# King’s College London

This paper is part of an assessment of the College counting toward the award of a degree. It is governed by the College Regulations

under the authority of the Academic Board.

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| **Degree Programmes** | MSc |
| **Module Code** | 7CCSMPMT |
| **Module Title** | Principles of Management |
| **Assessment** | Group Coursework |

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| --- | --- |
| **Submission Deadline** | Monday 11th March 2019 |

* **This assignment is a group assignment so please work in groups of several people. I will not assign you to groups – please create them yourself. You can use the class room lectures to find group members.**
* **KEATS will require you all to submit. Please, make sure that the group members of the same group submit exactly the same document and please have the names and student number of all involved on the cover page.**
* **There will be one mark for each group which will be applied to each group member.**
* **Prepare a report with your answers and submit it no later than above-set deadline. Submissions are ideally typed and not hand-written. Furthermore, the names of the contributors of specific parts of the questions should be written down too!**
* **This assignment constitutes 30% of your total mark.**

**IMPORTANT INFORMATION**

**Plagiarism is passing off someone else’s work as your own, and the penalties for plagiarising by the College can be severe. Uploading work to KEATS is regarded by the Department as a statement by the student concerned, confirming that the work has not been plagiarised.**

# Question 1 – Strategic Decision Making

## You are the Founder and CEO of a startup.

**Part A**

As a group, brainstorm some exciting startup ideas. Decide for one and – without having done any further formal analysis as per below methods – write down what the idea / product / service is and justify why you think it is a good idea to proceed.

### [10 marks]

### Exoskeleton

**Part B**

Apply the four strategic methods of i) SWOT*,  important to mention how the point was identified and what is the extent-of-effect of that particular point on the overall objective*

ii) Porter’s 5-Force

Analysis,

iii) Porter’s Generic Strategies, and

iv) the Lean Canvas to your startup company. Provide

**Porter’s Generic Strategies**

**Broad**

|  |  |
| --- | --- |
| Cost Leadership | Differentiation  ***EXOSKELETON*** |

**Narrow**

|  |  |
| --- | --- |
| Cost Focus | Differentiation Focus |

**Lower Cost**

**Differentiation**

Our product follows broad differentiation strategy according to Porter’s general strategies therefore focusing on developing special features and product for the exoskeleton work suit. Having various competitors on the market requires that we develop a product that is unique and will stand apart from all other exoskeleton products. Extra emphasis will be placed on the unique design and chip technology as well as the easiness to use by our customers.

Our product will also be designed to target all markets from companies and health sectors to personal home use.

Porter’s 5-Force **Analysis**

**3 problems**

Customer requires quick access to exoskeleton

Requirement of an easy and quick user guide

Reliability, durability and warranty

**2 Customer**

Labourers – (builders, road workers, miners…)

Civil servants (fire-crew, soldiers, policemen…)

Disabled personnel

**3 Unique value preposition**

Inhumane strength and life saving

**4 Solution**

Safe

Life saver

uniqueness

**5 Channels**

Online, amazon, p2p, exhibitions, Ads

**6 Revenue Streams**

Assets, sponsorship, In store sales 55%, Online sales 45%

**7 Cost structure**

60% developmental costs, partnerships and salaries

40% product costs, maintenance, updates

10% marketing costs; ads, social media, store front

**8 key metrics**

Customer orders

Feedback

Recommendations

Trade-off for Porter’s 5-Force:

According to the findings from the Porter’s 5-force strategy – the product is under stronger forces strategically in terms of intense competition and possible substitutes. However, most of the competition is still in research or developmental phase and adds the pressure of having to release a quick product to the market.

Higher supplier power

Medium buyer power

New entries high

Substitution low

Competition is medium

**Part C**

~~Prepare a detailed report summarising the findings of these strategic methods~~. The report should contain trade-off decisions and a clear strategic roadmap on what ought to be done in the coming months.

### [20 marks]

**Question 2 – Quantitative Tools**

**You are now the CFO of a company. (**Note that any mathematical calculations need to be detailed.**)**

## Part A

Two managers come up to you and pitch their product roadmap plans. They only present financials, as summarised in below table. You can only approve one. Which will you approve, and why? Note that you can choose any discount rate, but you need to justify the choice.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Investment** | **Year 1** | **Year 2** | **Year 3** | **Year 4** |
| **Manager #1** | £1m | £0.8m | £1.2m | £1.8m |  |
| **Manager #2** | £0.5m | £0.5m | £0.8m | £1.2m | £0.4m |

