

International Business Management put into Practice

Manual

IBMP version 5.3 (Scenario Round 2)

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1 Introduction

You've just been selected to be the new management team of a multinational company. This company will operate in three specific branches of a global industry.

As a top manager, you know that the market in which you operate is one in which you can make a substantial profit if you adhere to a good business plan. On the other hand, your company could lose its market share if your competitors prove to be more inventive in their respective decisions and strategy.

It's an exciting market with plenty of opportunities. And these opportunities are the ones you'll be seizing. By formulating a good procurement policy for raw materials and machines and by motivating your personnel, your production should run smoothly. Moreover, a good financial plan will guarantee that your company will be able to market itself properly and realise the production quotas you have in mind for it. Your marketing instruments will help you promote and sell the end products in the various markets.

Good luck with the running of your firm, but remember to stay alert. However far ahead you may think you are, your competitors will always be just one step behind you!

2 Management summary

2.1 Assignment

You and your team-mates are the new management team of a multinational company. In addition to yourselves, the world market in this particular industry comprises four other big competitors. Your shareholders will expect nothing less from you than growth and substantial profits.

You have taken on this challenge to make your company the top one - in every possible way!

The objectives look simple: obtain the largest possible market shares in the various markets, and strive for the highest possible profit while at the same time securing the continuity of the company's operations. Your endeavours to realise these objectives will be closely monitored by your shareholders. It's therefore important to devise a strategy and set up a policy that will clearly distinguish your company from your competitors, but will not jeopardise your company's continuity.

2.2 Products and markets

Your company produces and supplies three different products, which are sold in three home markets. These products are: Product 1, Product 2 and Product 3. Product 1 can also be sold in an Export Market, Product 2 can also be sold in a Dump Market and Product 3 can also be sold in the International Market (if applicable).

More information about product/market combinations can be found in chapter 3.

2.3 Departments

You will be given the tools to influence a number of departments.

Production

The production facility is the department in your company where the product is manufactured. Proper planning is vital for the production facility; if you fail to order raw materials in time for example, sales will eventually be lost. The same goes for the employees and machinery. If you do not have sufficient employees planned for the year ahead, you will not be able to realise your production quotas. Similarly, if you have a surplus of raw materials, your stock levels will go up and so too will the costs. It's therefore important to keep the costs at their lowest possible level. The production department should be flexible in its planning and able to look three years ahead.

More information about Production can be found in chapter 5.

Marketing

The marketing department employees advertise and promote the products manufactured in the production facility. It's up to you to ensure they develop a pricing strategy that's in line with your competitors and that they take advantage of all the various credit facilities. And last but not least, this department also manages the Sales Groups that promote your products in each of the different markets. Your company has five marketing-instruments at its disposal:

- Sales Groups
- Price
- Credit Facilities
- Promotion
- Quality

More information about Marketing can be found in chapter 4 and 5.

Human Resources (HR)

Good operational management must include proper HR management. Proper HR management means taking care of issues like competitive wages, good working conditions et cetera. The working conditions within your company greatly influence its results. Employees may leave the company if the wages are too low or the working conditions are (relatively) bad. Money spent on the improvement of the working conditions can lead to higher efficiency of the production processes and can reduce personnel turnover. If necessary, you can hire temporary personnel.

More information about HR management can be found in chapter 5.

Finance

The financial department must carefully monitor all company activities. It's essential that you don't allow financing to deteriorate to the point where it leads to the making of forced decisions in the areas of marketing and/or production.

Unless otherwise specified, all amounts and prices will be expressed in the Euro. The amounts for Product 1 in the Export Market however, will be expressed in Dollars (\$). One Dollar is approximately 0.88 Euro. On the International Market prices will be expressed in Olo. One Olo is equal to 0.6 Euro.

More information about Finance can be found in chapter 6.

Research and Development (R&D)

To ensure the maximum effort is being expended on improving its products and reducing its production costs, your company has its own R&D staff. By co-operating with other companies in the area of R&D, you can achieve a higher return on investment (ROI).

More information about R&D can be found in chapter 5.

2.4 Keeping your shareholders happy

In order that they might be able to monitor your company's strategy, your shareholders have defined several criteria that will make the success of your strategy measurable.

The shareholders are mainly interested in:

- cumulative profit up to and including the last Period
- total dividend paid
- continuity in Markets 1, 2 and 3
- the average Market share in the last three Periods in the Export Market
- continuity in the International Market (if applicable).

The exact criteria and their importance are explained in more detail in chapter 12.

2.5 Timing and planning

Competent management means you'll have to plan well in advance! Therefore, good timing and planning will be indispensable elements during the game. You cannot make good decisions simply by taking only the coming period into account. You have to look, think, and plan ahead to stay in the market and beat the competition. Chapter 11 gives an overview of all the possible delays that can affect your plans.

2.6 Reading the Company File

We suggest that you do not read the complete Company File in one go. Indeed, as several people have already discovered to their cost, trying to do so could prove to be a pitfall.

Instead, it's better to divide the Company File into two or three manageable parts during your preparation. In addition to this, we also suggest that you delegate the various tasks between

yourselves before reading the Company File. In this way, every management team member will be able to concentrate more on his or her specific role while reading it.

However, for a good understanding of the game, it's essential that you read the manual very carefully!

2.7 Structure of the game

The game will comprise of Rounds and each Round consists of several Periods. One Period represents a specific period of time, e.g. 3 months, one year. The Game Instructor will inform you about this. Depending on the Game Instructor, you can play one or more Rounds. All the figures used in this manual are the ones that correspond with Round 2.

Every company will begin from the same starting position which is described later on in this manual. This means that the circumstances will be identical for every team. Every Period you will make the decisions about the company's plans for the following Period.

You will specify your decisions on a Decision Form. An example is added to this manual. There is also a possibility to specify the decisions on an electronic Decision Form in WinMapp, a personal Management Planning Program. Whether or not you will use this can be checked at the Game Instructor.

At the end of every Period, you'll receive:

- an overview of the entered and accepted decisions
- a liquidity overview
- a profit and loss account
- a balance sheet
- a stock overview
- sales information
- a production capacity overview
- replies to information you may have requested from the Market Information Centre
- the share prices

Pools

To represent real life business your company will be one of 5 major players in a market. These 5 companies (teams) form one pool. This means that each team has 4 direct competitors. You can only compete and co-operate with teams in your pool. It's possible that for the final ranking, all other participating teams are your rivals. The Game Instructor will inform you about this.

After each Round, you'll also receive an evaluation overview of your pool. This overview will include the results of all five companies in the pool, together with the decisions they made that have led to these results. With this overview it will be possible to analyse your company's performance in comparison with the four competitors in your pool.

Cases

As an international company you will have to deal with international issues as they occur. These issues can manifest themselves in the form of additional cases. The Game Instructor will inform you of such in good time.

The scores you attain for these cases can be added to your criteria scores.

The Game Instructor

During the game, the Game Instructor will offer you support. The Game Instructor will:

- bear final responsibility regarding the game (decisions, co-operation agreements etc.);
- answer questions;
- provide any relevant information you might require.

Further information about the Game Instructor's responsibilities can be found in chapter 12.

Ranking

At the end of a Round, the companies will be ranked on the basis of a number of criteria. These criteria include profits, market shares obtained, a valuation of the company's continuity, and the total dividend paid, plus - where applicable - scores attained for the additional cases.



3 Company, products, and markets

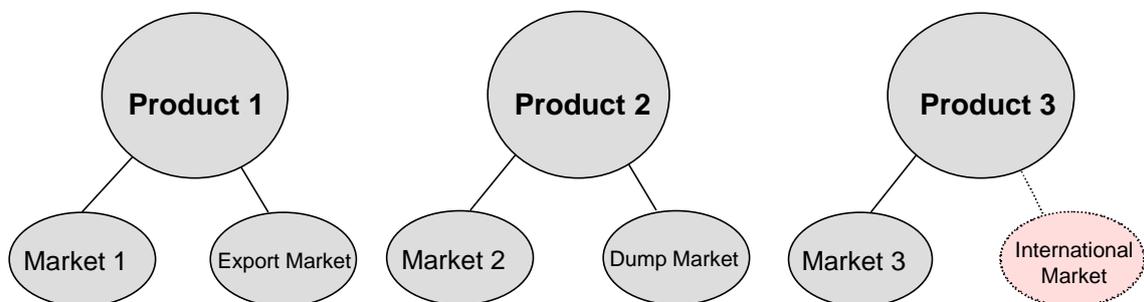
3.1 The company

Your company has four direct competitors that manufacture 2 comparable end products: Product 1 and Product 2. In the following paragraphs you'll find a brief description of your products and the markets in which they are sold.

3.1.1 Market definition

Your company is in the starting situation active in 2 home markets: Market 1 and Market 2. In addition to these home markets, there is also an Export Market and a Dump Market. All the markets have different demands and development structures. The figure below shows the product market combinations.

Note that the products can only be sold in the specific markets as shown below.



In period 3 a new market will emerge for a new product (product 3). In period 3 your company may be a supplier of this product, provided you have started the production of this new product in time.

Products will only be available for sale, when the production was started at the latest in the period preceding the period in which the products are offered. In the case of product 3 this means that the production must have started in period 2 at the latest; at least, if you want to profit from the opportunities a rising market offers.

When you start the production of the new product in period 2 and you want to keep the production of the other two products intact, it is necessary to decide on the expansion of the production capacity in period 1 already. Any expansion of the production capacity will not be available until the period following the one in which the decision was taken to expand. This concerns both personnel and machinery. You may hire production capacity. Hired capacity is immediately available.

For the production of product 3 you will need raw materials, which your company does not have in stock yet. If you want to start the production of the new product 3 in period 2, you must order the necessary raw materials in period 1 already. These raw materials will be delivered at the start of period 2 and will be immediately available for production.

International Market for product 3

Your company's previous management team started negotiating with agents in foreign countries about selling Product 3 in their market. These negotiations, together with market research, can culminated in a decision to start selling in the International Market in a certain period. The Game Instructor will inform you about this. By using promotion and Sales Groups, the sales in the International Market can be stimulated in advance (in a restricted way).

3.2 Product 1

Market 1

The market for Product 1 is Market 1. The current market demand is for 153,000 units per Period.

Export Market

Product 1 can also be sold in the Export Market. The current demand in the Export Market is 144,000 units per Period. Prices on the Export Market are in Dollars (\$). The effective rate of exchange is the one that's valid during the period of sale.

You'll have to bear in mind that in addition to trend-driven developments in the Export Market, external factors can also have a great influence on demand. The average price level, promotional expenses and quality level of Product 1 will all influence the development of the demand, both in the applicable Period and during the following Period(s).

3.3 Product 2

Market 2

The market for Product 2 is Market 2. The current market demand is for 405,000 items per Period.

Dump Market

A secondary market for Product 2 is the Dump Market, in which surplus stocks of Product 2 can be sold off at fixed prices of 920 Euro per unit. Payment is made during the period of sale, always in cash. The advantage of selling in the Dump Market is that all the products you earmark for sale in this market will actually be sold. The disadvantage however, is that you'll get a lower price for them.

Dump Sales of Product 2 will reduce the market demand in Market 2 for Product 2 during the following Period. This reduction will be 20% of the amount sold on the total Dump Market. Should your company decide to dump more than 20,000 items in the Dump Market, buyers will be granted a price discount of 15% of the Dump Market selling-price on the excess amount.

3.4 Product 3

Market 3

In period 3 a market emerges for a new product 3. This is Market 3.

As soon as there is a demand, your company may become an offerer in this market. The manufacture of product 3 for this new market will have to start at an earlier date. The basic demand for product 3 is about **60,000** items for the entire branch.

International Market (if applicable)

Competition in the International Market is fierce and because of this your company has decided to work with local Sales Groups. These Sales Groups are familiar with the culture and speak the country's language. They also take care of the promotion. The price and quality of Product 3, and the money spent on advertising will influence the demand for Product 3. The market demand in the International Market is approximately 40,000 items in the period the market emerges. The International Market is an independent market, which means that the sales in this market are not influenced by the sales in Market 3.

The currency used on the International Market is the Olo. There is no credit facility in the International Market, i.e. payments are due in the same Period as the one in which the sales were made, and at the applicable rate of exchange. The rate of exchange in Period 0 is:
1 Olo = 0,6 Euro.

3.5 Market demand

Market demand can be influenced by a number of factors. Market information can be bought from the Market Information Centre to gain insight into these factors, so that you can subsequently adjust your operating policy and strategy accordingly. However, incidental disturbances in markets can occur at any time, in spite of the forecasts.

Generally speaking, we can distinguish between three types of factors that can affect market demand. These are:

- basic trends in demand
- marketing strategies
- incidents and external influences such as government legislation.



4 Marketing

4.1 Introduction

Part of your task as the management team is to develop a sound marketing strategy and to translate this strategy into the way your five marketing instruments are used by your marketing department.

The five marketing instruments used by your marketing department are:

1. Sales Groups
2. Price
3. Credit Facilities
4. Promotion
5. Quality

Relevant details on these marketing instruments are explained in the following paragraphs. Quality will be explained in paragraph 5.9 and 5.10.

Apart from these marketing instruments, your company has the possibility to obtain market information from the Market Information Centre. This Market Information Centre will provide you with all relevant market information.

4.2 Sales Groups

Your company uses Sales Groups to sell and promote its products in the various markets. Sales Groups are responsible for the acquisition of orders and the administrative handling of these orders. If you don't use enough Sales Groups, you'll lose orders. What's more, if you don't deploy enough Sales Groups, they'll only deal with the administration of orders for existing customers, and will not have sufficient time to win new business. In the starting situation, your company has 27 Sales Groups at its disposal to help it sell its products to its customers.

Sales Groups build up relationships with clients. However, you'll have to bear in mind that it takes time to build up such relationships, so it'll take a number of Periods before the full effect of newly deployed Sales Groups will result in extra sales. On the other hand, if you deploy fewer Sales Groups, the relationships you enjoy with your customers will not come to a sudden end. You'll only notice the full effect of reduced deployment of your Sales Groups after several Periods.

The International Market has its own local Sales Groups. These Sales Groups are recruited in the applicable country and are paid by your company. In addition to enjoying contact with the local companies, the Sales Groups also speak the language of the country.

4.2.1 Capacity of the Sales Groups

The maximum number of sales that can be handled by one Sales Group is:

- 9,600 items of Product 1 in Market 1
- 9,600 items of Product 2 in Market 2
- 3,600 items of Product 3 in Market 3
- 14,000 items of Product 1 in the Export Market
- 14,000 items of Product 2 in the Dump Market
- 3,500 items of Product 3 in the International Market (if applicable)

If the capacity of your Sales Groups is completely taken up with the administrative handling of orders, they will be unable to establish new contacts in the markets. Therefore, the number of orders will not increase.

4.2.2 Costs and recruitment of Sales Groups

Home markets, Export Market, and Dump Market

A maximum of seven Sales Groups can be recruited for all these markets in total per Period. Newly recruited Sales Groups will initially cost 200,000 Euro, and will be able to start working for your company immediately, i.e. in the Period in which they are recruited. However, you'll be obliged to pay 50,000 Euro for training the new Sales Group personnel in this Period. The training costs are given under the item *Personnel and organisation* on the Liquidity Overview. At the end of each Period, a number of Sales Groups will leave your company. The turnover of a company's Sales Group employees will be similar to its general personnel turnover (initially approximately 7%). This turnover will be rounded-off to a whole number of Sales Groups.

International Market (if applicable)

You can recruit a maximum of three Sales Groups per Period, with the notable exception of the period the International market emerges when you can recruit six Sales Groups. In the starting situation, one Sales Group for the International Market will cost you 300,000 Olo, and this will increase as a result of wage rises. The costs of the Sales Groups are subject to inflation, which means they will increase by approximately 2% per Period.

For every new Sales Group you deploy in the International Market, you'll have to pay 80,000 Olo training costs. At the beginning, the turnover of the Sales Group employees in the International Market is approximately 10% per Period. However, this can be influenced by internal and external factors.

4.2.3 Deployment of the Sales Groups

If a company decides to deploy more Sales Groups in a market, it will result in an increased demand for that company's products (provided that the decisions of its competitors remain unchanged). Sales Groups can be deployed to sell each of the three products. You will decide per Period how many Sales Groups to deploy in the various markets. A minimum of one Sales Group should be deployed in Markets 1 and 2.

Every Period, you must indicate on the Decision Form how many Sales Groups you want to deploy per market. If the total increase in the number of Sales Groups - when compared to the previous Period - is higher than permissible, the deployment of Sales Groups will automatically be proportionally reduced to the maximum.

