PLAYERS' MANUAL

(Online version 2012)

INTRODUCTION

The challenge

This strategy and management simulation is based on a realistic business situation.

A number of virtual companies, represented by the teams taking part, compete against one another within a common business environment in making and selling a small range of desirable consumer products.

The aim is to manage your company during the challenge so that, at the end, your company is best placed to face the future (see below).

A complex computer model simulates -

- the interactions of the various parts of each company
- the competitive relationships between the companies
- and the effects of economic patterns and world events.

The **Global Management Challenge** is demanding. You will have to work under pressure, handling many disparate factors - some at a broad level and others requiring attention to detail. It will, almost certainly, provoke argument but, by taking part, you will probably have great fun, gain a strong sense of satisfaction and learn quite a lot about teamworking and, not least, managing a business.

Your task

The task facing your team is to take charge of one of these simulated companies and manage it as if it were a real live business. This manual explains how to take part.

It explains the organisation of the simulation, what your team has to do, how your company works, and how it relates to the other team companies. It has four parts:

1. This **Introduction.**
2. **The business environment**, which explains the internal functions of each company and interactions between the companies and the market.
3. **Your management report**, which explains the contents of the computer output.

4. **The decision form**, which explains how you should prepare your decisions.

The company, which you have to manage, is fairly complex. Therefore, the second and third parts of the manual explain the structure of your company in some detail. It describes the four main management functions of Marketing, Operations, Personnel and Finance, and emphasises the interactions between them.

One of the main aims of this simulation is to illustrate these interactions and to demonstrate that the best way of achieving a proper balance is by teamwork, good organisation, and effective communication.

You, however, must decide on the precise organisation of your team.

There is no constraint on what technical aids you may use. If you wish to write your own spreadsheet models, you will find detailed definitions in the third part of the manual.

How it works

You control your company through two documents:

1. The quarterly **Management Report**, shows how your company has performed in the period just completed, and provides information about the next period.
2. The **Decision Form**, allows you to input decisions that will affect the way your company will operate in the next period and beyond.

So that you know exactly what is happening, this manual describes the way in which your company works in great detail. The broad structure of the simulation is, however, simple.

> You are trying to win the competition by managing your company so that it has the highest **investment performance** at the end of the simulation.

Your investment performance reflects the value of your company to its investors. This is not just the market valuation of your company but includes the value of any dividends paid to your investors and the value of any shares purchased from them, less the cost of any new shares issued to them.

You should, therefore, choose an appropriate company strategy for achieving this goal.

So that you can make some preliminary assessment of how things work, you are given a brief history of your company covering a period immediately before the simulation starts, together with the decisions which generated these results. You may find it helpful to refer to the history when reading this manual. The histories are identical for all the companies taking part, so that all companies start from exactly the same position.

After reviewing this recent history, and having decided what you want to do, complete your first decision form and submit it for processing, in accordance with the published timetable. In return you will receive a management report which tells you what has happened to your company as a result of the decisions you have taken. Use this information to improve your knowledge of the workings of your company and of the market. Then make the next set of decisions ... and so on to the end of the simulation.

General points

Before reading the rest of this manual, you should understand some important general points:

- External factors such as market trends, interest rates and labour availability, are set before the simulation begins. They will not be changed arbitrarily during the simulation.
- Many relationships in the simulation are purely arithmetic (e.g. financial statements), but others are of a kind which cannot be derived exactly, even in real life (e.g. how many orders are you likely to receive and what is the effect of training going to be?).
- Some companies have been known to make large losses. Even so, you will never be declared bankrupt. Allowing companies to continue with massive borrowings, which might not be tolerated in real life, enables all teams taking part to reach the end.
- The simulation proceeds in steps of one quarter of a calendar year. Before the simulation begins, you will be told how many quarters there are and given a timetable detailing when your decisions must be sent in for processing, and when you should expect the resulting management report. A quarter is defined as twelve working weeks.
  Once you have submitted your decisions for the next quarter they cannot be revised.
- You receive management reports, and submit decision forms in the imaginary instant of time between the end of one quarter and the next. For clarity, quarters in the past, and in the future, are strictly defined in relation to this imaginary instant of time, and all references to them in this manual will be in these terms:

Last quarter has just finished (and to which the most recent management report refers).

Quarter before last: the quarter before 'last quarter'.

Please note that there is no such quarter as

'this quarter'.

Next quarter is just about to start (i.e. to which the current decision form applies).

Quarter after next: the quarter immediately following 'next quarter'.

How to use this manual

To help you make effective use of this manual, it not only has a relevant, clickable contents list (on the left) but, in addition, there are numerous hyperlinked cross-references in the text. These should enable you to explore fully any aspect of it.

- There are links from each decision that is mentioned in the general text, to the appropriate section of the decision form.
- A clickable image of the Decision Form links each decision that you can make for your company to the relevant part of the manual. You can use it as an index.
- A series of tables contain details of cost and other parameters. During the simulation, these numbers are fixed, unless they are over-ridden by an announcement in the **business report** section of your management report.
- You can obtain further guidance on key problems to help you with your decision making. These notes are more concerned with general principles rather than detail.
- Finally, you can read more important, or technical, detail about some of the concepts by clicking on "more" at the end of a section. For example -

More

GLOBAL MANAGEMENT CHALLENGE

THE BUSINESS ENVIRONMENT

Your market

Your company operates in direct competition with a number of other companies that manufacture and sell the same products as yours, in the same geographic areas. You make three products, which are not specifically defined. They are three different, but related, types of consumer durables that the public think are generally desirable.

Your market consists of two geographic areas for traditional retail trade -

- the Euro-market - which is most of western and central Europe;
- the Dollar-market - which is the North America free trade agreement area (Nafta).

At the same time, through the internet, you can reach both of the above geographic areas and also the rest of the world.

In all areas, you compete directly with the other companies taking part in the simulation, but additional competition also exists in the form of imports, or other local firms. Consequently, the market shares of the competing teams do not add up to 100%. This other competition, however, is not directly involved in the simulation.

ECONOMIC BACKGROUND

The population size and social make-up determine the underlying demand for products in each market area, and normal economic cycles of growth and decline can affect all markets.

Please note, however, that the economy in this simulation does not necessarily follow the present-day, real life economy; nor do real-life Government Policies have any bearing on it.

Superimposed on the general economic trend is a strong seasonal pattern of demand for the industry's products. This is not necessarily the same in all market areas, nor for every year, but the peak is usually in the fourth quarter.

Within the European market, trade is conducted in euros. In

Nafta, trade is in U.S. dollars. Trade on the internet is in dollars.

All monetary decisions which you make will be in euros, including decisions affecting Nafta and the Internet, even though the final transaction may be in dollars. The rate of exchange between the euro and the dollar will, therefore, affect trading.

Economic statistics and reports will be issued during the simulation to help you assess economic trends and movements in exchange rates. These take the form of deseasonalised, official statistics for last quarter, for both the European market and Nafta, covering:

- Gross domestic product (GDP)
- Percentage unemployment
- Trade balance
- Central Bank annual base interest rates which will apply next quarter.
- Exchange rate of the euro against the dollar which will apply next quarter.

Limited information on some of these topics is also available about the rest of the developed world under Economic intelligence in your management report.

In addition, short extracts of political, economic and commercial commentary from newspapers will be given to help you forecast the way in which economies and markets are likely to move. You should decide how reliable this information is.

More (technical detail on exchange rates)

WORLD EVENTS

Significant 'world events' can affect all companies. These events may be the result of political upheaval, economic or environmental developments, wars, physical disasters such as volcanic eruptions or earthquakes, epidemic diseases, etc. They can have a serious effect on companies' operations, and also affect the product markets.

Externally, the level of disruption should affect all companies equally, but the level of internal disruption will depend on how well the company is able to cope with what happens. For example, a company that holds adequate stocks of materials and finished products may be able to continue to trade, but a company with inadequate stocks may find itself in difficulty.

These events may occur suddenly, and without warning, giving you no opportunity to react. It is more likely, however, that at least some information, taken from the press and appearing in the Business Report ahead of an event, will give some hint that it may happen.

It is important that you read all sections of the

BUSINESS REPORT since they may contain important information about changes in costs (eg decommissioning charges) or other factors that are not necessarily fixed throughout the simulation.

You should bear in mind that, although this kind of disruption might not affect consumer markets directly, there could be an indirect effect on consumer confidence.

Note: although such world events **may** happen, it does not mean that they **will** happen.

MARKETING

Your company's marketing department is responsible for creating demand for, and selling the company's products in the face of competition from rival companies. To do this successfully you must have a good marketing strategy.

In Europe and Nafta you sell through agents to retailers who, in turn, sell to the general public. In those areas retailers are the prime target of your marketing effort. You can also sell directly to the public worldwide through the internet to people who have appropriate computer access. Selling through the internet will also reach Europe and Nafta so that, in a sense, you will be competing against your own agents in these areas. Public demand will vary according to the economic climate and the marketing effort of the competing companies. The retailers and the general public are also the target of direct competitors selling similar products in competition to yours.

Each product has a marketing image which you are seeking to promote in order to attract sales. This image is formed over time from a number of factors such as product quality, reliability, advertising, price and delivery which are of varying importance relative to similar factors in your competitors' products.

You decide some of these factors as part of your marketing plan, but others, such as the activities of your competitors, should be taken into account as you prepare the plan.

INFORMATION

To help you make forecasts, certain economic and competitive information about your competitors' activities last quarter is available to you, free of charge. This consists of the kind of information that would normally be freely available:

Product selling prices
- Total number of employees
- Basic skilled wage rates
- Number of distributors

Apart from this free information, you can decide to subscribe to Audit Research, which monitors the sales of each product and provides information about how the market is divided between you and your competitors. This information costs a fixed amount each time you ask for it. The information gives market shares by volume of sales for each of the competing companies in:

- The European market.
- The Nafta market.
- The internet

You can also decide to commission research about your competitors' business activities and products. This information costs you a fixed amount every time you ask for it. It includes:

- Total amounts spent on advertising
- Total amounts spent on product development.
- A consumer assessment rating of the product design quality.
- A consumer assessment of the quality of your web site (if relevant)

More

PRICING

Each quarter you must review and decide the prices at which you will sell your products.

The price that you decide for each product is the amount you will charge your agents and distributors for each unit delivered. It is also intended as a guide to the retail price that should be charged. Your agents in the EU and distributors in Nafta make most of their profit from commission that you pay to them based on the value of orders and sales.

For internet sales, the price you decide is the price which the consumer pays (excluding any delivery charge).

The products are quite price sensitive, though not equally so, with relatively high prices leading to fewer orders and low prices yielding more. Price reduction, as a means of gaining more orders, only works up to a point - the public become suspicious of very low prices.

You set all prices in Euros regardless of where they are to be sold. Because Nafta and internet prices are decided in Euros, but passed to the end customer in dollars, fluctuations in the euro/dollar exchange rate will affect demand, and your ability to compete in these markets. You should, therefore, take into account exchange rates when fixing your prices.

If you decide not to offer a particular product for sale, enter a zero price on your decision form. You will then receive no new orders for that product from that market next quarter.

PRODUCT QUALITY

Apart from product design (see below) you decide the build quality of your products through decisions taken at production time. In general, the longer you allow your skilled workers to assemble each product, the better finish it will have, and the more reliable it will be.

You may unintentionally release to the public products with serious health and safety problems. Apart from the cost of physically putting things right, serious damage can be done to your marketing image, leading to loss of public confidence and consequent loss of orders.

You may also improve the build quality, and reliability, of your products by using premium quality materials, rather than basic materials. You can decide to use such materials to whatever extent you wish, product by product. Quality materials are also less likely to be a danger to the public. Premium quality materials are, however, significantly more expensive.

The more attention you pay to quality, the better your image will be, and the more products you should be able to sell. (See also the description of your quality control process).

Customers who find any products to be faulty can return them, under the company's guarantee, for repair or replacement. Obviously, the better their quality, the fewer product units will need to be returned.

Sub-contractors carry out repairs for you and invoice you for the work at an agreed cost.

Internet customers may also return faulty products to your distribution agent. A local sub-contractor repairs these products, under your guarantee.

PRODUCT DEVELOPMENT

An important way in which your products can be competitive is through developments in design and technology. Each quarter, therefore, you should decide how much to spend on product development for each of your products.

Regardless of how much you spend, you cannot assume that your efforts will be immediately successful. Product development is cumulative, so that the more you spend the greater the chance of making real improvements. A steady effort is most likely to be effective.

Each quarter, there are three possible product development outcomes -

1. When MINOR improvements are reported they will have been automatically incorporated into your products (without requiring any decision) and have a small but immediate effect on your product image and sales.
2. MAJOR improvements that are reported may need further consideration, because the introduction of a major improvement renders existing models of the product obsolete. You may, therefore, wish to reduce existing product stocks, or build up marketing effort to introduce the improved product more effectively. You are therefore given the opportunity to decide whether to take up the improvement immediately or later.
3. NONE means that your product development was not successful last quarter. Product development is a cumulative process, so this is not necessarily a bad thing. Following the announcement of a major improvement (see above), your team starts on a fresh project which may take two or more quarters to come to fruition. The more you invest in product development, the shorter this period is likely to be.

