BUSINESS GAME DECISION-MAKING MANUAL
ATTENTION

It is useful to print this document before you start working on your decisions. You should have this at hand when you start going through the decision making tool.
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Chapter 1. About Cesim

1.1. General
Cesim provides corporations, universities, and other educational institutions easy-to-use and cost-effective business simulations that can be integrated in various business courses. Headquartered in Finland since 1996, we operate globally through our own offices and partner network.

1.2. Contact Cesim
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Viale Fulvio Testi, 223
20126 – milano
Tel. 02.66116364
Fax. 02.6426058

Chapter 2. Cesim On|Service

2.1. What is Cesim OnService?
Cesim OnService is a web-based simulation-training platform that allows instructors and students to conduct simulation based learning independently of time and geographical location. Cesim OnService simulation is designed for instructors who want to give their students a real-like experience of managing any service business in small and medium-sized enterprises (SME), but do not want to spend time on the game logistics. It integrates the best features of an on-line learning system and business simulation.

The task for the student teams is to manage a virtual family hotel in the fast-paced 21st century operating environment. They will also be faced with strategic decisions, such as expanding their operations to a new market. Students will manage the company’s human resources management, capacity management, investments, service quality, pricing, and marketing as they develop and execute a solid strategy for their virtual company.

The simulation has several high-season and low-season decision-making rounds. The goal of the simulation game is to maximize shareholder value.
Chapter 3. Students’ Decision-making

3.1. Decision-making flow
These instructions will help you as you go through the decision-making tool for the first time. In the beginning, you may want to follow the decision-making flow that is presented here. Later you can make decisions in your chosen order.
It is useful to print these instructions before you start working on your decisions. You should have this at hand when you start going through the decision-making tool.

3.2. Students' Home Page
The period for each round is indicated in the upper right corner. It changes so that every second round is winter (off-season) and the alternating is summer (high season). Both seasons are considered to be 6 months long.

3.3. Communications
You can use the forum from the communications menu to contact your team/course members. By using the communications forum you make your messages easily available to all team members. The instructor can also view the messages and provide additional guidance if necessary.

3.4. General issues related to decision-making
The decision-making process starts with an analysis of the last round's results. You can find these results under the results tab. After analysing the results, you can start making decisions. If you looked at round 1 results, you will start decision making for round 2. In the beginning of the game, results called initial round results are available and you start by making practice round decisions. After the practice round, the situation is cleared back to the initial, and you will be playing the round again, now called the first round.
You enter the decision-making area by pressing the Decisions -tab on the menu bar. The decision making area consists of several pages with different functions. On the left side of the decision area menu bar, you can find the Decision Checklist page. It contains your and your team members’ decisions as well as your team's decisions. Team decisions are used to calculate your results for this round. Be sure to check that your team's decisions are what you wanted them to be before the round deadline.
Other pages are used for decision-making. The rest of this manual helps you make all the decisions that are required to complete one round. The Decision-making area functions as a budgeting tool as well as a decision-making tool. It consists of supporting calculations and three kinds of input places.

1. In the **white cells** you enter your decisions. Some decisions like production target and price are very important to make in every round, while some like investments need to be made only in some rounds depending on the strategy of your team.

2. In the **blue cells**, you enter estimates of how the market will develop, what your market shares are, and so on. They affect your decision making since they are the basis for the budgets shown in the system.

3. **Drop-down menus** are used in certain decisions where there are some specific options to choose from.

The system automatically updates the budgets and calculations as you make decisions.

If you leave the decision-making area, decisions that you have made (and calculated after your last input) are automatically saved and will be available when you enter the area next time.

After you have made the decisions, you can decide whether you want to use your decisions as your team's decisions. If yes, then press the Save-button. It can be found in the Decision Checklist. Pressing this button always saves all your decisions, not just those that are on the particular page. You can always look at your team's latest decisions on Decision Checklist, as well as save some other set of decisions as the team's decision set.

After learning the basics of the decision making process, you are ready to enter the actual decision-making pages. The following presentation follows the suggested decision-making scenario.

