## Appendix I

<b>Cost</b>	price performance	lowest price paid	percentage $\leq 1$	actual price versus targeted price
	price performance	lowest price paid	percentage $\leq 1$	actual price versus market price
	open cost price structure	transparent	100% known	% cost price known and explainable
<b>Innovation</b>	creativity	very creative	# ideas	number of good ideas over a certain period
	innovation speed	low time-to-market	# weeks	# weeks time-to-market
	R& D budget	high budget available	percentage close to 1	R&D budget versus turnover
	capability R&D department	very experienced	high number of product introductions	# of product introductions per year
	investment in education/ training	high investment	high number of trainings	# of trainings per employee per year
	investment in technical equipment	high investment	high %	% turnover invested in new technical equipment
	failure rates in the development process	100% successful	% failures	# failing development projects/ total number of development projects
	responsiveness to buying company's request to innovate the product	100%	percentage $\leq 1$	# responses/ # requests
<b>Strategic Performance</b>	global infrastructure	same as customer		global, european, country coverage
	capability IT systems	EDI, e-procurement		linked systems:( in terms of ordering, payment, evaluation)
	service/ technology support	high support	100%	# times appropriate support/ # times support requested
	management commitment	high commitment		# times the management shows up/ # total number of meetings (per period)
	communication	good communication	100%	reachability from supplier # attempts/ # contact over a certain period
	environmental policy	following the trend		how far is the supplier in developing reverse logistics

## Appendix I

			strategies?
--	--	--	-------------

## Appendix II

### The Organisation

The internal stakeholders for (the initial interviewing) defining the criteria in a supplier performance measurement system have been selected upon the following criteria:

- Coverage of the supply groups (ingredients, packaging and co-packing)
- Coverage of the “main” companies like (Netherlands, UK, France)
- Coverage of main categories (scc, culinary)

### Supply Groups

The following stakeholders have been selected in order to cover the ESM organisation (see figure 1):

- Material (group) manager (s) (ingredient, co-packing, NL),
- supply group manager (s) (ingredient and packaging, NL),
- senior supply group manager (NL).

### Companies & Categories

- Works (SU) manager (Netherlands, scc),
- supply chain manager (scc),
- R&D director (UK, culinary),
- local purchasing (UK),
- local purchasing (France),
- company logistics manager (France),
- company QA manager (France)

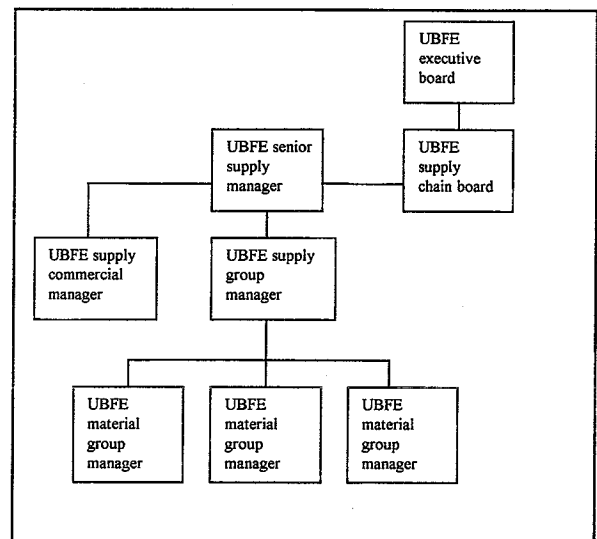


Figure ESM organisation

### Conclusion

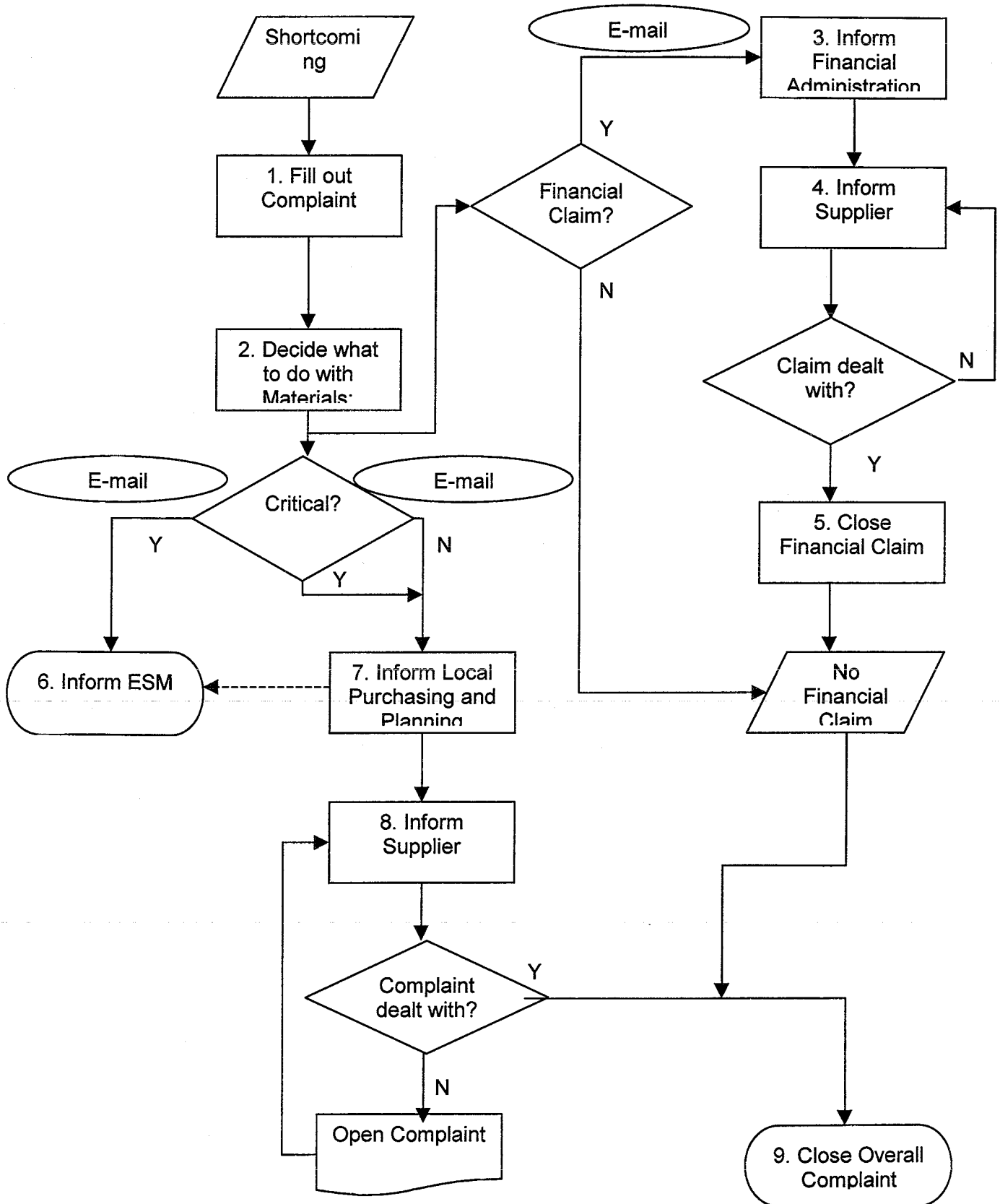
These stakeholders are complete and represent the UBFE organisation apart from:

- Germany is not involved in the interviewing yet but will be in week 10.
- The local logistic or financial managers are not involved in this initial stage but will be when the selected criteria need to be defined and tested in practice.
- Bestfoods is not included in this interviewing round as the current E.V.R.S. is taken as the best practice. Extra information on the EVRS system is gathered and (apart from the strategic purchasing criteria) in line with the Unilever approach. Bestfoods will be included in the next stage (check the selected criteria).