Introducing improvements enhances your product image in the eyes of consumers, so that your consumer assessment rating - the number of stars awarded by product assessment panels - is likely to increase. If your development effort is too small, or has little success, then your products may become obsolescent, with a declining marketing image and a reduction in the number of stars awarded. If one or other of your products is found to be environmentally unsound, the accompanying bad publicity will usually lead to loss of stars.

The quality of your management will also affect the department's chances of success.

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ADVERTISING

For each product, in each area, you should decide how much money to spend on advertising:

- on promoting sales of your products in the short term by providing television commercials, material for press advertising, and so on. This type of advertising has a limited effect on internet business.
- on promoting your company's corporate image in each area, regardless of product, in order to create long term confidence and goodwill. Corporate image advertising is cumulative, needing steady expenditure over a period to be effective. It not only extends the

market for your own company's products, but also, combined with all advertising, tends to contribute to the general growth of the market. A strong corporate image is the main influence which persuades people to visit your web-site, so it is important for your internet business.

In addition to direct advertising, it is important for users of the internet that your web-site reflects and maintains your company's image. You can decide how much to spend each quarter on enhancing the efficiency and attractiveness of your site.

There is no precise information about the effects of advertising, except that it affects sales of products differently in different areas. Advertising in Nafta and the internet areas will also depend on the relative movements in the euro/dollar exchange rate.

SELLING

You can sell your products in two ways:

1. To retailers in the EU and Nafta areas who then, in turn, sell to their customers.
2. Directly to customers world-wide (including the EU and Nafta areas) via the internet.

European market sales agents

In the European market, you appoint agents who will act for you to sell and distribute your products. You have three decisions to make each quarter:

- The number of agents you want to represent you in the European market from the beginning of the quarter after next.
- The amount that you are prepared to spend on behalf of each agent, each quarter. This covers basic payments for sales aids, supervision and accounting, market research, etc. This includes a minimum quarterly payment for each agent, to cover certain administrative expenses. A decision to spend more than this minimum will allow your agents to cover a wider geographic area and improve selling on your behalf.
- The percentage you will pay your agents in commission on the value of orders received each quarter. Commission is your agents' main source of income. Higher commission will motivate them to sell on your behalf and will compensate them for the fact that the prices of products sold through the internet will tend to be lower than retail prices.

Because the European market is large, you may need several agents to provide complete coverage of the area. Their effectiveness will depend on the level of support you give them. The higher the commission they are paid, the greater will be their selling motivation, especially if you support them with an adequate level of advertising. You need to offer both reasonable support and commission if you are to successfully appoint and retain your agents.

Nafta distributors

The Nafta market is more difficult and costly to penetrate because of distribution difficulties. To reach this market you appoint distributors, each of whom have an established network of wholesalers. Three decisions are needed each quarter:

- The number of distributors you wish to act for you.
- The level of support payments you decide to make, per distributor, subject to a minimum payment to cover basic overheads. Support payments are intended to cover basic costs of handling your product. The efficiency of the operation on your behalf will increase as support payments go up but movements in the relative price indices and the exchange rate will also affect performance.
- The percentage you will pay to the distributors in commission on the value of sales made.

In general the same factors that motivate selling agents in the European market apply to distributors in the Nafta area. However distributors are not active sellers of your products. Instead they respond to demand created by your advertising. Commission is not intended to stimulate demand for your products, but contributes to the distributors' profit, and other variable costs. Again, you need to provide both adequate support and reasonable commission.

More

The internet

You can sell directly to consumers world wide through the internet. The number of orders you receive will depend not only on the usual marketing factors of price (plus delivery charge), advertising, quality and availability, but also on the attractiveness, ease of use and selling power of your web-site, backed by a strong corporate image. The function of short term advertising is to remind people of what is available on your web-site.

Four decisions are needed each quarter;

- the number of ports (this determines the capacity of your website)
- the amount spent on website development
- your distributor's support payment (see Table 3) - this will affect the efficiency of, and care given to your operation
- the % commission paid to your distributor on the value of sales (this will also influence your distributor's

efficiency and care)

One problem with e-business is that consumer access to the internet depends on the general availability of computers, which is not universal. Another is that you will compete against your own products available through normal retail outlets. The advantages are that you are not dependent on middlemen to sell for you and that customers pay by credit card and therefore you get paid at the same time as the goods are delivered.

Order processing and credit card payments are handled for you by secure e-commerce software. Orders are then passed to a single distribution agent to be made up, packaged and delivered. The efficiency and care with which this is done will affect your marketing image so that poor service from your distribution agent will reflect badly on the company and its products. Conversely, prompt and efficient service will boost your image.

More

PRODUCT AVAILABILITY

Product availability affects the number of orders received, and the ability of your production department to keep up with orders is important. Completed products are delivered to agents' warehouses in the European market, to distributors in Nafta and to your internet distribution agent. All orders are intended for delivery as soon as possible in the same quarter in which they are received. Consequently you should try to keep an adequate stock of products available in all areas so that deliveries can be made promptly. Orders are only converted into sales when the goods have been delivered. Failure to meet orders received, will result in a queue of customers awaiting delivery, leading to dissatisfaction and lost sales, which will adversely affect your marketing image. The greater the number of orders outstanding, the greater this adverse marketing effect will be.

Product availability is even more important for trade on the internet. Goods for sale on the internet are sent to your distributor's warehouse from the factory for this purpose. If demand is greater than availability then potential customers are lost, and your company's image as an efficient internet trader will decline.

Important Detail

At the end of each quarter, at least half of any orders which remain outstanding in the European and Nafta areas will be cancelled by your potential customers, and those orders left for you to supply in the next quarter will be carried forward as a backlog to be cleared as soon as products become available.

If you decide to raise your price in the meantime, or to reduce the quality of your products in some way, then more of your backlog will be cancelled at the beginning of next quarter and the total number of orders cancelled will then be greater than half.

Should you decide to stop production of a product, any backlog of orders which you may have at that time will remain to be satisfied at last quarter's price.

Cancelled orders do not go directly to your competitors, but they will benefit in future quarters due to your poor delivery image.

On the internet, if there is a shortage of product, no further orders can be taken. Hence, although there can be no backlog, there is a negative effect on your image.

MARKETING MANAGEMENT

The whole of your marketing effort depends on good management. The amount you decide to allocate to your management budget will therefore have an important effect on the quality of your sales management, and hence on the success of your marketing effort as a whole.

Your company's selling effort has an indirect cost which covers the expenses of a sales office, and of supervising your marketing effort. This is calculated as one percent of the value of orders obtained in each quarter.

OPERATIONS

Your company's operations department is responsible for making, assembling and distributing the company's products as efficiently and cheaply as possible within the quality standards defined by your overall strategy.

The three types of product which your company sells are manufactured in your own factory, from one basic type of material. The products are made in two sequential processes:

1. Machining, in which components are made on machines, each operated by four unskilled machinists. Shift working is possible in the machine shop. In addition, or alternatively, you can outsource components by ordering them from external subcontractors for delivery in the quarter after next (see subcontracting below).

2. Assembly, in which the machined components are assembled into finished products and packed by skilled assembly workers, who only work single shifts.

Table 5 shows the material content of each product, and the minimum times taken to process one unit of each product through each of these stages.

Because of the differing space requirements of machines and assembly operations, you may need to consider the total production area needed for the mix of products you plan to make. Note that only a proportion of your total factory area can actually be used, because of the need for circulation and access space etc.

The number of products that can be made in your factory in any quarter depends either on the number of available components (whether machined in your own factory, or outsourced), or on the capacity of your assembly shop to assemble these components, whichever is the lower.

A lack of materials will never limit your production capacity, because any shortfall is purchased automatically on the spot market, although at a premium price (see below).

MACHINING

The capacity of your machine shop, in terms of productive hours, depends on the number of machines that you have in your factory (see Capital expenditure), and the shift level which you decide to operate, diminished by the number of hours lost through breakdowns and slower machine speeds due to ageing.

Catastrophic machine failure can also seriously reduce production time for more than just a few days, while the machine is brought back into production. If this lost time leads to a loss of sales, incurring backlog, the value of lost sales can be recovered from your insurance company. The cost of such repairs can also be recovered.

For each level of shift working there is a maximum number of hours each quarter available for production from each machine.

Important Detail

The machining times, given in Table 5 are for producing a set of components ready to be assembled into the finished product. These are the times expected from 100% efficient, new machines. As machines get older, or are used more, they become less efficient, and take longer to make the components for each product.

The introduction of a preventive maintenance programme (see below) can slow, or even reverse, this process of deterioration, but eventually each machine will reach a level of inefficiency at which it may be better to sell it and replace it with a new one. A further consequence of ageing is that a machine will tend to break down more often, and productive hours will be lost until it can be repaired.

Your insurer's assessment of lost sales first considers Product 3 in the EU, then Nafta and finally the internet; then Product 2 and finally Product 1, until all lost sales specifically attributable to loss of machine capacity are covered.

PLANT MAINTENANCE

You employ specialist independent contractors to carry out maintenance on your machines. Each quarter you decide how many hours of planned maintenance per machine you wish to contract out.

There is a fixed cost per contract hour for each machine which covers labour, spares, materials, tools and supervision.

The first priority of the maintenance effort will be to repair broken down machinery, any hours left over within the contract will be used on preventive maintenance outside normal working hours.

When there is a catastrophic machine failure, your normal maintenance contractors carry out repairs in the usual way. The cost of this work (which may need to be done at the emergency rate) can then be added to your quarterly insurance claim provided that you have the appropriate insurance.

The more preventive maintenance you are able to do, the fewer breakdowns there will be, and if a breakdown does occur the shorter the time before the machine is back in service again. Preventive maintenance also slows the rate at which machines become less efficient.

If your allocation of hours to contract maintenance is not even sufficient to cover basic repair times, any additional hours needed to meet this primary effort will be charged at a higher rate per contract-hour.

SUBCONTRACTING

You can decide to outsource some, or all of your machining work to external subcontractors in addition to, or instead of, machining components in your own factory.

However, any subcontracted components that you order next quarter will not be available for assembly next quarter, but will be delivered to you in the quarter after next. You can then assemble them, along with any components machined in your own factory.

The current price of materials, your decisions about the use of premium materials, and the exchange rate, will determine the cost of any outsourced components. The cost range for each product is shown in last quarter's management report, but the actual cost will depend on the percentage of premium materials used.

In fulfilling your production schedule, your operations department will use any outsourced components first. If required, machining will then be used in order to complete the schedule.

Any components that remain after your production schedule is completed, will be held in stock as 'work in progress', to be assembled later. Such stock is valued at purchase cost.

If you have sufficient space, you will hold such work in progress stocks in your factory.
If not, you will need to store them in external warehouses at a cost shown in Table 13.

ASSEMBLY

As well as being limited by your machine capacity (or bought-in components), your factory's output also depends on the ability of your skilled workers to assemble the components into finished products.

Each product has a minimum assembly time but, as part of your marketing policy (see above), you should decide the actual times to be taken. The longer the assembly time, the better the quality of your products will be (up to a point).

Having decided the time that it should take to assemble one unit of each product, the number of each that you can make, and the product mix, will then depend on the number of skilled workers that you employ, diminished by absenteeism and industrial unrest.

Assembly workers work only on a single, day shift, up to a maximum number of hours per quarter. There is no limit to the number that you may employ, provided that you can recruit them and that you have enough space for them. After allowing for the area taken up by your machines (see Table 26) the remaining factory area may limit the number of assembly workers that you can usefully employ.

Your assembly workers are prone to serious accident like any one else, both at work and at home. Prolonged absence can seriously affect your production schedule and could lead to loss of sales. When this happens, temporary assembly workers are brought in from an agency service, which charges twice the hourly wage rate paid to your own workers. Meanwhile, you continue to pay your own employee who is off sick.

If you are insured (see later) then these additional costs can be recovered through the company's insurance claim.

You could also try to improve motivation, reduce absenteeism, and improve safety by spending more on management and staff training.

PRODUCTION PLANNING

Each quarter, you decide the number of each product that you plan to deliver to each area. This delivery schedule is the main set of decisions that concerns the operations department.

Normally the number of each product actually produced will be those scheduled to be delivered plus those which have had to be re-made because the original was rejected as defective, either at the assembly stage or the inspection stage in quality control.

Apart from labour and material costs, which are discussed elsewhere, there are certain other semi-fixed costs which are charged to your operations department. These are:

- a cost per shift for supervision;
- a cost per machine for production overheads;
- a charge per machine hour for running costs;
- a production planning charge for each unit to be delivered.

Important Detail

If your production schedule is too ambitious because you have insufficient machine capacity (and work in progress) or skilled labour, then production will be limited to whatever quantities you can make. Quality control will reject any sub-standard products and the remainder will be delivered in proportion to the number asked for in your original production schedule. When your production schedule is cut back in this way you will find that where your decisions are reproduced in the Management Report for next quarter, the affected numbers will be starred (*).

