

2017

BCG Potential Test

Sample Test 2



Consulting Prep

Think like a top consultant

OVERVIEW

The test assesses a number of key skills like logic, analysis and business sense. The actual online test has 23 questions multiple choice questions and lasts 45 minutes. Use of a calculator and other electronical devices are not allowed during the test.

The sample contains 5 sample questions by BCG. They are intended to familiarize you with the format and navigation of the test. You should complete them in 10 minutes.

The screen is divided into 2 parts:

- On the left, you will find the questions and the multiple choice answers
- On the right, you will find the documents to which you have access

The navigation allows you to move forward and backwards through the case, as needed. You may change your responses before time runs out. In some questions, you can click on one or more answers. At the end of the 45 minutes, you will need to quit the case.

The score is +3 points for every right answer, 0 points for no answer and -1 point for a wrong answer.



BASKETBALL LEAGUE CASE

BCG SAMPLE CASE

ELAPSED TIME: 2:00 / 10:00

Doc 1

Doc 2

Doc 3

Doc 4

QUESTION 1 / 5

If the Client League can manage its Other Costs as well as the NBA can, given that Players' Salary stays constant (measured by the per-dollar-of-revenue-generated basis), what would their Profit be?

- \$3 million
- \$5 million
- \$7 million
- \$9 million

Case overview

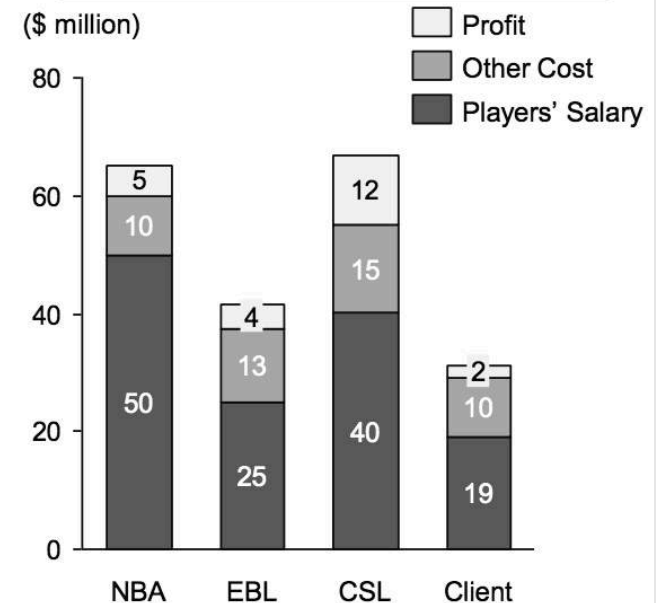
Our client is a professional basketball league in Germany. The league operates on a sporting business franchising model. Each team in the league has to pay an annual fee to the league and will manage itself by hiring players, selling tickets, managing administration costs...

Some direct and indirect competitors of the Client League are:

- US professional basketball league (NBA)
- Euro Basketball league (EBL)
- Country 's Soccer league (CSL)

The chart below measures revenue and its components **on the average-per-team basis**.

Market study



Doc 1

Doc 2

Doc 3

Doc 4

QUESTION 2 / 5

Suppose that there are 5 College Teams in the league. How many teams are there in the Major City Teams group?

- ☐ 2 teams
- ☐ 3 teams
- ☐ 4 teams
- ☐ 5 teams

SEGMENTATION OF CLIENT LEAGUE

Team segmentation

Based on its revenue (**on the average-per-team basis**) in the previous chart, we then go on to search for problems within the Client League.

The client then prepares a segment breakdown of all 18 teams. There are three main representing groups:

- College Teams
- Small City Teams
- Major City Teams

The segmentation along with some basic information is summarized in the table to the right.

Data

	Historical Winning Percentage	Revenue (\$US)	Profit (\$US)
College Teams	35 (%)	20 mil	2.2 mil
Small City Teams	50 (%)	25 mil	0.5 mil
Major City Teams	75 (%)	70 mil	6.5 mil

SG TAXI CASE

BCG SAMPLE CASE

ELAPSED TIME: 6:00 / 10:00

Doc 1

Doc 2

Doc 3

Doc 4

QUESTION 3 / 5

The owners of SG Taxi are putting pressure on management to generate over \$185 thousand in daily revenue. Which of the following, if being implemented along, will help SG Taxi achieve that?