# Appendix III

## SMART: Flow-Chart for Filing a Complaint



## Appendix IV

### Responsibility Matrix Smart

A	Authority to decide the need and resources for an activity
LW	Lead the Work
C	Will be Consulted
I	Will be Informed
DW	Do the Work

	ESGM	ESM	Cat QA mgr	SU QA	Company super-user	Local Purchasing	SU Planning	Local Financial
<b>FILING A COMPLAINT</b>								
1. Fill out Complaints			A	LW / DW				
2. Decide what to do with materials				LW / DW				
3. (In case of financial claim) Inform Financial Administration				LW / DW				I
4. In case of Financial Claim, inform Supplier								LW / DW
5. In case of Dealt Claim, Close Claim								LW / DW
6. In case of Critical shortcoming, inform ESM		I		LW / DW				
7. Inform Local materials management				LW / DW		I	I	
8. Inform Supplier about the Complaint				LW / DW		LW / DW		
9. Close complaint						LW / DW		
10. Close Overall Complaint				LW / DW				
<b>MAINTENANCE</b>								
1. Maintenance of Picklists of (sub) shortcomings, consequences, criticalities				C	LW/DW			
2. Maintenance of currencies, departments, e-mail names, standard distribution list				LW / DW	LW/ DW			
3. Maintenance of data entry			LW	DW				
<b>USAGE</b>								
1. Making user defined reports	DW	LW/ DW	LW/DW	DW	DW	DW		
2. Initiate improvement projects with suppliers		LW/DW/C	LW/DW/C	DW				
3. Coordinate & Evaluate improvement projects	I	LW/DW	C	C				

ESGM	European Supply Group Manager
ESM	European Supply Manager
Cat QA mgr	category quality assurance manager
SU QA	sourcing unit quality assurance manager

## Appendix V

Shortcoming	Sub Shortcoming
Appearance/Colour/Composition	Brightness
Appearance/Colour/Composition	Colour clarity
Appearance/Colour/Composition	Composition of the Mixture
Appearance/Colour/Composition	Dirt/Stains/Marks
Appearance/Colour/Composition	Intensity
Appearance/Colour/Composition	Marks/Spots/Flecks
Appearance/Colour/Composition	Processing
Appearance/Colour/Composition	Stiffness
Appearance/Colour/Composition	Uniformity
Appearance/Colour/Composition	Uniformity
Appearance/Colour/Composition	Varnish
Artwork	Colour standard
Artwork	Print standard
Artwork	Promotion/Part number
Certificate of conform/analysis	
Certification	Availability
Certification	Completeness
Certification	Correctness
Certification	Specification
Chemistry	Chemical composition: Food
Chemistry	Contaminants
Chemistry	Moisture
Expire date	Coding/Labeling
Foreign Bodies	FB of animal origin
Foreign Bodies	FB of process origin
Foreign Bodies	FB of staff origin
Foreign Bodies	FB of transport
Formation	Alignment/Set
Formation	Cut/Crease
Formation	Misfit
Formation	Misshapen
Formation	Perforation
Formation	Telescoping
Microbiology	Non-Pathogens
Microbiology	Pathogens
Organoleptic	Chemical composition: Recipe
Organoleptic	Odours
Organoleptic	Taints
Organoleptic	Taste
Physical dimensions	Breakage/Damage
Physical dimensions	Caliper
Physical dimensions	Core size
Physical dimensions	Density

## Appendix V

Physical dimensions	Diameter
Physical dimensions	Grammage
Physical dimensions	Size
Physical dimensions	Stickiness/Lumpy
Physical dimensions	Strength
Physical dimensions	Temperature
Physical dimensions	Viscosity
Transport conditions	
Transport/Outer packaging	Damage
Transport/Outer packaging	Dimension
Transport/Outer packaging	Dirty
Transport/Outer packaging	Pallet size
Transport/Outer packaging	Quantity

## Appendix VI

Consequences	
extra work	
extra losses	
production stoppage	
production planning change	
redelivery	
out-of-stock towards the customer	
potential endanger safety, health or environment	
Criticalities	
Critical	Potential endanger to health, safety, or environment be it consumer /customer or Unilever related.
	Where there is a realistic risk of out of stock to the customer
	When a customer /consumer or authority complaint is expected.
	When it adversely affects product quality
Major	Except when there is a realistic risk of out of stock to the customer the following consequences are major.
	Production delays.
	Line stoppages.
	Production misses.
	Except when a customer /consumer or authority complaint is expected the following consequence is major.
	Adversely affects product quality.
Minor	Defects that do not pose safety or on line performance risks.

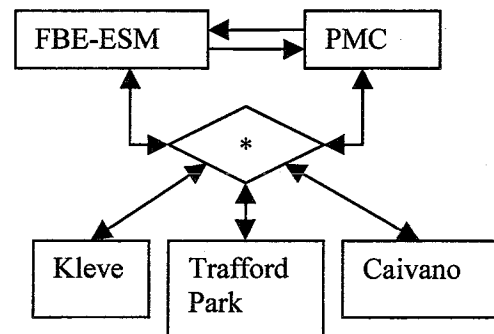
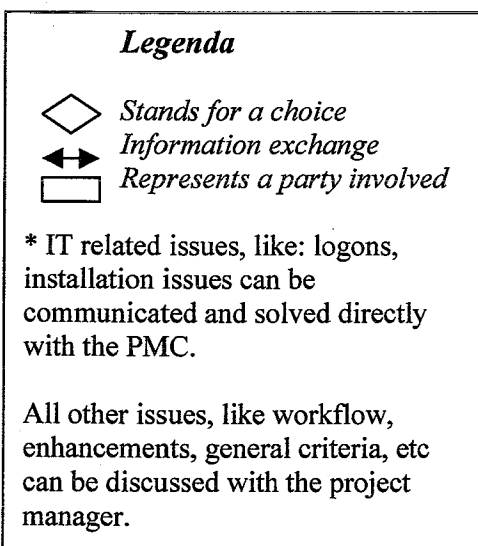
## Appendix VII

### Testing in week 49

Aim of this testing week is to approve a release of SMART version 1.2 by testing the system and report all findings centrally to Eline Beurskens (project manager). Piet Hein and Eline classify all findings in either bugs or new enhancements. The bugs are being solved in this release (1.2). The bugs can only concern the enhancements in the pre-release notes (if the real live situation is different from short description in pre release notes).

In this paper the following questions are addressed: what, who and when is SMART release version 1.2 tested?