If the deployment of Sales Groups specified on your Decision Form is less than the total number of Sales Groups your company actually has, the deployment of your Sales Groups will automatically be proportionally increased until the available amount of Sales Groups working at your company has been reached.

You'll also need Sales Groups to realise sales in the Export and Dump Market. Transactions in these markets involve larger quantities of products and the work required of the Sales Groups consists merely of administrative handling. Therefore, fewer Sales Groups will be needed.

The deployment of Sales Groups in the Export Market is determined proportionally. For example, the maximum capacity of a Sales Group in the Export Market is 14,000 items of Product 1 per Period. In order to sell 7,000 items in a particular Period in the Export Market, you'll need half (0.5) a Sales Group.

NOTES

On the Decision Form, fill in the total number of Sales Groups you'll need for Market 1 + the Export Market, and Market 2 + the Dump Market. The number of Sales Groups needed for the Export and Dump Market will be determined first, and the remainder will then be available for the home markets.

If you do not deploy any Sales Groups on the International Market when this market opens up your sales in this market will be 0.

Table 1. Sales Groups

Market	Sales Groups Period 0	Minimum deployment of Sales Groups	Maximum Capacity of Sales Groups	Sales Groups general	
Market 1	11	1	9,600	Sales Group costs Period 0 : 200,000 Euro	
Market 2	16	1	9,600	Training costs : 50,000 Euro	
Market 3	0	0	3,600	Maximum increase : 7	
Export Market			14,000	Maximum increase Period 3 : 12	
Dump Market			14,000		
				Sales Groups International Market	
International Market	0	0	3,500	Sales Group costs	300,000 Olo
				Training costs	80,000 Olo
				Maximum increase Period x	6
				Other Periods	3

4.3 Prices

As the management team, you'll determine the prices for your products in the different markets. A sound pricing strategy is a highly effective weapon that will help you in your 'struggle' against your competitors.

Prices of Product 1

The previous management team decided on a sales price of 1,350 Euro per unit for Product 1 sold in Market 1. Moreover, every Period, you are allowed to raise or lower the price of Product 1 in Market 1 by a maximum of 60 Euro. The minimum price in Market 1 is 1,100 Euro, and the maximum price is 1,600 Euro.

The previous management team decided on a sales price of \$1,550 per unit of Product 1 sold in the Export Market. This price may be increased or reduced by a maximum of \$50 per Period. The minimum price is \$1,300, and the maximum price is \$1,800. The exchange rate in Period 0 is \$1 = 0.88 Euro.

Prices of Product 2

The previous management team decided on a sales price of 1,100 Euro per unit of Product 2 sold in Period 0 in Market 2. Moreover, every Period, you are allowed to raise or lower the price of Product 2 in Market 2 by a maximum of 40 Euro. The minimum price in Market 2 is 900 Euro, and the maximum price is 1,300 Euro.

Bear in mind that the sales price per unit of Product 2 on the Dump Market cannot be changed and will always be 920 Euro per unit!

Prices of Product 3

You may set the introduction price per unit of Product 3 sold in Market 3 between 1,500 and 2,100 Euro, and the price you choose may be raised or lowered by a maximum of 80 Euro per Period. If you decide to sell your Product 3 on Market 3, but has not yet set a price for it, the price will be assumed to be 1,700 Euro per unit.

If you decide not to sell in Market 3 in Period 3, you may set your first price in a following Period. If you set a price for Product 3 before you can offer it for sale in this market, you will be restricted to the maximum price variation per Period.

International Market for Product 3 (if applicable)

You may set the introduction price per unit of Product 3 sold in the International Market between 2,500 and 3,500 Olo, and the price you choose may be raised or lowered by a maximum of 150 Olo per Period. If you decide to sell your Product 3 on the International Market, but has not yet set a price for it, the price will be assumed to be 2,700 Olo per unit.

If you decide not to sell in the International Market in the period this market emerges, you may set your first price in a following Period. If you set a price for Product 3 before you can offer it for sale in this market, you will be restricted to the maximum price variation per Period.

The exchange rate in Period 0 is 1 Olo = 0.60 Euro.

Table 2. Prices

Market price	Currency	Price in Period 0	Minimum price	Maximum Price	Maximum Variation
Market 1	Euro	1,350	1,100	1,600	60
Market 2	Euro	1,100	900	1,300	40
Market 3	Euro	-	1,500	2,100	80
Export Market	Dollar	1,550	1,300	1,800	50
Dump Market	Euro	920	-	-	-
International Market (if applicable)	Olo	-	2,500	3,500	150

4.4 Credit facilities

As the management team, you can decide on the credit facilities you'll grant your customers. This credit facility is the extent to which you will permit your customers to pay later. Any improvement you make to the credit facilities offered to buyers in the market will increase your sales and - provided the other marketing instruments remain unchanged - also increase your market share.

NOTE

In Period 0 the credit facility = 1, which means that you will receive 90% of the earnings in Period 0 and 10% in Period 1.

The credit facility is expressed as a number between 0 and 9 for each of the products.

- If the credit facility = 0, it means the entire amount of the sales income for the applicable product will be received in cash during the period of sale.

As the credit facility gets higher, the payments for the products will be spread out over the current and the following Periods in accordance with the following methodology:

- If the credit facility = 1, 90% of the payment will be received in cash during the period of sale, and the remaining 10% will be received during the following Period.
- If the credit facility = 2, 80% of the payment will be received in cash during the period of sale, and the remaining 20% will be received during the following Period.
- And so on.

NOTE

The credit facility for the Export Market is always 0, which means you will receive the total payment, in cash, during the period of sale.

4.5 Promotion

As the management team, you can decide on the budget to be spent on promotional activities. By increasing the promotion budget you can increase your sales. If your company increases its promotion budget in a particular market and your competitors don't, your market share in that market will increase.

Promotional activities have full effect in the Period in which they take place. In the following Period the carry-over effect these activities will have on the market demand will remain approximately 20% of what it was during the preceding Period. Promotional expenditures are made in multiples of 100,000 Euro in the home markets.

In the Export Market (Product 1), promotional expenditures are made in multiples of \$120,000, at the Dollar rate of exchange that's effective in the Period in which the promotional campaign actually takes place. There is no carry-over effect on the market demand in the following Period in the Export Market.

In the International Market (Product 3), promotional expenditures are made in multiples of Olo 140,000, at the Olo rate of exchange that's effective in the Period in which the promotional campaign actually takes place. The carry-over effect on the market demand in the following Period will be the same as it is in the home markets (20%). Promotional campaigns are not relevant to the Dump Market.

Table 3. Promotion

	Promotion Home markets (Markets 1, 2 and 3)	Promotion Export Market	Promotion International Market
Cost of promotion in multiples of:	100,000 Euro	120,000 Dollar	140,000 Olo
Maximum number of multiples:	99	99	99
Effect next Period in %	20	-	20

4.6 Market Information Centre

The Market Information Centre can provide you with all the relevant marketing information that you might need. You have the opportunity of requesting basic business information, and the types of information you can request, together with the respective prices, are listed below. You can request this business information every Period.

Furthermore, there is a possibility to also buy *all* available business information at once and against a different price (box number 38 on the Decision Form). This so-called Market Information Report can be extended with additional competitor information (a Consultancy Report). Verify with your Game Instructor if this is available for you.

4.6.1 Rates for requested separate business information

Competitors prices

The information will give you an insight into the prices set by the companies in your pool in Markets 1, 2, and 3, in the Export Market and in the International Market. Cost: 100,000 Euro.

Closing stock of end products

The Market Information Centre will supply you with information about your competitors' closing stock. Cost: 50,000 Euro.

Available production capacity

The Market Information Centre will supply you with information about each of your competitors' total number of personnel and machine units (procured and hired).

Cost: 50,000 Euro.

The effects of product improvements (R&D) / quality level

Per level, the Market Information Centre will supply you with information about of the percentage lead your company enjoys over its competitors for the specified quality level. And per request, will supply you with information for Markets 1, 2, and 3, the Export Market and the International Market. This information will afford you an insight into the effects that future product improvement investments will have. Research of this kind will also help you find out at which level investments in quality will still be profitable.

The effect can be requested for two quality levels per Period.

Cost: 30,000 Euro per level.

The effects of efficiency improvements / efficiency level

Per level, and for the efficiency level specified in the request, the Market Information Centre will supply you with information about the variable costs and the usage of raw materials per unit. And per request, will also supply you with this information for Product 1, Product 2, and Product 3.

This information will afford you an insight into the effects of future investments in efficiency.

Research of this kind will also help you find out at which level investments in efficiency will still be profitable. Two levels can be requested per Period.

Cost: 30,000 Euro per level.

Fixed costs

The Market Information Centre can offer you information concerning the fixed costs (in thousands of Euros) for the specified level of machine capacity.

This information will afford you an insight into the fixed costs of any possible increases of machine capacity in the future. It will also help you avoid surprises when increasing machine capacity because these fixed costs can be subject to sizeable increases; for example, because extra space might have to be rented.

Information about the fixed costs can be requested for two levels per Period.

Cost: 30,000 Euro per level.

The effects of promotion

The Market Information Centre will supply you with information about the market share percentage your company could realise for the specified amount of promotion expenditure (based on the assumption that your competitors do not spend anything on promotion). Per Period per Market, the Market Information Centre will supply you with this information for one level.

When requesting the effects of promotion, filling in units for 'Export' will show the effects for the International Market for Product 3 as well as the Export Market for Product 1.

Cost: 50,000 Euro per level.

Competitors' shares (percentages) of promotion expenditures

You will be afforded an insight into the total amount your competitors spend on promotion during this Period.

Cost: 50,000 Euro.

Quality level of competitors' products

The Market Information Centre will supply you with information about the quality level of each of your competitors' products for the next Period.

Cost: 50,000 Euro.

Sales Groups

Information about the number of Sales Groups will be provided. This will include newly recruited groups at your competitors' disposal during the Period under review.

Cost: 50,000 Euro.

Market demand estimates

You'll be given estimates of the market demand in Markets 1, 2, 3, the Export Market and the International Market for the next two Periods.

These estimates will include all the elements that will shape the market demand during the following Period, whereby the Period under review (Period n) is taken as a basis for determining the effects of the marketing instruments. The estimate for Period (n + 2) will be based on the assumption that there will be no supply deficits and no dump sales in Period (n + 1).

Cost: 50,000 Euro.

Share of working conditions improvements

Here, you'll be supplied with information about the total expenditures (expressed as percentages) on improvements in working conditions made by your direct competitors up to and including the Period under review.

Cost: 30,000 Euro.

Market shares

Here, the Market Information Centre will supply you with information (expressed as percentages) about your direct competitors' sales in Markets 1, 2, 3, the Export Market and the International Market in the Period under review of.

Cost: 75,000 Euro.

Competitors' wage costs

The Market Information Centre will supply you with information about your competitors' personnel costs. This information will be given per personnel unit (PU) per company.

Cost: 30,000 Euro.

If you order all market information items separately, it will cost you 915,000 Euro in total.

Market Information Report and Consultancy Report

You can apply for a Market Information Report via the Decision Form. This report includes all business information! If you want to order it, simply fill in box number 38 on the Decision Form and indicate the levels for the effects (boxes 27 through 30).

Alongside the basic business information, you can also receive a Consultancy Report. This will include additional important market and competitors' analyses:

- The credit facilities
- The lost sales and supplementary sales
- The dump sales
- The effectiveness of personnel
- The profit and profit per share
- The personnel turnover
- Some important Ratios (IFO, ROS, RONA and ROE)

You will receive this information from period 1 up to and including the last played period for all competitors in your pool. Besides you will receive an estimate of the liquidity position for the next period for all competitors, based on the same assumptions as used for the calculation of the criteria (see 13.3).

Your Game Instructor will inform you if the Consultancy Report is available for you.

Cost: 1,100,000 Euro, including Consultancy Report. When the Consultancy Report is not available, your Game Instructor will determine the costs.

5. Production

5.1 Introduction

The production department is responsible for the manufacture of Product 1, Product 2, and Product 3. As the management team, you are responsible for the perfect harmonisation between the following three production factors:

- Production Personnel
- Machinery
- Raw Materials

This means the development of a long-term investment strategy to assure your production capacity, a sound HR management policy to guarantee the supply and availability of well-qualified production personnel and careful procurement of raw materials to prevent shortage on the one hand and overstocking on the other.

The following paragraphs discuss these production factors and the running of your production facilities.

5.2 Personnel

In view of the fact you must have employees to operate the machines and process the raw materials and end products, your personnel forms an indispensable part of your production process. Therefore, if you wish to attract and retain skilled and motivated employees that will work effectively for your company, it's vitally important that you provide good working conditions and pay competitive wages. Personnel in your company is expressed in terms of Personnel Units (PUs). In the starting situation, your company has a (personnel) capacity of 222,000 PUs.

5.2.1 Recruitment and training

Your company may recruit permanent staff in multiples of 1,000 PUs. This should be specified on the Decision Form under the item: *Increase personnel - permanent employees*.

Newly recruited employees do not become active until the Period after they are recruited, which means an increase in the number of employees will not be reflected by higher manufacturing quotas until the following Period (see 5.2.2). Consequently, wages for newly recruited personnel will not be paid until the following Period. During the Period in which new employees enter into active service, your company will have to pay 5,000 Euro (per 1,000 PUs) for training them. These training costs are to be specified under the item *Personnel and organisation* on the Results Overview. The recruitment of new personnel will not affect the personnel turnover.

If necessary, you can also 'hire' temporary employees. Temporary employees' contracts are always valid for one Period only and their costs are incurred in multiples of 1,000 PUs. Temporary employees cost 150,000 Euro per 1,000 PUs, and these costs are to be given under the item *Hire* on the Results Overview.

Temporary employees can be deployed immediately during the current Period and will immediately be 100% effective. Permanent personnel is not always 100% effective.

5.2.2 Effectiveness of personnel

The effectiveness of the personnel is influenced by:

- wages
- working conditions
- large variations in production capacity
- procurement of large quantities of Product 2
- extraordinary circumstances the Game Instructor will inform you about

If your company pays very low wages compared to those paid by your competitors, you run the risk of a substantial reduction in effective PUs. You also run the risk of your employees going on a wildcat strike.

The effective production capacity will be specified for each Period on the Results Overview. Remember that new employees will not be fully productive in the Period they enter into active service, which means the effective percentage of PUs will drop during that particular Period.

In the starting situation, the effective performance of the personnel is only 90%. Every company will therefore start with 199,800 effective PUs (90% of 222,000). By improving its working conditions, a company can increase the effectiveness of its personnel. The Results Overview will show the effectiveness for the coming Period.

5.2.3 Working conditions

The working conditions within the company are partly the reason that the deployment of the personnel is only 90% effective. This effective production capacity can be increased by spending money on improving the working conditions. To improve the degree of your employees' effectiveness, you can decide to invest in units of 100,000 Euro, with a maximum of 10 units per Period. The effect of expenditures made on improving working conditions will diminish progressively so that for every following period the effect will be 70% of what it was.

5.2.4 Reduction of working hours

You can also decide to reduce your company's working hours. If you do, the fixed costs of the company-owned production units and the cost of permanent employees will be charged at 50%, but you'll have to pay in full for hired capacity.

Only 50% of the company-owned effective production capacity and hired capacity will be available. Short-time working will take effect immediately in the same Period and will apply to that Period only. Reduction of working hours should only be used as an emergency measure to save costs in that applicable Period and to raise money on a short term.

NOTE

If you use short-time working, don't forget to adjust your production targets to correspond with the reduced production capacity.

5.2.5 Wage increase

Every Period, you can increase the wages you pay your employees. Wage increases are expressed in terms of **per thousand** (in ‰) of the actual costs per employee and they are specified under the item *Wage increase* on the Decision Form. In the starting situation, the wage costs are 100 Euro per PU.

Wage increases become effective immediately. The costs of the Sales Groups in the home markets increase proportionally (per thousand) with wage increases. The general tendency in the development of wage increases is approximately 20‰. Wage increases are approximately 20‰ in the International Market(if applicable) too, but these do not depend on developments in the home markets.

Your company calculates its total wage bill on the basis of the number of employees (PUs) it has at its disposal multiplied by the wage you pay. The cost and number of permanent employees on the payroll in any one Period is given under the item *Personnel and Organisation* on the Results Overview.