- Acquire Taxi 54
- Raise the average fare price to \$2.5/ km
- Add 50 new vehicles to the team
- Increase Vehicle usage (km driven) by 25%

MAXIMIZE DAILY EBITDA

Case overview

Our client, the SG Taxi Group, is a medium sized taxi company operating in Singapore.

Like all other taxi companies in the area, SG Taxi operates on the "taxi franchise" model. The company manages vehicles, call centers, pricing, and other administration processes. Drivers are responsible for gas, their own work schedules, and their own strategy to get the most income.

Currently, SG Taxi Group's profitability is below the market average and needs help from us. The team is provided with this basic initial information.

Industry research

	Taxies owned	Daily Km driven total	Daily Revenue (\$US)	Daily EBITDA (\$US)
CP Taxi	1,000	270,000	484,000	382,360
Airport Taxi	500	131,900	237,500	201,875
SG Taxi	550	88,200	150,000	105,000
Taxi 54	50	7,500	13,500	11,000

Doc 1

Doc 2

Doc 3

Doc 4

QUESTION 4 / 5

What is the maximum amount of time that translators have to finish translating to make it worth it to switch to our idea?

- 3650 hours
- 3500 hours
- 4000 hours
- 3000 hours

LOWER COST OF TRANSLATION

Case overview

Imagine Learning is an English learning software provider for children. All the instructions, texts, and audio are translated into many different languages and inserted into the software.

A market study compared the cost of the Spanish product line versus that of Korean.

We propose an idea to self-translate Korean products by hiring new Korean translators, **replacing both the Translation Company and the programmers**. Assume that the average wage for programmers and translators are \$25 and \$15 per hour, respectively.

Market study

	Total Cost (\$US)	Cost from Translation Company (\$US)	No of defect found	Cost of fixing Defect* (\$US)
Korean Line	60,000	10,000	230	45,000
Spanish Line	25,000	15,000	17	2,000

**by programmers*

Doc 1

Doc 2

Doc 3

Doc 4

QUESTION 5 / 5

What is the best estimation of Cash Inflow of PTS in 2013?

- \$2.5 million
- \$21 million
- \$25 million
- \$50 million

CASH INFLOW

Case overview

The state of Texas has a unique taxation system where most of its revenue comes from property tax instead of income tax like many other states in the US. The property tax rate in Texas is 2.5%.

Property Tax Service (PTS) is one of the biggest property tax consulting firms in Texas, United States.

In 2013, PTS's total calls received are 135,000 and the average value of properties signed up is 110,000.

Current situation

The operation flow of PTS is as follows:

- Clients call to ask about the services, S% of those **sign up** their properties.
- Of those who sign up, PTS will **represent** clients to bring their cases to the appraisal district.
- Of those represented, PTS gets A% of them **agreed and approved** by the districts.
- Of those agreed and approved, V% of their **value** is reduced.
- Of those successfully reduced, F% of owners pay their **fee**.
- At the end, all tax savings is split by half between the client and the company.

The historical S, A, V and F percentage in 2013 are:
S% = 72%, A% = 89%, V% = 19%, F% = 92%

CORRECT ANSWERS

Question 1 – C (\$7 mil)

With this question, a few simple tricks can help you get through it very fast.

By looking at the graph, notice how the Client League and the NBA have about the same value for Other Costs. Also notice the fact that the NBA has twice the revenue of the Client League.

So, if the Client League is as good as the NBA, they will cut Other Costs in half, which is a \$5 million cut. That additional \$5 million along with the current \$2 million will make profit worth \$7 million.

CORRECT ANSWERS

Question 2 – B (3 teams)

It is possible to use revenue and profit to solve this problem. However, using the historical winning percentage is a much quicker way. We all know that basketball is a zero-sum game — if there are wins, there are losses. Thus, the Historical Winning Percentage of all 18 teams in the Client League has to be 50%.

You already have the Small City Teams' winning percentage equaling 50%. Therefore, the number of teams in the Major City Teams group (X) must satisfy the following equation:

$$\frac{5 * 0.35 + X * 0.75}{5 + X} = 0.5 \rightarrow X = 3 \text{ teams}$$

CORRECT ANSWERS

Question 3 – D (Increase Vehicle usage by 25%)

A: Acquiring Taxi 54 will increase SG Taxi's daily revenue by \$13,500 (current Taxi 54's daily revenue), which is not enough.

