EVALUATION GUIDELINES - Take-home examination

EXC 21221
Strategic Management Accounting

Department of Accounting, Auditing and Business Analytics

Start date:	02.05.2016	Time 12:00
Finish date:	04.05.2016	Time 12:00

For more information about formalities, see examination paper.

Question 1 (20%)

a)

We can explain the causal relations by starting with the last step in the cause-and-effect relationships and flip backwards through the chain:

Controlling activities: Management must define its measures from reported variances between ideal and actual performance, within the areas that are critical to the company. This may help the company to allocate management attention and competence to areas where there is room for (and a need for) improvement. Managing on a KPI level is different from traditional financial controlling because we focus on the value drivers instead of analyzing the result of the value creation as such. This is only possible to achieve with an efficient scorecard.

Scorecard: The scorecard shows how the company has measured its performance within the areas considered of utmost necessity to gain control over, in order to reach an overall and long-term strategy. The scorecard will show measured performance compared to quantifiable targets, and an evaluation of this performance in the form of a score and/or a color code, in addition to a trend indicator.
This is only possible to achieve with well-functioning KPIs.

KPIs: A Key Performance Indicator (KPI) expresses how a company performs within an area considered critical for the company to gain control over, in order to reach its strategic goals. The KPIs are quantitative because we wish to express the measurement in terms of figures, such as money, time and percentages. A KPI will only be efficient when it actually measures what we want to achieve, which means that it must have a high degree of validity and reliability, and distinguish between lead and lag indicators.
This is only possible to achieve if we have a well-designed strategy map.

Strategy map: A strategy map is a graphical presentation of the relations between the various critical success factors, which helps us to draw the way to overall success. The strategy map visualizes the fact that financial success is a consequence of success with the customer and market perspective (for instance customer satisfaction) and that the success is a consequence of efficient internal processes (such as for instance ability to deliver on time). Success within the internal processes is a consequence of focus and attention brought to infrastructural areas (such as for instance the development of unique competence).
This is not possible to achieve if we do not have a knowledge about the critical success factors.

Critical success factor: A critical success factor is something that needs to happen in order for the company to succeed with an overall target. These factors are necessary conditions, but not always sufficient alone, for the strategies to give the intended results. What we consider critical depends on the strategy and the corresponding ambitions.
It is not possible to define critical success factors without first defining the company's targets.

Target: A target expresses something we want to happen in the future. Targets shall be defined in a SMART way (specific measurable, achievable, realistic and time-bound) and before we choose the KPI parameters, we need to make the targets operational by expressing what we want to achieve, in quantitative terms.
This is not possible without a developed strategy.

Strategy development: A company needs overall directions for how its organizational units, their managers and employees shall prioritize. Not all strategy can (and shall?) be planned in detail and a certain element of dynamics must be present to make it possible to change priorities along the way and open up for possibilities that may emerge.

b)

In 1984, Birger Wernerfelt wrote an influential article, *The Resource-based view of the Firm*, where he wrote that it is the company's unique resources that are crucial to value creation. Jay B. Barney followed seven years later with what has become known as the VRIN framework.
As opposed to The Positioning School that explains competitive advantages from an external market-oriented perspective, the Resource Based View explained these advantages from its internal resources.

According to Barney, competitive advantages are created as result of having:

- Valuable resources
- Rare resources
- Resources that are difficult to imitate
- Resources that are not easily substituted by other resources

The goal will then be to create sustainable competitive advantages, but we will often see that what a company perceives as unique resources can and will often be copied or imitated after a short time. If the resources are business specific and difficult to move out of the organization (for instance when key personnel leaves), we may secure long-term competitive advantages.
It is only when resources neither can be copied nor replaced by new competing products that we maintain our long-term competitive position.

The purpose of the six core resources mentioned in BI's strategy plan is to create such sustainable competitive advantages for the business school.

c)

We must seek to find parameters that actually measure what we want to achieve. The KPIs must be relevant and measure performance in areas, which is valid to us, and KPIs must be reliable, so we also can get data that measures a trend over time.