5.2.6 Personnel turnover

At the end of each Period, some of your employees will leave your company. The process of employees leaving the company, and the recruitment of new employees to replace them, is known as personnel turnover. The extent of this turnover depends on:

- the wages paid by your company in comparison with your competitors
- the working conditions in your company compared to the working conditions in the other companies
- the operating results (profit or loss)
- the financial state of your company

In the starting situation, the personnel turnover is 0%, and during the first few Periods an average turnover of about 7% is normal. The turnover of the Sales Groups in the home markets, the Export Market, and the Dump Market is equivalent to that of the regular personnel. The personnel turnover of the Sales Groups in the International Market is not related to the turnover in the home markets. Every Period, the personnel turnover in the various markets will be given on the Results Overview.

5.2.7 Dismissing personnel

It may be necessary for your company to dismiss employees but you will only need to resort to such measures if your company is in serious trouble. However, if you wish to make part of your personnel redundant, you will have to come up with a good social plan to compensate them. (Which certainly won't be cheap!)

It is not possible to make known your intention to dismiss employees simply by using the Decision Form. For any dismissals you must contact the Game Instructor. If you want to request the redundancy of some of your employees, you'll have to tell the Game Instructor how many of your permanent employees you want to dismiss. This number will have to be specified as a percentage of the permanent employees that were working for you during the previous Period. This percentage will then be added to the personnel turnover of the previous Period. Dismissals take effect immediately, during the same Period in which they are requested. It's not possible to dismiss employees during the last Period!

Costs of dismissals

If you've taken redundancy measures, 60% of the wages of the dismissed employees (rounded off to multiples of 1,000 Euro) must be paid in the Period in which the dismissals take effect. These costs will be specified on the Results Overview under the item *Miscellaneous*.

Employees that are to be dismissed will no longer be available for production purposes in the Period in which the dismissals are requested.

Effect

The dismissal of personnel will cause unrest amongst the remaining employees, and this will seriously reduce their effectiveness. Reorganisations will also cause employees to look for other jobs. This will result in higher personnel turnover in the Period in which the reorganisation takes place and the Periods that follow it.

In table 4, you'll see a summary of the key figures relating to the personnel.

Table 4. Production capacity - personnel

Available Period 0 in PUs	Total costs Period 0 in Euro	Hire costs per 1,000 Pus	Personnel turnover	Training costs per 1,000 items in Euro
220,000	22,200,000	150,000	Appr. 7%	5,000

5.3 Machinery

The term machinery includes machines, buildings, storage space, and transport. Machinery is expressed in Machinery Units (MUs). At the moment you have 445,200 MUs. The same machinery can be used for the manufacture of all three products.

5.3.1 Buying and hiring machine capacity

You can increase your machinery capacity by buying extra units of machinery and these will cost you 300,000 Euro per 1,000 MUs. If you decide to buy extra machine capacity in a certain Period you have to pay for this capacity in the current Period (the Period in which you decide to increase the machine capacity). The extra capacity will be effective from the next Period.

It's possible to hire extra machine capacity for one Period and this will cost you 250,000 Euro per 1,000 MUs. These costs are given on the Results Overview under the item *Hire*. Hired capacity is available for production in the Period in which the decision was made. This means that hired machine capacity can be used for production immediately. Hired capacity is 100% effective.

5.3.2 Effectiveness of machinery

In the starting situation, machinery can be used 100% effectively, which means you'll start with 421,200 effective machinery units (MUs). The effectiveness of your machinery is reduced as a result of breakdowns, maintenance, etc. The Results Overview shows the effectiveness of both PUs and MUs for the coming Period.

5.3.3 Capacity loss

Every Period, part of your machine capacity will be taken out of commission because of wear and obsolescence. This capacity loss is 6% of the existing company-owned capacity in every Period, excluding any increase in capacity that might have been procured during that Period. The capacity loss will be specified in, and charged to the profit and loss account. The value of the production means will be reduced by the same amount on the balance sheet.

5.3.4 Closing down machine capacity

With the exception of Period 1, you can close down machine capacity prematurely in any Period, except for the last Period.

It is not possible to make known your intention to close down machinery simply by using the Decision Form. You'll have to inform the Game Instructor of such and you'll have to tell the Game Instructor the percentage of machinery that's to be sold (above the normal capacity loss) in the applicable Period.

The percentage you specify will be relative to the company-owned machine capacity at the beginning of the Period.

Fifteen per cent (rounded off to multiples of 1,000 Euro) of the original value of the machine capacity that is to be sold, will be received in the Period in which the sale was effected. This sum will be given on the Results Overview under the item *Miscellaneous*. The machines will still be available in the Period in which the decision to sell is taken. In this Period, fixed costs will still have to be paid on the fully available machine capacity.

NOTE:

It's not possible to close down machine capacity during the last Period!

5.3.5 Costs of machinery

Every Period, fixed costs will have to be paid on company-owned machinery. Generally speaking, the average fixed costs per MU will decrease as capacity increases. At 421,200 MU, the fixed costs are 46,300,000 Euro per Period.

Table 5 gives a summary of the key figures as they apply to machinery.

Table 5. Production capacity - machinery

Available Period 0 in MUs	Total fixed costs Period 0	Hire costs per 1,000 MUs	Capacity loss per Period	Price per 1,000 MUs
421,200	46,300,000	250,000	6%	300,000

5.4 Production targets

To manage the production of your company, you will have to make a number of decisions every Period as to how many units of each of the three products to manufacture. Production targets will therefore have to be set.

If the capacity required for the planned production exceed the effective production capacities, the decisions that recommend this planned production will be re-adjusted. What this effectively means is that the production targets you specify will be reduced proportionally until they fall within the scope of the effective capacity. In the event that you have insufficient quantities of raw materials, the largest possible number of products will be manufactured from the available raw materials for that particular product.

The production will first be re-adjusted to correspond with the available capacity, and then to the available raw materials.

5.5 Production and stocks

Your company manufactures so that it can sell from stock. This means that end products manufactured in any given Period can only be sold during the *following* Period. The same goes for end products that are ordered during a Period; these will only be available for sale during the following Period. Stock costs are described in more detail in paragraph 5.8.2.

In the starting situation (in Period 0), production was started up for 59,400 items of Product 1, 81,000 items of Product 2, and 0 items of Product 3. This production will then be available for sale in Period 1. The stock at the end of Period 0 is available for sale in Period 1. This stock includes 10,000 items of Product 1, 8,000 items of Product 2, and 0 items of Product 3.

5.6 Capacity utilisation

As was already mentioned under machinery, the machines can manufacture all three of the products. For the manufacture of these products, different proportional relationships exist between the personnel and machinery that will be required. The manufacture of 1 unit of Product 1 requires 2 PUs and 3 MUs; Product 2 requires 1 PU and 3 MUs per unit; and the manufacture of Product 3 requires 2 PUs and 2 MUs per unit.

Table 6. Production, sales, and capacity utilisation

Product	Production target in Period 0	Opening stock Period 1	Available for sale in Period 1	Capacity utilisation (CU/product)	
				PU	MU
Product 1	59,400	10,000	69,400	2	3
Product 2	81,000	8,000	89,000	1	3
Product 3	0	0	0	2	2

5.7 Raw materials

Raw materials are needed for the production of the three products, and the production department is responsible for the procurement of these raw materials. Every product needs different sorts and quantities of raw materials.

The following quantities of raw materials are required for production:

- 15 units of raw material 1 per unit of Product 1
- 10 units of raw material 2 per unit of Product 2
- 20 units of raw material 3 per unit of Product 3

Raw materials that are ordered during one Period will be delivered and available for production during the following Period. Raw materials are paid for upon delivery.

If you procure bulk quantities of raw materials in one order, your company will receive a discount of 15% of the basic price. This discount applies to every unit above the applicable discount threshold mentioned in table 7.

EXAMPLE

Discount = 15%

Order Product 1	1,300,000 raw material 1
Discount threshold for Product 1	<u>1,100,000 raw material 1</u>

Discount of 15% received on	200,000 raw material 1
-----------------------------	------------------------

5.8 Production costs

Your company's production costs comprise fixed and variable costs. The fixed costs are those for machinery, personnel, real estate, etc., and the variable costs are directly production-related costs, such as the costs of raw materials and stock costs. Since the variable costs can fluctuate considerably as a result of discounts and various other measures, the following section explains these variable costs in a little more detail.

5.8.1 Costs of raw materials

The prices of the raw materials, the discount thresholds, and the discount percentages are all listed in table 7. The stock costs for the closing stocks of raw materials are paid during the following Period. These costs are 0.5 Euro per unit of raw material.

Table 7. Raw materials

Raw Material	Usage	Price Period 0	Opening stock	Ordered in Period 0	Discount threshold	Raw materials general
1	15	24	90,000	891,000	1,100,000	Stock costs: 0.5 Euro/unit
2	10	34	80,000	810,000	1,000,000	Discount: 15%
3	20	20	0	0	500,000	

5.8.2 Stock costs

Every Period, the stock costs are calculated on the basis of the Period's opening stock (= closing stock of the previous Period).

The stock costs are:

- 25 Euro for Product 1 per unit per Period
- 20 Euro for Product 2 per unit per Period
- 65 Euro for Product 3 per unit per Period.

The valuation of the closing stocks, that you can find on the Profit and Loss Account and the Balance Sheet, is based on the variable costs, increased by the raw materials that are processed into the products.

5.8.3 Setting and re-adjusting costs

If you decide to increase the production of Product 1 by more than 12,000 items (compared to the previous Period), the variable costs will be increased by an additional charge made for setting and re-adjusting the costs. A similar surcharge for Product 2 will be applied if the production increase is in excess of 15,000 items; and for Product 3 if the production increase exceeds 4,000 items (except the first time you produce Product 3). This surcharge is 20% of the variable costs of the extra production increase (in excess of 12,000, 15,000, and 4,000 items respectively).

Table 8. Production and production costs

Product	Product 1	Product 2	Product 3
Maximum increase without adjustment costs	12,000 items	15,000 items	4,000 items
Stock costs (Euro)	25	20	65
Personnel (PU)	2	1	2
Machinery (MU)	3	3	2
Variable costs in Period 0 (Euro)	240	120	350

5.8.4 Variable costs

In addition to the costs for raw materials, other costs are also incurred during the manufacture of a product. These costs (costs of other materials, electricity, etc.) are included in the variable costs. Efficiency improvements affect your costs in two ways:

1. Lower variable costs
2. Less raw material needed

In the starting situation, the variable costs are 240 Euro for 1 unit of Product 1, 120 Euro for 1 unit of Product 2, and 350 Euro for 1 unit of Product 3.

5.9 Product Improvement

As the company's management team you'll be setting the budget that can be spent on product improvements. If you invest in research & development and your competitors don't, it can earn you an increase in the demand for your products.

Product improvement expenditures will lead to an improved quality level of the products in the Period of production. The quality level is the degree of quality of the product, expressed in quality units. The following examples illustrate how the quality level is calculated. This means that the quality improvement will manifest itself in the following Period and the respective market share will not be affected until then. In each of the subsequent Periods, the effect of the quality improvement on the sales will be 80% of what it was during the preceding Period.

Your company can invest in product quality in units of 250,000 Euro, up to a maximum of 20 units per product per Period. Product improvement expenditures will be charged in full to the profit and loss account of the Period in which the investment is made.

All Products 1 and Products 2 offered in the Export or Dump Market will be of the same quality level as the products offered in the respective home markets. However, the effect the quality level has in the International Market can differ to the effect it has in Market 3. You can see this effect in the Market Information and the Market Information Report (provided you've requested them).

EXAMPLE 1:

The quality level of a product in Period 1 is 0 (zero). In Period 1, a company invests 20 units in a product quality improvement. This investment costs 20 x 250,000 Euro. In Period 2, the quality level will be 20. Without further quality improvements in Period 2, the quality level of the product in Period 3 will drop to 16 (80% of 20). If no further quality improvements take place in Period 3, the quality level in Period 4 will drop to 13 (80% of 16 = 12.8, rounded off to 13), and so on.

EXAMPLE 2:

The quality level of a product in Period 1 is 0 (zero). In Period 1, a company invests 20 units in a product quality improvement. In Period 2, the quality level will be 20. In Period 2, another 10 units are invested in a product quality improvement. The quality level in Period 3 will be 10 + (80 per cent of 20) = 26 units.

5.10 Efficiency improvement

You can reduce your variable costs by introducing efficiency improvements. Expenditures on efficiency improvements are made separately for Product 1, Product 2 and Product 3. Efficiency improvements will lead to an improved level of efficiency in the production process. The efficiency level is the degree of efficiency of the production process, expressed in units.

Efficiency improvements cost 500,000 Euro per unit. An efficiency improvement becomes effective in the Period in which it is carried out and it remains effective during all the subsequent Periods. A maximum of 10 units per product per Period may be spent on efficiency improvements. The effect of an efficiency improvement will be greater if you co-operate with other companies in this area (refer to chapter 7).

5.11 Procurement of Product 2

A certain quantity of Product 2 end products can be procured (as opposed to manufactured) from a procurement market for Product 2. The procurement price per unit is 900 Euro. A maximum of 35,000 items of Product 2 can be procured per Period.

5.11.1 Quality level of procured Product 2

Procured Product 2 will be quality level 0. Therefore, if you do procure Product 2, you'll have to upgrade the procured items to the same quality level as the Product 2 your company manufactures. Upgrading the procured products will cost 1 Euro per procured product per quality level unit. These upgrading costs are given on the Results Overview.

EXAMPLE

Suppose you order 10,000 items of Product 2 in Period 1, and you manufacture another 50,000 items during that Period. The manufactured Product 2 is quality level 7. The upgrading costs in Period 2 will thus be $10,000 \times 7 \times 1 = 70,000$ Euro.

5.11.2 Supplier's credit

If, when ordering Product 2 - during Period 1 for example - a company indicates that it wants to take up supplier's credit, the Product 2 it orders will be paid for in Period 3. If no supplier's credit is required, payment will be made upon delivery (in this case in Period 2). A 3% price discount will be granted to customers that do not require supplier's credit.

If Product 2 is ordered during the last Period for which decisions have to be submitted, supplier's credit cannot be requested.

6.1 Introduction

As the management team you are responsible for the financial position and –structure of your company. As such you decide on financial issues such as loans, repayments and the issuing of shares. The financial department in your organisation supports you in two ways to carry out this task. It performs the accounting and controlling function as well as it implements the financial decisions you make as the management team.

The way finance influences the well being of your company can be compared to a thin line between being successful and going bankrupt. The Results Overview and the balance sheet, which are both issued every Period, will be of the utmost importance in the analysis of your performance and to gain insight in the successes and failures of your strategy and policy.

In the context of the dealings between your company and the markets, this chapter of the Company File discusses the various roles played by loans and repayments, credit, suspension of payments and bankruptcy, and dividends and shares.

6.2 Loans and repayments

In the starting situation, your company only has limited liquid assets (cash). However, its financial position is such that borrowing money will not pose any problems. If, during a Period, your company needs more money than it receives, you can borrow money at an interest rate of 3% per Period. However, bear in mind that your possibilities for borrowing money are not unlimited; the **credit limit** set by the banks is 70% of the sum of your company's equity and reserves combined. The amount you can still borrow every Period will be specified on the Results Overview under the item *Credit margin*.

Your company's liquidity at the end of a Period partly depends on the decisions you make during the current Period. Decisions and results from earlier Periods will also significantly affect your liquidity situation.

If your **credit margin** is negative, you'll have to repay credit. The credit margin is the difference between the credit limit and the loan balance. The loan balance in its turn is the total sum of loans as specified on the balance sheet. Every Period, the credit limit and credit margin for the next Period are shown on the Results Overview. Remember that in the values that are given, supplementary credit, dividend payments or share issues will not yet have been taken into account, so that profits will be reserved. This will be done in the following Period.

EXAMPLE:

In Period 0, the company's financial assets are:

135,000,000 Euro (equity) + 14,000,000 Euro (reserves) = 149,000,000 Euro.

The credit limit for Period 0 is $0.70 \times 149,000,000 \text{ Euro} = 104,300,000 \text{ Euro}$.

The profits (minus taxation) for Period 0 will be added to the reserves.

So the credit limit for Period 1 will be:

$0.70 \times (135,000,000 \text{ (equity)} + 14,000,000 \text{ (reserves)} + 8,317,000 \text{ (profit)}) = 110,121,900 \text{ Euro}$.

The credit margin for Period 1 will be:

$110,121,900 - 66,700,000 \text{ Euro (loans on balance)} = 43,421,900 \text{ Euro}$, which is the credit limit minus the loan balance total.