### [10 marks]

### Manager 1 = 1m

### Manager 2 = 0.5m

### Payback = Profit per year w.r.t initial investment

### 1: profit 🡪 £0.8 £1.2 £1.8 -> 1 year & 2/12=1/6= 1.6667 years (marginal favourite)

### 2: profit 🡪 £0.5m £0.8m £1.2m £0.4m -> 1 year

### Based on payback Manager 2 would be favourite (shorter payback period)

### Accounting Rate of Return

### 1: Average annual profits = 0.8 + 1.2 + 1.8 = 3.8 -1 =2.8/3 = 0.9333

### 2: Average annual profits = 0.5 + 0.8 + 1.2 + 0.4 = 2.9 -0.5 =2.4/4 = 0.6

### 1: ARR 🡪[(0.9333)/1 ] \* 100% = 93.33%

### 2: ARR 🡪 [(0.6)/0.5 ] \* 100% = 120%

### Based on ARR Manager 1 would be favourite (shortest Accounting Rate of Return)

### Net Present Value: discount rate @10%, compound y1:0.91; y2: 0.83; y3: 0.75, y4: 0.68

### 1: 2.074 = 0.8 \*.91 + 1.2 \*.83 + 1.8 \*.75 – 1 (marginal favourite)

### 2: 1.791 = 0.5 \* .91 + 0.8 \* .83 + 1.2 \* .75 + 0.4 \* .68 – 0.5

### Based on NPV Manager 1 would be favourite

### Ranking

### 

|  |  |  |  |
| --- | --- | --- | --- |
|  | Payback | ARR | NPV |
| Manager 1 | 2 | 1 | 1 |
| Manager 2 | 1 | 2 | 2 |

### Manager 2’s project is best if NPV is chosen because:

### ARR does not differentiate between early or late profits

### Payback fails to consider the time value of money

### NPV uses the time value of money

**Part B**

You have awarded a contract to a 3rd party of £100k to develop 10 mechanical parts of a larger product of yours. At the time of planning, the development of a single part takes roughly 10 day at £1k per day. At inspection day #70, it turns out that only 6 parts were developed instead of 7; and the actual development cost was £1.1k per day.

For that inspection day, calculate the budgeted cost of the work scheduled (BCWS), the budgeted cost of work performed (BCWP) and the actual cost of the work performed (ACWP); as well as the schedule variation (Sv) and cost variation (Cv).

### [20 marks]

**BCWS** = (70 days) x (1 part) x (£1k) = £70k

**BCWP** = (6 parts) x (£10 a day) x £1k = £60k (behind schedule by a day 7-6 = £1k)

**ACWP** = 6 parts x 10 days’ x £1.1k = £66k

**SV** = 60 – 70 = -10 (project is behind schedule)

**CV** = 60 – 66 = -6 (project cost overun)

**Part C**

The below figures appear in your company’s operating report for the year ending the calendar year 31 December 2018:

|  |  |  |
| --- | --- | --- |
|  | **2017** | **2018** |
|  | *£000* | *£000* |
| Sales | 40 600 | 55 700 |
| Cost of Sales | 35 500 | 40 200 |
| Other Income | 110 | 0 |
| Selling Expenses | 5 600 | 7 400 |
| Admin Expenses | 1 100 | 2 200 |
| R&D Expenses | 1 400 | 1 000 |
| Other Expenses | 3 000 | 3 100 |
| Tax | 0 | 735 |

|  |  |  |
| --- | --- | --- |
|  | **2017** | **2018** |
|  | *£000* | *£000* |
| **Sales/ Total Revenue** | **40 600** | **55 700** |
| Cost of Sales/Revenue | 35 500 | 40 200 |
| **Gross Profit** | **5 100** | **15 500** |
| Selling Expenses | 5 600 | 7 400 |
| Admin Expenses | 1 100 | 2 200 |
| R&D Expenses | 1 400 | 1 000 |
| Other Expenses | 3 000 | 3 100 |
| **Total operating expense** | **11 100** | **13 700** |
| **Operating Income** | **6000** | **1 800** |
| Other Income | 110 | 0 |
| **Income before tax** | **5890** | **1 800** |
| Tax | 0 | 735 |
| **Income after tax** | **5890** | **1 065** |
| **Net Income** | **5890** | **1 065** |

Create a Profit and Loss Account for the above company, for 2017 and for 2018.

Analyse the profitability of the company: Is it profitable? How profitable is it? Compare the profitability in 2017 and in 2018.

*It made a loss in 2017 but was profitable in 2018.*

Analyse the reasons for the change in profitability from 2017 to 2018, and prepare a report for the CEO to action on the insights.

*Increased amount in sales or services provided to the customer – the more sales the increase in profit.*

### [20 marks]