Here is a list of areas where we can seek to find efficient KPIs:

1. To measure *how student oriented BI is* we can ask our students how their actual perception of this is and if we actually put students first, as we say we do. Measuring overall student satisfaction may answer this question, but we may feel the need to split the measurement areas into key success areas such as learning efficiency, administrative services, library services, student support and more.

2. Measuring our employees' *academic freedom and integrity* and how we honor academic value may prove more difficult, and it is probably necessary to make this target less abstract before we start looking for something that may indicate our performance in this area. We conduct an annual work environment survey where all employees are asked to evaluate how they perceive their own work situation. Questions pertaining to employees' freedom and integrity should be incorporated into this survey.

3. Ethical values and compliance to code of conduct are examples of areas that are difficult to measure. Even with a comprehensive internal control system and structured internal auditing procedures, we see that companies fail in this area. Ideally, such systems should report status on ethical conduct, but this requires a detailed follow-up of all the daily activities and routines of the employees and managers, which can be costly and have negative side effects.

4. A measurement of our *excellence in research, teaching and support services* and how we nurture a culture of continuous improvement is probably easier to undertake.
    a. The best research is published in academic journals of various rank and we can measure the number of articles accepted by the editors of these journals.
    b. The learning outcome can be measured by the exam results of the students and their progression during the various programs. The assurance of learning is measured for each program by picking three courses where we check that the learning objectives are tested at the exam. We can then evaluate to what extent the students actually have reached these targets.
    c. Also in the area of student support we can for instance measure response time and frequently asked question are answered.

Question 2 (20%)

a)

Total budgeted sales

	463	563	663	Total
Number of units (pairs)	4 235	5 450	688	10 373
Average price per units	2 460,00	4 042,50	6 678,00	
Total budgeted sales	**10 418 100**	**22 031 625**	**4 594 464**	**37 044 189**

Monthly sales budget

January, 10%	3 704 419
February, 9%	3 333 977
March, 9 %	3 333 977
April, 7%	2 593 093
May, 7%	2 593 033
June, 6%	2 222 651
July, 6%	2 222 651
August, 7%	2 593 093
September, 8%	2 963 535
October, 9%	3 333 977
November, 10%	3 704 419
December, 12%	4 445 303
Total, 100%	37 044 189

b)

Budgeted production 2016

	463	563	663
Op/balance 1.1.2016	180	356	108
Cl/balance 31.12.2016	0	0	0
Sales budget 2016	4 235	5 450	688
Change in inventory 2016	-180	-356	-108
Production volume 2016	**4 055**	**5 094**	**580**

Budgeted direct material costs 2016

	463	563	663	Total
Produced units (pairs)	4 055	5 094	580	9 729
Direct material per unit	905,00	1 740,00	2 742,00	
Total direct material	**3 669 775**	**8 863 560**	**1 590 360**	**14 123 695**

Budgeted direct labor costs 2016

	463	563	663	Total
Produced units (pairs)	4 055	5 094	580	9 729
Direct labor per unit	465,50	579,50	807,50	
Total direct labor	**1 887 603**	**2 951 973**	**468 350**	**5 307 926**
Of which salaries	1 477 090	2 309 983	366 494	4 153 566
Of which 12.0% holiday pay	177 251	277 198	43 979	498 428
Of which 14.1% social sec	233 262	364 792	57 877	655 931

c)

Calculating direct costs per unit

	463	563	663	
Direct material	3 669 775	8 863 560	1 590 360	
Direct labor	1 887 603	2 951 973	468 350	
Total direct costs	5 557 378	11 815 533	2 058 710	19 431 621
No. of produced units	4 055	5 094	580	
Total direct costs per unit	**1 370.50**	**2 319.50**	**3 549.50**	

Calculation of inventory values 1.1.2016

	463	563	663	Total
Total units in stock	180	356	108	644
Total direct costs per unit	1 370.50	2 319.50	3 549.50	
Inventory value	**246 690**	**825 742**	**383 346**	**1 455 778**
			Value of components	1 044 222
			Value of inventory	2 500 000