**3.5. Market outlook**

You should read the market outlook before starting to make decisions. On the left hand side of the market outlook - page you can see the average estimated demand per team in both domestic and international markets and the parameters for the round. All these parameters are already inputted in your decision making area and taken into account in your budgets and calculations.

Decision-making is done separately for two seasons; summer and winter according to the seasonality in Hotel le Bonheur’s business. Both seasons are considered to be 6 months long.
Decision-making is done separately for two seasons; summer and winter according to the seasonality in Hotel le Bonheur’s business. Both seasons are considered to be 6 months long.

**Note**
Quantitative parameters are forecasts for the period but they tend to be rather accurate. Market development, on the other hand, can be different from the market outlook due to the fact that the markets are influenced by the other companies' actions in the markets. Therefore, market growth may not actualize exactly as predicted.

### 3.6. Sales
You are able to sell room capacity for travel agencies and Internet booking agencies for two periods in advance, for the next period (+1), and the period after the next period (+2). Finally, during the ongoing period you will decide the walk-in room rate for individual customers. Typically the advance sales market is more price sensitive than the walk-in market.
3.6.1. The advance sales
Selling in advance for both the next period and the period after the next one, you decide the amount of nights you will offer to the agencies. This results in the room rate at which you are able to sell to the desired amount. Other factors affecting the room rate are:
- marketing efforts
- personnel sufficiency
- personnel quality
- condition of facilities
- credit term
The share of the agreed number of nights changes in the pie charts according to your decisions. Place your cursor over the charts and you will see the explanations in the mouse hover. The colours in the chart are the same as those shown next to the respective figures.

3.6.2. Sales for this period
For an ongoing period you will give a walk-in room rate at which your hotel customers are able to book rooms. According to your room rate and other factors affecting demand, the outcome is the amount of nights sold. Other factors affecting your demand besides the price are:
- marketing efforts
- personnel sufficiency
- personnel quality
- condition of facilities
The amount of nights sold is uncertain, since it depends also on your competition. However, try to make a good sales estimation in the blue cell. The estimation does not affect your sales, but it is taken into account in your budgeted income statement.
On the Sales-page you also decide how much you are going to use on marketing this round. Marketing decisions have both a short term and a long term effect, so this decisions impacts the following rounds as well. Marketing increases both the sales for this period and the advance sales for the following two periods.
Note that you must make the same decisions differently for both domestic and international markets if you have international operations. You can, however, start investing in the rooms and marketing in the International market before having operations there. You can also sell the capacity in advance that you invest in this round. Notice that marketing is not very efficient in advance as it affects only the advance sales and furthermore, the advance sales is not very responsive to the marketing efforts.
3.7. Operations

On the Operations -page you make decisions concerning your hotel-facilities and personnel.

3.7.1. Facilities

Each room has a capacity of 180 nights for a half a year period. Investments into room capacity are made in batches of 5 rooms. Investing into one batch of 5 rooms will thus increase the hotel capacity by 900 nights per period. In the domestic market the hotel has made a rental contract for the next 100 years. The Hotel owns the actual buildings. Therefore also new investments are paid by the hotel.

Investments can be made to additional room capacity as well as to renovating existing rooms. In both cases it takes one period to have the investment ready and operational. Renovation increases the overall quality of the hotel. The condition of facilities is indicated by a number, where 100 means the condition of a newly built or renovated. Better condition reflects as better perceived quality. The condition of facilities decreases over time due to normal wear and tear.

If you decide to expand your operations to the international markets, you have to decide whether you add hotel buildings to the land rental agreement or finance the buildings on your own. This is a on-off decision.
you have to make when starting the international operations. Adding the buildings in the rental agreement means that you will pay rent for the building instead of financing them on your own. The landlord has agreed to build new capacity whenever you feel that it is needed.