Any stock of product left unsold in an area at the end of a quarter will be kept in the warehouse to be sold in the next quarter. You can decide, however, to return excess stock from your internet distribution agent or European selling agents for redistribution to other areas, by specifying a negative quantity on the Decision form. Goods cannot be returned from Nafta.

You cannot deliver products to areas where you have no agent. Such decisions will be set to '0'.

Rejects found in the production process are sold as scrap, and reduce the number of product units available for delivery, though if you have sufficient capacity, extra products to replace those rejected will be produced automatically, so that deliveries can be completed.

QUALITY CONTROL

Your quality control department inspects products during the manufacturing process. The cost of inspection per unit is shown in Table 10.

Inevitably, some products will develop faults after they have reached the customer and be returned under the terms of your guarantee (see above). The servicing of products returned under guarantee in the EU and Nafta is carried out in those areas by local service agents, who charge you (at fixed rates) for the work carried out. Products returned to your internet distributor are repaired locally by a sub-contractor at the same rates (including delivery).

It is possible that your products are delivered with unsuspected design faults, or be made from sub-standard materials, so that they become a danger to members of the public. If this happens, products are returned under guarantee for repair in large numbers, and you also require to examine and repair all units of product currently in the distribution system. This work is done by the normal repair contractor, who (because of the volumes involved) charges 75% of the normal fee per unit repaired. The additional cost of repair work done under an incident of this kind is added to your company's quarterly insurance claim for settlement by your insurer.

Your product reliability (and also the number that will be returned for repair under your guarantee) depends on the time that you allow your skilled workers for assembling the products, how well trained and motivated they are, the quality of the materials you use, and also the effectiveness of your quality control management.

DISTRIBUTION

You decide the number of products to deliver to the EU, Nafta and to your internet distribution agent (unless your production resources limit your ability to manufacture these quantities). Products are delivered to warehouses controlled by the agents and distributors, who make a charge for storage.

When in your distribution system, units of finished product can be lost, stolen or broken so that they do not reach their final destination in usable condition and have to be written off. Depending on the level of stock in your warehouse losses of this kind can lead to backlog and loss of sales. If you are unable to meet orders because of a loss of product, your insurer is prepared to cover the full sales price of all sales lost providing you have adequate insurance. If you simply lose stock but have no loss of orders (because you have sufficient stocks), you just receive the valuation of the stock lost (Table 21).

Journeys to your internet distributor and to the port used for shipment to Nafta, are of a fixed length. Nafta distributors are responsible for transport from the port in America. Journeys to Europe are made as round trips and depend on the number of agents you have selling for you.

Transport is by standard sized containers and mixed product loads can be carried, but part loads are charged at the full load rate.

Important Detail

Hired transport has an all-in cost per day for the container and transport costs.

The total cost of delivery to your internet distribution agent and to Nafta distributors will depend on -

- the number of loads to be delivered - which is determined by
- the number of products you specified for delivery and
- the container capacity (in product units),
- the fixed journey length and
- the maximimum distance that can be covered per day

In Europe the journey length is not fixed, but depends on the number of agents you have in the EU market (assuming them to be evenly distributed throughout the area).

Finished product units are warehoused in the European market (including products for the internet distributor) and Nafta at a cost per unit, based on the average quarterly holding. Warehousing in Nafta is charged in dollars and converted to euros at the rate quoted in last quarter's management report.

MATERIAL PURCHASING

All three products are made from the same basic materials, but the material content varies product by product. Furthermore, you may decide to use a proportion of premium quality materials for any, or all of your products.

You decide how to buy basic materials. You can buy them at the current spot price for delivery next quarter, or on the Futures Market for delivery in three months' or six months' time. Prices for each option are quoted in last quarter's management report.

Materials ordered for future delivery incur no storage charges, but all material becomes your property from the time it is ordered, and is valued on your balance sheet. Once material is delivered you may have to pay storage costs (see below) if there is insufficient space in your factory after allowing for the area occupied by your machines and assembly operations.

Premium quality materials are purchased from suppliers who deal in superior, environmentally friendly, materials. The price for such materials is a fixed percentage above the spot price. Deliveries of premium materials are made on a 'just-in-time' basis to meet your production schedule and, therefore, do not need to be held in stock. You decide the proportion of such materials to use, product by product.

Important Detail

Material ordered next quarter is invoiced next quarter, based on prices quoted in dollars last quarter. The equivalent amount in euros is then paid in two parts. 50% immediately and 50% in the following quarter. No adjustment is made for a change in the exchange rate between these part-payments. The second part of the payment is carried forward in the balance sheet as part of creditors until it is paid in the quarter after next.

If your production plan requires more materials than you have available for next quarter, then sufficient additional materials are bought automatically on the Spot Market in order for you to complete production. Such emergency purchases are at a premium over the normal price.

Your buying and warehouse department incurs a fixed administrative cost per quarter.

Material is stored in covered space in your own factory, if possible. There is no specific cost for maintaining your own storage area other than the fixed administrative cost (see above). The space available depends on the area of your factory and how it is being used (see Table 26). If there is insufficient space, then the excess materials must be stored in commercial warehouses nearby at a quarterly rate per unit, based on the average quantity held.

INTERNET WEBSITE

An Internet Service Provider (ISP), who sells you web-hosting capacity, provides you with access to the internet. If you wish to trade over the internet, your website should have the capacity to cope with the volume of traffic that it might attract. This capacity is defined in terms of the number of access "ports" it has.

You decide the number of ports that you want to operate, but any change requires one quarter's notice and, therefore, will not be fully effective until the quarter after next.

Demand on your web-site will vary from day to day, and also throughout the day, so that deciding how many ports to install is not straightforward. If you are not able to give quick and efficient service to visitors at peak times your marketing image may decline quite sharply. The management report for last quarter shows three statistics which may be helpful:

1. The capacity of your system, as decided, in terms of its number of ports
2. The number of visits made to your web-site last quarter.
3. The percentage of potential visits to your site that failed due to poor capacity.

Your website incurs a quarterly cost. This includes a cost per port, and a volume cost to pay for secure trading and credit-card handling. The total quarterly cost is treated as a marketing expense and is paid to your ISP in the same quarter.

Software determines the quality of your website (attractiveness, ease of use, etc.) and you decide how much to spend on website development, which is mainly for such software.

Regular, independent surveys give "Star Ratings" which show how customers rate your web-site. Five stars are the best possible; one star is the worst. Such information incurs an additional cost.

More

OPERATIONS MANAGEMENT

Good management affects the whole of your operations. The amount that you decide to allocate to your management budget will therefore have an important effect on the quality of your operations, and hence on the success of your ability to meet demand.

PERSONNEL

Your personnel department is responsible for ensuring that the company has sufficient employees to function effectively. Workers must be recruited in a competitive labour market, within which people can move from company to company seeking the best terms and conditions. The supply of people in the labour market can significantly affect your company's ability to operate efficiently.

The company's labour force is divided into four sections:

1. Unskilled machine operators - who make the components for the company's products.
2. Skilled workers - who assemble completed products from the machined components.
3. Ancillary workers - storepeople, clerks, junior management, etc.
4. Senior management.

All grades of workers may leave because of retirement, sickness or in order to work for rival companies. Workers who leave do so at the end of a quarter.

In order to meet your delivery schedule, you need to recruit employees in sufficient numbers to cope with your production needs and to counteract the loss of any workers retiring or leaving to work for other companies.

Your personnel management task has two specific aspects - recruitment and motivation.

In the simulation, ancillary workers are dealt with in the context of their own departments and their costs are linked directly with departmental costs. You do not need to make any decisions about them.

Senior management is dealt with below.

RECRUITMENT

Assembly Workers

Skilled assembly workers are the product of intensive training and may be difficult to recruit.

You decide how many assembly workers you wish to recruit (or dismiss). Recruitment is either from the pool of unemployed skilled labour, or from other companies who employ skilled workers. Note, however, that recruiting is not always successful - you may not get any!

Effective recruiting depends not only on current earnings, but also on motivation, the quality of goods which you produce, and the ability of your personnel management.

It also depends on the number of unemployed available in the labour pool. In periods of full employment, recruitment can be very difficult, and trying to tempt people away from other companies may lead to a very unstable labour market.

Alternatively, in order to acquire a small number of assembly workers, you may decide to train unemployed unskilled workers. Although more expensive than recruitment, training is more certain.

Whether you decide to recruit or train, the new employees will not be available for production until the quarter after next. Furthermore, you may be limited by the space available in your factory for more assembly workers (see Table 26). If this is insufficient, then your decisions will be reduced to a level that is possible (this could be zero).

Unskilled Machine Operators

Four unskilled machine operators are needed to operate each machine on each shift that you work. Any change in the number of machines you have, or in the level of shift working, will mean that more or fewer unskilled workers are needed.

As with assembly workers, unskilled workers may leave if they feel that working conditions in your factory are not as good as can be found elsewhere.

Because there are always unskilled workers available in the local pool of unemployed labour, any need for new or replacement people is handled automatically at a lower level of management in the company, and senior management is not involved. The shift supervisor will always be able to recruit enough workers from the pool of unemployed, at the start of next quarter.

More (important detail)

STAFF TRAINING

In addition to training unemployed unskilled workers to become assembly workers (as described above), you may also decide to provide your staff with general skills training in order to improve their motivation, teamwork and effectiveness.

External consultants provide such 'on the job' training which can have both immediate and long-term benefits for your company. The results of such training, however, can be variable.

The training is measured in consultant days, and charged at a rate per day (see Table 15). Typically, a consultant can provide training for about 5 to 10 employees each day.

PAY and CONDITIONS

As well as ensuring that you have enough workers, your personnel department should also manage the cost of the workforce. Although you decide the wage rate, the way in which your workers are treated can also have a significant effect not only on motivation, but also earnings. Overtime, and shift payments can be controlled to keep costs down, but these elements can only be managed effectively in the context of current economic conditions, and your marketing and operations strategy.

Assembly Workers

Skilled assembly workers are paid at a basic hourly rate, which you decide each quarter. This basic rate is subject to an agreement with the trade union which does not permit wage rates to be reduced. Any increase in the basic rate is implemented at the beginning of next quarter.

Machine Operators

You can change the capacity of your machine shop by installing more machines, selling existing machines or by changing shift levels (see machining above). Changes of these kinds will directly affect working conditions and pay.

Ancillary Staff

The cost of other workers in your company is included in the various costs associated with the departments in which they are employed. These include: clerical and accountancy staff, buyers, warehouse staff, researchers, etc.

SENIOR MANAGEMENT

Your team assumes the role of the company's Board of Directors and can consist of a Chief Executive, and executives who are responsible for Marketing, Operations, Personnel and Finance. You decide a **management budget** which is spent on outside services and expertise, directors' salaries, and general management expenses. The management budget influences the general quality of management and this, in turn, affects efficiency in all parts of the company.

More (important detail on pay)

FINANCE

Your finance department is responsible for ensuring that the company's funds are managed efficiently in line with corporate strategy. This implies a variety of roles which include monitoring profitability, controlling investment and borrowings, and managing the company's assets and dividend policy. Above all, it must work closely with the management team to maximise the company's investment performance, the criterion by which you will be judged.

SHARES

The company is financed by shareholders' capital, consisting of shares with a nominal value of €1 (euro) each, to the amount shown on the company's balance sheet.

The company's shares are quoted on the Stock Exchange, and the latest share prices for all companies are quoted each quarter in your management report. Many different factors determine your share price.

You can decide to:

- issue more shares
- or repurchase (and cancel) shares from the market

In either case, the transaction takes place at the start of next quarter, but the number of shares issued (or repurchased) in any one year cannot be more than 10% of the issued capital at the start of the year.

There may be other restrictions that apply to share issues and repurchases. For example, share issues and repurchases are not allowed if the share price is below par value (€1).

DIVIDENDS

Each quarter you should decide the rate of dividend to be paid to your shareholders. This is expressed in cents per share (or as a percentage of the share capital).

Good dividend payments are an important element of your investment performance. Many shareholders look for capital growth from an increasing share price but others, including major institutional investors such as pension funds, value a consistent stream of dividends.

Dividend payments are made at the beginning of quarters. The total dividends paid next quarter may not exceed the company's retained earnings as shown in your balance sheet for last quarter. If you try to pay a dividend that exceeds your retained earnings, the dividend rate will be restricted to what is possible (this could be zero).

TERM DEPOSIT

If your company has spare funds, then you may decide to place them on deposit for a period of 3 months. Term deposits earn interest at the current EU bank rate and such interest will be credited to your bank account at the end of next quarter.

By default, any term deposit will be 'rolled over' next quarter for a further 3 months, unless you decide to change the amount. Such deposits will be taken from, or credited to, your bank account at the beginning of next quarter (see more detail).

If you wish to reduce (or cancel) your term deposit, then you should enter the appropriate negative amount.