The inventory 31st December 2016 will therefore consist of a basic stock of components with same value as in the beginning of the year, 1 044 222, and net change of inventory will be 2 500 000 less 1 044 222, which equals 1 455 778 (which is the value of the finished goods in the beginning of the year).

d)

Master budget 2016 (simple report)

Sales income	37 044 189
Direct material	14 123 695
Direct labor	5 307 926
Change in inventory (cost)	1 455 778
Indirect costs	14 887 000
Budgeted profit	1 269 791
Payable taxes, 25%	317 448
Profit after taxes	**952 343**

e)

Budgeted income statement 2016 January-June

	January	February	March	April	May	June
Sales income	3 704 419	3 333 977	3 333 977	2 593 093	2 593 093	2 222 651
Direct material	1 412 370	1 271 133	1 271 133	988 659	988 659	847 422
Direct labor, salaries	415 357	373 821	373 821	290 750	290 750	249 214
Direct labor, holiday pay	49 843	44 859	44 859	34 890	34 890	29 906
Direct labor, social sec.	65 593	59 034	59 034	45 915	45 915	39 356
Change in inventory	121 315	121 315	121 315	121 315	121 315	121 315
Contribution margin	**1 639 942**	**1 463 816**	**1 463 816**	**1 111 565**	**1 111 565**	**935 439**
Indirect labor, salaries	703 617	703 617	703 617	703 617	703 617	703 617
Indirect labor, holiday pay	84 434	84 434	84 434	84 434	84 434	84 434
Indirect labor, social sec.	111 115	111 115	111 115	111 115	111 115	111 115
Depreciation	50 250	50 250	50 250	50 250	50 250	50 250
Rent	30 333	30 333	30 333	30 333	30 333	30 333
Electricity	30 000	30 000	30 000	30 000	30 000	30 000
Telephone/data lines	11 833	11 833	11 833	11 833	11 833	11 833
Company car costs	32 583	32 583	32 583	32 583	32 583	32 583
Travels	42 667	42 667	42 667	42 667	42 667	42 667
Commission to agents	47 833	47 833	47 833	47 833	47 833	47 833
Other operating expenses	75 333	75 333	75 333	75 333	75 333	75 333
Operating profit	**419 942**	**243 816**	**243 816**	**-108 435**	**-108 435**	**-284 561**
Financial revenues	+1 917	+1 917	+1 917	+1 917	+1 917	+1 917
Financial costs	-22 500	-22 500	-22 500	-22 500	-22 500	-22 500
Profit before taxes	**399 359**	**223 233**	**223 233**	**-87 852**	**-87 852**	**-263 978**
Payable corporate tax	-99 840	-55 808	-55 808	+21 963	+21 963	-65 995
Profit after taxes	**299 519**	**167 425**	**167 425**	**-65 889**	**-65 889**	**-197 983**