*Who is testing it?*



#### *Organisation:*

Kleve: Dagmar Wessjohann is superuser for UDL (during the testing week) and will report on the issues.

Trafford park: Karen Nihill is superuser for Trafford Park (during the testing week) and will report on the issues.

Caivano: Alfredo Sasso is superuser for Caivano (during this testing week) and will report on the issues.

PMC: Piet Hein Goossens is project manager for the IT-side of the project and will address the IT problems with logons and installation issues, etc.

ICFE PIT SC: Antonio Sangil is project manager for the IT side of the project and will address the IT problems and logons and installation issues, etc.

FBE-ESM: Eline Beurskens is user project manager and will co-ordinate and collect the findings of the testing week.

## Appendix VII

### *What is tested?*

The SMART release version 1.2 will be tested in the test-environment in week 49.

- *Workflow*: This needs to be tested through practical examples (on ingredients and packaging) that are defined per SU that can also be used in later versions.  
*Practical example Kleve*: we need to test the complaints (both ingredients, packaging) with financial claim in order to involve all business units.  
*Practical example Trafford Park*: we need to test the complaints (both ingredients, if possible, and packaging) with financial claim in order to involve all business units.  
*Practical example Caivano*: we need to test the complaints (both ingredients and packaging) with financial claim in order to involve all business units.
- *Pre-release notes (enhancements)*  
The 35 enhancements that are solved according to the pre release notes need to be checked one by one during the testing week. The pre release notes are included in an e-mail. Some additional comments are:  
*Number 1*: superusers (Dagmar, Karen and Alfredo) are able to delete complaints.  
*Number 6*: this can't be tested because no one has access as the user smart.  
*Number 16*: this can't be tested because no one has access as the user smart.  
*Number 24*: this is on having more up to date data information on materials, material groups and suppliers in the database. Can you please check if this is the case?
- *(Sub) shortcomings*  
The content of the list of (sub) shortcomings needs to be finalised at the end of this week (49). We can discuss the results during the meeting from December 12. Eline will look at the differences between the agreed list of shortcomings and the actual list. Alfredo, Karen en Dagmar needs to evaluate the content of the list of shortcomings and advice on adjustments in the content of the list.
- *Authorisation: How does it work in the testing week?*  
Kleve: Dagmar is superuser for UDL (Kleve, Hamburg). This means she has access to all three complaint screens, three reports, maintenance (except for supplier, materials, material groups), authority to delete reports. We need to decide who else needs access to the test database in this week (note: this can be different than the users in the production environment but preferably include a representative from all disciplines in the workflow). So logons can be provided before 4/12/00.  
Trafford Park: Karen is superuser for Trafford Park. This means she has access to all three complaint screens, three reports, maintenance (except for supplier, materials, material groups), authority to delete reports. We need to decide who

## Appendix VII

else needs access to the test database in this week (note: this can be different than the users in the production environment but preferably include a representative from all disciplines in the workflow). So logons can be provided before 4/12/00.

Caivano: Alfredo is superuser for Caivano. This means he has access to all three complaint screens, three reports, maintenance (except for supplier, materials, material groups), authority to delete reports. We need to decide who else needs access to the test database in this week (note: this can be different than the users in the production environment but preferably include a representative from all disciplines in the workflow). So logons can be provided before 4/12/00.

- *Helpfile: Is the helpfile user friendly?*  
Is the help file easy to read? Does it provide you with an answer on your questions?  
Does it need adjustments due to enhancements in version 1.2?
- *Is the system user friendly and reliable?*  
Are the correct data in the system?
- *System effective for it's purposes*  
Is the SMART system supporting the data collection process?

### *When is it tested?*

It is tested in week 49. All final-testing results will be collected in the morning of Friday 8 December. Eline can then summarise the findings and discuss with Piet Hein. All superusers, ESM and PMC have an appointment on December 12 to evaluate the results ((sub) shortcomings, bugs and enhancements) of the testing week.

### *Actions:*

What	Who	When
Decide who (else) should have access to the testing system, next week.	DW, ALS, KN	01-12-2000
Suggest and agree on a complaint example using the whole workflow for own SU.	DW, ALS, KN	01-12-2000
Testing in week 49	DW, ALS, KN	Week 49
Report on results from testing.	DW, ALS, KN	08-12-2000
Discuss results	EB, PHG	11-12-2000
Discuss results and agree actions.	EB, PHG, ALS, KN, DW	12-12-2000