BORROWING - Term Loans

You can decide to take out, or add to, a long term loan at a fixed interest rate. In this type of loan the money comes from investment institutions that are prepared to commit themselves to your company for the long term, and become part of the funding structure of your company. Your company's borrowing power, as shown in last quarter's management report, may limit (or prevent) any new term loans.

The money is credited to you immediately at the beginning of next quarter as cash, or used to repay all or part of any outstanding overdraft which you may have - see below.

> Note that these loans cannot be repaid during the period of the simulation.

BORROWING - Overdraft

Finance is also available from a bank overdraft (i.e. a flexible bank loan) at an interest rate related to the current European Central Bank rate.

Your bank sets a maximum, authorised overdraft limit for next quarter, based on your company's short term assets and liabilities as shown in last quarter's balance sheet. Overdrafts are issued and repaid automatically as your cash requirements dictate.

If you need more funds than your overdraft limit permits, your bank will still continue to fund your company, but without security, by means of an unauthorised overdraft.

The interest rate charged on an unauthorised overdraft is much higher. Furthermore, this higher rate will apply to the whole overdraft, and not just the excess over your authorised limit.

In this simulation, **bank loans will continue to be granted to your company even though, in normal circumstances, you might be considered to be insolvent.**

No one is declared bankrupt in the simulation, even if your shares become worthless.

More

CAPITAL EXPENDITURE - Property

The company's factory (land and buildings) is wholly owned and has a value as shown in your company's balance sheet. No depreciation is charged on land or buildings.

Your management report shows both the area of land you own, and the effective floor space in your factory. Office space is mainly at the front of the building on an upper floor and, therefore, does not impinge on the total production space available.

You can decide to extend your factory (in order to provide more space for machines, assembly workers and stocks of material or work in progress), subject to the limitation of enough land being available, after allowing for access and parking (see Table 26). Such work is also subject to your financial position.

Using information from last quarter's balance sheet, your building contractor checks your credit-worthiness. If this is at least equal to the total cost of the planned extension, then the building work can go ahead. But, if your credit-worthiness is insufficient, then the contractor will only agree to extend your factory by some smaller amount (which may be not at all).

New building work takes nearly one quarter to complete, so that extra space only becomes available starting in the quarter after next. However, any new machines purchased next quarter can be installed at the end of the quarter (see below). The current cost (per square metre) of new building work is shown in your management report.

CAPITAL EXPENDITURE - Plant and equipment

You can decide to buy new machines, at a fixed cost. You may not be able to place orders for some or all of the machines you require unless your company's financial position is sound and you have enough space in your factory.

The machine supplier checks your ability to pay from your credit-worthiness, which may be reduced by the cost of any building work (see above). If your credit-worthiness is at least equal to the total price of the machines you want, the supplier will accept your order, together with your payment of the purchase price. If your credit-worthiness is insufficient, then the supplier will only take orders for that number of machines which your credit-worthiness covers (which may be none).

Machines that you buy next quarter are delivered and installed at the end of next quarter. They become available for use in the quarter after next.

The value of a machine is depreciated quarterly, by the decreasing balance method.

Each installed machine occupies an area of your factory. This includes the space needed for access and temporary storage of materials and machined components.

When you decide to sell machines, the oldest are sold first, at the start of next quarter, at their depreciated (book) value last quarter. However, because of new legislation on environmental issues, the potential for contamination and the need for safe waste disposal, there is a decommissioning charge whenever a machine is removed for sale. Any decommissioning costs are included under 'Other costs'.

Furthermore, because of the need for decommissioning, the space vacated on removal will not become available for other uses until the quarter after next.

INSURANCE

Your company's activities are at risk from a variety of random events which can disrupt its operations:

- Some or all of the materials held in your own warehouse may be accidentally destroyed by careless handling, theft, flooding or fire.
- Similar risks can destroy all or part of stocks of material in transit or in your own local warehouse.

- Key assembly workers, can suffer from serious home or workplace accidents which might disrupt your production capacity.
- Machines can suffer from catastrophic breakdown which takes them out of production for periods of time.
- Badly designed products can be distributed or sold which later are found to be environmentally dangerous, and need to be withdrawn for modification.

Disruptive events are relatively rare, and the effects of each are described in the relevant parts of the manual. Such events are identified by a "!" (exclamation mark) alongside the relevant figures in the management report.

To guard against such incidents, you can decide to take out insurance which will cover any financial loss caused by them. Your insurance company has four plans in which the proportion of primary risk which your company takes on itself rises successively. Premiums are calculated as a percentage of the value of your non-current assets and inventories.

A fifth option is to take out no insurance at all, in which case you are exposed completely to the dangers and consequent costs of random disruption.

The other factor affecting the risk of random disruption will be the level of your management budget (Decision form). Good management leads to safer working environment, ensures that Health and Safety procedures are properly implemented and that your products are properly designed. Poor management tends to lead to a high-risk company.

More

THE MANAGEMENT REPORT

YOUR COMPANY

The first part of this report contains information solely about your company.
It describes all the entries in your report and defines the arithmetic derivation of each number, where possible.

It consists of:

- a copy of your decisions
- resource usage and availability statistics
- product statistics
- financial accounts

The second part gives information about all the companies in your group, plus information about the economy in which you operate.

On receipt of your management report, check that -

- the copy you have received is for you,
- it has your group and company number on it, and
- it is for the correct quarter.

If any of these are incorrect please contact the simulation controller as quickly as possible.

DECISIONS

The first section of your report shows the decisions which were actually used (or in effect) last quarter. Normally these numbers are the same as the decisions you made, or tried to enter, but there are three ways in which they might differ. Any such difference will be marked by an appropriate symbol -

+ not entered (default values will have been used).

* invalid (not possible because of the current state of your company).

! changed due to unforeseen circumstances (possible insurance claim).

> If a number is different, and there is no error indicator, you should contact the simulation controller immediately so that a check can be made against the decisions which you sent. If the number turns out to have been wrongly entered into the computer, then the appropriate action can be taken.
>
> Note that it can only be corrected within an appropriate period, which will be communicated in advance by the simulation controller.

The rest of the report gives you information about the state of your company and the simulation. It will either tell you what happened last quarter, the state of some parameters of your company now, or say something about next quarter. It also gives you information about your competitors and the economic environment.

The remainder of this part of the manual examines each of the headings of the report in turn and explains how the corresponding figure was obtained.

RESOURCES EMPLOYED

PHYSICAL RESOURCES (availability and usage)

Space

This section shows the utilisation of your land (in square metres) at the end of last quarter.

It also shows the size of your factory (in square metres) at the end of last quarter, and how the space available for production will be used at the start of next quarter.

For component and material stocks, it shows the storage area required even if you do not have the space to store them in your factory (see below).

Available space (overflow if negative): shows the unused space (in square metres) available in your factory at the beginning of next quarter. If negative, it implies that you will have to use external storage for at least some of your material or component stocks.

MACHINES

Number decommissioned at the beginning of last quarter, and sold during last quarter.

Machines in use last quarter: Machines available next quarter from the quarter before last, less the number you decommissioned.

Number bought and installed at the end of last quarter.

Machines available next quarter: the number of machines available for use next quarter. Machines in use last quarter, plus the number you installed last quarter.

Theoretical hours available: the number of machines available to you last quarter, multiplied by the maximum number of hours each could work under the shift system decided.

Breakdown time: the total number of hours during which machines were out of production due to breakdown and repair. Where breakdown time is partly due to catastrophic failure of a machine, you may be able to claim the cost of repair against your insurance. Look for the "!" sign to see if this is the case.

Used last quarter: the total number of hours of machine time used to produce products last quarter. The number of units of each product which were machined, multiplied by the machining time appropriate to each, extended by the effect of declining machine efficiency.

Maintenance hours: the number of hours of preventive maintenance given to your machines last quarter, outside of normal production time. The maintenance hours you decided multiplied by the number of machines in use, less breakdown time. If breakdown time exceeded the number of maintenance hours allocated, no maintenance will have been carried out.

Average machine efficiency %: the theoretical minimum number of hours which should have been taken to manufacture your products last quarter, compared with the actual time.

MATERIALS

A) **Opening stock**: the number of units of material available at the beginning of last quarter. Closing stock at the end of the quarter before last plus any material ordered in earlier quarters for delivery last quarter (see F & G below taken from the report for the quarter before last).

B) **Bought spot**: Material ordered at the beginning of last quarter for delivery last quarter. This figure includes any premium materials purchased last quarter.

C) **Bought default**: Material bought last quarter to make good any shortfall in material ordered. Materials used from D & E less the total of materials from A & B, if positive.

D) **Lost or destroyed**: The number of material units lost, stolen or spoiled in your own warehouse last quarter. (Look for the "!" sign).

E) **Used last quarter**: The total number of units of material used last quarter. The number of each product delivered, plus rejects last quarter, multiplied by the material content of each.

F) **Closing stock**: the number of units of material on hand at the end of last quarter, to be carried forward into next quarter. The sum of A, B & C, less D & E.

G) **For delivery next quarter**: the number of units of material ordered by you last quarter, and in the quarter before last, for delivery next quarter.

H) **For delivery quarter after next**: the number of units of material ordered last quarter for delivery in the quarter after next.

PRODUCTION EMPLOYEES

At start of last quarter: the number of skilled assembly workers and unskilled machine operators available to you at the beginning of last quarter. This is the number of skilled workers that worked for you throughout last quarter. For unskilled workers this is simply the number that were available to you at the start of last quarter.

Recruited: the number of each type of worker which you successfully recruited last quarter. Skilled workers were recruited at the end of last quarter, and hence did not work during that period. Unskilled workers were recruited automatically at the beginning of the quarter, to make up the number needed to operate your machines at the shift level decided (4 workers per machine, per shift).

Trained: the number of workers trained last quarter to be skilled assembly workers, after being recruited from the pool of unemployed unskilled labour. They can work for you next quarter.

Dismissed: the number of each type of worker which you decided to dismiss last quarter. Skilled workers were dismissed at the end of last quarter and hence worked for you during that period. Unskilled workers were dismissed at the beginning of last quarter. Unskilled workers are dismissed only as a result of a reduction in the number of machines, or a lowering of shift level, but as only half of any surplus labour can be dismissed in one quarter it is possible to have more unskilled workers than you need.

Left: the number of each type of worker who left because of retirement, sickness, or who went to work for rival companies. All of these would have left at the end of last quarter.

Available for next quarter: the number of each type of worker who will be available to you at the beginning of next quarter. The number of unskilled workers may then change immediately due to changes in the number of machines or in the level of shift working. This figure is the total of 'Personnel at start of quarter' plus 'Recruited' and 'Trained', less 'Dismissed' and 'Left'.

Assembly workers

Assembly hours available last quarter: the number of skilled workers you had available last quarter multiplied by the maximum number of hours that each could have worked, less a fixed number of hours per worker for each strike week notified at the end of the quarter before last (see below).

Absenteeism: the number of skilled man-hours lost through workers being sick, or not starting work for other reasons. Where part of absenteeism is due to serious illness or accident the cost of it may be covered by insurance. Look for "!" alongside to show that you have had a problem which may be claimed on insurance, if your cover is sufficient. The precise number of hours attributable to serious illness is not shown.

Hours worked: the total number of paid hours worked by skilled assembly workers last quarter. Defined as, the number of products you produced last quarter, multiplied by the assembly time for each product decided by you last quarter.

Notice of strike weeks next quarter: The number of weeks' work which will be lost by each skilled worker next quarter, due to intended industrial action. This is a fixed number of hours per person per week.

AGENTS and DISTRIBUTORS

Details of changes to your sales agents in the European market and distributors in Nafta.

Active last quarter: The number of agents and distributors who represented you last quarter. Equal to 'Active next quarter' from the quarter before last.

Resigned: The number of agents and distributors who decided to stop representing you. This is possibly because they felt that they were not making sufficient profit, or are not being supported sufficiently by your advertising or commission levels, compared to other companies.

Dismissed: The number of agents and distributors who you decided should stop representing you at the end of last quarter by a decision taken at the beginning of last quarter

Appointed: The number of new agents and distributors who have agreed to represent you from the beginning of next quarter. They were appointed last quarter to fulfill your decision on the target size of your network taken at the beginning of last quarter. You may not have attracted all the agents and distributors you were seeking. Agents and distributors are attracted to your network for broadly the opposite reasons that make them leave.

Active next quarter: The number of agents/distributors who will represent you next quarter.

TRANSPORT

Journey length (km): the average length of journey made when delivering your products to the agents and distributors. The trips to your internet distributor and to the port used for shipment to Nafta are of a fixed length. For Europe, the average number of days taken per journey will be the average journey distance divided by the daily distance limit. Part days will be rounded up, to cover maintenance, loading, etc.

Number of loads: The number of container loads of products sent to each area. Part loads are rounded up to full loads. This is equivalent to the number of journeys.

INTERNET STATISTICS

This section gives performance statistics relating to your internet operation. If you are not operating a web-site the statistics will show as 0.

Number of internet ports: The number of ports which you decided to operate last quarter. This determines the capacity of your web-site (see below).