If all outstanding loans have been repaid, money can be deposited in the bank at an interest rate of 2.5% per Period. Repayments made to the bank and money deposited in savings will be specified on the Decision Form under the item *Repayments*.

6.3 Imposed loans

If your company doesn't borrow enough money (your cash balance remains negative after balancing your incoming and the outgoing cash flows), loans, in multiples of 1,000,000 Euro, will be imposed on you until your cash balance is positive again. In addition to the normal 3% interest, an additional 1% interest charge will be levied as a penalty for not requesting these extra loans. Imposed loans are automatically converted to normal loans - with normal rates of interest - during the following Period.

If your company's credit margin is less than the total of the loans required, loans will be imposed up to the credit limit. Supplementary credit may also be granted.

6.4 Supplementary credit

If your company has taken out the maximum amount of loans and your cash balance is still negative, supplementary credit – up to a maximum of 4,000,000 Euro - will be granted for one Period. Although you can apply for supplementary credit again in later Periods, it cannot be granted for two consecutive Periods.

Supplementary credit will only be granted if it makes your cash balance positive again.

Supplementary credit is granted in multiples of 100,000 Euro and the amount of supplementary credit that's granted will be such that the applicable Period will be closed with a positive cash balance between 0 and 100,000 Euro. The supplementary credit facility costs 15% on the additionally borrowed amount.

Supplementary credit will be granted automatically on the basis of the conditions outlined above; it cannot be specified explicitly on the Decision Form. It will be sufficient to fill in the amount, which at least brings you up to the credit limit, on the Decision Form under the item *Loans*.

6.5 Suspension of payments

If a Period is closed with a negative cash balance, your company will be granted suspension of payments for the following Period. A suspension of payment situation never lasts longer than one Period.

If suspension of payments has been granted, your company will be restricted in its decisions during the following Period. These restrictions are:

- credit facilities for the sales markets will be set to 0
- efficiency improvements cannot be implemented
- product improvements cannot be implemented
- supplementary credit cannot be granted
- dividend payments cannot be made
- a maximum of 20,000 personnel units can be recruited (20 x 1,000 PUs)
- a maximum of 10,000 temporary (hired) personnel units can be recruited (10 x 1,000 PUs)
- a maximum of 20,000 company-owned machinery units can be procured (20 x 1,000 MUs)
- a maximum of 10,000 machinery units can be hired (10 x 1,000 MUs)
- co-operation agreements with other companies are not allowed

An additional interest of 3% in excess of the normal 3% will be levied over the negative cash balance.

If your company is facing suspension of payments, there are ways of avoiding its implementation. For example, if you have a stock of Product 2 (after sales in Market 2 and the Dump Market), you can raise extra cash by selling more Product 2 in the Dump Market.

While your company is in a state of suspension of payments, and for as long as this is considered necessary to facilitate reasonable progress during the game, the Game Instructor will act as supervisor and exert influence on your company decisions.

6.6 Bankruptcy

If your company has been granted suspension of payments, it must close off the following Period with a positive cash balance. If it fails to do so, you will be declared bankrupt.

The decision-making limitations imposed on a company that's in a state of suspension of payments do not apply to a company that's in a state of bankruptcy. The government will stand surety for any credit up to the amount of the negative cash balance.

An additional charge of 3% above the normal interest rate for loans will be levied over the negative cash balance.

While your company is in a state of bankruptcy, and for as long as this is considered necessary to facilitate reasonable progress during the game, the Game Instructor will act as supervisor and exert influence on your company decisions. If a bankrupt company no longer submits decisions, the Game Instructor will make and submit these decisions for it.

If a company is facing bankruptcy, the Game Instructor will offer the company every possible assistance in avoiding it.

In the event of your company's bankruptcy, criteria points will be deducted only once during that round and this deduction will be equal to the maximum number of points that can be scored for continuity. This means your company will not be excluded from further participation, unless the Game Instructor decides otherwise. Your management team must try to bring the company back to 'life' again as soon as possible, or finish with positive cash balance again.

6.7 Dividend

As the company's management team, you can decide to pay a dividend to your shareholders. The payment of a dividend contributes to the value of the shares, and could eventually be a decisive factor in the determination of the best management team.

A dividend can be paid in every Period, provided that both profit and general reserves were positive during the previous Period. The maximum dividend payment will be equal to the profits made during the previous Period. If the profits during the previous Period resulted in positive general reserves, the maximum dividend payment will be equal to the general reserves formed without payment of dividend.

EXAMPLE 1:

Suppose a company has negative reserves of 100 and makes a profit of 200. The dividend that the company can pay will be $200 - 100 = 100$.

EXAMPLE 2:

Suppose a company has positive reserves of 200 and makes a profit of 200. The maximum dividend that the company can pay will be 200.

After the payment of a dividend, the remaining part of the previous Period's profit (profit after taxation -/- dividend paid) will be added to the company reserves.

Twenty five per cent of the dividend will be in shares; and the amount paid in shares will be added to the equity of the current Period. The payment of dividend will lead to a lower credit limit during the current Period. This is because the profits can not be added to the reserves if they are paid out as a dividend. This will be illustrated in the following example.

The total dividend paid per round is one of the criteria on which your management team will be assessed.

EXAMPLE

In Period 2, a profit of 7,000,000 Euro (after taxation) is made. The balance sheet for Period 2 shows an equity of 120,000,000 Euro and reserves of 10,000,000 Euro.

A. The company decides not to pay a dividend in Period 3. The credit limit in Period 3 will then be:

• Equity	120,000,000 Euro
• Period 2 reserves	10,000,000
• Period 2 profit added to Period 3 reserves	<u>7,000,000</u>
Total equity and reserves	137,000,000 Euro
Credit limit factor	<u>0.70 x</u>
Credit limit for Period 3	95,900,000 Euro

B. The company decides to pay a dividend 4,200,000 Euro in Period 3. The credit limit in Period 3 will then be:

• Equity	120,000,000 Euro
• Equity increase following dividend payment of 25% of 4,200,000 Euro	1,050,000 Euro
• Period 2 reserves	10,000,000 Euro
• Period 2 profit added to Period 3 reserves (7,000,000 Euro -/- 4,200,000 Euro dividend payment)	<u>2,800,000 Euro</u>
Total equity and reserves	133,850,000 Euro
Credit limit factor	<u>0.70 x</u>
Credit limit for Period 3	93,695,000 Euro

6.8 Taxation

A tax of 35% is levied on the operating profit. Taxation has to be paid in the next Period. In the event of a loss, the company will receive a 35% subsidy. Similarly, if applicable, a subsidy will be received in the next Period.

6.9 Issuing shares

The company's equity in Period 0 (135,000,000 Euro) comprises 13,500,000 shares, each with a nominal value of 10 Euro. Issuing new shares can attract additional equity. Shares can be issued twice in each round. The maximum number of shares that can be issued per Period is equal to 6% of the number of shares outstanding during the previous Period (i.e. excluding the number of shares added to the equity during the dividend payment in this Period).

The price of newly issued shares will be equal to the Stock Exchange quotation (share price). This price will be specified on the previous Period's Results Overview. You may assume that all shares that are issued will be sold. If you issue new shares, you'll have to bear in mind that the profits per share will go down. It's therefore important to consider your shareholders' reactions to the issuing of new shares. Shares may only be issued if the share price exceeds the nominal stock market value (i.e. 10 Euro).

The funds you acquire by issuing shares will be received in cash during the same Period and booked under the item *Miscellaneous receipts* on the Results Overview. The newly issued shares will immediately be added to the equity at their nominal value. The difference between the funds acquired from the share issue and the nominal value of the newly issued shares will also be added to the reserves in the same Period. The credit limit will be raised in the Period in which the shares are issued.

The share price depends on the cash flow (capacity loss + profits), the interest rates, the company's performance, and, something that's of particular importance, its prospects. In view of the latter, the investors will particularly look at the same elements that also determine the Criteria of score. General economic developments will also play a key role.

7 Co-operation agreements

7.1 Introduction

It is quite common for companies to co-operate with their competitors in certain areas. This has considerable advantages over working alone because significant cost savings can be made. Companies can co-operate with their competitors in the areas of efficiency and product improvements. The so-called co-operation agreement form is used for this purpose.

A co-operation agreement is an agreement between companies that last for one Period and pertains to a product improvement or an efficiency improvement for one product.

An example of a co-operation agreement is included in this chapter.

7.2 The effects of co-operation

A co-operation agreement will enable you to reduce your variable costs that much sooner and improve the quality of your products. You can expect a higher return on your R&D investment if you co-operate with other companies in this way. Similarly, if you co-operate in the area of product improvements, you'll attain positive results sooner.

The co-operation agreement drawn up between the co-operating companies will specify the number of units to be invested by each of the respective companies. Every period, companies are informed about their quality and efficiency levels so that the effects of co-operation agreement(s) quickly become evident. The effect of a product improvement in the Period that follows the closing of a co-operation agreement will fall to 80%. In the case of an efficiency improvement, there will be no effect in the Period that follows the closing of a co-operation agreement.

EXAMPLE 1:

Supposing a company invests 10 units in a quality improvement. Without any co-operation at all, such an investment will result in an increase of the quality level of 10 units. With a co-operation agreement the same investment could, for example, result in an increase of the quality level of e.g. 14 units.

EXAMPLE 2:

After 2 Periods, a company has invested a total of 40 units in efficiency improvements and of these, 20 units were invested in co-operation agreements. If we assume the co-operative investments have 1.6 times the effect of the separate investments, then the efficiency level for that particular product will be $(20 \times 1.6) + 20 = 52$.

EXAMPLE 3:

The quality level of a product in Period 1 is 0 (zero). In Period 1, a company invests 20 units in a product quality improvement and of these, 14 units are invested in a co-operation agreement with another company. In addition to this, the company invests another 6 units separately. If we assume the co-operative investments have 1.6 times the effect of the separate investments, then the quality level in Period 2 will be $(1.6 \times 14) + 6 = 28$ units (28.4 rounded-off to 28). In Period 2, another 20 units are invested in a similar manner. The quality level in Period 3 will then be 80% of $28 + (1.6 \times 14) + 6 = 51$ units (50.8 rounded-off to 51).

7.3 Limitations

There are some restrictions that apply to co-operation agreements.

- For product improvements, a maximum investment of 14 units per company per Period per product is allowed. And for efficiency improvements a maximum investment of 5 units per company, per Period, per product is allowed.

- Companies that have entered into co-operation agreements can also invest in product or efficiency improvements on their own. However, the total expenditure per area may not exceed the maximum allowed per Period. This is 20 for a product improvement (14 in co-operation agreements) and 10 for an efficiency improvement (5 in co-operation agreements).
- A company can enter into a maximum of two co-operation agreements with any one company from the same pool. Moreover, while it's possible to enter into co-operation agreements with other companies in the same pool, this cannot be done for a co-operation agreement already closed with another competitor.
For example, if a company has already entered into a co-operation agreement for a particular product and purpose (either a product or efficiency improvement), it is not possible for that company to enter into another co-operation agreement for the same product and purpose (efficiency or product improvement).

EXAMPLE 1:

Supposing your company wants to invest 20 units in a product improvement in Product 1 and of these 20 units, 14 are to be invested in a co-operation agreement with another company. You will fill in 20 on the Decision Form (18 a or b). However, on the co-operation agreement, you'll fill in 14 because this corresponds with the number of units you want to allocate to the co-operation agreement.

EXAMPLE 2:

You can enter into a maximum of two co-operation agreements with the same company. Supposing you invest 14 units on a product improvement and 4 units on an efficiency improvement, both of which are for Product 1. These two co-operation agreements can be filled in on one co-operation agreement form. Bear in mind though that you will not be able to enter into any more co-operation agreements for Product 1 during this Period!

This means you can use one co-operation agreement form per two agreements.

EXAMPLE 3:

Supposing you enter into a co-operation agreement with company A for an efficiency improvement for Product 1 and a product improvement for Product 3. You simply fill these requirements in on one co-operation agreement form (remember however, that this counts for 2 co-operation agreements!)

For Product 1 and Product 2 you close a product improvement agreement with company B. After closing these agreements, you can still close an efficiency improvement agreement for Product 3 and Product 2. However, you cannot close any more co-operation agreements for Product 1 during this Period.

A co-operation agreement is always valid for one Period. If an agreement is to run for a longer, it will have to be reported to the Game Instructor separately and for every Period. Co-operation agreements for Periods that have already been closed cannot be accepted.

A penalty of 100,000 Euro per agreement, per Period, will be imposed on a team that enters into more co-operation agreements than is allowed. A team 'guilty' of doing so will have to settle 'out of court' with the other parties. If an acceptable compromise cannot be reached, the Game Instructor may impose a financial arrangement to compensate any disadvantaged teams. If there are too many co-operation agreements, the Game Instructor will decide which ones are to prevail.

7.4 Completing the Decision Form

The total investments made, per product, in product and efficiency improvements must always be mentioned on the Decision Form. These include the investments made in the framework of co-operation agreements, plus any other separate investments. If the number of units specified on the Decision Form is below that which is specified in the co-operation agreement, or if no value has been specified at all on the Decision Form, the number of units (on the Decision Form) will be made the same as the one specified in the co-operation agreement. In such a case, it will mean that apart from the co-operation agreement, your company will not have made any investments for that particular product or that particular purpose.

7.5 Completing the Co-operation agreement

You have to inform the Game Instructor of your intentions to co-operate with another company. This is done by means of a co-operation agreement, which has to be completed and signed by both companies. A maximum of two agreements with the same company can be specified on one form (= the maximum number of agreements that can be negotiated with the same company).

If a team is in a state of suspension of payments, its co-operation agreements will be cancelled.

If your company has entered into one or two co-operation agreements with the same company, only **one form** needs to be submitted to the Game Instructor. The team mentioned first on a co-operation agreement is the team that has to send the co-operation agreement form to the Game Instructor. If a co-operation agreement is not signed by both parties, or has not been completed fully, the co-operation agreement will not be valid.

Co-operation agreements should be submitted on the same time as the Decision Forms.

A summary of the most important values, as they relate to (co-operation in) product and efficiency improvements, is given in table 9.

Table 9: Product and efficiency improvements

	Product Improvement	Efficiency Improvement
Cost in multiples of:	250,000 Euro	500,000 Euro
Maximum investment in multiples per Period	20	10
Maximum multiples in co-operation agreements	14	5
Effects next Period	80%	100%



CO-OPERATION AGREEMENT
International Business Management
put into Practice

Team number

Team number

Period

The contact persons from the Management Teams specified above hereby declare, that both teams have agreed upon the following Co-operation Agreement(s):

- 1. - For product (1, 2 or 3) ¹⁾
- With respect to (P/E) ²⁾
- Units ³⁾

- 2. - For product (1, 2 or 3) ¹⁾
- With respect to (P/E) ²⁾
- Units ³⁾

- ¹⁾ Specify the product number **1 (Product 1), 2 (Product 2) or 3 (Product 3)**.
- ²⁾ With respect to **Product improvement**: add **P**. With respect to **Efficiency improvement**: add **E**.
- ³⁾ Specify the number of units, invested by **each** company.
The units correspond with the units for Product improvement and Efficiency improvement as mentioned in the rules of the game. The maximum numbers of units for product improvement and for efficiency improvement are also mentioned in the manual.

Team number

Team name -----

Contact person -----

Phone -----

Fax -----

E-mail -----

Date

City -----

Signature contact person:-----

Team number

Team name -----

Contact person -----

Phone -----

Fax -----

E-mail -----

Date

City -----

Signature contact person:-----

All data must be filled in for both Management Teams and both parties must sign the contract. Only the first mentioned team sends in this form. Any omission will invalidate the agreement!

8 Trade transactions

8.1 Introduction

Because your company operates in a dynamic and competitive market, it's only natural that you should be able to trade products with your competitors. For you as the company's management team, being able to trade in this way is a valuable tool. It allows you to sell products or raw materials to help you get rid of excess stock or gain extra money, or, alternatively to buy extra products or raw materials in case you have a shortage.

However, it's only possible to trade products or raw materials with other teams in the pool. The Game Instructor can impose restrictions to the trade in raw materials and end products.

8.2 Trade transactions of raw materials

Your company is allowed to trade raw materials with other teams in the pool. Trading raw materials with other teams has an advantage because you can get discounts when buying bulk quantities. You should decide which Management Team buys the raw materials.

To conclude the agreement you must draw up a contract (trade transaction agreement) with the other teams and hand this in at the Game Instructor on the submission date. The contact persons in both parties must sign the contract. The team mentioned first (the buying team) is responsible for submitting the agreement to the Game Instructor.