Budgeted income statement 2016 July-December, incl. total

	July	August	September	October	November	December	Total 2016
Sales income	2 222 651	2 593 093	2 963 535	3 333 977	3 704 419	4 445 303	**37 044 189**
Direct material	847 422	988 659	1 129 896	1 271 133	1 412 370	1 694 843	**14 123 695**
Direct labor, salaries	249 214	290 750	332 285	373 821	415 357	498 428	**4 153 567**
Direct labor, holiday pay	29 906	34 890	39 874	44 859	49 843	59 811	**498 428**
Direct labor, social sec.	39 356	45 915	52 475	59 034	65 593	78 712	**655 931**
Change in inventory	121 315	121 315	121 315	121 315	121 315	121 315	**1 455 778**
Contribution margin	**935 439**	**1 111 565**	**1 287 691**	**1 463 816**	**1 639 942**	**1 992 193**	**16 156 790**
Indirect labor, salaries	703 617	703 617	703 617	703 617	703 617	703 617	**8 443 408**
Indirect labor, holiday pay	84 434	84 434	84 434	84 434	84 434	84 434	**1 013 209**
Indirect labor, social sec.	111 115	111 115	111 115	111 115	111 115	111 115	**1 333 383**
Depreciation	50 250	50 250	50 250	50 250	50 250	50 250	**603 000**
Rent	30 333	30 333	30 333	30 333	30 333	30 333	**364 000**
Electricity	30 000	30 000	30 000	30 000	30 000	30 000	**360 000**
Telephone/data lines	11 833	11 833	11 833	11 833	11 833	11 833	**142 000**
Company car costs	32 583	32 583	32 583	32 583	32 583	32 583	**391 000**
Travels	42 667	42 667	42 667	42 667	42 667	42 667	**512 000**
Commission to agents	47 833	47 833	47 833	47 833	47 833	47 833	**574 000**
Other operating expenses	75 333	75 333	75 333	75 333	75 333	75 333	**904 000**
Operating profit	**-284 561**	**-108 435**	**67 691**	**243 816**	**419 942**	**772 193**	**1 516 790**
Financial revenues	+1 917	+1 917	+1 917	+1 917	+1 917	+1 917	**+23 000**
Financial costs	-22 500	-22 500	-22 500	-22 500	-22 500	-22 500	**-270 000**
Profit before taxes	**-263 978**	**-87 852**	**47 108**	**223 233**	**399 359**	**751 610**	**1 269 790**
Payable corporate tax	-65 995	+21 963	11 777	-55 808	-99 840	-187 903	**-317 448**
Profit after taxes	**-197 983**	**-65 889**	**35 331**	**167 425**	**299 519**	**563 707**	**952 343**

Question 3 (20%)

a)

	Basis for output VAT	25% output VAT	Basis for input VAT	25% input VAT	Payable VAT
January	1 852 210	463 052	1 559 870	389 967	73 085
February	1 666 989	416 747	1 418 633	354 658	62 089
March	1 666 989	416 747	1 418 633	354 658	62 089
April	1 296 547	324 137	1 136 159	284 040	40 097
May	1 296 547	324 137	1 136 159	284 040	40 097
June	1 111 326	277 831	994 922	248 730	29 101
July	1 111 326	277 831	994 922	248 730	29 101
August	1 296 547	324 137	1 136 159	284 040	40 097
September	1 481 768	370 442	1 277 396	319 349	51 093
October	1 666 989	416 747	1 418 633	354 658	62 089
November	1 852 210	463 052	1 559 870	389 967	73 085
December	2 222 652	555 663	1 842 343	460 586	95 077

To be paid in April 2016: 135 174
To be paid in June 2016: 102 186
To be paid in August 2016: 69 198
To be paid in October 2016 69 198
To be paid in December 2016: 113 182
To be paid in February 2017: 168 162

b)