Number of visits to your web-site: The number of successful visits made to your web-site last quarter. This shows the degree of interest in your web-site. Your success in converting these visits into orders for products will depend on the effectiveness of your web-site and on the marketing image of your products. This statistic is provided by your ISP.

Estimated level of failed visits (%): the number of failed attempts to visit your web-site last quarter divided by the total number of potential visits. This performance statistic is provided by your ISP.

Internet service complaints: The number of complaints received by your internet distributor because of poor packaging, incorrect addressing, or other delivery problems. It is an indication of the efficiency of your internet distributor's operation, and affects your marketing image.

CARBON FOOTPRINT

This shows your primary carbon footprint or CO_2e (carbon dioxide equivalent). It is made up from your use of energy for factory heating and lighting, plus the energy used in your machining and assembly operations.

There is a cost for offsetting your primary footprint. This service is purchased from a charity who plant trees whose lives will offset the carbon footprint you generate. The cost (at a rate of €40 per tonne of CO_2e) is included under 'other costs' in your administrative expenses.

Note: it does not show your secondary carbon footprint, which consists of the CO_2e generated by other firms from whom you purchase products and services such as buildings, machines, materials, subcontracted components and hired transport. Even though you are responsible for it (because it is 'embodied' in your products) you do not offset this footprint.

PRODUCT DATA

Quantities scheduled: the number of each product scheduled for production last quarter as a result of your delivery decisions, summed across all market areas.

Produced: the number of products which were actually produced in your factory last quarter, including those which were rejected and those made again to replace rejects. This may be less than the number requested if you did not have sufficient production capacity to make the number you wanted.

Rejected: the number of each product rejected from those produced because they were found to be sub-standard by your Quality Control department. These rejects are sold at scrap value. If you have sufficient resources your production department will automatically produce more units to replace these rejects.

Lost or destroyed : the number of each product lost, stolen or destroyed within your distribution system, last quarter, for which insurance may pay if you are covered (Look for the "!" sign).

Delivered to: the number of each product made and actually delivered to each marketing area and to your internet distributor. This may be less than the number originally decided if your factory did not have sufficient production capacity, or if any products are lost or destroyed (see above). Products will not be sent to markets where you do not have an organisation.

Orders from: the number of orders received for each of your products from each area last quarter. These are new orders and do not include any backlog of orders waiting to be satisfied from the quarter before last.

Sold to: the number of each product sold to each area last quarter. Calculated as the lesser of: new orders plus any backlog from the quarter before last; or, deliveries last quarter plus any product stock carried forward for sale from the quarter before last.

Backlog of orders: the number of unsatisfied orders (backlog) for each product in Europe and Nafta brought forward from last quarter because of poor delivery. There can be no backlog of orders on the internet. Note that these quantities are only half of the actual number of dissatisfied orders, as the other half will have cancelled their order. These have not gone directly to your competitors, but are likely to do so indirectly at some time in the future. Your backlog of orders may fall still further at the beginning of next quarter if you decide to raise your price in the meantime, or reduce the assembly time for your products. (See next paragraph for method of calculation.).

Warehouse stocks: the number of each product warehoused in each area and available for sale next quarter. Redundant stocks of any product may be sold at the beginning of next quarter if you decide in the meantime to take up a reported major product improvement for that product. 'Product stocks' or 'Backlog' for each product in each area, is calculated as:

Product stocks from the quarter before last,
plus deliveries last quarter,
less backlog from the quarter before last,
less orders received last quarter.

If positive, then you have product stocks in that area available for sale next quarter. If negative, you had unsatisfied orders in that area, half of which will have been cancelled, so that the result will have been divided by two before being shown as backlog, to be carried forward. A negative result in the internet area will be ignored.

Guarantee services: The number of each product serviced to correct defects, under the company's one year guarantee, by local servicing agents. This may include products returned for repair resulting from poor design or inherent ecological problems in the products, and also similar repairs to product stock still in your distribution system (look for the "!" sign). The number of units returned for this reason is not given separately.

Product Improvements: three words can appear here, for each product, either:

- 'None' indicating that no product improvement suggestions have come out of your product development department last quarter.
- 'Minor' indicating that your product development department has made a relatively minor improvement to your product, which will already have been incorporated into the product last quarter. No further action is needed.
- 'Major' indicating that your product development department has come up with an improvement of major significance which now awaits your decision to

be implemented when you are ready to do so.

A product improvement is only listed once, at the time it is reported, though it remains available until you decide to take it up. Indeed further major improvements may be notified before an earlier one has been implemented, and when this happens all available improvements are introduced at the same time, when you do make the decision.

Product components: This section shows the numbers of components which were used in assembling your products last quarter. It also shows the numbers of components you decided to purchase and how many were held in stock at the end of last quarter and how many are available to be used for assembly next quarter.

FINANCIAL STATEMENTS

The final part of the management report shows your company accounts under the headings **Administrative costs**, **Income statement**, **Balance sheet** and **Cash flow statement**. These are dealt with in detail, below. All transactions are recorded in euros. Where payments are due in dollars these will have been converted to euros at the exchange rate in operation last quarter.

ADMINISTRATIVE EXPENSES

The following items are for costs incurred last quarter.

Advertising: the total cost of advertising all products in all areas, as decided.

Internet distributor: There can be only one agent. The total support payment and commission paid to your internet distributor for handling your products. The value of sales last quarter multiplied by the percentage rate decided; plus the lump sum support payment which you decided. In addition, there can be costs for opening, or closing, an Internet operation.

Internet service provider: the cost of operating your web-site. This depends on the number of ports you have installed, plus a variable charge for services such as security. This is a fixed percentage of the value of internet sales. In addition, there can be costs for opening, or closing, an internet operation.

Agents/distributors: the total cost of support payments and commission paid to EU agents and Nafta distributors last quarter; plus the cost associated with any agents and distributors who ceased to represent you at the end of last quarter; plus the cost of attempting to recruit new agents and distributors to bring the number up to your requirements. The number you tried to recruit (and hence had to pay recruitment charges for) was the target number you decided to try to obtain last quarter, less the number in your network at the end of the quarter before last (Table 3). Agents' commission is paid on the value of orders. Distributors' commission is paid on the value of sales.

Sales office: sales administration costs 1% of the total value of orders taken in all areas last quarter.

Guarantee servicing: the total cost of repairing products returned last quarter as faulty, under the company's guarantee. The number serviced last quarter multiplied by their respective costs. Products repaired as a result of a product re-call, are charged at 75% of the standard cost.

Product development: the total amount spent last quarter on product development to improve your products, as decided.

Website development: Each quarter you decide how much to invest in the development and maintenance of your web-site (if you have one). Money is spent on updating the information presented, and on software development to make the site more attractive. There is an in-built obsolescence factor which will tend to make the site look old fashioned and out of date. You should invest to overcome this tendency. The "Website Star Rating" depends on how much and how regularly you spend.

Personnel department: the cost last quarter of trying to recruit, dismissing and/or training personnel. The number decided in each category multiplied by the relevant cost rate.

Machine maintenance: the cost of maintaining and repairing the company's machines.
The number of contract hours decided, multiplied by the number of machines, multiplied by the hourly cost. If the number of breakdown hours exceeds the total contract hours decided, the difference will be paid for at a premium hourly rate.

Purchasing and warehousing: the administrative costs of your purchasing department, plus a cost for each of the average number of units of material held in commercial warehouses, due to lack of available space in your factory, plus a cost for each of the average number of product units warehoused in the sales areas at their respective costs (see Tables 13 and 14).

Business intelligence: the costs of buying information last quarter, as decided.

Management salaries: the cost of your company's management last quarter, as decided.

Credit control: the costs of collecting money from your company's debtors and for handling internet credit card payments.

Insurance premiums: the amount paid as a proportion of your insured risk to provide insurance cover. The total from the balance sheet in the quarter before last of non-current assets and inventories, all multiplied by the rate for insurance under the insurance plan which you decided. If you have not taken out insurance cover, then this will be zero.

Other costs: the total of other miscellaneous costs not included so far under other headings. These are mainly fixed (or semi-fixed) costs which depend on the size of your factory, such as building maintenance, heating and local taxation. They also include decommissioning charges incurred when selling machines and the cost of off-setting your primary carbon footprint.

Total administrative expenses: the total of all items listed above.

ACCUMULATED TAXABLE PROFIT

Profit/loss before tax: as shown in your income statement.

Previous taxable profit/loss: The amount of accumulated profit (or loss, if negative) from the quarter before last. This will be zero if any tax was assessed at the end of that quarter.

Taxable profit/loss: The amount of accumulated profit (or loss, if negative) at the end of last quarter. This is the sum of the above two items.

Important detail

If this value is positive when tax is assessed in the fourth quarter of the year, then tax will be payable on that value, at the current rate. It will then be carried forward to the next quarter as zero.

If it is negative (a loss) when the tax assessment is made, no tax will be payable and the loss will be carried forward to the next quarter.

In the fourth quarter of each year the figure shown is its value immediately before tax is assessed.

Insurance claimed: the total assessed value of claims for losses incurred last quarter. If you did not take out insurance cover this will be zero.

Primary non-insured risk: the amount of risk which your company agreed to underwrite itself, before receiving payment from the insurers. By applying the percentage agreed under the insurance plan decided, it is possible to use this figure to work back to the value of the total insured risk.

INCOME STATEMENT

The first part of this account calculates the gross profit, the second gives the net profit.

Sales revenue: total revenue from all trading last quarter. The number of each product sold in the European, Nafta and Internet markets multiplied by the appropriate prices; plus the number of each product sold off at their valuation price after introducing a major product improvement; plus the sale of any product rejects at their scrap value.

Opening inventory values: the total value of product, component and material stocks held or on order at the beginning of last quarter. This is the same as the total value of closing inventories in the balance sheet for the quarter before last.

Components purchased: the cost of machined components ordered from subcontractors last quarter, for delivery next quarter. The cost per unit can be calculated from the price ranges announced in the quarter before last, by adjusting for premium material content.

Materials purchased: the cost of materials ordered last quarter, in the quantities decided, and at the prices announced in the quarter before last. Materials ordered for future quarters are included in this figure at the future prices quoted. Material units purchased to make up shortages last quarter are charged at last quarter's spot price plus a premium. Note that material is priced and paid for in US$, but appears in the accounts in euros, converted at the rate of exchange used last quarter.

Machine running costs: the costs of operating your machines last quarter. The number of machines available multiplied by the cost of machine overheads, plus the cost per shift for supervision, plus the number of machine hours used multiplied by the machine rate, plus a charge for each unit of product requested for production planning charges.

Machinists wages: the number of machine hours used last quarter plus breakdown time, at the basic rate, Saturday overtime rate and Sunday overtime rate, for the shift level being worked, multiplied by the appropriate wage rate, all enhanced by the shift premium, and multiplied by four workers per machine. If the number of unskilled workers employed was greater than the number needed to operate your company's machines at the shift level being worked, these surplus workers are paid at the same average rate as those manning the machines. Unskilled workers are paid for a minimum number of hours each, per quarter.

Assembly wages: the number of skilled hours used last quarter on basic working, Saturday overtime working and Sunday overtime working, all multiplied by the basic skilled wage rate, or increments of it, as appropriate. If this total, converted into the average wage per worker, per week worked, is less than a similar figure for unskilled workers, the unskilled rate of average weekly earnings is used instead, multiplied by the total number of weeks worked.

Quality control: The cost of your quality control department. The total number of products assembled last quarter multiplied by the cost per unit.

Hired transport: The cost last quarter of using hired transport to deliver your company's products to your agents and distributors:

- The cost within the European market is the number of container-days needed, multiplied by the daily container hire rate.
- The cost of deliveries to Nafta is the number of container-days needed to transport products to the port, multiplied by the daily cost per container, **plus** the number of container loads multiplied by the cost of shipment across the Atlantic to Nafta.
- The cost of deliveries to the internet distributor is the number of container-days, multiplied by the daily cost per container.

The number of container-days can be calculated by dividing the distances by the daily maximum allowed (rounded up), multiplied by the number of loads. In all cases mixed product loads can be carried.

less Closing inventory values: the total value of product, work in progress and material stocks (both in hand and on order) at the end of last quarter.

Cost of sales: the cost of making and bringing your products to market last quarter. The sum of opening inventory values, components and materials purchased, machine running costs, machinists' and assembly wages, quality control and hired transport, less closing inventory values.

Gross profit: Sales revenue, less cost of sales.

Administrative expenses: the total as shown above.

Insurance receipts: the amount your insurance company paid to you in settlement of your claims last quarter. The total amount claimable less the percentage of the total insured risk that you agreed to meet under your chosen insurance plan.

Depreciation: the amount by which your machines depreciated last quarter. Calculated as a fixed percentage of the value of assets shown in the balance sheet for the quarter before last, less the value of any assets sold last quarter.

Operating profit/loss: Gross profit less administrative expenses and depreciation, plus any insurance receipts.

Finance income: interest earned on deposits during last quarter.