When the Management Teams all decide to continue trading with each other the next period, the process repeats itself. However, when you do not continue trading with each other, you have to bear in mind that you all fill in an amount of raw materials on your Decision Form in period 2!

Contrary to co-operation agreements, there are no limitations to the number of teams with which trade is allowed or to the number of types of raw materials. It is also possible to trade one raw material with several teams, provided a clear contract is drawn up for each transaction. The total amount (+ or -) of the transaction will be included under "Transactions & Miscellaneous".

The Profit and Loss Account will show the value of the raw materials sold or bought. These will be specified under "Extraordinary costs & profits". The raw materials will be valued in accordance with the current prices of raw materials in that particular period.

EXAMPLE:

Company 101, 102, 103 and 104 are joining together to trade raw materials with each other for period 1. Company 101 buys 3,000,000 units of raw materials for Product 1 and fills this amount in on the Decision Form. The other companies will fill '0' in as amount on the Decision Form! Each company will make up a trade transaction agreement for the following period (= period 2) in which Company 101 is the 'selling team' and the other companies are the 'buying team'.

8.3 Trade transactions of end products

If you want to trade with one another, you and your potential trading partners (other companies) must draw up a trade transaction agreement and submit it to the Game Instructor on the specified submission date. An example of a trade transaction agreement is included in this chapter.

The Game Instructor must be informed about any such transaction by means of a completed and signed trade transaction agreement form. One form must be filled in for each transaction and signed by the contact persons of both parties. The team mentioned first (the buying team) is responsible for submitting the agreement to the Game Instructor.

Only teams operating within the same pool are allowed to trade end products. Contrary to co-operation agreements, there are no restrictions, neither with respect to the number of teams with which trade is allowed nor to the number of products (the only restriction is the number of boxes on the trade transaction form). It's also possible to trade one product with several teams, provided that is, that a clear contract is drawn up for each transaction.

The (approximate) total amount involved in the transaction will be included under the item *Transactions & Miscellaneous* on the Results Overview. The end products, valued at current variable costs and raw materials prices, are included in the profit and loss account.

If you trade end products, you must take into account that any end products you procure will automatically have the same quality level as the products manufactured by your own company. A major part of a product's quality is determined by the 'image' a company creates for that particular product and in this respect, trade doesn't really change anything. Any 'loss' or 'gain' of quality has to be negotiated into the trading price with the other party.

Transactions will not be possible in the Period following the last Period for which decisions are taken.

8.4 Trading raw materials with the Game Instructor

When you have a shortage of raw materials that you need immediately, it is possible to *buy* raw materials via the Game Instructor. The price of these raw materials is approximately 30% above the current market price of raw materials. This emergency order of raw materials will be directly available for production in the same period (no delays involved).

When you ordered too many raw materials it is also possible to *sell* raw materials to the Game Instructor. This to lower your stock costs. The price of these sold raw materials is approximately 30% below the current market price. The number of raw material units that can be sold in this manner can never exceed the opening stock plus raw materials ordered. The raw materials sold are no longer available for production in the period in which they were sold.

Trade transaction agreement

Applications for the sale or purchase of raw materials should be sent in writing to the Game Instructor on a trade transaction form. The team number of the Game Instructor is **100**. These forms must reach the Game Instructor on the submission date for that particular period.

The total amount (+ or -) of the transaction should be rounded off to Euro 1,000 and will be included under "Transactions & Miscellaneous". The Profit and Loss Account will show the value of the raw materials sold or bought. These will be specified under "Extraordinary costs & profits". The raw materials will be valued in accordance with the current prices of raw materials in that particular period.

Example:

You want to buy raw materials from the Game Instructor. The Management Team number of the Game Instructor is 100. You fill this number in on the trade transaction agreement under 'selling team'. Under Team name you fill in 'Game Instructor'. Under 'buying team' you fill in your own data. You submit the agreement to the Game Instructor.

8.5 Selling end products to the Game Instructor

If your company is in need of money, you can sell end products to the Game Instructor. Products sold in this way will be sold at a dump price that is approximately 30% below the market price of the product in Markets 1, 2, or 3 in Period 0.

Products dumped in this way during a particular Period are no longer available for sale in the various markets. The number of end products that can be dumped can never exceed the opening stock plus the number of end products manufactured and procured. If end products are dumped in this way, it will not affect the market demand for them during the subsequent Period(s).

It is not possible to buy end products from the Game Instructor!

Trade transaction agreements to sell end products must be sent to the Game Instructor on the submission date. Only **one form** is to be sent to the Game Instructor. Applications for the sale of end products to the Game Instructor should be sent in writing to the Game Instructor on a trade transaction form. The team number of the Game Instructor is **100**.

The (approximate) total amount involved in such transaction(s) will be rounded-off to 1,000 Euro and included under the item *Transactions & Miscellaneous*.

EXAMPLE:

Supposing you want to sell end products to the Game Instructor, the Game Instructor's management team number is 100 so you fill this number in on the trade transaction agreement where it says 'Buying team'. Under 'Team name', you fill in 'Game Instructor' and under 'Selling team', you fill in your own data. You submit the agreement to the Game Instructor.



TRADE TRANSACTION AGREEMENT
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Team number **buying** team

Team number **selling** team

Period *) *) **Period number in which trade transaction actually takes place.**

The contact persons from the Management Teams specified above hereby declare, that both teams have agreed upon the following trade transaction

<ul style="list-style-type: none"> – Product (1, 2 or 3) <input type="text"/> ¹⁾ – End product/Raw material (E/R) <input type="text"/> ²⁾ – Units <input type="text"/> ³⁾ – Price <input type="text"/> ⁴⁾ 	<p>1) Specify the product number 1 (Product 1), 2 (Product 2) or 3 (Product 3). 2) Specify E(nd product) or R(aw material) 3) Specify the number of units. The maximum number of units you may buy or sell is determined by the number of available boxes. 4) Specify the total price (in Euro 1,000).</p>
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<p>Team number buying team <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>Team name _____</p> <p>Contact person _____</p> <p>Phone _____</p> <p>Fax _____</p> <p>E-mail _____</p> <p>Date <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>City _____</p> <p>Signature contact person _____</p>	<p>Team number selling team <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>Team name _____</p> <p>Contact person _____</p> <p>Phone _____</p> <p>Fax _____</p> <p>E-mail _____</p> <p>Date <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>City _____</p> <p>Signature contact person: _____</p>
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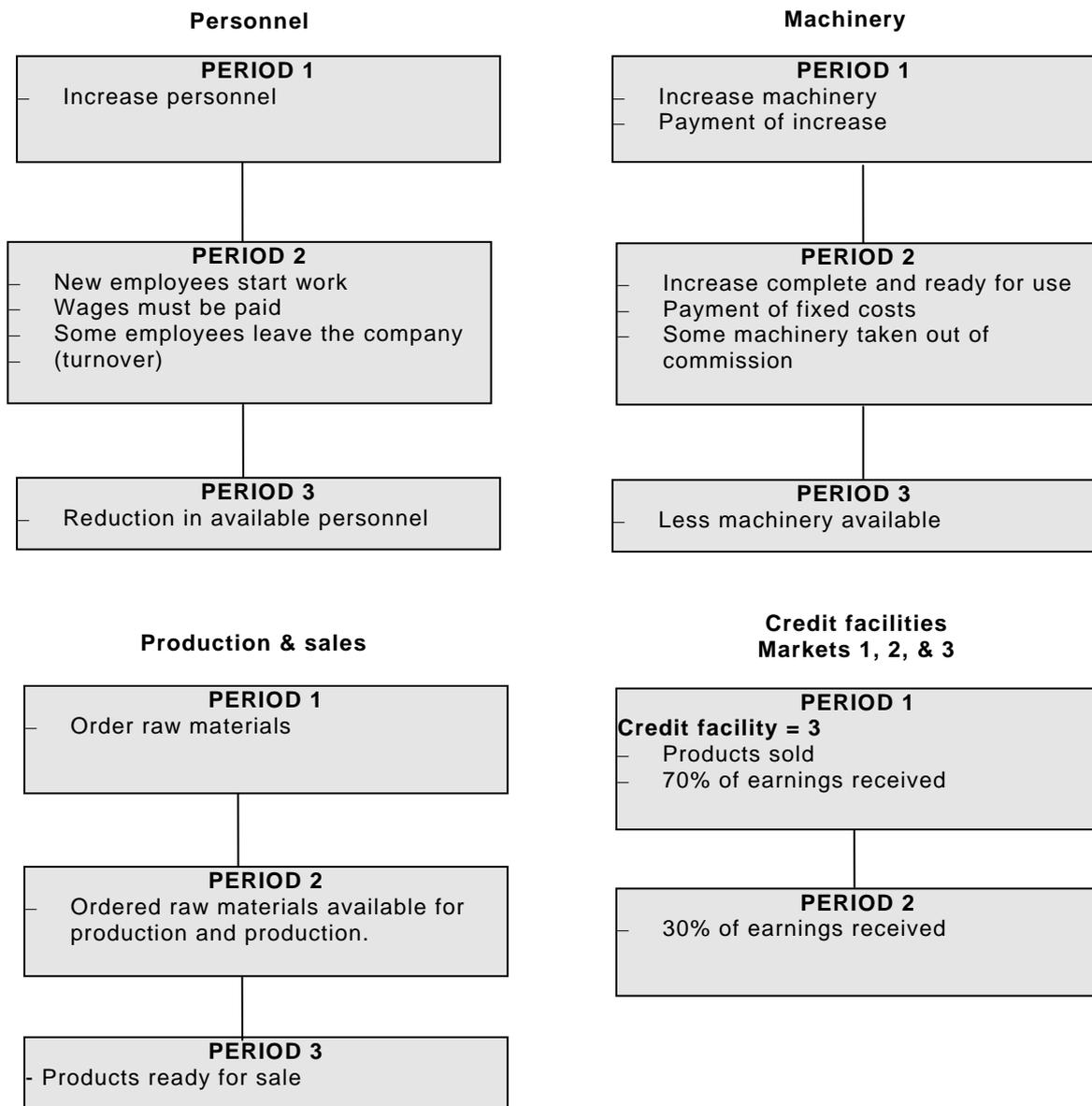
All data must be filled in for both Management Teams and both parties must sign the contract. Only the first mentioned team sends in this form. Any omission will invalidate the agreement!

9.1 Introduction

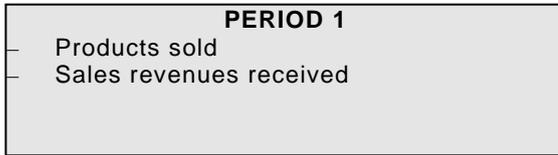
To be able to run your company in an effective and efficient way it is necessary to gain good insight in the time frames of the different processes in your company. In the following schemes the time frames of the most important processes are depicted, which are:

- Hiring personnel
- Buying machinery
- Production and sales
- Product improvement
- Credit facilities and earnings
- Credit and payments

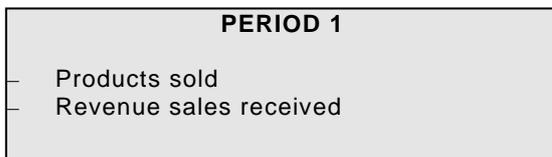
Beware! Planning mistakes, resulting from the fact that the above mentioned time frames are not correctly translated into the management decisions, can have serious consequences for the efficiency and effectiveness of your company. Many processes are described in the Company File and the most important of these processes (and sometimes delays) are summarised in this chapter.



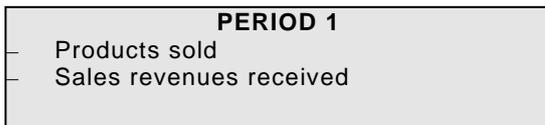
**Credit facilities
International Market**



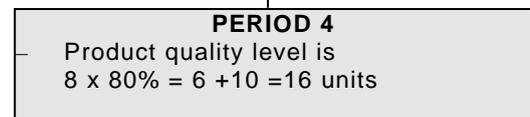
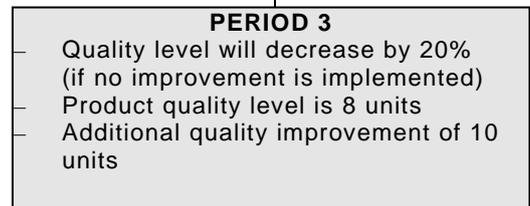
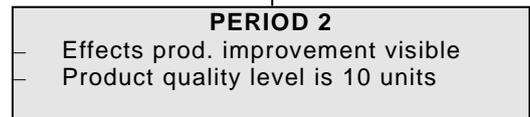
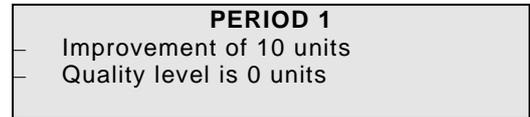
**Credit facilities
Export Market**



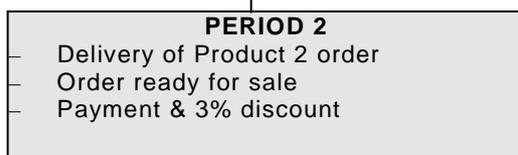
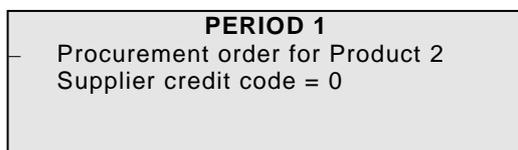
**Credit facilities
Dump Market**



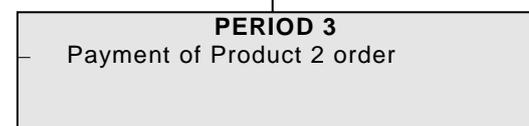
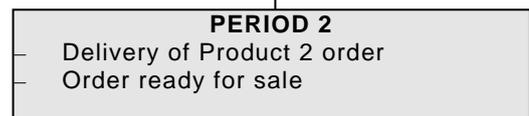
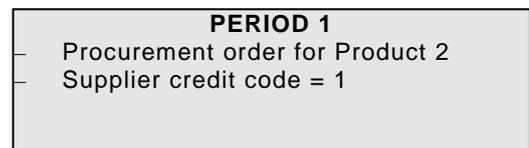
Product improvement



**Supplier credit Product 2
credit period = 0**



**Supplier credit Product 2
credit period = 1**



10 Management Information

10.1 Introduction

Your company has recently developed and implemented a Management Information System, which furnishes you periodically with all the information you need to run your company. At the end of this chapter you will find the most recent management information, provided by the system, describing the current state of affairs in your company (Period 0). Use this information to prepare for and make your first management decisions.

All the types of information that are provided by your Management Information System are explained in detail in this chapter.

We advise you to use the starting situation when going through the chapter. If you do so you'll be able to get better acquainted with the various figures and you'll be able to quickly locate those figures you consider to be the most important.

10.2 Results output

General rule

Although the amounts that are actually printed are rounded-off ones, the original (exact) amounts continue to be used for calculations. This situation may produce discrepancies if you compare the sum of the amounts per Period (rounded-off) and the printed (rounded-off) elements of the same sum. Unless otherwise stated, all amounts are given in 1000 Euro.

10.2.1 Accepted decisions

General										
1. Incr. Pers. perm.	0	(0)	9. Red. of work. hours	0	(0)	10. Expen. work. cond.	0	(0)		
2. Incr. Pers. hired	0	(0)	10. Expen. work. cond.	0	(0)	11. Dividend payment	0	(0)		
3. Incr. Mach. bought	30	(30)	11. Dividend payment	0	(0)	12. Wage increase	0	(0)		
4. Incr. Mach. hired	0	(0)	12. Wage increase	0	(0)	13. Orders for raw mat. 1	891	(891)		
5. Loans	1000	(1000)	13. Orders for raw mat. 1	891	(891)	14. Orders for raw mat. 2	810	(810)		
6. Repayments	0	(0)	14. Orders for raw mat. 2	810	(810)	15. Orders for raw mat. 3	0	(0)		
7. Orders Product 2	0	(0)	15. Orders for raw mat. 3	0	(0)	16. Issuing shares	0	(0)		
8. Suppliers cred. code	0	(0)	16. Issuing shares	0	(0)					
Production										
	Product 1		Product 2		Product 3					
17. Production targets	59400	(59400)	81000	(81000)	0	(0)				
18. Research & Development										
a. Product imp.	0	(0)	0	(0)	0	(0)				
b. Efficiency imp.	0	(0)	0	(0)	0	(0)				
Marketing										
	Market 1		Export		Market 2		Market 3		Int. Market 3	
19. Limits			29	(29)	0	(0)			0	(0)
20. Price	1350	(1350)	1550	(1550)	1100	(1100)	0	(0)	0	(0)
21. Sal. gr.	11	(11)			16	(16)	0	(0)	0	(0)
22. Prom.	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)
23. Cred.	1	(1)			1	(1)	0	(0)		
Market Information Centre										
24. Competitors prices			0		31. Competitors share in prom.				0	
25. Competitors closing stock			0		32. Competitors quality levels				0	
26. Competitors prod. capacity			0		33. Competitors sales groups				0	
27. Effect quality level		0	0		34. Estimate of market demands				1	
28. Effect efficiency level		0	0		35. Competitors working cond.				0	
29. Fixed costs		0	0		36. Competitors market shares				0	
30. Effect promotion	m1:	0	exp:	0	37. Competitors wage costs				0	
	m2:	0	m3:	0	38. Market Information Report				0	

On the first page of the management information report you'll find an overview of the management decisions you've made during the current Period. The decisions actually entered into the system can be seen between brackets. These decisions may have been corrected because they clash with the game rules. For example, you may have (inadvertently) overstepped a maximum value, or you may have insufficient raw materials or production capacity to realise your intended production targets. If the decisions you submitted are different to the entered decisions (between brackets), and the difference is not a result of transgressing the rules, please contact the Game Instructor.