Cash-flow budget January-June 2016

Op/bal, cash at our disposal	2 800 000	376 609	147 903	756 748	1 305 723	1 762 789
	January	**February**	**March**	**April**	**May**	**June**
From sales in 2015	4 200 000	2 000 000	0	0	0	0
From sales in 2016 ex VAT	0	1 852 209	3 519 198	3 333 977	2 963 535	2 593 093
From sales in 2016, VAT part	0	231 526	439 900	416 747	370 442	324 137
Financial revenues	0	0	0	0	0	0
Reduced short-term claims	0	0	0	0	0	0
Total incoming payments	**4 200 000**	**4 083 736**	**3 959 098**	**3 750 724**	**3 333 977**	**2 917 230**
	January	**February**	**March**	**April**	**May**	**June**
From purchases in 2015	4 998 000	1 000 000	0	0	0	0
Direct material (*)	0	1 765 462	1 588 916	1 588 916	1 235 823	1 235 823
Direct labor, salary part	415 357	373 821	373 821	290 750	290 750	249 214
Indirect labor, salary part	703 617	703 617	703 617	703 617	703 617	703 617
Social security costs	350 000	0	346 857	0	327 180	0
Holiday pay	0	0	0	0	0	1 520 000
Rent (*)	113 750	0	0	113 750	0	0
Electricity (*)	0	37 500	37 500	37 500	37 500	37 500
Telephone/data lines (*)	0	14 792	14 792	14 792	14 792	14 792
Company car costs	0	32 583	32 583	32 583	32 583	32 583
Travels	42 667	42 667	42 667	42 667	42 667	42 667
Commission to agents	0	47 833	47 833	47 833	47 833	47 833
Other operating costs (*)	0	94 167	94 167	94 167	94 167	94 167
Financial costs	0	0	67 500	0	0	67 500
Payable corporate tax	0	0	0	0	0	0
Paid short-term liabilities	0	0	0	0	0	0
Paid mortgage loan	0	50 000	0	0	50 000	0
Paid other long-term loan	0	0	0	100 000	0	0
Paid VAT	0	150 000	0	135 174	0	102 186
Total outgoing payments	**6 623 391**	**4 312 442**	**3 350 253**	**3 201 748**	**2 876 911**	**4 147 882**
Net cash-flow	**-2 423 391**	**-228 706**	**608 845**	**548 976**	**457 066**	**-1 230 652**
Cl/bal, cash at our disposal	**376 609**	**147 903**	**756 748**	**1 305 723**	**1 762 789**	**532 137**

Cash-flow budget July-December 2016

Op/bal, cash at our disposal	532 137	538 091	596 190	388 777	472 083	500 264
	July	**August**	**September**	**October**	**November**	**December**
From sales in 2015	0	0	0	0	0	0
From sales in 2016 ex VAT	2 407 872	2 222 651	2 407 872	2 778 314	3 148 756	3 519 198
From sales in 2016, VAT part	300 984	277 831	300 984	347 289	393 595	439 900
Financial revenues	0	0	0	0	0	23 000
Reduced short-term claims	0	0	0	0	0	100 000
Total incoming payments	**2 708 856**	**2 500 483**	**2 708 856**	**3 125 603**	**3 542 351**	**4 082 098**
	July	**August**	**September**	**October**	**November**	**December**
From purchases in 2015	0	0	0	0	0	0
Direct material (*)	1 059 277	1 059 277	1 235 823	1 412 370	1 588 916	1 765 462
Direct labor, salary part	249 214	290 750	332 285	373 821	415 357	498 428
Indirect labor, salary part	703 617	703 617	703 617	703 617	703 617	703 617
Social security costs	307 502	0	307 502	0	333 739	0
Holiday pay	0	0	0	0	0	0
Rent (*)	113 750	0	0	113 750	0	0
Electricity (*)	37 500	37 500	37 500	37 500	37 500	37 500
Telephone/data lines (*)	14 792	14 792	14 792	14 792	14 792	14 792
Company car costs	32 583	32 583	32 583	32 583	32 583	32 583
Travels	42 667	42 667	42 667	42 667	42 667	42 667
Commission to agents	47 833	47 833	47 833	47 833	47 833	47 833
Other operating costs (*)	94 167	94 167	94 167	94 167	94 167	94 167
Financial costs	0	0	67 500	0	0	67 500
Payable corporate tax	0	0	0	0	153 000	0
Paid short-term liabilities	0	0	0	0	0	177 000
Paid mortgage loan	0	50 000	0	0	50 000	0
Paid other long-term loan	0	0	0	100 000	0	0
Paid VAT	0	69 198	0	69 198	0	113 182
Total outgoing payments	**2 702 902**	**2 442 384**	**2 916 269**	**3 042 297**	**3 514 170**	**3 594 731**
Net cash-flow	**5 955**	**58 099**	**-207 413**	**83 306**	**28 180**	**487 367**
Cl/bal, cash at our disposal	**538 091**	**596 190**	**388 777**	**472 083**	**500 264**	**987 630**

(*)VAT deductible costs

c)