3.7.2. Cost saving efforts for increasing cost efficiency
Both operating costs and administrative costs can be influenced by cost saving efforts, which aim to better, leaner and more efficient processes. The first cost saving project affects direct service costs and the second fixed administration costs. You can re-name the cost saving projects to your liking. The administration costs in the income statement stands for those administrative services that are outsourced.

4.7.3. Personnel
It is important to plan the resource capacity to be flexible and efficient at the same time. Two types of personnel are available; permanent and temporary. There is a need to have enough permanent knowledgeable employees who are able to perform several tasks. However, changes in permanent personnel are not so fluent having high costs associated with both recruiting and lay-offs. Hiring temporary workers enables the hotel to adjust better to the demand fluctuations. Many tasks are easy enough for temporary employees and flexibility does not require that all the workers should need to be able to do all the tasks. Temporary personnel can be hired at a given market salary, but you are able to decide the compensation for your permanent employees. That decision – naturally – has an effect on how permanent, your personnel actually is. You need to avoid high personnel turnover, since there is a recruiting cost involved in taking on new staff. Moreover, you need to budget for a lot of training if the personnel turnover increases. In addition to wages and training, the permanent personnel turnover is affected also by workload and company success. Personnel stress level is an indication of personnel adequacy considering the scale of operations. Training increases the motivation and efficiency of the personnel in all cases, but it begins to yield less results as personnel competence increases.

Personnel competence level is affected by:
- new / old personnel ratio
- training budgets (this and previous periods)
- wages (new personnel)

Personnel quality is a function of:
- temporary / permanent employee ratio
- average competence level of personnel
3.7.4. Recruitment and lay off costs

Recruitment costs are expenses paid to a personnel agency for hiring new permanent personnel. Lay off costs occur when you decrease permanent personnel by more than what would be the natural turnover. The amount of lay off costs is determined by the amount of permanent personnel laid off.

3.8. Financing

Financing decisions are typically the last set of decisions that you are making. All financial market transactions are managed in the group level. You decide on:
- increases (+) and decreases (-) in long-term loans
- credit term
- dividend payments

Cash at the end of the year cannot be below a minimum requirement (200t€). If cash falls below this requirement financial department fills that gap automatically by current liabilities. It is paid back automatically when it isn’t needed any more. Current liabilities interest rate is usually higher than
that for long-term liabilities. Current liability rate premium is reported on
the market outlook page.
You get to decide the credit term (in days) for the advance sale to travel
and internet agencies. The credit term affects the amount of trade
payables in your balance sheet.

3.9. Financial statements
Under this page you find both the income statement and balance sheet.
Choose in the upper right corner which one you want to see. Both pages
update continuously as you make decisions.
## Financial Statements

### Income Statement

<table>
<thead>
<tr>
<th>Description</th>
<th>This Year</th>
<th>% Change</th>
<th>Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic</td>
<td>659,085</td>
<td>35.0</td>
<td>486,080</td>
</tr>
<tr>
<td>International</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>659,085</td>
<td>35.0</td>
<td>486,080</td>
</tr>
</tbody>
</table>

### Personnel Expenses and Direct Cost

<table>
<thead>
<tr>
<th>Description</th>
<th>This Year</th>
<th>% Change</th>
<th>Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent</td>
<td>334,030</td>
<td>122.4</td>
<td>149,048</td>
</tr>
<tr>
<td>Temporary</td>
<td>16,883</td>
<td>6.1</td>
<td>15,914</td>
</tr>
<tr>
<td>Direct Cost</td>
<td>41,874</td>
<td>18.8</td>
<td>36,496</td>
</tr>
<tr>
<td><strong>Gross Profit</strong></td>
<td>482,330</td>
<td>25.9</td>
<td>383,017</td>
</tr>
</tbody>
</table>