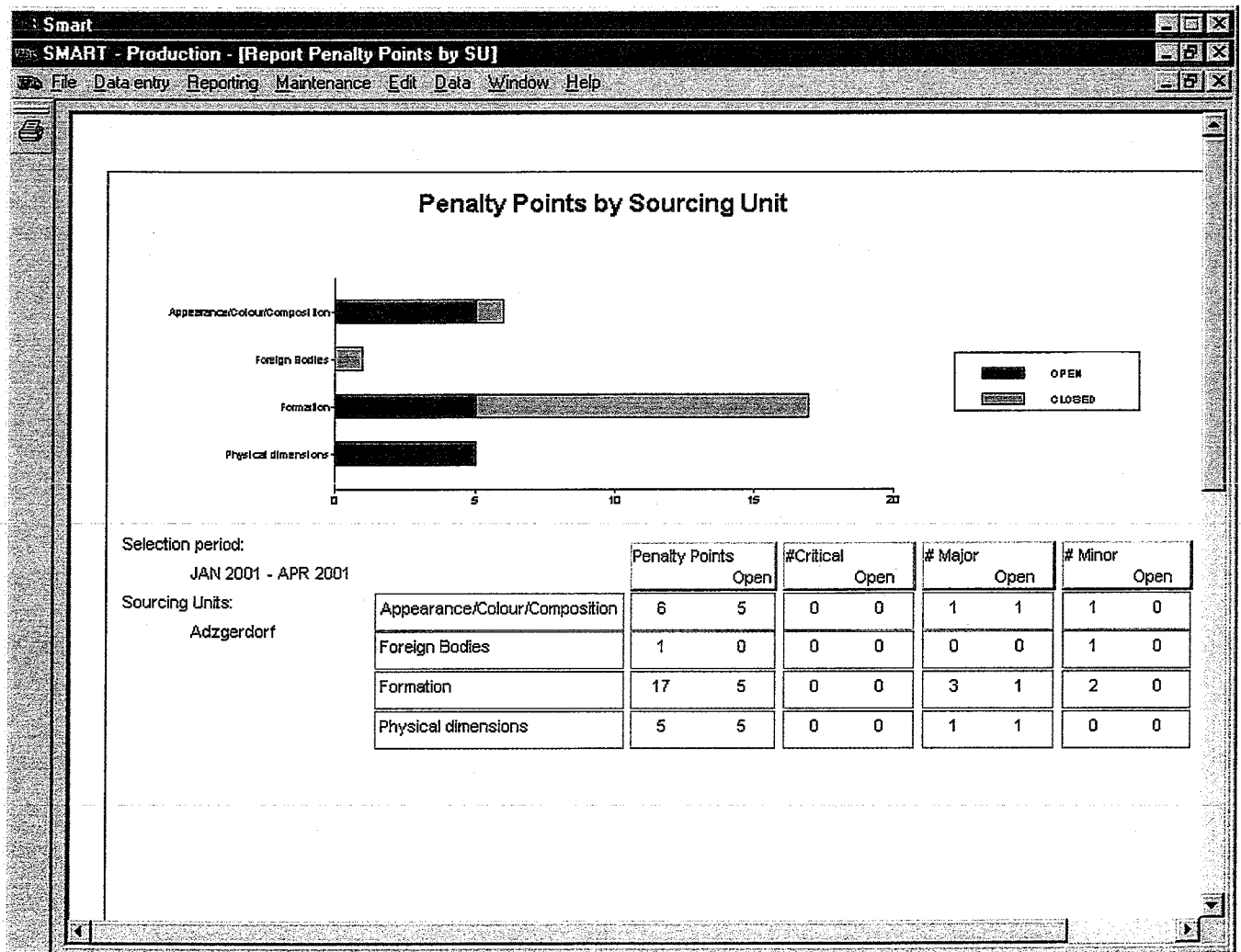


## Appendix VIII

### The current reporting in SMART

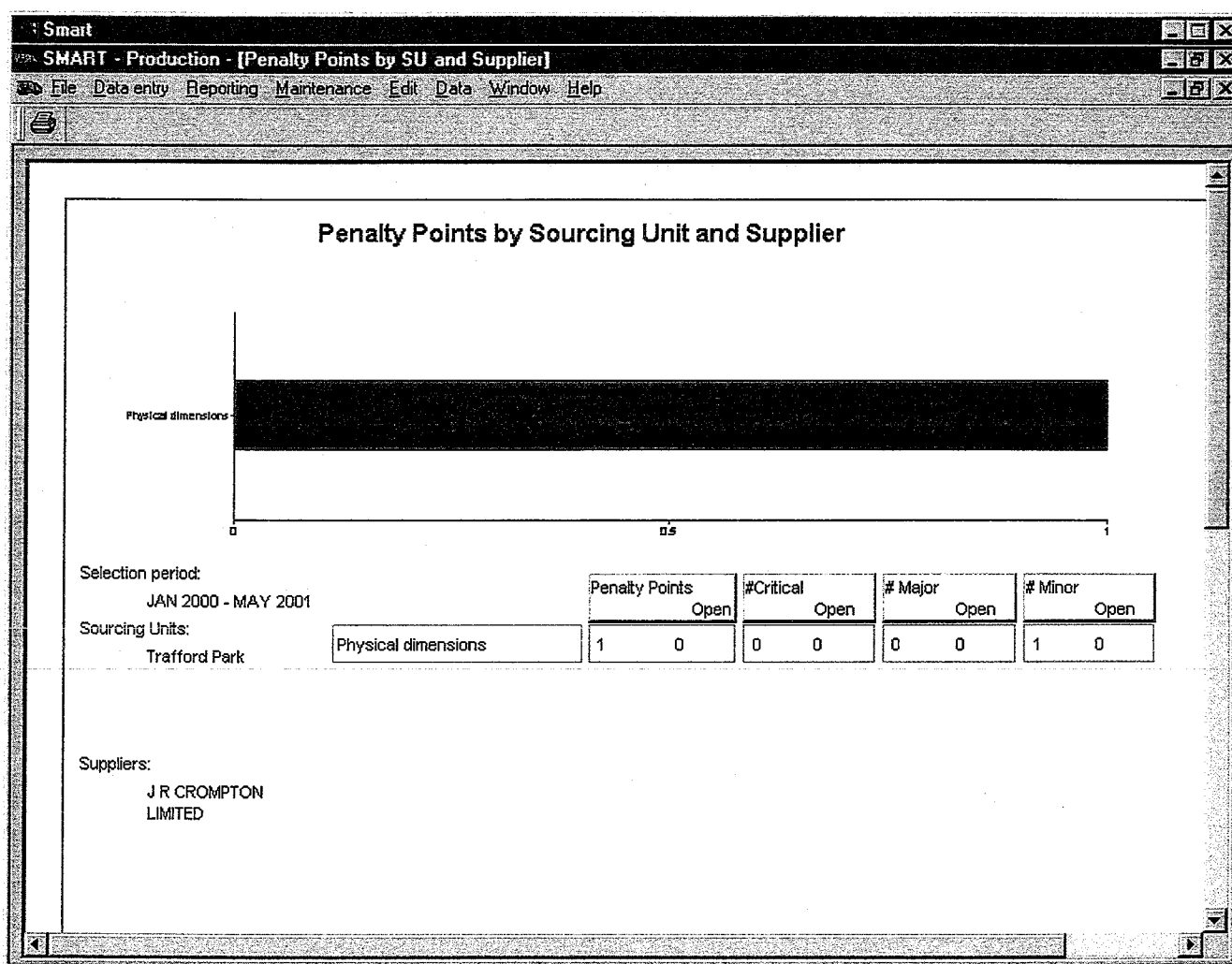
The reporting functionality in SMART is currently limited to the following reports. The report shows the penalty points per sourcing unit. The penalty points are shown per shortcoming over a certain period and selected sourcing unit(s). The colours refer to the status of the complaint, where red refers to open and green refers to a closed complaint.

The reporting shows that formation has been the largest issue for Atzgerdorf (Austria) from January-April.