Budgeted balance sheet per 31.12.2016

Assets	**01.01.2016**	**31.12.2016**	
Intangible assets	500 000	460 000	Depreciated by 40 000
Land	1 400 000	1 400 000	Non-depreciable, no change
Buildings	8 660 000	8 340 000	Depreciated by 320 000
Machines	2 200 000	2 013 000	Depreciated by 187 000
Company cars	1 265 000	1 209 000	Depreciated by 56 000
Inventory	2 500 000	1 044 222	Inventory of components for production
Accounts Receivable	6 200 000	7 084 701	Dec sales + half of Nov sales included 12.5% VAT
Other short-term claims	400 000	300 000	Reduced by 100 000
Bank deposits	3 400 000	1 587 630	Cash-flow budget, incl. 600 000 on locked accounts
Total	**26 525 000**	**23 438 554**	

Equity and liabilities	**01.01.2016**	**31.12.2016**	
Equity	7 900 000	8 852 343	Retained earnings is influenced by profit after tax
Mortgage loans	8 877 000	8 677 000	Reduced balance by 200 000
Other long-term liabilities	1 000 000	800 000	Reduced balance by 200 000
Accounts Payable	5 998 000	2 345 429	See specification below
Payable social security	350 000	366 535	Nov and Dec, to be paid in January 2017
Payable VAT	150 000	168 162	Nov and Dec, to be paid in February 2017
Payable holiday pay	1 520 000	1 511 637	Closing balance equals accrued holiday pay for 2016
Payable corporate tax	153 000	317 448	Closing balance equals accrued tax for 2016
Other short-term liabilities	577 000	400 000	Reduced balance by 177 000
Sum	**26 525 000**	**23 438 553**	

Direct material December incl. VAT	2 118 554
Electricity December incl. VAT	37 500
Telephone/data lines December incl. VAT	14 792
Car cost December (VAT already included)	32 583
Commission to agents December	47 833
Other operating expenses December incl. VAT	94 167
Balance Accounts Payable 31.12.2016	**2 345 429**

Question 4 (20%)

a)

Variable activity costs	1 240 000 * 24% = 297 600
Fixed activity costs	1 240 000 * 76% = 942 400
Budgeted activity level	600 quality controls
Available resources	600/0.75 = 800 quality controls
Excess capacity	200 quality controls
Activity rate, fixed costs	942 400/800 = 1 178 per control
Cost of excess capacity	1 178 * 200 = 235 600

The cost of excess capacity equals the additional cost of actually having the possibility to perform 200 quality controls more than what the actual situation suggests today. This flexibility can be necessary to have if the company plans to grow, or if there are fluctuations in the activity level and the output is not evenly distributed through the year.

If the company wants to reduce costs for excess capacity, management can choose between different strategies:

- They can plan for future growth
- They can try to make activity costs (or parts of them) variable, for instance by outsourcing this function to a company that can charge them according to the number of quality controls actually performed
- They can find alternative use for the resources tied up in quality controls, either internally, by organizing in a more flexible way or externally, by offering quality control services for other companies.

b)

Supporting activities are activities that are necessary for the primary functions to deliver value-creating activities. These supporting activities, such as for instance general management and human resources management, accounting/finance and procurement, are not asked for by the company's customers, but are in the demand of internal users in the company.
Because these activities are not adding to what the customer perceives as value creation, they can to a certain extent be regarded as "necessary evil". It is therefore important that the resources consumed in these supporting activities areas are justifiable compared to the primary activities.

Activity based costing may add valuable knowledge about what causes costs that not always are directly caused by production as such (in a broad sense of the term). Because ABC focuses on finding the underlying reasons for the costs to occur and we can group these costs drivers in different groups according to how much the level of costs fluctuates with the company's level of activity, we learn more about the link between what we do and what it costs us.

Although most administrative costs tend to be fixed and unavoidable in the short run, ABC can help us to focus better on these costs in a longer perspective. Given certain assumptions, we can also calculate the costs of excess capacity in different activity groups.

c)

According to Kaplan and Cooper's hierarchy of activities, we can sort the activities in four groups:

The unit-based activities are volume-based, in a way that the cost will occur each time we produce one unit more. Material costs and most of the direct manufacturing costs as well as electricity are unit-based.