Finance costs: interest and other charges, paid last quarter on any bank overdraft and medium term loans. The interest calculation assumes an initial re-organisation of cash and borrowings from the balance sheet position at the end of the quarter before last, due to decisions made at the beginning of last quarter.

Profit/loss before tax: Operating profit plus finance income, less finance expense.

Taxation: the amount of tax on profits which your company must pay is assessed at the end of the fourth quarter each year. This is calculated on any positive value of accumulated taxable profit at the current rate of tax. Tax assessed is carried forward as a liability in the balance sheet until it is paid in the second quarter of the next year.

Profit for the period: Profit before tax, less taxation.

Earnings per share: profit for the period divided by share capital.

Dividend: the amount paid to your shareholders following your decision to pay a dividend.
Your share capital multiplied by the percentage dividend decided.

Transferred to retained earnings: Profit for the period less dividend.

Previous retained earnings: Retained earnings at the end of quarter before last.

Retained earnings: The sum of the above two items (see also below under balance sheet).

More (on accounting practice)

BALANCE SHEET

This shows your company's non-current (long term) and current (short term) assets and liabilities plus a reconciliation of its net assets with shareholders' equity.

NON-CURRENT ASSETS

Land: the value, at original cost, of the company's land.

Buildings: the value, at cost, of the company's factory building.

Machinery: the current depreciated value of your company's machines.

Property, plant and equipment: The total value of land, buildings and machinery.

CURRENT ASSETS

Product inventories: the value of product stocks held in all the sales areas.

Component inventories: the value of any stocks of bought-in components that were delivered last quarter (or previously), but not yet assembled.

Materials inventory: the value of material stocks held in or near your factory at the end of last quarter, plus units already ordered for next quarter and the quarter after next.

Trade receivables: money owed to your company by its customers. Trade receivables for the quarter before last, plus sales revenue last quarter, less trading receipts.

Cash and cash equivalents: your bank account balance, if positive, plus any term deposit.

Total assets: the above non-current assets, inventories, trade receivables, and cash.

LIABILITIES

Tax due: the tax assessed in the fourth quarter of the year and due for payment next year. Note that a figure appears here only in the fourth and first quarters of each year.

Trade payables: money owed by the company for goods and services bought last quarter.

Bank overdraft: the balance of your bank account, if negative. It is the amount of money loaned by the bank on variable interest secured against the company's short term assets.

Current liabilities: the sum of the above tax payable, trade payables and overdraft.

Term loans: the total of long term loans which you have received.

Net assets: the above total assets, less current liabilities and term loans.

EQUITY

Share capital: the original shareholders' funds, or starting capital for the company, in the form of €1 shares, modified by any further issues of shares, less any share repurchases.

Share premium account: undistributable profits from the issue of shares at a price above the par value of €1, less any reduction through repurchases of shares.

Retained earnings: undistributed profits (or losses) accumulated during the lifetime of the company. These reserves are usually equal to previous retained earnings (from the quarter before last) plus transferred to retained earnings last quarter. However, if a share repurchase exhausts your share premium account, then any excess will be deducted from these reserves.

Total equity: Share capital plus share premium account and retained earnings. The total shareholders' equity interest in your company is equal to net assets (as defined above).

More (on balance sheet definitions)

CASH FLOW STATEMENT

This account shows how funds flowed into and out of the company during the last quarter.

OPERATING ACTIVITIES

Trading receipts: payments made to the company by its customers. A proportion of trade receivables from the quarter before last and sales last quarter. The receipt of sales revenue is subject to target credit periods. These targets are never met in full, and outstanding debts are carried forward to next quarter as trade receivables on the balance sheet.

Insurance received: see Income statement above.

Trading payments: payments made for salaries and wages, and goods and services supplied to the company. Trade payables from the quarter before last, plus administrative expenses, materials and components purchased, total wages, machine running costs, quality control and hired transport costs, less trade payables last quarter.

Tax paid: in the second quarter only, tax payable from the balance sheet in the quarter before last.

Net cash from operations: trading receipts less trading payments and tax paid

INVESTING ACTIVITIES

Interest received: interest received from your term deposit account.

Asset sales: the value of machines sold last quarter (excluding decommissioning charges).

Assets purchased: capital expenditure last quarter on any factory building extension, and payments for machines ordered and installed.

Net cash from investing: interest received less net capital expenditure

FINANCING ACTIVITIES

Shares issued: funds received from issuing new shares (number x price).

Share repurchases: payments made for any repurchases of the company's shares.

Dividends paid: see Income statement above.

Additional loans: funds from additional long term loans.

Interest paid: the cost of borrowing last quarter. Different interest rates apply to term loans, agreed overdrafts and unauthorised overdrafts.

Net cash from financing: income from shares and loans, less dividends and interest paid

Net cash flow: Net cash from operations, investing and financing.

Previous cash balance: Cash and cash equivalents, less any bank overdraft, at the end of quarter before last.

Cash balance: The sum of the above two items. Cash and cash equivalents, less any bank overdraft, at the end of last quarter (see balance sheet).

Overdraft limit next quarter: Your authorised overdraft limit for next quarter. This depends on the assets and liabilities in your balance sheet at the end of last quarter.

Borrowing power: the maximum additional long term loan that you can raise next quarter. This is determined by

- the stock market value of your company's shares
- the amount of any existing term loan
- your overdraft limit

THE MANAGEMENT REPORT - GROUP INFORMATION

This part of the report gives information about all the companies in your group, and about the economy in which you all operate.

This description of the contents of the management report assumes that you have just received it. It therefore refers mainly to last quarter's data, except where specifically noted. This information can help you make decisions for next quarter.

- **Building cost**: the cost per square metre of extending your factory next quarter.
- **Component costs**: for each product, the cost range per unit for purchasing components next quarter. The

lower figure is for components made from basic materials only, the higher figure is for components made from 100% premium materials.

- **Prices of basic material** in $ (USD) per 1000 units: Prices quoted, if ordered next quarter for delivery next quarter (spot price), for delivery in the quarter after next (3-month price), or for delivery in the quarter after that (6-month price). A percentage of the lowest of spot, 3-month or 6-month price was used to value material stocks at the end of last quarter (see Table 21).
- **Share prices, market valuations and investment performance**: The price quoted on the stock market for each company's shares at the end of last quarter, is given in cents. Investment performance measures the total return for the initial investors in each company, taking into account the share price, dividends paid and any share issues or repurchases. More (detail about investment performance)
- **Dividend %**: The percentage of each company's ordinary capital paid out in dividend as decided last quarter.

Balance sheets for all companies in your Group are supplied free of charge at the end of every quarter

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BUSINESS INTELLIGENCE

This part of the management report is concerned with general information, either given to you free, or which you requested and paid for (see Table 2).

Information about every company in your group last quarter which would, in the normal course of events, be available to you free of charge:

- **Prices**: charged for each product in the European, Nafta and Internet markets.
- **Production employees**: the total number of assembly workers and machinists employed.
- **Skilled wage rate**: the basic hourly wage rate paid to skilled assembly workers.
- **Agents and distributors**: The total number of active EU agents and Nafta distributors.

Business Activity: this information is paid for (Table 2).

- advertising expenditure
- product development expenditure
- star ratings for each product, as assessed by a consumer panel
- an assessment of web-site effectiveness.

In all cases star ratings range from one to five, where one is poor and five is excellent.

% Market share of sales: Market shares are calculated on the number of sales, and not on orders. The information is given in three parts, for each product.

1. Each company's share of the total European retail shop market. Apart from you and your direct competitors there is also other competition selling imported products, hence the total may be less than 100%.
2. Each company's share of the total Nafta retail shop market. Again, these will sum to less than 100%.
3. Each company's share of the internet market. Again, the total will be considerably less than 100% because of the existence of other competitors, world-wide.

ECONOMIC INTELLIGENCE

Various official statistics covering both the European market and Nafta are given to you free of charge each quarter. These give an indication of the relative performance of the European and export economies, and hence where market growth is likely. These statistics are:

- **Gross domestic product**: in a seasonally adjusted form. This gives an indication of the underlying trend of economic growth (or decline) in the markets, and of changes in that trend.
- **% Unemployed rate**: this gives the percentage of unemployed people in both market areas and gives an indication of likely movements in spending power. It also gives a guide to the availability of labour in the European market. It is given in a deseasonalised form.
- **% Central Bank rate next quarter**: this gives the rate of annual interest set by the Central Bank in each area at the end of last quarter, which will apply next quarter. The European rate is the basis for all other interest calculations in the simulation.
- **Trade balance**: is a measure of the competitive strength of the European and Nafta economies.
- **Exchange rate**: quoted as € per $ (USD). This is the rate which will be used throughout next quarter, and which was used to value materials at the end of last quarter.
- Economic information about the other markets outside Europe and Nafta is limited. To give some idea of how its economy is functioning, estimates of the corresponding economic statistics where applicable are given for the "Rest of the World". It may be dangerous to rely on this information.

BUSINESS REPORT

Finally, you may receive brief extracts of current economic information extracted from the financial press which may help you to forecast economic trends and warn of business problems ahead.

All companies can be affected by significant 'world events'. These events may be the result of political upheaval, economic or environmental developments, wars, physical disasters such as volcanic eruptions or earthquakes, epidemic diseases, etc. They can have a serious effect on companies' operations, and also affect the product markets. For example, an outbreak of an infectious disease that has a global impact could not only affect the markets for your products, but also significantly upset your ability to make products because your labour force is unable to get to work.

Externally, the level of disruption should affect all companies equally, but the level of internal disruption will depend on how well the company is able to cope with what happens. For example, where adequate reserve stocks of material and finished products are held by a company, it may be able to continue to trade, whereas another company with inadequate stocks may find itself in difficulty.

These events may occur suddenly, without warning, giving you little chance to take action. It is more likely, however, that at least some information taken from the press and appearing in the Business Report ahead of an event will give a hint that it may happen. The effect of world events on a company's operations will be indicated by a '!' sign on the management report, except where markets and the economy are concerned.

It is important that you read all sections of the business report since they may contain important information which can affect calculations in the management report - for example, changes in costs or decommissioning charges.

You should bear in mind that, although this kind of physical disruption might not affect the consumer market directly, there may be an indirect effect on consumer confidence.

Note: although such world events **may** happen, it does not mean that they **will** happen.

DECISION FORM

This form sets out all the decisions that you can make to control the development of your company.

It is essential that you ensure the accuracy of the information that you enter on your decision form. Once the decision form has been processed, you cannot change your mind.

Here are some simple, basic points to watch.

- Where decisions can be positive or negative you must put a plus or minus sign. If you leave this sign blank the field will be entered as positive.
- If you wish to make a nil decision, enter a zero.
- If you enter a number which is not acceptable in terms of the current simulation (for example, trying to sell two machines when you only own one), the computer will replace the wrong entry by the nearest acceptable value. Also some decisions you try to implement may not succeed, e.g. you may try to recruit five workers and only get three. Errors or differences of these types will be indicated by *
- A table gives the units, and the upper and lower limits, for each item that can be entered on the decision form (and also its default value).

Before the start of the simulation, your team will have been allocated to a group of teams within which you will compete, and given a group and company number, and an identification code. You must ensure that these numbers are on all your decision forms. If you contact the simulation controller you must quote these numbers, so that your identity can be verified.

You should also check that the year and quarter are correct. Please remember to use the quarters for the simulation, not the real-life ones, and that quarter '1' follows quarter '4'.