B: Raising the price will create unpredictable results in revenue. Of course we get more for each km driven. But there will be less km driven, especially in a market where everybody charges the same price.

C: 50 vehicles are too few to create any economy of scale. 50 new vehicles will generate about the same revenue-per-vehicle. Specifically, those 50 vehicles will generate $\$150,000 / 550 * 50 =$ about \$13,600. This is not enough.

D: An increase of Vehicle usage by 25% brings a 25% increase in revenue as well. This will bring SG Taxi's revenue to a little over \$185 thousand.

CORRECT ANSWERS

Question 4 – A (3650 hours)

You should ignore the \$25 programmers wage in this question.

If the self-translating process is used, no Cost to Translation Company and Cost of fixing defects will be needed. Instead, the only cost is to pay for the translators. To break even, the maximum number of hours would be:

All current costs / translator hourly wage = $(\$10,000 + \$45,000) / \$15$ = roughly 3650 hours

CORRECT ANSWERS

Question 5 – B (\$21 million)

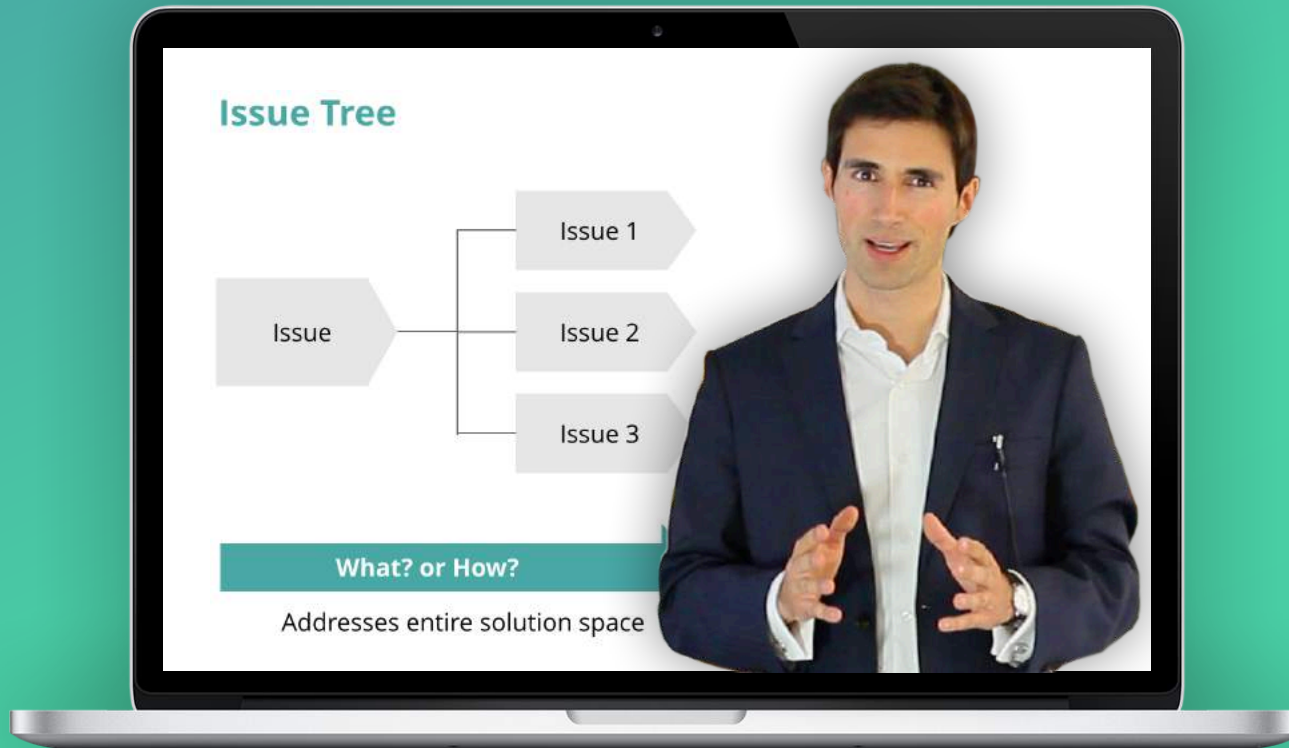
Cash inflow will be:

$(\text{Number of Calls} * \text{Sign up \%} * \text{Agree \%} * \text{Value \%} * \text{Fee \%} * \text{Average Property Value} * 2.5\%) / 2$

This equals about \$21 million

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