The serial-based activities are more of a structural nature, because costs here is not influenced entirely on production volume, but how often we take on a new task, which gets us from one step to another in a production process. Set-up costs and procurement costs are example of costs that often will be the same, regardless of the company is planning for a large production series or a shorter one.

The product-based activities are not dependent on the production output or production series, but the variety of products and their attributes. The more we adapt our products to different needs in the market the more resources we spend on production planning and product development.

The facility-based activities are not dependent on production output, production series or the assortment of goods and services the company offers, and it can therefore be hard to find any relevant cost driver on an activity level. These costs are often unavoidable in the near future and is therefore not relevant for short-term decision-making. Examples of such costs are general management/administration and some of the costs for office and production premises.

The serial and product-based activities are often influenced by what we call *structure-based cost drivers*. Understanding these types of cost drivers may add to the efficiency of our management control systems, because it helps us to understand if there are easier ways to organize our production in the future.

Question 5 (20%)

a)

To avoid overproduction and unnecessary inventory, the Just in Time-principle states that production should be as directly synchronized with the demand as possible ("pull instead of push". Where demand is constant, production levelling is easy, but where demand fluctuates, there will often be gaps between ideal production output and actual demand-driven output. We can therefore conclude that these two principles can be in conflict with each other, but there are ways to build a bridge between them.

The first alternative strategy is to *influence the demand*, for instance with price discriminating actions. Such demand levelling is s a normal practice for instance in hotels that experience fluctuations during the week or the seasons.
The second alternative strategy is to *influence the production output* and sometimes produce standard products that will be in demand soon (and therefore accept small inventories of finished goods). A manufacturer of doors and windows can for instance produce standard measures a day where nobody asks for individually sized products.
Another production levelling strategy is to do frequent changes in the mix of products manufactured, so that total output is as constant as possible.

b)

The first lean-principle is that value creation is defined by what the customer perceives as value added. This means that a company must focus on eliminating activities that customers are not willing to pay for. Any attributes that customers do not appreciate by paying extra for them, is regarded as organizational waste.

The person at the workshop reception desk is superfluous as long as the mechanics handle the customer contact directly, in a manner that customers accept. In this case, the direct contact even adds to the communication quality, because an unnecessary intermediary is omitted. As long as the mechanics are content with customer contact, and this does not interfere with their primary tasks and customers are equally happy with the same solution, the car dealers can reduce the use of resources in their supporting activities.

When the former customer contacts got new jobs in the company within sales or as mechanics, the company moved resources from a supporting function to its primary activities, which creates a double positive effect in the value-creating process.

c)

The Lean-philosophy is not about cutting costs for the sake of doing so, and it could often be relevant to see if there is a possibility to strengthen the functions that add to product and service attributes that customers show a willingness to pay for.

A luxury hotel needs a sufficient number of staff members to cater for their clients, often 24/7. An expanded room service solution would require more personnel, but this can have positive side effects if that makes the hotel even more valuable in the eyes of its customers. Although it could be difficult to operate the room service activities with sufficient profitability at all times, this may be justifiable if it adds to the hotel's overall image and reputation.
Therefore, an extended room service operation is not necessarily in conflict with the Lean-philosophy if it adds to a package of services that customers in the end are willing to pay extra for.

d)

A company cannot strive for continuous improvement without having a high level of strategic ambitions. Hence, the strategy of a Kaizen influenced company will not be to continue a steady operation, but to set high goals, often in many areas.

It is not enough though to develop an ambitious strategy, the company must also define activity plans that actually makes it possible to reach these higher goals and to measure along the way that the company heads in the right direction. This is not possible without highly motivated managers and work force. Employees and managers on all levels must have a high degree of self-motivation to create successfully teams that do not rest on their laurels. A successful change process toward a more ambitious organizational culture is not done overnight and is a major management challenge.

In addition to creating an ambitious organization, it is often important to design incentives that award individual and collective behavior that will contribute to future organizational excellence.