10.2.2 Sales

In the sales overview the total sales for a certain Period in the different markets are given. You can find the sales overview in your Results Overview on page 1. All information items in the sales overview will be explained in detail below.

Sales Period 0	Mrkt 1	Export	Mrkt 2	Mrkt 3	Int.M
Total m.demand	153000	144000	405000	0	0
Total sales	153000	144000	405000	0	0
Sales	30600	28800	81000	0	0
Market share	20.0%	20.0%	20.0%	.0%	.0%
Extra dem. per. 1					
as res. of lost sale	0		0	0	0
Tot dump Product 2			0		

The following will be printed: the total demand in the Export Market, the International Market and Markets 1, 2, and 3; the total sales; the number of items your company sells and its subsequent share of the total sales (your company's market share).

Extra demand resulting from 'lost sales'

This is the total extra demand generated as a result of all companies' lost sales during the current Period, which is then added to the following Period's market demand.

If your company creates more demand than it can satisfy, a supply deficit – known as lost sales - will be the result.

Lost sales will increase the demand for the products of those competitors that have not run out of stock during the applicable Period. Depending on the market efforts of each of the companies, the potential buyers of your product may take one or more of the following actions:

1. Some will buy their products elsewhere.
2. Some will not buy the products at all.
3. Some will postpone their purchases until the next Period.

A buyer that postpones his purchase will make a new choice of product from the companies in your pool during the next Period. Consequently, postponed purchases will create extra demand in the market during the following Period. This extra demand will be visible on the following Period's Results Overview. Because not all buyers will immediately switch to competitors' products (during the applicable Period), some companies may be 'saddled' with surplus products while others will suffer lost sales.

NOTE

A company's lost sales in the Export Market will not affect the market demand for the products of the other companies. Neither will it affect the market demand in the applicable Period or in the following Period(s). Any unsatisfied demand will be met immediately by other competitors on the world market.

Total dump sales of Product 2

This is the total sale of all companies in the Dump Market causing a reduction of the market demand for Product 2 during the next Period.

10.2.3 Balance sheet

In the balance sheet the assets, liabilities, and owner's equity of your company at the end of a certain period are listed. You can find the balance sheet of your company in your Results Overview on page 1. The following balance sheet reflects the financial situation of your company at the end of Period 0 and at the start of Period 1. All information items in the balance sheet will be explained in detail below.

Balance Sheet			
Means of production	127778	Equity	135000
Stocks	14560	Reserves	14000
Work in progress	72900	Loans	66700
Debtors period 1	13041	Credit. period 1	48924
period 2	0	period 2	0
Procure contracts	48924	Taxation	4478
Cash balance	216	Profit	8317
Total	277420	Total	277420

Production means

= The value of the company-owned machinery units after taking capacity loss and increase during the applicable Period into account.

Stocks

= The value of the closing stock of end products.
 + The value of the closing stock of raw materials.

Work in progress

= Variable costs paid during this Period, including any surcharges for setting and readjusting costs.
 + The costs of the raw materials used to manufacture the products, valued at the basic prices effective during the applicable Period.

Debtors

= Receipts during the coming Periods from sales during the current and previous Periods.

Procure contracts

= The value of the quantity of Product 2 ordered during this Period (including any discounts).
 + The value of raw materials ordered during this Period (including any discounts).

Equity

= Share capital

Creditors

= Payments during the following Periods for orders for Product 2 placed during the current and previous Periods.
 + Payments during the following Period for raw materials ordered during the current Period and including any possible discounts.

Taxation

= Reserves for taxation to be paid during the following Period.

(All amounts rounded-off to 1,000 Euro.)

10.2.4 Liquidity survey

The liquidity survey reflects the cash flow in your company in a certain period. You can find the liquidity survey of your company in your Results Overview on page 1 and a specification of the liquidity survey on page 3. The following liquidity survey reflects the cash flow in your company in period 0. All information items in the liquidity survey will be explained in detail below.

Liquidity Survey			
Opening balance	880	Creditors	48924
Debtors receipts	156652	Prod.costs & work.cond.	70276
Miscellaneous	0	Personnel & organisation	22200
Loans	1000	Sales costs	5895
		Interest & information	2021
		Transactions & miscell.	0
		Taxation	0
		Dividend	0
		Means of production	9000
		Closing balance	216
Total	158532	Total	158532

Creditors

- = Payments for Product 2 ordered during the previous Period(s) (including any discounts).
- + Payments for raw materials ordered during the previous Period (including any discounts).

Production costs and working conditions

- = Variable costs (including any surcharges)
- + Fixed costs
- + Hire costs (including hiring of personnel)
- + Expenditures on efficiency improvements and for the improvement of working conditions.

Personnel & organisation

- = Costs of permanent employees
- + Training costs

Sales costs

- = Stock costs
- + Expenditures on product improvements
- + Promotion costs
- + Costs for upgrading supplies
- + Costs of sales groups

Interest & information

- = Interest costs
- + Costs of supplementary credit
- + Costs of requested information

Transactions & miscellaneous

- = Costs and returns of transactions
- + Miscellaneous costs or returns

Taxation

- = Payment during the current Period of the amount reserved for taxation on the balance sheet during the previous Period.

Dividend

- = Dividend paid during this Period

Production means

- = Payment for an increase of machine capacity (units) bought during the current Period.

(All amounts are rounded off to 1,000 Euro.)

10.2.5 Profit and loss account

The profit and loss account reports the revenues and expenses of your company for a specific period. You can find the profit and loss account of your company in your Results Overview on page 2. The following profit and loss account reflects the revenues and expenses of your company in period 0. All information items in the profit and loss account will be explained in detail below.

Profit and Loss Account	Product 1	Product 2	Product 3
Sales, markets 1,2,3	41310	89100	0
Sales Export/Dump/Int.M.	39283 +	0 +	0 +
Total sales	80593	89100	0
Opening stock	6000 -	3680 -	0 -
Work in progress & bought	35640 -	37260 -	0 -
Closing stock	6000 +	3680 +	0 +
Gross margin/product	44953	51840	0
Efficiency improvement	0 -	0 -	0 -
Sales costs	2495 -	3400 -	0 -
Raw materials	0 +	0 +	0 +
Contribution per product	42458	48440	0
Total contribution		90898	
Capacity loss	7582		
Fixed costs, hire_work. cond.	46300		
Personnel & organisation	22200		
Interest & information	2021		
Extraordinary Costs_Profits	0		
Total Costs		78103 -	
Operation profit		12796	
Taxation 35 %		4478 -	
Profit		8317	

Sales Markets 1, 2, & 3

= Price

x Quantities sold in Market 1, Market 2, and Market 3 respectively

Sales Export Market/Dump Market/International Market

= Export price (in Dollar) x Quantities sold in the Export Market

+ Dump price (in Euro) x Quantities sold in the Dump Market

+ International price (in Olo) x Quantities sold in the International Market

Sales will be given in multiples of 1,000 Euro.

Opening stock

= Value of previous Period's closing stock of end products

Work in progress and procured

= Work in progress on previous Period's balance sheet

For Product 2, the amount has been increased by the quantity delivered during the current Period (ordered during the previous Period) x buying price.

Closing stock

= The value of the closing stock of end-products: number of items x the variable costs effective during the current Period, increased by the current costs of raw materials used to manufacture the products.

Gross margin

- = Sales
- /- Cost price sales = *Work in progress and procurement*
 - + *Value of the opening stock*
 - /- *Value of the closing stock.*

Efficiency improvement

- = Expenditures for efficiency improvements made during the current Period

Sales costs

- = Costs of finished product and raw material stocks
- + Expenditures on product improvements
- + Promotion costs
- + Costs of deployed sales groups

For Product 2, the sales costs are increased by the costs incurred for upgrading the procured products (ordered during the previous Period) to the company's own quality level.

Raw materials

- = Possible revaluation of opening stock of raw materials in accordance with changed basic prices of raw materials (changed in relation to the previous Period).

Contribution

- = Gross margin
- /- Accountable additional costs per product for expenditures on efficiency and sales costs

Capacity loss

- = Depreciation of machinery

Fixed costs, hire & working conditions

- = Fixed costs
- + Hire (including the hiring of personnel)
- + Expenditures made on improving the working conditions during the current Period

Personnel & organisation

- = Costs of permanent employees
- + Training costs

Interest & information

- = Interest costs
- + Costs of supplementary credit
- + Costs of requested information

Extraordinary costs & profits

- = Valuation of the raw materials procured or sold through transactions (valued at current raw materials prices), possible discounts on the delivered raw materials during the current Period, costs and returns from transactions and possible additional costs (fines etc).

(All these amounts are rounded-off to 1,000 Euro.)

10.2.6 Ratios

Your financial department calculates periodically a number of performance ratios. You can find the calculated ratios of your company in your Results Overview on page 2. In the following you find the exact definition of these ratios.

Ratios		<u>Cross-sectional</u>	
Income From Operations:	IFO = 12796.	Avg. IFO =	12796.
Return On Sales:	ROS = 4.90 %	Avg. ROS =	4.90 %
Return On Net Assets:	RONA = 13.30 %	Avg. RONA =	13.30 %
Return On Equity:	ROE = 5.43 %	Avg. ROE =	5.43 %
Return On Investment:	ROI = 6.73 %	Avg. ROI =	6.73 %
Current Ratio:	C.R. = 2.80	Avg. C.R. =	2.80
Working Capital to Sales:	W.C.S. = .57	Avg. W.C.S. =	.57
Debts to Equity:	D.E. = .43	Avg. D.E. =	.43

Income from operations

Income from operations can be defined as the additional revenue minus the current costs of the assets used in realising that revenue, which is also called 'operating profit'. This operating profit is defined as:

$$\text{Income from operations} = \frac{\text{Total contribution}}{\text{Total costs}}$$

Return on sales (ROS)

This ratio is a measure of the relationship between the net income and sales.

$$\text{ROS} = \frac{\text{net income (profit)}}{\text{sales}}$$

Return on net assets (RONA)

This ratio is a measure of how efficiently a company uses its assets. Expressed as a formula:

$$\text{RONA} = \frac{\text{Operating profit} / \text{working capital} (= \text{current assets} - \text{current liabilities})}{\text{Sales}}$$

In which:

Operational profit = Operational profit
 Current asset = Stock
 + Work in progress
 + Debtors
 + Procured contracts
 + Cash balance

Current Liabilities = Creditors
 + Taxes

Return on equity (ROE)

Return on equity is a measure of the returns to stockholders in relation to the amount of capital they have invested. This is therefore a primary profitability yardstick for a company. Definition:

$$\text{ROE} = \frac{\text{Net income} / \text{average equity}}{\text{Stockholders' equity}}$$

In which:

Net income = Profit
 Average equity = Average stockholders' equity
 = $(\text{Stockholders' equity end per. n} + \text{st.holders equity begin per. n}) / 2$
 Stockholders equity = Equity + Reserves + Profit

Return on investment (ROI)

Return on investment is a measure of the operational profit before taxation in relation to the invested capital. It is defined as:

$$\text{ROI} = \frac{(\text{Operational profit} + \text{interest}) / \text{avg. (total assets} - \text{current liabilities)}}{\text{Invested capital}}$$

In which:	
Operational profit	= <u>Operational profit</u>
Interest	= <u>Interest</u> (interest on borrowed loans– interest on lent loans)
Total assets	= <u>Production means</u> + <u>Stock</u> + <u>Work in progress</u> + <u>Debtors</u> + <u>Procured contracts</u> + <u>Cash balance</u>
Current liabilities	= <u>Creditors</u> + <u>taxation</u>
Avg (...)	= Average of (total assets – current liabilities) in Period n and Period n-1.

Current ratio (C.R.)

The current ratio gives the relationship between current assets and current liabilities. Expressed as a formula:

Current assets / current liabilities

For an explanation of these terms, see above.

Working capital to sales (W.C.S.)

This ratio gives the relationship between the working capital and the sales. It is defined as follows:

Working capital / sales

In which:	
Working capital	= <u>Current assets</u> -/- <u>Current liabilities</u>
Current assets	= <u>Stock</u> + <u>Work in progress</u> + <u>Debtors</u> + <u>Procured contracts</u> + <u>Cash Balance</u>
Sales	= Total sales in all markets (excluding the result of possible trade transactions)

Debts to equity (D.E.)

This ratio gives the relationship between net debts and equity. This relationship is defined as:

Loans – cash balance / avg. equity

In which:	
Loans	= <u>Loans</u> (long term liabilities)
Cash balance	= <u>Cash balance</u>
Avg. equity	= see above

The average (cross-sectional) ratios for your pool are given next to your company's ratios on the form with the Results Overview.

10.2.7 Production capacity

In this overview all relevant details on the costs, effectiveness and deployment of your production capacity are given. You can find this overview in your Results Overview on page 2. All information items are explained in detail below.

Production Capacity					
	Personnel		Machinery		
	permanent	hired	bought	hired	
Costs / PU	100.00				
Total costs	22200	0	46300	0	
Available cap. period 0	222000	0	421200	0	
period 1	222000	0	425928	0	
period 2	206460	0	400372	0	
Capacity use period 0	199800 PU's		421200 MU's		
Cap. utilisation period 0	90.0%		100.0%		
Personnel turnover	.0%				
Effectiveness cap.: period 0	90.0%	199800	100.0%	421200	
period 1	90.0%	199800	99.5%	423798	
period 2	90.0%	185814	99.7%	399171	

Costs/PU

= The costs per PU

Total costs

= The total personnel costs, including training costs
 = The fixed costs of machinery
 = The costs of hiring personnel and machinery

Available capacity (PU & MU)

- During the current Period (Period n)
- During the next Period (n + 1), after capacity loss and personnel turnover, and after increase during Period n
- During Period (n + 2), after capacity loss and personnel turnover during Period (n + 1), and irrespective of any capacity increase decisions to be made during Period (n + 1).

Capacity use

= The deployed production capacity in MU and PU during the current Period

Capacity utilisation

= Deployed production capacity expressed as a percentage of the total available production capacity (both company-owned and hired).

Personnel turnover

= Personnel turnover at the end of Period n expressed as a percentage of the available personnel units in Period n, this percentage is also used to calculate the available personnel units in Period n + 1.

Effectiveness capacity

- During the current Period (Period n)
- During the next Period (Period n + 1)
- In Period n + 2, (excluding the effects of the procurement of Product 2, variances in production capacity, and irrespective of any improvement of working conditions decisions to be taken in Period (n + 1)).

10.2.8 Work in progress

In the work in progress overview the following information items will be printed:

- The variable costs per item during the current Period
- The variable costs during the current Period
- The surcharge for setting and readjusting costs during the current Period

- The costs of the raw materials used to manufacture the products, valued at their effective prices during the current Period
- Total valuation of the production during the current Period
= Work in progress, on the balance sheet for the current Period

Work in Progress			
	<u>Product 1</u>	<u>Product 2</u>	<u>Product 3</u>
Variable costs/prod (Euro)	240	120	350
Variable costs	14256	9720	0
Including surcharge	0	0	0
Raw materials costs	21384	27540	0
Work in progress	35640	37260	0

10.2.9 Raw materials

In this overview all relevant details on the usage and stocks of raw materials are given. You can find this overview in your Results Overview on page 3. All information items are explained in detail below.