### Other Operating Expenses

<table>
<thead>
<tr>
<th>Description</th>
<th>This Year</th>
<th>% Change</th>
<th>Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>46,105</td>
<td>-5.4</td>
<td>49,210</td>
</tr>
<tr>
<td>Marketing</td>
<td>12,500</td>
<td>38.9</td>
<td>9,000</td>
</tr>
<tr>
<td>Rent and payments</td>
<td>62,500</td>
<td>6.0</td>
<td>62,500</td>
</tr>
<tr>
<td>Layoff and recruitment</td>
<td>15,950</td>
<td>27.0</td>
<td>12,705</td>
</tr>
<tr>
<td>Personal training</td>
<td>8,400</td>
<td>23.0</td>
<td>5,000</td>
</tr>
<tr>
<td>Cost saving efforts</td>
<td>8,000</td>
<td>8.0</td>
<td>5,000</td>
</tr>
<tr>
<td>Maintenance</td>
<td>30,000</td>
<td>6.0</td>
<td>30,000</td>
</tr>
<tr>
<td><strong>Expenses Total</strong></td>
<td>104,455</td>
<td>13.4</td>
<td>101,445</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>This Year</th>
<th>% Change</th>
<th>Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBITDA</td>
<td>207,004</td>
<td>34.2</td>
<td>1,214,573</td>
</tr>
<tr>
<td>Depreciation</td>
<td>285,060</td>
<td>35.8</td>
<td>115,000</td>
</tr>
<tr>
<td>EBIT</td>
<td>137,864</td>
<td>35.8</td>
<td>82,573</td>
</tr>
</tbody>
</table>
### 3.9.1. Calculation of key financial ratios:

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on sales (ROS), %</td>
<td>Profit for the round / Sales revenue</td>
</tr>
<tr>
<td>Equity ratio, %</td>
<td>Shareholder's equity / Total assets</td>
</tr>
<tr>
<td>Net debt to equity (gearing), %</td>
<td>Short- and long-term liabilities - cash and cash equivalents / Shareholder's equity</td>
</tr>
<tr>
<td>Return on capital employed (ROCE), %</td>
<td>Operating profit (EBIT) / Average shareholders' equity + interest-bearing liabilities (short- and long-term)</td>
</tr>
<tr>
<td>Return on equity (ROE), %</td>
<td>Profit for the round / Average shareholders' equity during the round</td>
</tr>
<tr>
<td>Earnings per share (EPS), USD</td>
<td>Profit for the round / # of shares at the end of the round</td>
</tr>
</tbody>
</table>

(Following ratios are available only in results-section after each round)

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dividend yield, %</td>
<td>Dividend per share / Share price</td>
</tr>
<tr>
<td>P/E ratio</td>
<td>Share price / Earnings per share</td>
</tr>
</tbody>
</table>

**Cumulative total shareholder return, % (winning criteria)**

\[
100\% \times \left( \frac{\text{current share price} + \text{cumulative dividends per share}}{\text{first period share price}} \right)^{\frac{1}{\text{this period}}} - 1
\]

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel occupancy, %</td>
<td>Nights sold / Hotel capacity in nights</td>
</tr>
<tr>
<td>Gross profit per room, €</td>
<td>Gross profit / Domestic room capacity + International room capacity</td>
</tr>
<tr>
<td>Net profit per room, €</td>
<td>Net profit / Domestic room capacity + International room capacity</td>
</tr>
</tbody>
</table>
Chapter 4. Interpreting the Results

It is useful to start each decision-making round by studying results from the previous round. By this way you can compare your operations to the other teams’ and improve your strategy.

Results become available when the practice round has started. After each round the system calculates the results for the round according to the teams’ decisions. By choosing the wanted round from the drop-down menu, you can view results from all the rounds passed and compare your results to the others’.

By clicking the small chart symbols you can see the information in chart form.

4.1. Winning Criteria

Usually the teams are evaluated by cumulative total shareholder return, which indicates the value created to the company’s shareholders over all the played rounds. This value is reported in the key figures; “Cumulative total shareholder return %, p.a”. The “p.a” means that the figure is given as an average growth per year (i.e. per annum). The companies' market value is determined through the discounted cash flow method.

Increasing large positive cash flow results in high market value. Cumulative total shareholder return is the capital gains (market value of the company), plus the dividends per share paid out throughout the game.

