

EXAMINATION QUESTION PAPER - Written examination**EXC 21221****Strategic Management Accounting****Department of Accounting, Auditing and Business Analytics****Start date:** 04.05.2018 Time 09.00**Finish date:** 04.05.2018 Time 14.00**Weight:** 100% of EXC 2122**Total no. of pages:** 7 incl. front page**Answer sheets:** Lines**Examination support materials permitted:** BI-approved exam calculator
Simple calculator
Bilingual dictionary

Exercise 1 (20%)

Question a) (5%)

Describe what a cost driver is, why a cost driver analysis can be a useful tool in strategic management accounting, and give examples of generic cost drivers from Porter's and/or Riley's research in this area.

Question b) (5%)

Compare the VRIN framework with factors often relevant in the infrastructural perspective (often also referred to as the learning and growth perspective) in a balanced scorecard model. Do you find similarities in how these two different approaches can contribute to understanding more about the company's value creation process?

Question c) (5%)

Describe the connection between the strategy plans, targets, activity plans/measures and the budgets in a company that primarily uses the budget as a simulation and forecasting tool.

Question d) (5%)

Describe how the main principles of the lean-philosophy (as this is defined in lean manufacturing) can contribute to increasing the efficiency of a given business process.

Exercise 2 (25%)

Two well-known Norwegian investors are currently planning a new privately owned medical center in Oslo. Empatia Medical Center AS will offer a wide variety of medical services, organized as a membership organization where members pay an annual fee that gives them quick access to both general practitioners as well as specialists. The members pay an additional fee for the consultations needed.

This is Empatia Medical Center AS

- Opens August 1st, 2018
- Investment 500 mill NOK in buildings, equipment and start-up
- Vision: Patient first!
- Will hire 100 medical doctors in full and half time positions
- In addition, 100 assistants, nurses and administrative personnel
- General practice, 24-hour emergency, specialists
- Cardiologists, gynecologists, ophthalmologists, dermatologists, stomach and intestinal specialists, plastic surgery, neurologists, psychologists and more.
- Personal or company memberships

The investors have, together with a well-reputed Norwegian consulting firm, developed a strategy plan for the period until end of year 2022, and here is a copy of the *summary of this strategy*:

Empatia Medical Center AS – summary of the strategy for 2018-2022

Although the Norwegian public health care system has improved in recent years, it often takes a long time before a patient receives the necessary treatment from a specialist. The majority of the general practitioners have a limited capacity to follow up the patients sufficiently. In addition, employer-based health check subscriptions, where the workforce is offered regular check-ups are often not thorough enough to secure good healthcare in practice.

We think that many Norwegians have a willingness to pay for quick and professional treatments and to be followed up thoroughly after these treatments.

Medical consultation and treatment is an individual and person dependent experience and it is important to recruit and train our personnel in the possible way. Equally important is it to attract and keep unique medical competence. Our goal is to offer positions attractive enough to ensure that the best medical doctors want to work with us, rather than anywhere else.

The customers are offered two main products. One is a membership that gives access to our menu of various services, the other is a membership that contains one or two annual medical check-ups. This latter is also a product that will be offered as an occupational health service package to employers.

Our initial investment can be grouped in six investment areas:

- Purchase of land, planning and building new premises: 180 mill NOK
- Furnishings and fixtures and parking garage: 60 mill NOK
- Medical and laboratory equipment, MR-scanning/X-Ray: 85 mill NOK
- IT-applications for patient information and medical protocols: 15 mill NOK
- Marketing, recruiting personnel and other costs that occur before opening: 30 mill NOK
- Funding of operational loss 1st August 2018 – 31st December 2019: 80 mill NOK

We expect that the cash flow from the operational activities will be positive from 2020 onwards and a target for the Return on Assets (ROA) is 18 per cent in year 2022.

It is of utmost importance to design a management control model capable of following up the financial targets and providing good management reports that give relevant management information. There are also a number of non-financial value drivers that require continuous focus. The IT systems must ensure effective and secure handling of patient data and there is a need to tailor make applications for this. In addition, written procedures for all types of standard medical consultations is necessary for a quality control system that is also able to report variances along the way. The goal is to have a certified quality control system according to the ISO 9001 standard by early 2020.