GLOBAL MANAGEMENT CHALLENGE

The business environment
- Economic background
- World events

Marketing
- Information
- Pricing
- Product quality
- Product development
- Advertising
- Selling
- Product availability

Operations
- Machining
- Plant maintenance
- Subcontracting
- Assembly
- Production planning
- Quality control
- Distribution
- Material purchasing
- Internet website

Personnel
- Recruitment
- Staff training
- Pay and conditions
- Senior management

Finance
- Shares and dividends
- Term deposit
- Borrowing
- Capital expenditure
- Insurance

Your management report

The decision form
- Screenshot

Tables

Decision Form

Identity

Group	1	Company	1	ID Code	●●●●

Period

Year	2010	Quarter	1	Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

Europe			
Nafta			
Internet			

Deliveries

Europe			
Nafta			
Internet			

Quality

Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)	100	150	300
Premium materials (%)			

Operations

Subcontracting (units)			

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot	0	3mth	0	6mth	0
Plant maintenance (hr)		Shift level (1, 2 or 3)			
Internet ports		Website development			

Personnel

Assembly workers: hire	0	Assembly trainees	0
Wage rate (cents/hr)			
Management budget		Staff training (days)	

Finance

Shares (issue/cancel)	0	Dividend (cents/share)	
Long term loan (€'000)	0	Term deposit (€'000)	0
Machines - to buy	0	Machines - to sell	0
Factory - build (sq m)	0	Insurance plan (0-4)	

Information

Market shares	0	Business intelligence	0

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Tables of parameters and costs

Table 1	Demographic data		
	Population (millions)	GDP ($) per capita	% Internet access
European Union (EU)	501	34222	67.3
North American free trade area (Nafta)	453	37315	65.7
Other major economies	3504	5390	23.8

Table 2	Marketing costs
Information on market shares	€ 5000
Information on competitors' activities	€ 7500

Table 3	Costs for agents (EU), distributors (Nafta) and internet distributor
Minimum quarterly support cost per agent	€ 5000
Setting up cost per agent	€ 7500
Termination cost per agent	€ 5000

Table 4	Internet marketing costs
Service cost (based on internet sales value)	3%
Initial joining fee to Internet Service Provider	€ 7500
Quarterly cost per website port	€ 1000
Cost of closing down an internet operation	€ 5000

Table 5	Manufacturing parameters		
	Product 1	Product 2	Product 3
Minimum machining time per unit	60 min.	75 min.	120 min.
Minimum assembly time per unit	100 min.	150 min.	300 min.
Material content per unit	1 unit	2 units	3 units

Table 6	Maintenance costs
Contracted maintenance per machine	€ 85 per hour
Uncontracted breakdown repairs (over contracted hours per machine)	€ 175 per hour

Table 7	Maximum hours available per machine per quarter relative to shift level worked	
Shift Level	Maximum hours per quarter that each machine can work, accumulating hours to each successive level of shift	Unskilled workers needed for each machine
1	576	4
2	1068	8
3	1602	12

Table 8	Valuation of rejected products		
	Product 1	Product 2	Product 3
Scrap value per product unit	€ 40	€ 80	€ 120

Table 9	Guarantee servicing charges		
	Product 1	Product 2	Product 3
Service charge per product unit	€ 60	€ 150	€ 250

Table 10	Production costs
Cost of supervision per shift	€ 12,500
Production overheads, per machine	€ 3500
Machine running cost per hour	€ 8
Production planning cost per unit	€ 1
Variable cost of inspection per unit	€ 1

Table 11	Container capacity		
	Product 1	Product 2	Product 3
Container capacity in product units	500	250	125
Note: *mixed loads may be carried*			

Table 12	Distribution parameters
Daily all-in hire cost of container and tractor	€ 650
Distance to Nafta shipment port	250 km
Cost of container hire across North Atlantic	€ 8000
Distance to internet distribution agent	150 km
Legal distance limit per day on each vehicle	400 km

Table 13	Purchasing and warehousing
Quarterly cost of purchasing administration	€ 7,500
Cost of unplanned material purchases	spot price **plus** 10%
Cost of premium materials purchases	spot price **plus** 50%
External storage cost per unit of material	€ 2.50
External storage cost per component unit	€ 3.00
Storage cost per product unit at EU agents and internet distributor	€ 3.50
Storage cost at Nafta distributor	$US 4

Table 14	Calculation of average quarterly stocks
	0.5 x (opening value + closing value)

Table 15	Personnel department costs		
	Recruitment	Dismissal	Training
Skilled assembly worker	€ 2000	€ 5000	€ 8500
Unskilled machinist	€ 1000	€ 2000	n/a
Staff training consultant	€ 1000 per day		

Table 16	Maximum hours per quarter for each production worker plus shift pay premiums			
Shift level	Hours per worker at basic rate	Hours per worker at Saturday rate (basic + 50%)	Hours per worker at Sunday rate (basic + 100%)	Machinists shift premium
1. Single	420	+ 84	+ 72	0
2. Double	420	+ 42	+ 72	1/3
3. Treble	420	+ 42	+ 72	2/3

Table 17	Minimum hours and pay
Unskilled machinist's minimum paid hours per quarter	360
Skilled assembly worker's strike hours per week	48
Skilled assembly worker's minimum hours per quarter	nil
Skilled assembly worker's minimum hourly wage rate	€ 9
Ratio of unskilled : skilled rate of pay	65 %

Table 18	Plant and equipment
Cost per machine (€)	300,000
Rate of depreciation per quarter	2.50 %
Decommissioning charge (€)	60,000

Table 19	Calculation of financial limits
Authorised overdraft limit	50% of property + inventories **plus** 90% of trade receivables **less** 100% of tax due and trade payables
Borrowing power	50% of (share price x number of shares) **less** term loans and bank overdraft limit
Credit-worthiness	borrowing power + cash and equivalents
Note: *All of these values are taken from last quarter's management report* *If any of the limits calculated above are negative, then that limit is set to 0*	

Table 20	Financial parameters
Credit control cost per unit sold in EU and Nafta	€ 1
Credit card rate per unit sold for internet sales	€ 1
Factory fixed expenses per quarter	€ 20 per sq m
Company tax rate per annum	25 %
Annual interest rates: (based on the EU base rate announced last quarter)	
Term deposits	base rate
Authorised overdraft	base rate plus 4%
Unauthorised overdraft	base rate plus 10%
Term loans	Fixed annual rate of 10%

Table 21	Inventory valuations
Materials stock	90% of the lowest of the spot, 3-month and 6-month prices quoted last quarter (converted into euros), times the number of units in stock and on order
Component stocks	These are valued at purchase cost, the ranges of which are shown in last quarter's management report. (the actual costs can be derived by interpolation using the percentages of premium materials in each product)
Product stocks	For each product, 110% of the total cost calculated as: • The material content, valued as above but adjusted for premium material usage; • **plus** (65% of the basic wage rate + the % shift premium, if any) x 4 times the machining time; • **plus** the basic skilled wage rate times the assembly time for the product
Note: If any product stock is brought forward from the quarter before last, then the valuation will use the weighted average of the opening stocks plus new deliveries.	

Table 22	Insurance Options	
Insurance Plan Number	Primary Risk	Insurance Premium
0	100 %	no insurance
1	0.1 %	0.60 %
2	0.2 %	0.35 %
3	0.3 %	0.20 %
4	0.4 %	0.10 %
Note: The monetary value of the primary risk is calculated as: the quoted percentage of non-current assets and inventories, taken from last quarter's balance sheet		

Table 23	Target customer credit periods
Internet	0 days (credit card)
EU agents	60 days
Nafta distributors	90 days

Table 24	Timing of payments to creditors	
EXTERNAL COST ITEMS ONLY **(internal costs and pay omitted)**	For goods delivered, or services provided next quarter the charged amount will be paid as follows -	
	Next quarter	Quarter after next
Advertising		100 %
Internet Service Provider	100 %	
Agents and distributors	100 %	

Guarantee servicing		100 %
Web-site development		100 %
Personnel costs	100 %	
Maintenance		100 %
Warehousing costs		100 %
Business intelligence		100 %
Insurance	100 %	
Miscellaneous overheads	100 %	
Materials and components *	50 %	50 %
Hired transport costs		100 %
Capital expenditure	100 %	
Interest (paid or received)	100 %	

***** All materials and components ordered next quarter will be paid 50% next quarter and 50% in the quarter after next. The second payment will not be affected by any change in the exchange rate in the meanwhile.

Table 25	Website capacity					
Note: Demand on your web-site varies from day to day and also from hour to hour. If you are not able to provide a quick and efficient service to visitors at peak times, your marketing image can decline quite sharply. The capacity of your web-site (measured in visits per hour) depends on the number of ports that you have.						
Number of ports in parallel	1	2	5	10	20	50
'Theoretical' capacity	12	24	60	120	240	600
Effective working capacity	2	7	31	81	190	537

Table 26	Space requirements		
Land utilisation (maximum)	80%		
Factory space utilisation (maximum)	75%		
Machining (per machine)	25 sq m		
Assembly (per assembly worker)	10 sq m		
Materials stock (per 1000 units)	5 sq m		
Work in progress stocks:	Product 1	Product 2	Product 3
(sq m required per product unit)	0.25	0.5	1.0

Table 27	Carbon footprint (CO2e)	
Factory heat and light (per sq m)	50 kWh	9.50 kg
Machining (per machine hour)	6 kWh	2.82 kg
Assembly (per skilled hour worked)	1 kWh	0.47 kg

Team organisation

The company, which you have to manage is complex and, although it is fairly easy to understand its broad structure, there are many subtle aspects to the way in which it works.

The second part of the manual (The business environment) describes the structure of your company. In doing this it looks at the four main management functions of:

- Marketing
- Operations
- Personnel
- Finance

It explains how these functions work and emphasises the interactions between them.

One of the main aims of this simulation is to illustrate these interactions and to demonstrate that, in managing a company, achieving a proper balance is fundamental to success and you can do this through teamwork, good organisation, and effective communication.

Your team needs to organise itself to carry out the senior management duties of the company it is controlling. Precisely how you organise yourselves is your own decision.

You can, for example, set yourselves up along functional lines, with each person responsible for looking after one aspect of the business. You will probably need a team leader who will ensure that everyone's views are heard and brought together to form a consensus.

Or, you may prefer a more relaxed setup with everybody in a broadly based committee.

There is no constraint on what technical aids you may use. If you wish to create your own spreadsheet models, you can find detailed definitions in the management report section.

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Company strategy

Once you have a strategy, you can then devise the business tactics to make that strategy happen. (If you find that you are getting into trouble, the strategy can always be revised to make it achievable.)

One approach is -

- Marketing should consider the economic background,

and the nature of the different markets, and then prepare a marketing plan. This would provide forecasts of likely product sales in the overall market.
- Operations then invests in plant and equipment, recruits staff, buys materials, organises production and distributes products in order to meet this demand.
- Personnel should check that whatever is planned by marketing and operations can be achieved, and at what cost, given the nature of the labour market.
- Finally, the finance department needs to check this whole process in order to ensure that it is not only profitable, but also can actually be implemented within the company's financial resources.

This is the basis of teamwork - and its need to compromise to find the best corporate solution, not only in the short term, but also one that fits into the longer term strategy.

Remember, you are trying to maximise your company's investment performance. The share price reflects the future prospects for your company and, therefore, you should devise a strategy to get your company into the best possible shape towards the end of the simulation.

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Futures market

You can buy basic materials in three different ways -

1. by default, by not ordering enough materials to meet your production plan
2. on the 'spot' market, at a price announced last quarter
3. on the Futures Market at prices announced last quarter

Default purchases are likely to be the most expensive, as they are bought for immediate delivery at a premium above the spot price.

Buying on the spot market is the usual method. Material prices, however, can fluctuate quite widely under some economic conditions, so the spot price could be higher than you had been expecting. It could also be lower.

The futures market exists so that firms can buy ahead, at prices that are known in advance. In this simulation, you can order materials for delivery in three months' time (one quarter) or in six months' time (two quarters). However, there is no guarantee that prices on the futures market will turn out to have been cheaper than buying at the spot price some time in the future, but at least your costs are known in advance, at the time of purchase.

If you think that economic growth is strong and that material prices are likely to increase (perhaps at an even higher rate) then buying on the futures market may be a wise move provided that, in your view, the prices quoted are reasonable.

Conversely, if you think that the world economy is slowing, and material prices are likely to fall, then this might already be reflected by the prices quoted on the futures market. Whether the spot price will fall even further is a matter for you to judge.

Note that premium materials are not purchased in this way, but only from reliable suppliers.

back

Product marketing image

Each product has a marketing image which you are seeking to promote in order to attract sales. In effect it is a representation of your actual, or potential, customers' perceptions of your product in a particular market.

The image of a product is formed over time from a number of factors which are of varying importance, and relative to similar factors in your competitors' products. They include -

- **the quality of your management**
- **staff training**
- **the number of agents, and how they are supported**
- **corporate and product advertising**
- **product design quality and reliability**
- **product pricing and 'value for money'**
- **product availability and delivery**
- **machining capacity and reliability**
- **assembly capacity and attention to**

- detail
- employee motivation
- the quality of your website

Many of these factors are directly under your control and should be part of your marketing strategy (see below).

Because the image is composed of many factors, which may vary over time, it is not easy to strike the right balance. Some factors need to be considered together - for example, it is unlikely to be effective to charge a high price for a poor product. On the other hand, potential customers may be prepared to wait for a high quality product that is being sold at a fair price.

[use your browser Back button, or the backspace key, to return]

Marketing strategy

Your marketing department is responsible for creating demand for, and selling your products in the face of competition from rival companies. In order to do this, it must review the market place and the competition; prepare strategic marketing plans and make decisions to put them into operation both in the long term and short term; and work with the company's other departments to ensure that sales are profitable.

Using the available economic and business information, and any conclusions you can draw from the Company History plus your experience in managing the company so far, you should be able to prepare a marketing plan for each of your products. You should consider -

- Pricing
- Product design and reliability policy
- Advertising schedule
- Agency and distributor policy
- Internet trading policy
- Product availability

The preparation of this plan implies that you have an expectation of how many orders you will receive for each product. You should use this forecast to discuss your plans with the company's other departments. It is of prime importance that marketing works closely with your operations department, providing the best possible forecasts of demand so that adequate quantities can be delivered to the areas. Problems in production which affect availability also become problems for marketing and must be solved by mutual agreement.

Most marketing factors (eg advertising, quality, commissions, etc.) are subject to the law of diminishing returns, so that increased effort does not yield proportionately increased results.

You should also take into account the activities of your competitors. This can only be done by forecasting how they are likely to behave in the future and making allowance for them.