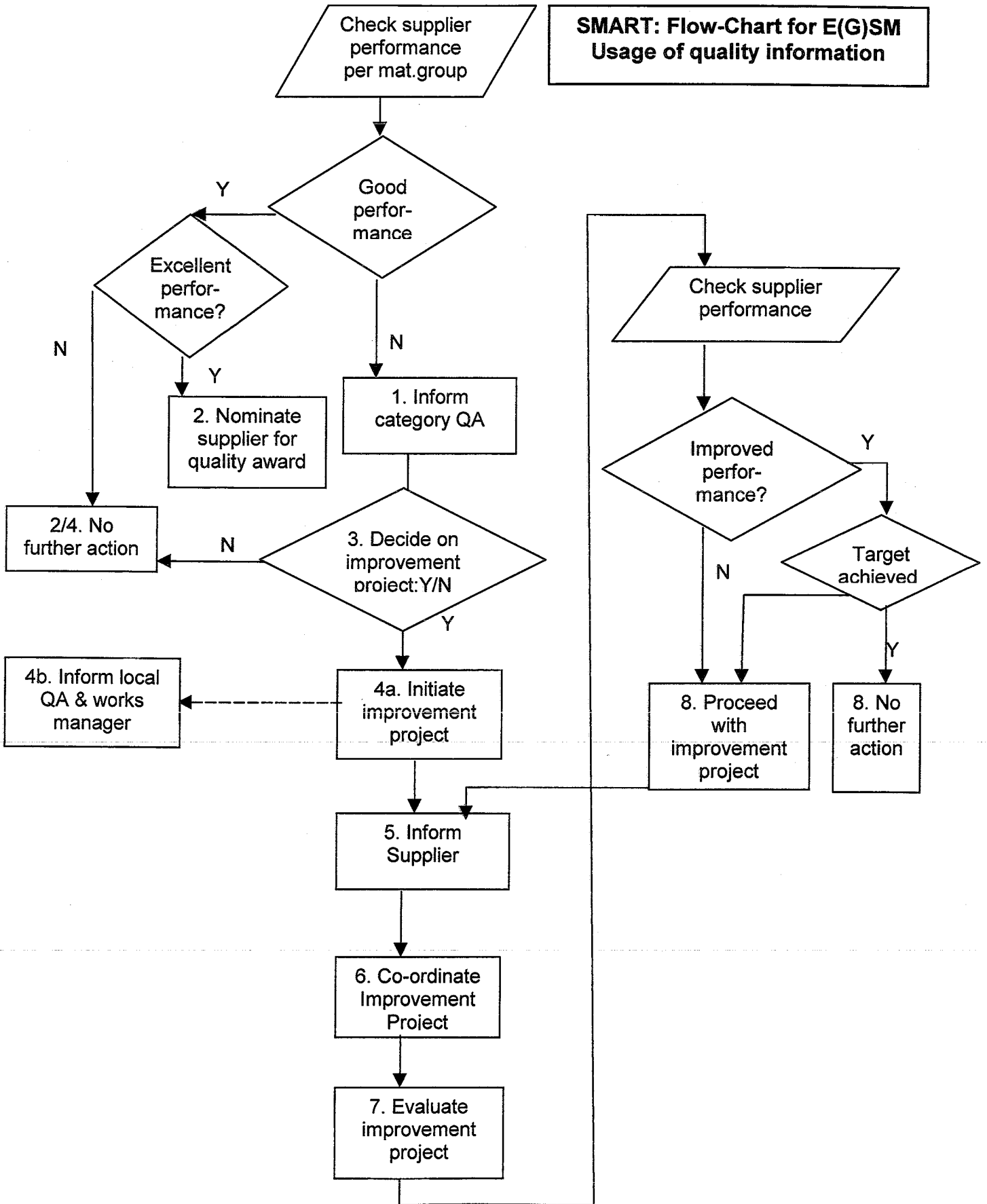
## Appendix VIII

The reporting shows that the selected supplier has one penalty point for Trafford Park in physical dimensions over the period from January-April 2001. It is possible to select more suppliers and sourcing units in this reporting.



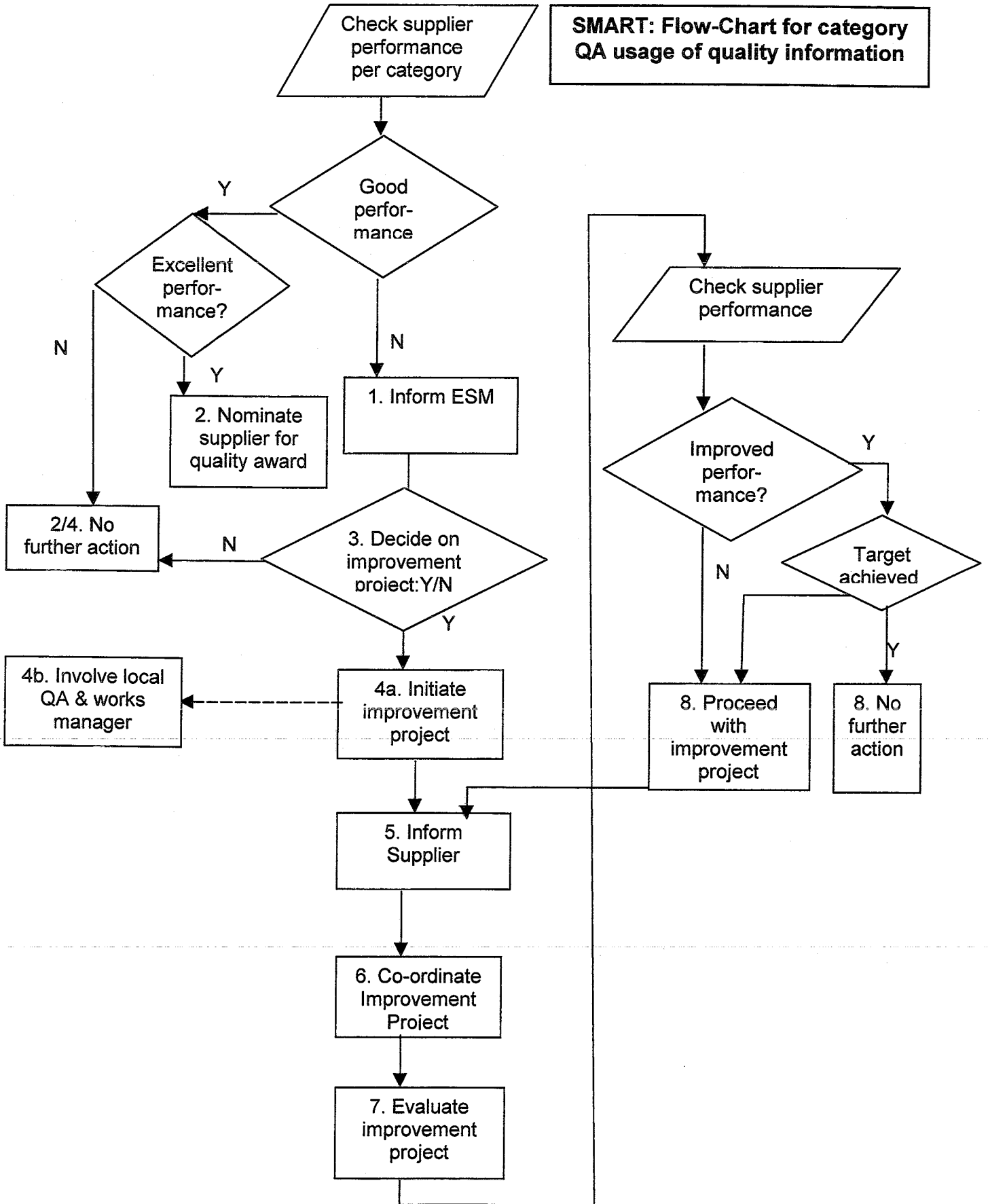
**Appendix IX**

**SMART: Flow-Chart for E(G)SM Usage of quality information**



# Appendix X

**SMART: Flow-Chart for category QA usage of quality information**



## Appendix XI

### SMART consolidation through reporting

This appendix contains five levels of detail that lead to the overall supplier rating. The supplier rating is calculated based on delivered volumes (as explained in chapter 5.5).

The lowest level of detail is on SKU level. The final rating is consolidated to a supplier level. The supplier ratings are of interest for the material/ supply group (step 4, 5), sourcing units (step 1,2) and categories (step 3).

The aggregation of the supplier complaints (input per material per supplier per sourcing unit) is calculated on delivered volumes (SKU).

**Non-performance rating:**  $\frac{\text{Quantity to complain} * \text{penalty points}}{\text{Delivered quantity}} * 1/5 * 100\%$

**Supplier rating:**  $100\% - \text{non-performance rating}$

Note:

The minimum for a supplier rating is 0%.