Alternatively, other measures can be used as the winning criteria. When you choose between different winning criteria you should take into account the long-term and short-term aspects of the chosen indicator.

Cumulative total shareholder return is the best single performance measure since it is based on the share price as well as the paid dividends.

4.2. Market report

Market report provides information about room rates, sales, profitability and advance sales. The shown period is automatically the last period, if some of the earlier rounds are not explicitly selected instead.

The room rates show at which price the nights at the period are sold at 1. the same period, 2. one period in advance and 3. two periods in advance.

The respective sales in nights sold are shown below the rates.

Below this the revenue per room from the period is reported. Note that one room can host 180 nights.
The market report includes an area specific profit calculation. The group level consolidated income statement is shown later under “Income Statement”.

In the area profit calculation, following costs are subtracted from the revenue per period: personnel expenses, direct costs, maintenance costs, Administration costs, Marketing costs, rents and cost saving effort costs. **Personnel expenses:** The wages, training, recruiting and lay-off costs in the area. **Direct costs:** The direct variable cost of one night to the hotel. **Maintenance:** Maintenance and renovation expenses. These are decided in the operations page. **Administration:** The level of administration cost is typically increasing at the rate of inflation. However, it can be affected by cost saving projects that aim to decrease the administration costs. **Marketing:** This is the marketing effort that the team decides for the area on the sales page. **Rental Payment:** Consists of a fixed rent for the land and buildings in the international market if they are rented. **Cost saving efforts:** This is the sum of the cost saving efforts addressing the administration costs and direct costs. Cost saving decisions are in the operations page. **EBITDA** is Earnings before interest, taxes, depreciation and amortization (we do not have any amortization items in this simulation). In the simulation it is Operating Revenue – Operating Expenses. **Depreciation:** Assets, such as hotel rooms lose value over time. Depreciation attributes purchase cost of an asset across its useful life, roughly corresponding to normal wear and tear. The depreciation per one hotel room can be seen on the market outlook page. The value of depreciation is decreased from the facilities’ value in the balance sheet. EBITDA minus Depreciation is EBIT, earnings before interest and taxes. At the bottom of the Market Report page you have advance sales and prices for the next two periods. Also the total market supply and the total market demand are shown for the period.

4.3. **Operations report**

In top of the Operations report we have the capacity and sales figures for the period. Occupancy is given as percentage. The advance sales and their share of the capacity are reported for the next two periods. The investments in the capacity decided in the period are shown as the number of rooms.
Personnel - permanent:
Wage / month: The monthly wage you have decided to pay for permanent employees
Training / person: Training investment for permanent personnel.
Personnel last period: Amount of permanent personnel you had during previous period.
Personnel turnover: Percentage of personnel leaving. Part of this is due to the salary and training offered being less than that of competing companies’. Part of the turnover is based on other factors which are not controllable (=normal turnover).
Recruitment(+) / lay offs(-): Depends on the amount of personnel you decided to need, amount of personnel last period and personnel turnover.
Personnel this period: The amount of personnel you have decided to employ this period.

For temporary personnel, the amount employed last and this period is reported.
The competence level is a function of wages offered and training.
Below the competence level information, you see a breakdown of personnel costs.
At the end the direct costs are shown for the teams. It is the direct variable cost of one night to the hotel.

4.4. Income statement

Income statement contains a summary of your financial operations over a period. It shows the net profit from the period by stating the company's revenues and expenses.
There are two income statements available. The first stands for the round (period) that you have selected from the drop down box. The second (rolling year) includes also the previous period, thus a full year income statement.
Revenue: nights sold multiplied by the room rate.
Personnel expense: Wages paid for your personnel. You decide the wages for permanent employees, but temporary staff is paid according to a given market salary (see market outlook for the market salary level)
Direct cost: Direct cost of one night to the hotel multiplied by the number of nights sold.
Administration: fixed administration cost that can be affected by cost saving efforts.
Marketing: This is the marketing effort that the team decides for the area on the sales page.
Rental payments: Rent paid for land and/or buildings. See operations, and market outlook for details.