Empatia Medical Center AS expects monthly operating costs of approximately 20 mill NOK from the start-up in August 2018, of which 60 per cent are salaries and other personnel costs. With such a large portion of the resources tied up in our own personnel, it is of utmost importance to our success that we are able to develop an organizational culture where all employees feel highly appreciated and are motivated to continuously develop the company. In this respect it is also important to succeed in getting three different cultures to work hand in hand; medicine, administration and commercial activities.

The handling of health personnel is resource demanding, because of legal requirements as well as the continuous focus on both the individual and joint responsibility for maximum compliance in this respect. Good reputation and low patient risk will only be secured as a result of long-term and determined activities in all processes and at every level. A code of conduct will be established, containing both general regulations concerning all employees, as well as more specified ethical codes for the various types of work carried out.

We will quickly need to build a large membership base that actively uses our services and that are loyal enough to recommend us to others. Our overall market target is to be recognized as the best private supplier of health care services in Norway. To succeed with this, we need to focus on market and media activities as well as the presence on important medical seminars and congresses, both domestically and international. A close co-operation with the pharmacy industry as well as with suppliers of technical equipment is very important, but we must at the same time maintain a high degree of integrity and neutrality towards these parties, to secure our own basis for making the best judgements on behalf of the patients at all time.

Together we shall take on the social mission to build an even better health care system in Norway, by offering good solutions, parallel with the public services in this area. At the same time, we must maintain a continuous focus on creating financial values in a capital and labor intensive business, a value creation both for our people in the organization and those who have invested in it.

Question a) (5%)

Comment on Empatia Medical Center AS' *financial targets* in the period from the start-up to the end of the strategy period in 2022 and suggest areas suited for measuring the financial performance in this period.

Question b) (10%)

Suggest what in your opinion are *relevant critical success factors* in Empatia Medical Center AS' strategy plan for 2018-2022, and place these in the four common strategic perspectives used in a Balanced Scorecard model.

Question c) (10%)

Suggest KPI's in *non-financial areas* that in your opinion have the necessary validity and reliability to be used in a Balanced Scorecard model in Empatia Medical Center AS. Discuss also areas where finding appropriate KPIs for this company *can prove difficult* in real life.

Exercise 3 (55%)

The Norwegian company Radioactive AS has been successful selling digital DAB radios on the Norwegian market the last few years. Many countries are now offering DAB stations, first and foremost as a supplement and not a substitution for the traditional FM net.

The owners of Radioactive AS must therefore make an important decision when the strategy plans for 2019-2020 are made, shall the company continue to focus on the Norwegian market or should they also enter the Swedish market?

In the spring of 2018 Radioactive AS conducted a market research to analyze the market potentials on the Swedish market. This analyze concluded that there for the company's products probably is a connection between demand and sales price as follows:

Average price per unit	Expected demand
SEK 800.00	17 500 units
SEK 900.00	16 000 units
SEK 1.000.00	14 000 units
SEK 1.100.00	12 000 units

The above sales prices are recalculated to represent average price in Swedish Krone to Swedish distributor ex VAT. The company has chosen to use average prices because several different radio models in various price categories will be offered

The DAB radios are produced in China and the manufacturer can deliver the radios including freight to Scandinavian destination. There are no import duties on such goods.

Radioactive AS has so far used a mark-up on their own purchase price of 60 per cent on all the products and expects that this is a margin that can be justified also on the Swedish market. This means that a radio that for instance has a price free delivered Scandinavia for 500 kroner can be sold to a distributor for 800 ex VAT.

Radioactive AS thinks it is not possible to be successful on the Swedish market without establishing a Swedish company there. Hence the decision is, if it is decided to start operations in Sweden to establish a Swedish limited company, operative from January 1st 2019.

In the spring of 2018 has the management of Radioactive AS sketched the outline of the budget for the first business year of the Swedish subsidiary:

Sales income: The combination of price and demanded quantity that maximizes sales income.

Cost of goods sold: A mark-up of 60 per cent on total costs free delivered Scandinavian warehouse is still relevant.

Salaries and personnel: Three sales representatives will each be offered a fixed salary of SEK 25 000 per month, as well as a bonus of 4 per cent of the sales income. An additional cost of 40 per cent for employer's contribution to the social security system and other personnel costs will be added to both salaries and bonuses.

In addition, there will be a logistics manager who will be offered a fixed salary of SEK 35 000 per month. There will also here be added 40 per cent additional employer's costs.