The effect of calculating the supplier rating with the original penalty points (1, 5, 10) sometimes leads to high (over 100%) non-performance ratings. The factor 1/5 is added in order to "normalise" the effect of the penalty points to 1/5, 1 and 2. Table 1 shows some practical examples that support the factor: 1/5, which basically restricts the effect of the penalty points in order to calculate a reasonable score.

Months	Sour- cing unit	Mate- rial	Sup plier	Critic ality	Pe- nalty points	Qty to com- plain	Deli- vered qty	Non perfor- manc e Rating	Sup- plier rating	Non perfor- mance rating *1/ 5	Supplier rating 5
april	traf	TRAF 1013 990	217 452 242	major	5	51000	98000	260	0	52	48
march	leioa	LEIO 5819 0	046 102 763	Minor	1	1022	8000	13	87	3	97
march	leioa	LEIO 5004 8	046 102 112	minor	1	106500	43000	248	0	50	50
march	leioa	LEIO 5410 9		major	5	162000	20000 0	81	19	16	84

## Appendix XI

---

march	leioa	LEIO	056	major .	5	345600	12000	29	71	6	94
		5410	292				00				
		5	993								
			5								

---

## Appendix XI

**Step 1:** Data output for supplier X, sourcing unit A, material 3. The scores are calculated based on the data in table 1.

Example for the non performance rating in January:

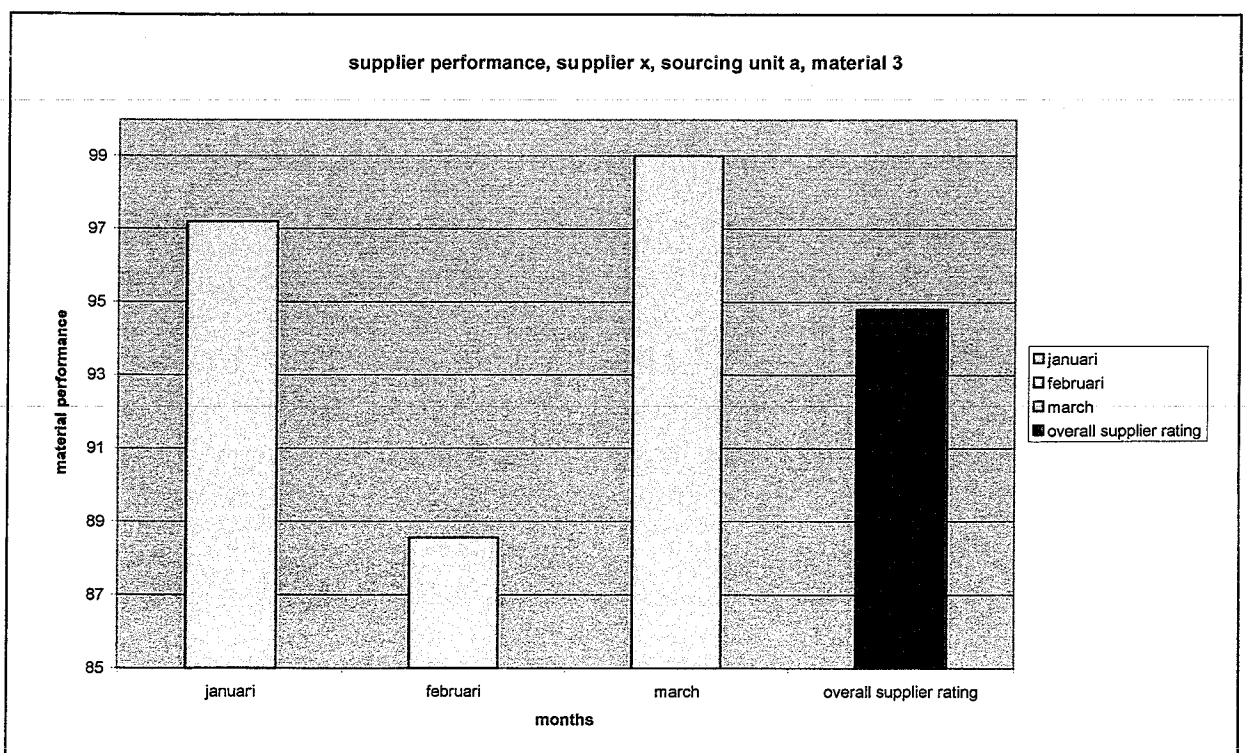
$$\frac{(30*1) + (40*1)}{500} * 100\% * 1/5 = 3$$

Supplier rating in January = 100% - 3% = 97%

An example for material 3 is provided. The same calculation is executed in the background for material 1 and 2.

supplier x, sourcing unit a, material 3	qty to complain in month	Seriousness	delivered in month	Non-performance rating per month	supplier rating per month
januari	30	1	500		
januari	40	1	500	3	97
februari	80	5	700	11	89
march	10	1	800	1	99
march	20	1	800		
march	10	1	800		
overall supplier rating	520		2000	5,2	95

The following figure shows the chart representing the table.



## Appendix XI

**Step 2:** The supplier rating for supplier X in sourcing unit A is calculated.  
 Example for the non performance rating for material 1:

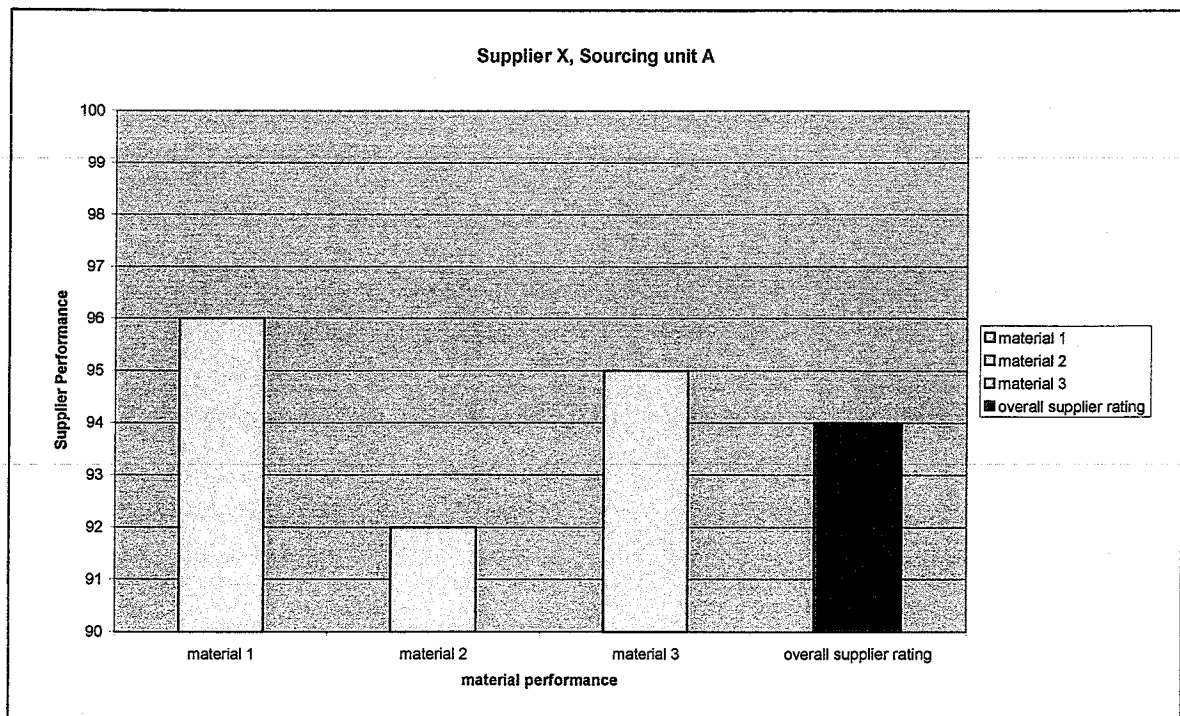
$$\frac{70}{400} * 100\% * 1/5 = 4$$

Supplier rating in January = 100% - 4% = 96%

An example for material 1 is provided. The same calculation is executed in the background for sourcing unit B& C.