Lay off and recruitment: Lay off and recruitment costs for personnel. See market outlook for details.

Personnel training: Personnel training costs. You decide this in the operations page

Cost saving efforts: This is the sum of the cost saving efforts addressing the administration costs and direct costs. Cost saving decisions are in the operations page

Maintenance: Maintenance and renovation expenses. These are decided in the operations page.


Interest income: Companies receive interest payments on Cash and cash equivalents. The rate is seen in the market outlook.

Interest expense on long-term liabilities: Debt capital, i.e. Loans from Financial Institutions cause interest payments. The interest rate is based your financial situation.

Interest expense on current liabilities: Same as above, except the interest rate differs by a premium added on the long-term interest rate. The premium can be seen in Market outlook -page.

Direct taxes: Tax rate can be seen in Market outlooks -page. The losses from previous periods are tax deductible.

4.5. Balance sheet

The balance sheet records the company’s assets and liabilities on the last day of the financial period. It provides a picture of the company’s current financial state. The balance sheet is a two-sided calculation, one side of which is called “assets” and the other “equity and liabilities”. “Assets” describes where the company’s funds are invested in, and “equity and liabilities” shows where those funds come from. Thereby, the total sums of the two sides are equal.

Property plant and equipment: The value of buildings the company owns. Depreciation is subtracted from this periodically.

Trade receivables: Advance sales that haven’t been paid for yet. You are able to affect this item by adjusting the Credit term on financing –page.

Cash and cash equivalents: There is a minimum cash requirement of 200 t€ to ensure day to day operations.

Your cash balance must be at least equal to this limit always. The cash balance is managed automatically and all shortages are filled by using Current liabilities. The amount of cash in your balance sheet affects the interest income in your income statement.
**Share capital:** Share capital is fixed to 927 443 Eur, i.e. equity offers or share repurchases are not included in the simulation.

**Other restricted equity:** Equity that is otherwise restricted. I.e. it can’t be used to pay dividends.

**Retained earnings:** Profits from previous periods are visible here. Dividends are paid out from this line in Balance sheet. High retained earnings in the end are a clear sign of long-term profitability.

**Net profit from the period:** Bottom line in the same period's income statement. High profit, on the other hand, is a sign of short-term profitability.

**Long-term liabilities:** Companies have access to large amounts of debt capital that is used to strengthen the financial position if cash inflows from operations are weak. Naturally, these liabilities are interest-bearing.

**Current liabilities:** Short term debt capital, which is used to fill cash shortages if they arise.

**Trade payables:** Companies make all their purchases according to the same terms, 30 days in this case unless otherwise stated. Marketing, rental payments, cost saving efforts, maintenance and renovation affect the amount of trade payables.

### 4.6. Cash flow statement

The cash flow statement shows where the firm has received incoming cash, and where it has spent it. It consists of the cash flow from operations, cash flow from investments (capital expenditure), and cash flow from financing. The operating margin (EBITDA) that forms the base of the cash flow statement comes from the income statement. To this, we add financing income and deduct financing expenses. These items typically comprise of interest income and expenses. Further by deducting direct taxes, we get the firm’s income financing (funds generated from operations). Note, depreciation is not included here, since it’s not real cash flow, but a method to divide past investments into income statement over the periods an investment is used.

Change in net working capital includes changes in receivables and payables. These are both balance sheet items. When receivables increase, it ties up capital. Increase in account payables on the other hand frees up capital, as the share of our operations financed by other parties increases. When the change in net working capital is added to (deducted from) the income financing, we get the cash flow from operations. When we deduct the purchases of fixed assets (facilities), we get cash flow after capital expenditure.
From that figure, we deduct the payment of loans, and add any new loans taken. If the shareholders have been paid dividends, the dividend payment is subtracted. In the end, we have the net increase and decrease in cash and cash equivalents.

By adding (subtracting) this figure to the cash and cash equivalents at the beginning of period we get cash and cash equivalents at the end of period.