Raw Materials			
(units)	<u>Raw material 1</u>	<u>Raw material 2</u>	<u>Raw material 3</u>
	<u>Product 1</u>	<u>Product 2</u>	<u>Product 3</u>
Opening stock	90000	80000	0
Delivered	891000	810000	0
Transactions	0	0	0
Available	981000	890000	0
Used	891000	810000	0
Closing stock	90000	80000	0
Ordered	891000	810000	0
Costs/unit (Euro)	24.00	34.00	20.00
Used per product	15	10	20

Closing stock

- = Opening stock in units
- + Number of units delivered during the current Period
- + Any additional units procured (by transactions)
- /- Any units sold (by transactions)
- /- Number of units used for production purposes during the current Period

Costs/unit (Euro)

- = The basic price of raw materials, effective during the current Period

Used per product

- = The number of units required per product during the current Period

10.2.10 End-products

In this overview all relevant details on the sales and stocks of your end products are given. You can find this overview in your Results Overview on page 3. All information items are explained in detail below.

End Products			
(items)	Product 1	Product 2	Product 3
Opening stock	10000	8000	0
Produced and procured	59400	81000	0
Transactions	0	0	0
Available	69400	89000	0
Sales Export/Dump/Int.M.	28800	0	0
Sales Market 1,2,3	30600	81000	0
Closing stock	10000	8000	0
Under production & procured	59400	81000	0

Produced and procured

= The number of items with which Product 2 production was started during the previous Period, increased by the number of items ordered during the previous Period (and delivered during the current Period).

Closing stock

- = Opening stock
- + End products produced and procured
- + Any end products procured through trade transactions
- /- Any end products sold
- /- Export, Dump and International Market sales
- /- Sales in markets 1, 2, or 3

10.2.11 Market Information Centre

On this page you'll find the results of your requested information. See chapters 4 and 11 (Decision Form overview) for more information about the effects of promotion, quality and efficiency levels, and other market information.

10.2.12 Additional Information

In this report several additional information items are given. You can find this overview in your Results Overview on page 4. All information items are explained in detail below.

Additional Information

Credit limit period 1 122640 *)

Credit margin period 1 55940 *)

*) Excluding supplementary credit, dividend, and issuing shares

Upgrading Product 2 0 items at Yala 0 = Yala 0

	<u>Product 1</u>	<u>Product 2</u>	<u>Product 3</u>
Average credit facility	1.0	1.0	1.0
Quality level period 1	0	0	0
Efficiency level period 0	0	0	0

Sales group home per. 0: 32 Costs per sales group: Yala 200000

Sales group home per. 1: 32

Incr. Costs Sales gr. Int.M Period 0 : .0 %Turnover Sales gr. Int.M Period 0 : .0 %

Sales gr. Int. Mrkt per. 0: 0 Costs per sales group: Olo 300000

Sales gr. Int. Mrkt per. 1: 0

Exchange rate \$ period 0: Yala .88

Exchange rate Olo period 0: Yala .60

Credit limit

= Credit limit next Period excluding supplementary credit, payment of dividend and share issues.

Credit margin

= Credit limit +/- loans next period (without supplementary credit, payment of dividend and share issues).

Upgrading of Product 2

= To raise the quality level of procured products to the same level as your own, you'll have to pay 1 Euro per quality level unit for each delivered Product 2.

As additional information, you'll also find:

- The average credit facilities of the companies in your pool
- The quality level(s) of the products for the next Period
- The efficiency level in the Period under review
- The number of sales groups in the Period under review
- The costs per sales group in the Period under review
- The number of sales groups available for the next Period (without extra recruitment)
- The increase of the costs of sales groups on the International Market (in %) in relation to the costs in the previous Period
- The sales groups' turnover in the International Market (in %) at the end of the current Period
- The exchange rates of the Dollar and Olo.

Team number	101
Round	2
Period	0

International Business Management put into Practice



Company 1

General									
1. Incr. Pers. perm.	0	(0)	9. Red. of work. hours	0	(0)				
2. Incr. Pers. hired	0	(0)	10. Expen. work. cond.	0	(0)				
3. Incr. Mach. bought	30	(30)	11. Dividend payment	0	(0)				
4. Incr. Mach. hired	0	(0)	12. Wage increase	0	(0)				
5. Loans	1000	(1000)	13. Orders for raw mat. 1	891	(891)				
6. Repayments	0	(0)	14. Orders for raw mat. 2	810	(810)				
7. Orders Product 2	0	(0)	15. Orders for raw mat. 3	0	(0)				
8. Suppliers cred. code	0	(0)	16. Issuing shares	0	(0)				

Production									
	Product 1		Product 2		Product 3				
17. Production targets	59400	(59400)	81000	(81000)	0	(0)			
18. Research & Development									
a. Product imp.	0	(0)	0	(0)	0	(0)			
b. Efficiency imp.	0	(0)	0	(0)	0	(0)			

Marketing										
	Market 1		Export		Market 2		Market 3		Int. Market 3	
19. Limits		29	(29)	0	(0)	0	(0)	0	(0)	
20. Price	1350	(1350)	1550	(1550)	1100	(1100)	0	(0)	0	(0)
21. Sal. gr.	11	(11)			16	(16)	0	(0)	0	(0)
22. Prom.	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)
23. Cred.	1	(1)			1	(1)	0	(0)		

Market Information Centre									
24. Competitors prices		0	31. Competitors share in prom.	0					
25. Competitors closing stock		0	32. Competitors quality levels	0					
26. Competitors prod. capacity		0	33. Competitors sales groups	0					
27. Effect quality level	0	0	34. Estimate of market demands	1					
28. Effect efficiency level	0	0	35. Competitors working cond.	0					
29. Fixed costs	0	0	36. Competitors market shares	0					
30. Effect promotion	m1: 0 exp: 0	0 m3: 0	37. Competitors wage costs	0					
	m2: 0 m3: 0		38. Market Information Report	0					

Sales Period 0					
	Mrkt 1	Export	Mrkt 2	Mrkt 3	Int.M
Total m.demand	153000	144000	405000	0	0
Total sales	153000	144000	405000	0	0
Sales	30600	28800	81000	0	0
Market share	20.0%	20.0%	20.0%	.0%	.0%
Extra dem. per. 1					
as res. of lost sale	0		0	0	0
Tot dump Product 2			0		

Balance Sheet			
Means of production	127778	Equity	135000
Stocks	14560	Reserves	14000
Work in progress	72900	Loans	66700
Debtors period 1	13041	Credit. period 1	48924
period 2	0	period 2	0
Procure contracts	48924	Taxation	4478
Cash balance	216	Profit	8317
Total	277420	Total	277420

Liquidity Survey			
Opening balance	880	Creditors	48924
Debtors receipts	156652	Prod.costs & work.cond.	70276
Miscellaneous	0	Personnel & organisation	22200
Loans	1000	Sales costs	5895
		Interest & information	2021
		Transactions & miscell.	0
		Taxation	0
		Dividend	0
		Means of production	9000
		Closing balance	216
Total	158532	Total	158532

No personnel and sales groups turnover in period 0

All amounts in 1000 Euro, unless given else

Team number	101
Round	2
Period	0

International Business Management put into Practice

Company 1



Profit and Loss Account	Product 1	Product 2	Product 3
Sales, markets 1,2,3	41310	89100	0
Sales Export/Dump/Int.M.	39283 +	0 +	0 +
Total sales	80593	89100	0
Opening stock	6000 -	3680 -	0 -
Work in progress & bought	35640 -	37260 -	0 -
Closing stock	6000 +	3680 +	0 +
Gross margin/product	44953	51840	0
Efficiency improvement	0 -	0 -	0 -
Sales costs	2495 -	3400 -	0 -
Raw materials	0 +	0 +	0 +
Contribution per product	42458	48440	0
Total contribution	90898		
Capacity loss	7582		
Fixed costs, hire_work.cond.	46300		
Personnel & organisation	22200		
Interest & information	2021		
Extraordinary Costs_Profits	0		
Total Costs	78103 -		
Operation profit	12796		
Taxation 35 %	4478 -		
Profit	8317		

Ratios		Cross-sectional
Income From Operations:	IFO = 12796	Avg. IFO = 12796
Return On Sales:	ROS = 4.90%	Avg. ROS = 4.90%
Return On Net Assets:	RONA = 13.30%	Avg. RONA = 13.30%
Return On Equity:	ROE = 5.43%	Avg. ROE = 5.43%
Return On Investment:	ROI = 6.73%	Avg. ROI = 6.73%
Current Ratio:	C.R. = 2.80	Avg. C.R. = 2.80
Working Capital to Sales:	W.C.S. = .57	Avg. W.C.S. = .57
Debts to Equity:	D.E. = .43	Avg. D.E. = .43

Extraordinary Costs & Profits			
Transactions			
			Total
Value Sale(+)/Purch.(-) Raw Mat. 1	0 un. at Euro 24.00 =	0	
Value Sale(+)/Purch.(-) Raw Mat. 2	0 un. at Euro 34.00 =	0	
Value Sale(+)/Purch.(-) Raw Mat. 3	0 un. at Euro 20.00 =	0	
	Total Value		0
Discount Raw Material			
Raw Material 1	0 units at Euro 3.60 =	0	
Raw Material 2	0 units at Euro 5.10 =	0	
Raw Material 3	0 units at Euro 3.00 =	0	
	Total Discount		0
Costs(+)/Income(-) Transactions			
Extra Costs(+)/Extra Income(-) Miscellaneous			
Extraordinary Costs & Profits			

	Personnel		Machinery		
	permanent	hired	bought	hired	
Costs / PU	100.00				
Total costs	22200	0	46300	0	
Available cap. period 0	222000	0	421200	0	
period 1	222000	0	425928	0	
period 2	206460	0	400372	0	
Capacity use period 0	199800 PU's		421200 MU's		
Cap. utilisation period 0	90.0%		100.0%		
Personnel turnover	.0%				
Effectiveness cap.:	period 0	90.0%	199800	100.0%	421200
	period 1	90.0%	199800	99.5%	423798
	period 2	90.0%	185814	99.7%	399171

Co-operation Agreements: Team:
Product:
Prod.(P) / Eff.(E) Impr.:
Units:

Team number	101
Round	2
Period	0

International Business Management put into Practice

Company 1



Specification Liquidity Survey			
(Receipts)			
Opening balance	Closing balance prev.		880
	Debtors	158652	
	Proceeds dump sales	0	
	Miscellaneous receipts	0	
	Loans	1000	
			+
		157652	+
	Total		158532
(Expenditures)			
Creditors	Payments creditors		48924
Production & working	Total variable costs	23976	
	Fixed costs	46300	
	Total hired	0	
	Expenditure effic. improv.	0	
	Expenditure working	0	
			+
		70276	
Personnel & organisation	Personnel costs	22200	
	Training costs	0	
			+
		22200	
Sales costs	Stock costs	495	
	Product improv. costs	0	
	Promotion costs	0	
	Upgrading costs	0	
	Sales groups costs	5400	
			+
		5895	
Interest & information	Interest costs	1971	
	Supplementary credit costs	0	
	Information costs	50	
			+
		2021	
Transactions & misc.	Transactions + miscellaneous		0
Taxation	Taxation previous		0
Dividend	Dividend paid		0
Means of production	Payment mach.		9000
New balance	Closing balance		216
			+
	Total		158532

Work in Progress			
	Product 1	Product 2	Product 3
Variable costs/prod (Euro)	240	120	350
Variable costs	14256	9720	0
Including surcharge	0	0	0
Raw materials costs	21384	27540	0
Work in progress	35640	37260	0
Raw Materials			
(units)	Raw material 1	Raw material 2	Raw material 3
	Product 1	Product 2	Product 3
Opening stock	90000	80000	0
Delivered	891000	810000	0
Transactions	0	0	0
Available	981000	890000	0
Used	891000	810000	0
Closing stock	90000	80000	0
Ordered	891000	810000	0
Costs/units (Euro)	24.00	34.00	20.00
Used per product	15	10	20
End Products			
(items)	Product 1	Product 2	Product 3
Opening stock	10000	8000	0
Produced and procured	59400	81000	0
Transactions	0	0	0
Available	69400	89000	0
Sales Export/Dump/Int.M.	28800	0	0
Sales Market 1,2,3	30600	81000	0
Closing stock	10000	8000	0
Under production & procured	59400	81000	0

Team number	101
Round	2
Period	0

International Business Management put into Practice

Company 1



Market Information Centre		101	102	103	104	105	
Prices	Market 1	****	****	****	****	****	Euro
	Export	****	****	****	****	****	\$
	Market 2	****	****	****	****	****	Euro
	Market 3	****	****	****	****	****	Euro
	Int.Market 3	****	****	****	****	****	Olo
Stocks	Product 1	*****	*****	*****	*****	*****	items
	Product 2	*****	*****	*****	*****	*****	items
	Product 3	*****	*****	*****	*****	*****	items
	Personnel (incl. hired)	*****	*****	*****	*****	*****	PUs
	Machinery (incl. hired)	*****	*****	*****	*****	*****	MUs
Share promotion	Market 1	****	****	****	****	****	%
	Export	****	****	****	****	****	%
	Market 2	****	****	****	****	****	%
	Market 3	****	****	****	****	****	%
	Int.Market 3	****	****	****	****	****	%
Quality level	Product 1	****	****	****	****	****	
	Product 2	****	****	****	****	****	
	Product 3	****	****	****	****	****	
Share working		****	****	****	****	****	%
Sales groups		****	****	****	****	****	
Sales groups	Int.Market 3	****	****	****	****	****	
Wage costs / PU		*****	*****	*****	*****	*****	Euro
Share prices		20.52	20.52	20.52	20.52	20.52	Euro

Effect promotion					
A promotion expend.	** units in Mrkt 1	will have a market sh. improvement	****	%	
A promotion expend.	** units in Export	will have a market sh. improvement	****	%	
A promotion expend.	** units in Mrkt 2	will have a market sh. improvement	****	%	
A promotion expend.	** units in Mrkt 3	will have a market sh. improvement	****	%	
A promotion expend.	** units in Int.M	will have a market sh. improvement	****	%	

Effect quality level			Mrkt 1	Export	Mrkt 2	Mrkt 3	Int.M
At a quality lev. of	*** the market sh. impr. will	****	****	****	****	****	****
At a quality lev. of	*** the market sh. impr. will	****	****	****	****	****	****

Effect efficiency level			Prod.1	Prod.2	Prod.3
At an efficiency lev.	*** the variable costs will be:	Euro	****	****	****
At an efficiency lev.	*** the variable costs will be:	Euro	****	****	****
At an efficiency lev.	*** the use of raw material will be:		****	****	****
At an efficiency lev.	*** the use of raw material will be:		****	****	****

Fixed costs				
At	***** units machinery the fixed costs will be	*****		
At	***** units machinery the fixed costs will be	*****		

Market demands		Mrkt 1	Export	Mrkt 2	Mrkt 3	Int.M
Period 1		159000	146600	408500	0	0
Period 2		162400	148400	411800	0	0

Market shares		101	102	103	104	105
Market 1		****	****	****	****	****
Export		****	****	****	****	****
Market 2		****	****	****	****	****
Market 3		****	****	****	****	****
Int.Market 3		****	****	****	****	****

Additional Information			
Credit limit period 1		110122	*)
Credit margin period 1		43422	*)
*) Excluding supplementary credit, dividend, and issuing shares			
Upgrading Product 2		0 items at Euro 0	= Euro 0

	Product 1	Product 2	Product 3
Average credit facility	1.0	1.0	.0
Quality level period 1	0	0	0
Efficiency level period 0	0	0	0

Sales group home per.0:	27	Costs per sales group: Euro	200000
Sales group home per.1:	27		
Incr. Costs Sales gr.	Int.M	Period 0 :	.0 %
Turnover Sales gr.	Int.M	Period 0 :	.0 %
Sales gr. Int. Mrkt per. 0 :	0	Costs per sales group: Olo	300000
Sales gr. Int. Mrkt per. 1 :	0		
Exchange rate \$ period 0:	Euro	.88	
Exchange rate Olo period 0:	Euro	.60	

11 Decision Form overview

11.1 Introduction

Every Period you must fill in a Decision Form and submit it to the Game Instructor. If you use the WinMapp planning system you can generate a decision-file in WinMapp and then submit it to the Game Instructor. The co-operation and trade transaction agreements have to be completed by hand. At the end of this chapter you will find an example of a Decision Form.

11.2 Explanation of the Decision Form

In this paragraph you will find short explanations of the most complicated decision fields.