supplier x, sourcing unit a	qty to complain from jan-march * seriousness	delivered qty from jan-march	rating jan-march	supplier rating jan-march
material 1	70	400	4	96
material 2	750	2000	8	92
material 3	520	2000	5	95
overall supplier rating	1340	4400	6	94

The following figure shows the chart representing the table.





## Appendix XI

**Step 3:** The overall supplier rating for supplier X over all sourcing units is calculated. Example for the non performance rating for sourcing unit B:

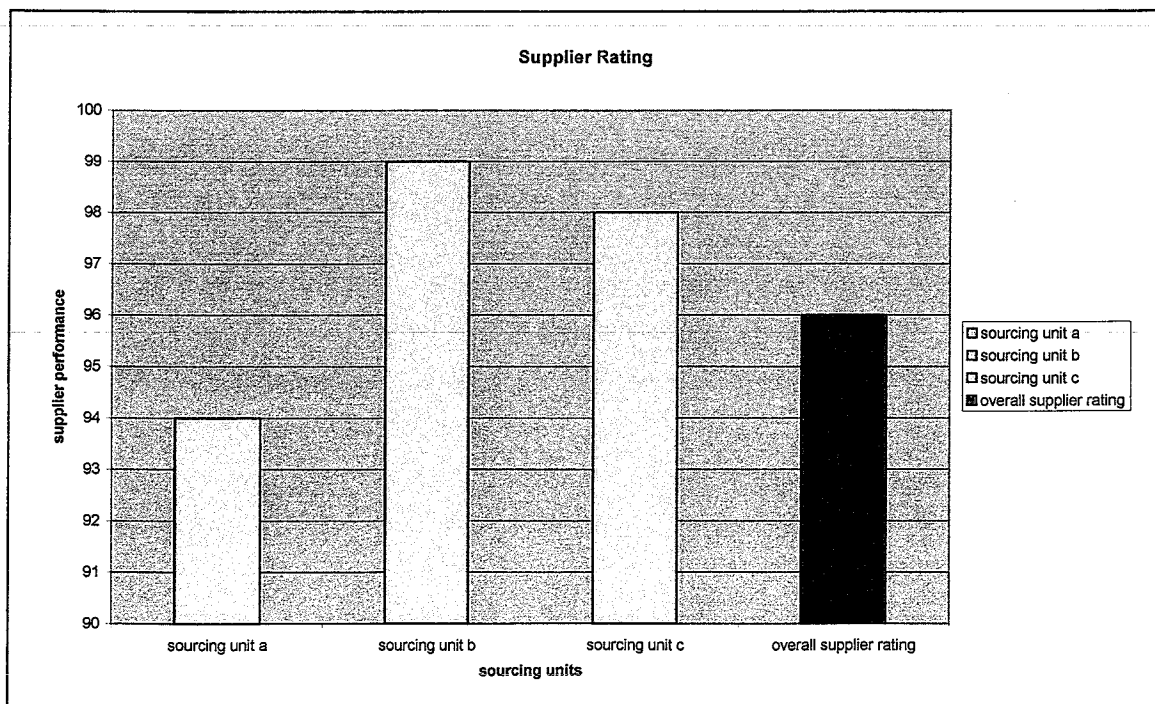
$$\frac{50}{1000} * 100\% * 1/5 = 1$$

Supplier rating in January = 100% - 1% = 99%

An example for sourcing unit B is provided. The same calculation is executed in the background for supplier Y en Z.

supplier x	qty to complain from jan-march *seriousness	delivered qty from jan-march	rating jan-march	supplier rating jan-march
sourcing unit a	1340	4400	6	94
sourcing unit b	50	1000	1	99
sourcing unit c	200	2000	2	98
overall supplier rating	1590	7400	4	96

The following figure shows the chart representing the table.



## Appendix XI

**Step 4:** The overall supplier rating for a material group over all suppliers is calculated. Example for the non performance rating for supplier y:

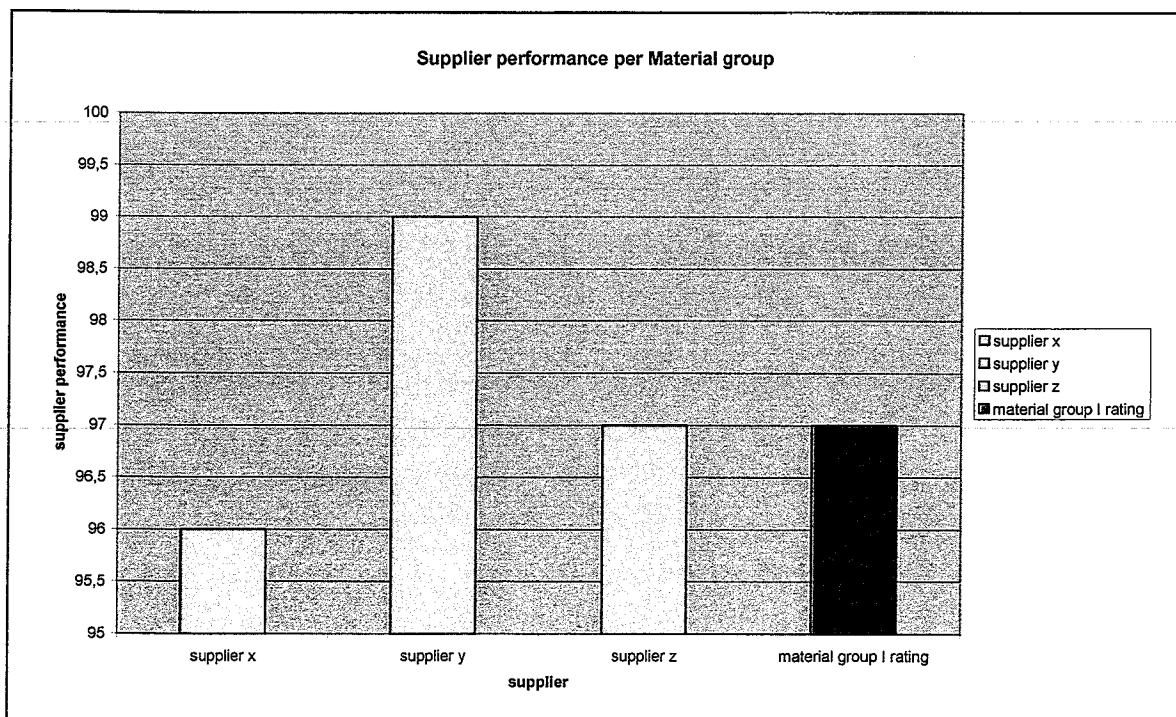
$$\frac{200}{4000} * 100\% * 1/5 = 1$$

Supplier rating in January = 100% - 1% = 99%

An example for supplier y is provided. The same calculation is executed in the background for other material groups.