Sales and marketing: There is an average budgeted monthly cost for sales and marketing of SEK 60 000 per month. This includes travels, presentation material and advertising.

Other costs: In addition to the above, there are average payable operating costs of SEK 80 000 per months

Investments: It is stated in the business plan that four company cars are purchased in the beginning of the year, with a total cost of SEK 1 200 000 ex VAT. These are subject to linear depreciation over 10 years.

In addition, the plan is to buy data equipment, office furniture and other fixtures for SEK 240 000 ex VAT, which will be subject to linear depreciation over three years.

In order to rent office and warehouse space it is expected that a deposit of SEK 300 000 has to be made to a special bank account in a Swedish bank that will only be used for this purpose. This will be returned to the company when the lease period is over.

The Swedish subsidiary will be managed by the Norwegian organization and an agreement between the two parties is set up to cover this relation. You should therefore in your budgets include a management fee to be paid by the Swedish company as follows:

Management services	400 hours at SEK 500 per hour
Accounting services	300 hours at SEK 300 per hours
Travels and other expenses in 2019	SEK 100 000

Question a) (10%)

What is *the budgeted profit for 2019* in Radioactive AB, based on the information above?

Assume now that Radioactive AS chooses to establish a Swedish subsidiary and that we still can use the above budget information. The company's management needs to know how to fund the investment and they turn to you to make a cash flow budget.

You gather the following additional information pertaining to Radioactive AB that may be relevant:

- The balance of Accounts Receivable 31st December 2019 is expected to be SEK 1 400 000
- The company needs a stock of 1 000 DAB radios in Sweden already in January 2019 and you can assume that this inventory balance will remain the same at the end of the year. For the valuation of these goods you can use the same purchase cost as you used in the 2019 budgeted income statement
- The balance of Accounts Receivable 31st December 2019 is expected to be SEK 800 000
- The expected balance of payable VAT, social security contribution and other short term liabilities is expected to be SEK 600 000 at the end of the year
- The investments are paid in full in the beginning of the year and the VAT on these are fully recoverable.
- The rent deposit of SEK 300 000 will be made to a special bank account that cannot be used for regular in and outgoing payments.
- The company wants in addition to have SEK 400 000 on their regular Swedish bank account at the end of 2019
- There will be no payments of Swedish corporation tax in 2019

Question b) (15%)

Present a cash flow budget that shows the company's need for capital in 2019. You are free to choose a suitable presentation format for this.

Question c) (10%)

Discuss how Radioactive AS can fund the need for capital the that you have already have calculated and give examples on various sources for this funding.

You may assume that Radioactive AB will be a fully owned subsidiary by the Norwegian company.

Radioactive AS is currently analyzing their sales and marketing costs by using an Activity Based Costing model. The forecasted costs for sales and marketing in 2018 can be split as follows:

Activity	Activity costs	Cost driver	Available capacity	Forecasted capacity utilization
Customer meetings	1 200 000	No. of customer meetings	600 meetings/year	460 meetings/year
Other customer support	800 000	No. of support hours	1 200 hours/year	900 hours/year
Complaints and returns	600 000	No. of customer complaints	400 complaints/year	300 complaints/year
Other costs for sales and marketing	1 400 000	---	---	---

Question d) (10%)

Calculate the costs of excess capacity in the Sales and Marketing Department of Radioactive AS in 2018 and suggest various strategies to reduce these costs in the future.

Radioactive AS sells its products through *three retailing chains* in Norway and we can gather the following information about the activities pertaining to these:

	ElektroGiganten	Claes Frantz	QuickPower	Total
Sold number of units	15 000 units	9 000 units	8 000 units	32 000 units
Customer meetings	220 meetings	180 meetings	60 meetings	460 meetings
Other customer support	500 hours	300 hours	100 hours	900 hours
Complaints and returns	160 complaints	120 complaints	20 complaints	300 complaints

The average price per sold DAB-radio in 2018 is NOK 1 000 ex VAT (price from Radioactive AS to retailer) and there are no significant variations in the sales prices between the three retailing chains. The sales representatives are paid 4% bonus on sales order values (ex VAT).

Question e) (10%)

Comment on how each of Radioactive AS' three customer groups add to the profitability of the company, using relevant information on the sales and marketing costs shown above