General

10. Expenditures for improvement of working conditions: x 100,000 Euro

Production

18. Research & Development

- a. Product improvement expenditures : x 250,000 Euro
- b. Efficiency improvement expenditures: x 500,000 Euro

Marketing

19. Sales limit Export Market Product 1

The maximum number of items of Product 1 (in 1000 items) that your company intends to sell on the Export Market should be specified on the decision form. Sales in the Export Market take preference so that the remaining items will then be sold on the Home market. Sales in the Export Market will not affect the demand in Market 1.

You must specify on the Decision Form how many items (in 1000 items) your company intends to sell on the Dump Market. You will have the guarantee that the specified number of products in items will be bought, provided that the company has a sufficient amount of products and sales groups available. Sales in the Dump Market take preference above those in the regular market. The remaining items of Product 2 will be offered for sale in Market 2.

The maximum number of units of Product 3 that a company intends to sell in the International Market should be specified on the Decision Form. Sales in the International Market take preference. The remaining items of Product 3 will be offered for sale on Market 3.

To summarise, you can limit your sales. If you fill in a number (in units of 1,000 items) which is lower than the demand for your products, then you will only sell the number you've actually specified on the Decision Form. If you fill in a high value, you will sell the maximum demand for that specific product in the applicable Market.

22. Promotion: Markets 1, 2, and 3: x 100,000 Euro
Export Market: x \$ 120,000

23. Credit Facility

- Credit Facility = 0: the entire turnover will be received, in cash, during the current Period.
- Credit Facility = 1: 10% of the turnover will be received, in cash during the following Period, and 90% during the current Period.
- Credit Facility = 2: 20% of the turnover will be received, in cash, during the following Period, and 80% during the current Period.
- Credit Facility = 3: 30% of the turnover will be received, in cash, during the following Period, and 70% during the current Period.

Market Information Centre

27. Effect of the quality level

- Fill in the quality level for which you want to know the effect on the market share percentage. The relevant information will then be provided for Markets 1, 2, and 3.
- Information can be requested for two levels per Period.

- 28. Effect of the efficiency level on production costs**
- Fill in the efficiency level, in units, for which you want to know the effect on the variable costs and the usage of raw materials. The relevant information will be provided about the variable costs and the usage of raw materials for Product 1, Product 2, and Product 3.
 - Information can be requested for two levels per Period.
- 29. Fixed costs for a given level of production machinery**
- Fill in the level of production machinery (in multiples of 1,000 MU) for which you want to know the fixed costs. You will receive the total fixed costs (in 1,000 Euro) for the specified level of production machinery.
 - Information can be requested for two levels per Period.
- 30. Effect of promotional expenditures**
- Fill in the number of promotion units for which you want to know the effect it will have on the market share percentage. The relevant information will be provided for the market in question.
 - One level per market may be specified per Period.
- 38. Market Information Report (if available)**
- Fill in the applicable levels in boxes 27 through 30.
 - If you order the Market Information Report, you'll get all the relevant business information as previously specified under Market Information Centre. In addition to this you can also get a report containing additional market and company information (Consultancy Report).

Fill in a '1' for questions 24 through 26, and 31 through 37, if you want to receive information only about the applicable subjects. If you don't want information on any of the applicable subjects, please leave the boxes blank (or fill in a 0).

NOTE

If you fill in a "1" for Market Information Report (38), you'll automatically receive all the business information. Boxes 24 through 26, and 31 through 37 can be left blank. For boxes 27 through 30, you have to fill in the applicable levels. If you don't fill in these levels, the Market Information Centre will not be able to give you the required information about these effects!



DECISION FORM

International Business Management put into Practice

TEAM NUMBER	<input type="text"/>
PERIOD NUMBER	<input type="text"/>

General

1. Increase Personnel-perm.	<input type="text"/>	x 1000 PU	9. Reduction of working hours	<input type="text"/>	yes=1, no=0
2. Increase Personnel-hired	<input type="text"/>	x 1000 PU	10. Expend.work.cond.improv.	<input type="text"/>	*)
3. Increase Machinery-bought	<input type="text"/>	x 1000 MU	11. Dividend payment	<input type="text"/>	x Euro 1000
4. Increase Machinery-hired	<input type="text"/>	x 1000 MU	12. Wage increase	<input type="text"/>	x 0.1 %
5. Loans	<input type="text"/>	x Euro 1000	13. Orders for raw mat. Prod. 1	<input type="text"/>	x 1000 units
6. Repayments	<input type="text"/>	x Euro 1000	14. Orders for raw mat. Prod. 2	<input type="text"/>	x 1000 units
7. Orders Product 2	<input type="text"/>	Items credit=1	15. Orders for raw mat. Prod. 3	<input type="text"/>	x 1000 units
8. Suppliers credit code (only if Orders Pr.2)	<input type="text"/>	no credit=0	16. Issuing shares	<input type="text"/>	x 1000 shares

Production

	Product 1	Product 2	Product 3	
17. Production targets	<input type="text"/>	<input type="text"/>	<input type="text"/>	items
18. Research & Development:				
a. Product improvement expenditures	<input type="text"/>	<input type="text"/>	<input type="text"/>	*)
b. Efficiency improvement expenditures	<input type="text"/>	<input type="text"/>	<input type="text"/>	*)

Marketing

	Market 1	Exp. Market	Market 2	Market 3	Int. Market	
19. Sales limit Export/Dump/Int. Market		<input type="text"/>	<input type="text"/>		<input type="text"/>	x 1000 items
20. Price	<input type="text"/>	Euro/\$/Euro/Euro/Ol o				
21. Deployment of sales groups	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	
22. Promotion	<input type="text"/>	*)				
23. Credit facility	<input type="text"/>		<input type="text"/>	<input type="text"/>		*)

Market Information Centre

24. Competitors prices	<input type="text"/>	**)	31. Competitors share in promotion	<input type="text"/>	**)
25. Competitors closing stock	<input type="text"/>	**)	32. Competitors product quality levels	<input type="text"/>	**)
26. Competitors production capacity	<input type="text"/>	**)	33. Competitors sales groups	<input type="text"/>	**)
	Level 1	Level 2	34. Estimate of market demands	<input type="text"/>	**)
27. Effect quality level	<input type="text"/>	<input type="text"/>	35. Competitors share in work. cond. improvement	<input type="text"/>	**)
28. Effect efficiency level	<input type="text"/>	<input type="text"/>	36. Competitors market share	<input type="text"/>	**)
29. Fixed costs at a certain level of Machinery	<input type="text"/>	<input type="text"/>	37. Competitors wage costs	<input type="text"/>	**)
30. Effect of prom. exp.			38. Market Information Report (fill in 27 - 30)	<input type="text"/>	**)
	Market 1: <input type="text"/>	Export: <input type="text"/>			
	Market 2: <input type="text"/>	Market 3: <input type="text"/>			

*) Units described on explanation

***) not required = 0

required = 1

Team name:

Contact person:

12 Rules and regulations

In this chapter you'll find all the things you'll need to know about the rules and regulations that apply to the International Business Management put into Practice simulation.

12.1 Submitting your decisions

We cannot overemphasise that your Decision Form and co-operation and trade transaction agreements must be in the possession of the Game Instructor on the exact date and before the times given.

12.2 The Game Instructor

During the game, the Game Instructor will be your contact person with regard to decisions, co-operations, trade transactions, and questions.

If you have any questions pertaining to the game, you can contact the Game Instructor. A summary of the Game Instructor's various responsibilities is given below.

12.4.1 Responsibilities

The Game Instructor shoulders final responsibility for the operation of the game. A number of the aspects that make up this overall responsibility are listed below.

- Discrepancies to the text stated in the manual can be decided upon by the Game Instructor and will in case of appearance be announced in advance.
- Decision Forms that are illegible will be evaluated at the discretion of the Game Instructor.
- Companies that fail to fill in Decision Forms, or submit them too late, will have their decisions made for them by the Game Instructor.
- The Game Instructor is responsible for the approval of co-operation and trade transaction agreements.

All decisions made by the Game Instructor will be final and non-negotiable.

12.4.2 Personnel

If you want to dismiss employees, you have to contact the Game Instructor first about your intentions.

12.4.3 Machinery

You can take machinery out of commission but you'll have to inform the Game Instructor about your intentions.

12.4.4 Suspension of payments

If your company is granted suspension of payments, you can try to redress the situation by 'dumping' extra Product 2's on the Dump Market. The Game Instructor will adjust the decision immediately.

12.4.5 Bankruptcy

If your company faces bankruptcy, the Game Instructor will supervise the decisions you make. If the extra dumping of Product 2 is no longer possible, the Game Instructor can declare your company bankrupt.

12.4.6 Co-operation agreements and trade transactions

Should you decide to close co-operation or trade transaction agreements with other companies, the Game Instructor will have to be notified. The first team of the two co-operating companies mentioned on the agreement form will be responsible for submitting the signed co-operation agreement to the Game Instructor.

12.4.7 Trade transactions

Teams can also close trade transactions with the Game Instructor and these pertain only to end products.

You can *sell* end products to the Game Instructor at a dump price that's 30% below the market price. The decision to sell will be carried out immediately, which means the products will no longer be available for sale on the market. You cannot *buy* end products from the Game Instructor.

You can apply for trade transactions by completing and submitting a trade transaction agreement.

12.4.8 Fines

The Game Instructor will impose a fine of 100,000 Euro on a management team that enters into more co-operation agreements than it is allowed to.

12.5 Results

We advise you to **check the accepted decisions immediately**. These are listed on the first page of the Results Overview. Any adjustments to the decisions are usually the result of submitted decisions that do not fully comply with what the game rules allow.

However, it's not inconceivable that mistakes could be made while the decisions are entered into the central computer. Therefore, some accepted decisions might have to be corrected. If this is the case, the Game Instructor must be contacted **immediately after you receive your results**. If mistakes are not reported within the term set by the Game Instructor, these mistakes can no longer be rectified.

At the of a round, you'll receive an evaluation overview of practically all the decisions you and your competitors have made during all the Periods. By using this evaluation overview, you'll be able to analyse the progress of the game during the applicable round.

We suggest that you make yourself a liquidity prognosis for every Period and, preferably, for at least two Periods in advance. Suspension of payments can have undesirable consequences, so if it appears that the decisions you intend to make could lead to serious liquidity problems, you'd be well advised to reconsider them.

12.6 Dummy teams

Sometimes, a pool can have four companies (teams) instead of five. The Game Instructor will make the decisions for these so-called 'dummy' teams making up the numbers. The decisions made by the Game Instructor will be based on the average decisions made by the other teams in the applicable pool, and will be such that they offer a negligible advantage or disadvantage to the remaining teams. These 'dummy' teams will continue to operate in the market, which means that you must take their existence into account when making your decisions.

However, when it comes to 'dummy' teams, there are a number of divergent regulations pertaining to co-operation agreements and trade transactions. In the event that a dummy team is 'active' in a pool, or is created by prevailing circumstances, co-operations and trade transactions with this team are not possible.

12.7 Rules

1. Every management team is responsible for the timely submission of all forms which are of importance for the execution of a Period.
2. If numbers larger than those that are permitted are filled in on the Decision Form, the Game Instructor will replace them with the maximum possible values. If the numbers are illegible or unclear, the Game Instructor will give his or her own interpretation of that which has been written. The judgement of the Game Instructor will be final.
3. In cases where management teams do not submit their Decision Forms, or not in time, the Game Instructor will make the applicable decisions for them.

13 Criteria of score

To quantify your company's progress, a number of criteria have been defined. At the end of a round, the team classifications (rankings) will be drawn up on the basis of these criteria.

13.1 Criteria

Criteria	Weighting
a) Profit per share during the last three Periods	1
b) Cumulative profit up to and including the last Period	6
c) Average market share during the last three Periods in Market 1	1
d) Average market share during the last three Periods in the Export Market	3
e) Average market share during the last three Periods in Market 2	1
f) Average market share during the last three Periods in Market 3	1
g) Continuity in Market 1	3
h) Continuity in Market 2	3
i) Continuity in Market 3	3
j) Total dividend paid out	4
k) Average market share during the last three Periods in the Int. Market	1 (if applicable, else 0)
l) Continuity in the International Market	3 (if applicable, else 0)

Scores will be awarded accordingly on the basis of the marks corresponding to the position attained for each of the mentioned criteria. The team that comes in first in the sector will be awarded 50 points, the runner-up will receive 40 points, and so on. See table 10: Scores. If two or more teams attain equal positions for any of the criteria, the points to be awarded will be shared. Please note that if two or more teams have equal criteria scores, their respective stock exchange quotations during the last Period will be decisive for their respective rankings.

13.2 Continuity

- Criteria g, h, i, and l are measured to see to what extent the arithmetic average market share attained over the last three Periods can be continued in the Period following the last Period executed.
- The ranking is determined on the basis of the average market share over the last three Periods. If the number of available products is not sufficient for the company to realise this market share, the ranking will be determined on the basis of the largest possible market share that can be attained with the products that are available.
- For the calculation of the continuity in Market 1, the average number of products sold on the Export Market over the last three Periods will be deducted from the total number of available products in Market 1.
- The continuity in the International Market will be calculated in the same way. The average number of products sold in the International Market during the last three Periods will be deducted from the total number of available products in Market 3.
- The expected market demand generated by trends, effects of dump sales, and marketing efforts (based on the effects carried over from the last Period) will be seen as market demand for the Period following the last Period executed. However, this is without taking into account the effects of any sales deficits or accidental disturbances.
- Points will be awarded for each of the criteria, but only if the average market share is at least 10%, and the number of products available at the end of the last Period is sufficient to attain a market share of at least 10% in the Period following the last Period of a round. A team that does not meet these requirements will receive no points for the market in question.

13.3 Liquidity

The liquidity position in the Period following the last Period must be a 'healthy' one. In order to determine this, a liquidity overview will be drawn up for the Period after the last Period to be played. This will be drawn up on the basis of the following decisions and assumptions.

1. **Production targets:** Average production during the last three Periods.
2. **Raw materials:** Sufficient raw materials (closing stock + materials ordered during the last Period) must be available for the given production targets. If insufficient quantities of raw materials were ordered during the last Period played, further quantities required to attain the production targets will have to be ordered. A 15% surcharge will have to be paid for the extra quantities of raw materials.
3. **Sales in the markets:** The number of products required for attaining the (corrected) average market share, whereby any remaining Product 2 is sold in the Dump Market. For the calculation of debtors' receipts, the prices and credit facility of the last (played) Period will be used.
4. **Dividend payments:** The average of the dividend payments during the last three Periods of a round.
5. **Production capacity:** Production capacity should be sufficient to meet the production targets mentioned under 1. Any increase needed for personnel and/or machinery will have to be hired and paid for as specified in chapter 5.
6. **Sales Groups:** Any increase of the Sales Groups should be equal to the personnel turnover during the last Period (i.e. the number of Sales Groups will remain unchanged in relation to the last Period).
7. **Procurement:** Procurement of Product 2 during the last Period will only be possible without suppliers' credit. Procured Product 2 therefore needs to be paid for immediately (suppliers' credit will be deducted).
8. **Other expenditures:** All other expenditures affecting a company's liquidity position (promotion, product improvements, efficiency improvements, improvements in working conditions, and requested MIC information) will take the average values of the last three Periods.
9. **Supplementary credit:** Credit will not be granted.
10. **Loans:** If expenditures exceed the revenues, loans will be automatically granted up to the credit limit. If the expenditures are less than the revenues, automatic repayments will be made.

The cash balance for the Period following the last Period will be calculated on the basis of these decisions and the normal running costs (fixed overhead costs, staff costs, variable costs, etc.). If the cash balance is negative, the company will receive 0 (zero) points for criteria g, h, i. and l.

13.4 Suspension of payments and bankruptcy

- In the event of suspension of payments during the last Period, no points will be awarded for criteria g, h, i, and l.
- In the event of bankruptcy, the criteria points will be deducted only once in that round. The deduction will equal the maximum number of points that can be scored for 'continuity'.

Table 10. Scores

	Ranking	1	2	3	4	5
a	Profits per share in last 3 Periods (3x)	50	40	30	20	10
b	Cumulative profit	300	240	180	120	60
c, e, f	Market share in Markets 1, 2 and 3 (3x)	50	40	30	20	10
d	Market share in Export Market	150	120	90	60	30
g, h, i	Continuity in Markets 1, 2 and 3 (3x)	150	120	90	60	30
j	Dividend	200	160	120	80	40
k	Market share in Int. Market (if applicable)	50	40	30	20	10
l	Continuity in International Market (if applicable)	150	120	90	60	30

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