Material Group I	qty to complain from jan-march* seriousness	delivered qty	rating jan-march	supplier rating jan-march
supplier x	1590	7400	4	96
supplier y	200	4000	1	99
supplier z	1500	10000	3	97
material group I rating	3290	21400	3	97

The following figure shows the chart representing the table.



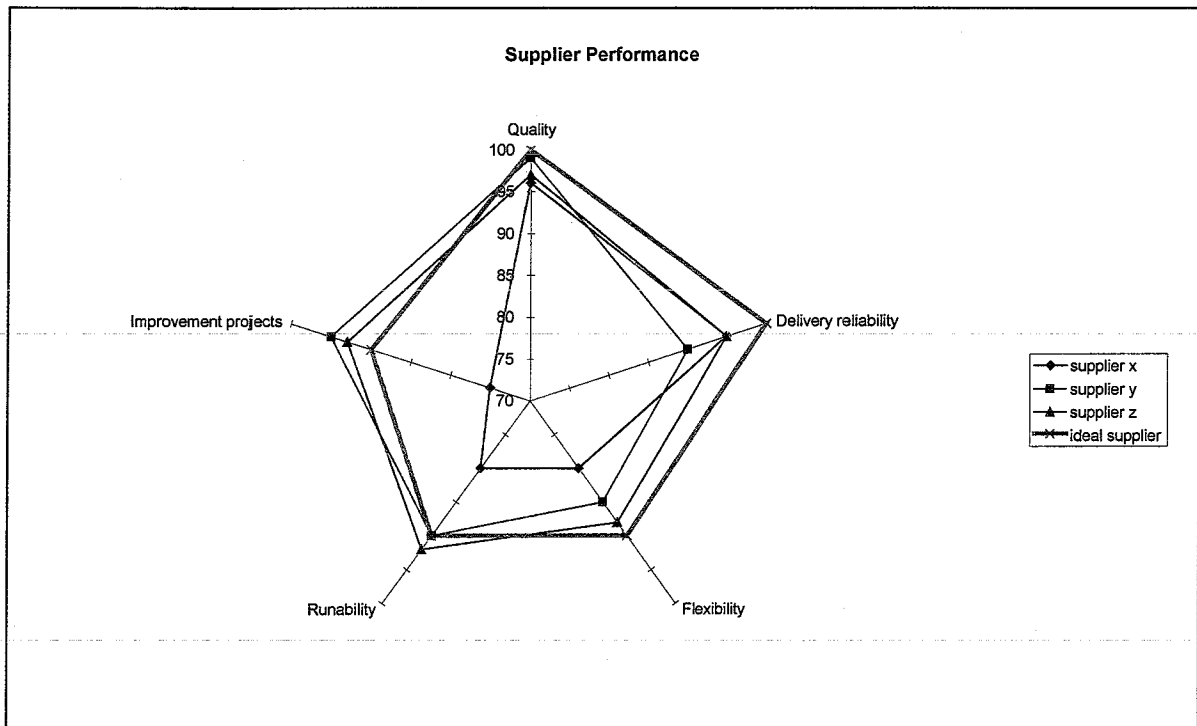
## Appendix XI

**Step 5:** The overall supplier rating for a supply/ material group over all suppliers is calculated.

The scores are based on the individual roll ups. For quality for example the scores are based on the consolidation as described in step 1-4.

Supplier	Quality	Delivery reliability	Flexibility	Runability	Improvement projects
supplier x	96	95	80	80	75
supplier y	99	90	85	90	95
supplier z	97	95	88	92	93
ideal supplier	100	100	90	90	90

The following figure shows the chart representing the table.



## Appendix XII

### Criteria for the supplier audit

The following criteria were derived from the internal interviewing (criteria under *Innovativeness*), the literature study and the external analysis (criteria in the table). These criteria determine the supplier's ability to perform and are not likely to change (dramatically) within the timespan upto three years (minimum frequency of an audit).

#### *Innovativeness*

1. priority on innovation: measure through R&D budgets and how much % budget is on Unilever's core business (first mover advantage)
2. is there a R&D director in the board
3. what percentage of the profit (over 3/4/5 years) comes from innovations.
- ¾. What is the time to market of the supplier's innovations.
4. the global or regional spread of the R&D centre. It I better to have a few concentrated R&D centres than too many over the whole world.
4. how many ideas are put into practice, how many launches are still in use three years after the launch (determines the success rate)
5. # patents that focus on Unilever's core business and related the # exclusivity agreements.

Versus the # patents on blue sky research

5. education: links with universities, internal training

R& D budget	supplier	high budget available	Percentage close to 1	R&D budget versus turn-over
capability R&D department	supplier	very experienced	high number of product introductions	# of product introductions per year
investment in education/ training	supplier	high investment	high number of trainings	# of trainings per employee per year
investment in technical equipment	supplier	high investment	high %	% turnover invested in new technical equipment
Global infrastructure	supplier	same as customer		global, european, country coverage
capability IT systems	supplier	EDI, e-procurement		linked systems:( in terms of ordering, payment, evaluation)
Environmental policy	supplier	following the trend		how far is the supplier in developing reverse logistics strategies?
maturity of the logistic system	supplier	supplier maturity >= customer maturity		on-site-stock, bar-code systems, kanban systems, ship to line, SMI (very mature) ship to stock (medium) purchase order/ call-offs

## Appendix XIII

### Criteria defined as “good to have”

The following criteria are defined as “good to have” (versus “audit criteria” and “must have”). These criteria don’t use available and accurate data and don’t directly link into the ESM and UBFE objectives.

Cost of non-quality	sku	Zero	# Euro	claims (Euro) * number of rejects/ total number of deliveries
case-fill rate	sku	100% in full	% in full	total case items received on time/ total case items ordered
line-fill rate	sku	100% line-fill	% in full	total line items received on time/ total line items ordered
cost of non-logistics performance	sku	Zero	Zero	claims (Euro) * number of deliveries concerned/ total number of deliveries
service/ technology support	supplier	high support	100%	# times appropriate support/ # times support requested
Management commitment	supplier	high commitment		# times the management shows up/ # total number of meetings (per period)
Communication	supplier	good communication	100%	Reachability from supplier # attempts/ # contact over a certain period
number of corrective actions	sku		% corrective actions	number of corrective actions/ total number of rejects
responsiveness	sku	minimise the number of days	# days	number of days before supplier offers a solution
No invoice errors	SKU	Minimise the invoice errors	# Euro	Value from differences in invoices, and delivery dockets
responsiveness (flexibility)	sku	100% flexible	Percentage >=1	# times that the supplier can meet the (rush) requests/ total number of requests