As in many fields, there may not be a single best answer. For example, an exclusive (high-price, high-quality) strategy or a 'stack-them-high and sell-them-cheap' strategy, could be equally successful. However, one strategy might take longer to achieve than another.

back

Production planning

You will need to work with your marketing department to ensure that their forecasts of likely demand can be met by a sufficient flow of products, both in the short term and the long term. It also implies working with your personnel department to ensure that there is sufficient labour to do the job at reasonable cost. And further implies proper forward planning to ensure that there is sufficient machinery and efficient buying of material.

Your production schedule should be prepared in co-operation with the marketing department, because it reconciles their sales forecast with the operations department's ability to make products for delivery to the sales areas. You should remember, however, to modify marketing's demand forecasts by:

a) Adding in products outstanding as backlog from last quarter, or;

b) Deducting stocks of product left unsold in the warehouse from last quarter (except for stock which will be written off if you decide to take up a major product improvement).

A properly planned production schedule will take into account the resources available to you, and allow for all the factors which may constrain the utilisation of these resources.

Quality control

The proportion of substandard products reaching your customers and then returned for repair under your guarantee will affect your product image and hence your ability to market the product successfully in the future.

Material purchasing

Your ability to buy effectively will depend on the accuracy of your forecasts of the likely sales of your products, your use of the economic indicators to predict how material prices are going to move, and your use of a sensible buying strategy.

back

Website capacity

The demands on your website will vary a good deal and there will be extended periods when your system will be underused, but there will also be short periods of high usage when the traffic load approaches, or exceeds, capacity.

Your system's ability to cope with peak demand is critical for the efficient image that you must try to present to potential customers. Lack of capacity at these times can damage the company's marketing image.

Clearly the capacity that you have available should depend on how much traffic you expect at peak times - which implies that your decision is the result of a forecast on your part but, because of the uneven nature of traffic flow, it will rarely be used to the maximum.

The 'important detail' note gives further help on how to determine the appropriate capacity.

Website quality

Software underpins the efficiency of your system and can also enhance the marketing image of your operation. Visitors to your web-site will be encouraged to buy your products by the impression it gives.

Updating your software to keep the information relevant and present a modern image, is a continuous task, and you should decide how much to spend on it each quarter. The money is spent on programming and design expertise and on software tools. The more you spend, relative to rival companies, the more you will enhance your image, and the more successful your Internet marketing will be.

Consumer assessments of websites award star ratings for attractiveness, ease of use, etc. High development spending on a regular basis should increase your star rating. Low or falling expenditure may lose you stars.

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Staff recruitment

Your personnel department should monitor the labour market, working with the other functional departments in the company to forecast what demand for labour will be and taking steps to ensure that labour requirements are met, and that those who are working for the company do so under the best conditions that the company can afford. Any decisions to recruit, train or dismiss should be taken within the management team.

Success in recruiting depends on the current level of average earnings (not the basic wage rate) of the workers you employ already, the training they are given, the quality of goods which you produce, and the ability of your personnel management, all compared to the same factors in the other companies.

Recruitment also depends on the number of unemployed available in the labour pool. If there is high unemployment, recruitment will tend to be easier; if unemployment is low, recruitment can become very difficult and will depend on your ability to tempt people away from other companies, which may lead to a very unstable labour market.

Training unemployed, unskilled workers is more expensive than recruiting directly, but it does ensure that you get the number you want, and that they stay and work for you for at least one quarter after training. After that, they are influenced by pay and conditions as usual.

As well as ensuring that you have sufficient workers, you must also manage the cost of the workforce. You decide wage rates, but the way in which your workers are treated can also have a significant effect on earnings. Overtime, and shift payments can be controlled to keep costs down, but these elements can only be managed effectively in the context of current economic conditions, and the needs of your marketing and operations departments.

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Staff motivation

All grades of workers may leave because of retirement, sickness or because they have left to work for other companies that seem to be offering better conditions. The main reasons for leaving are not just low average earnings, but also excessive overtime working, colleagues being dismissed, poor quality products, weak management and inadequate training, all relative to other companies.

It is therefore essential for your personnel department to work as part of the management team not only to ensure that labour requirements are met, but also that those who are working for the company do so under the best conditions that the company can afford.

As well as ensuring that you have sufficient workers, you must manage the cost of the workforce, while at the same time trying to keep them happy. Although you decide wage rates, the way in which your workers are treated can also have a significant effect on earnings. Overtime, and shift payments can be controlled to keep costs down, but these elements can only be managed effectively in the context of current economic conditions, and the needs of your marketing and operations departments.

An effective management team can motivate your employees at all levels. This will depend not only on the skill of your managers, but also on what training is offered to all your employees.

It is difficult to know exactly how much training is desirable, or needed, but it is one way of making your employees feel that you value them and that you are prepared to invest money to help them perform better.

A well-trained and highly motivated workforce does not appear on a typical balance sheet, but it may be more important than other, more tangible, assets.

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Share price

The company is financed by shareholders' capital, consisting of shares with a nominal value of €1 each, which are quoted on the Stock Exchange. The latest share prices for all companies are shown each quarter.

Your share price is determined by many factors, including:

- The company's net worth (ie net assets, or shareholders' equity)
- Current profitability
- Dividend performance (erratic or low dividends have a negative effect)
- Liquidity (and borrowing power)
- Ability to pay interest charges on all borrowings
- Use and availability of resources (physical, financial and human)
- Market and product potential (are sales likely to increase?)
- Product quality and reliability (and development effort)
- Ability to satisfy orders promptly
- The general state of the economy
- Current bank interest rate

Any decision to issue more shares, or to repurchase and cancel shares from the market will have an impact on your share price. In general, buying large blocks of shares will raise your share price but, conversely, selling more shares will lower the price. The precise effect will depend on market reaction.

A profitable, well-managed company is unlikely to have any problem. The cash generated from a share issue will be seen as helping expansion, or to reduce expensive debt. Repurchases will be seen as a way to use spare funds to increase earnings per share. On the other hand, an unprofitable company, or one with with poor prospects, is likely to suffer a fall in total market value, because the market thinks that new funds may be badly invested, or repurchases are just a means of reducing dividend payments.

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Altered decisions

There are three possible reasons why a decision is not shown in your Management Report as you had intended it:

1. Your decisions were not received in time and default values will have been used, as defined in The Decision Form, and a plus (+) printed as an error indicator.
2. A decision was impossible in terms of the simulation:

for example -

- trying to dismiss five assembly workers when you only have four,
- or, trying to buy a machine when your credit-worthiness was inadequate,
- or it may differ because a decision did not achieve the desired effect; for instance you may have been able to recruit only three assembly workers when you tried to recruit five.

In such cases your decision will have been changed to the nearest possible value, and marked by an asterisk (*) next to the relevant number.

3. There may have been an unforeseen 'insurance' event (shown by !) making your decision impossible to carry out. The nearest possible number will have been used.

Important detail

If a number is different, and there is no error indicator, contact the simulation controller immediately (it can only be corrected if communicated within the time limit announced at the start of the simulation) so that a check can be made against the decisions that you sent in. If the number turns out to have been wrongly entered to the computer, then the appropriate action can then be taken.

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GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

Use the 'back' button or backspace key for immediate return to the manual

Decision Form

Identity

Group [1] Company [1] ID Code [ ]

Period

Year [2012] Quarter [1]

[Send]

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)	120	160	350
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot	0	3mth [0] 6mth	0
Plant maintenance (hr)		Shift level (1, 2 or 3)	
Internet ports		Website development	

Personnel

Assembly workers: hire	0	Assembly trainees	0
Wage rate (cents/hr)			
Management budget		Staff training (days)	

Finance

Shares (issue/cancel)	0	Dividend (cents/share)	
Long term loan (€'000)	0	Term deposit (€'000)	0
Machines - to buy	0	Machines - to sell	0
Factory - build (sq m)	0	Insurance plan (0-4)	

Information

Market shares	0	Business intelligence	0

[Reset]

Note: money values are in €'000 unless shown otherwise

Important detail on how to use this on-line manual

The left hand 'frame' always contains a clickable contents list.
The relevant part of the manual appears in the (scrollable) right hand frame, as here.

When you choose one of the main sections (for example, The business environment), then the contents list changes in order to expand the choices for that section.

The main parts of the manual are shown with a pale blue/green background. Within the manual there are hyperlinked cross-references to other, relevant parts of the manual.

In addition, there are many links to additional pages -

- Guidance notes, which provide general help on various important topics, are shown with a pale yellow background.
- Detail notes, containing technical details (as here), are shown in boxes, or panels, with a pale blue/green background.
- Tables of various fixed parameters (eg costs)

These optional pages, replace the main (right hand) page. Use the 'backspace' key (or browser 'Back' button) to retrace your selections.

If you prefer, and if you have a large screen, you can open these additional pages in a new window, by right-clicking. You can then move and resize these windows as needed. They can be left on screen for reference, or you can exit them in the usual (X) way.

Or, you can open any other page (eg Tables) in another 'tab' and switch to and from your main page and any other such pages.

The manual is optimised for a 1024x768 screen. Toggling F11 maximises the useable area. Alternatively, you can temporarily remove one or more toolbars (eg the status bar).

Note that, currently, there is no keyword index to this manual. However, you can search each of the main sections using your browser's search facility (Edit then Find, or use Ctrl+F).

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Important detail about Exchange Rates

The exchange rate is quoted in € per US$: i.e. the price paid in euros for one US dollar. When the euro-cost of a dollar is falling you will be paying fewer euros per dollar hence the euro is strengthening and the dollar weakening, and you can expect to sell fewer products in the dollar area (all other things being equal). If the euro-cost of a dollar is rising the opposite effect occurs.

The exchange rate quoted is fixed at the end of last quarter and will be used in exchange transactions throughout next quarter. The rate used last quarter (i.e. in the latest management report that you have) will have been quoted in the report for the quarter before last.

The economic statistics are given in deseasonalised form, so that underlying economic trends can be deduced from them directly with no need to worry about smoothing.

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Important detail about Information

Free information comprises -

- Prices which are quoted by company, product and sales area (Europe, Nafta and Internet).
- Total number of employees which includes unskilled machinists and skilled assembly workers.
- The basic wage rate is the rate for assembly workers decided by each company.
- Total number of agents (Europe) and distributors (Nafta) last quarter.

Information which must be paid for includes -

Market shares: for each of your competitors, based on the number of **sales** made last quarter.

Other company activities are:

- The figures for spending on advertising and product development are totals. There is no breakdown by product.
- The consumer assessment rating of the design quality of your own and your competitors' products takes the form of the award of 'stars', varying in number from five for a superlatively designed, technically advanced, well-made product; to one star for an obsolete, shoddily made product. This information is gathered from consumer panels and reflects the views of the general public. Consumer assessments should be viewed with a little caution as they come from an analysis of subjective discussion between small sample groups of consumers.
- An assessment rating, based on the same 5-star system) of the attractiveness, effectiveness and ease of use of your web-site (if you are trading on the Internet).

Back

Important detail about Product Development

Each quarter, the degree of success of your product development is shown at the bottom of the 'Products' section of your management report, by the words 'MAJOR', 'MINOR', or 'NONE'.

You must have had a Major improvement reported before you can take one up. If you start the process to take one up without having had one reported, it goes ahead anyway and existing stocks are sold off, but there is no corresponding marketing advantage.

A Major product improvement is only reported once. Whether or not you take it up immediately next quarter, your product development department will have started a new project, and it is up to you to remember if you have improvements in hand, not yet implemented.

Major improvements which are not taken up immediately do not disappear. You can take them up in a future quarter. If you do not take them up soon, however, you are likely to find that rival companies seize the advantage by bringing similar improvements to the market before you.

It is possible to leave a major improvement for so long that a second one is reported. In this case when you do take one up, you automatically take both with an increased marketing effect.

Taking up a major improvement has no effect on any backlog of unfulfilled orders you may have.

Minor improvements are a by-product of the research on the way to a major improvement, and do not interfere with the progress of that research.

The process of taking up a Major product improvement is as follows:

- Each quarter you decide the product development expenditure for each of your products.
- After a number of quarters this investment pays off and your product development department reports a Major product improvement for one of the products.
- Next quarter, or in some later quarter, you decide to implement that improvement. It is important to weigh up the marketing benefits an improved product will bring against the potential loss of sales revenue in selling off obsolete stocks of old product cheaply, and that will depend on how much old stock you currently have in hand.
- Once you decide, at the beginning of next quarter, any stocks of that product are sold off at the valuation price, outside the normal markets.
- Your production department starts making the new product and marketing begins to sell it.
- Consumer assessment committees re-evaluate the product and may revise its star rating.

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Important detail about Agents and Distributors

If you have no agents or distributors working for you, then you will receive no orders from the European or Nafta markets. If you wish to appoint some, then you must decide one quarter in advance how many agents or distributors you want to try to appoint, and what support and commission you are offering, so that the terms are clear before they join your network. The key for successfully appointing and retaining them is both the level of support and commission they receive.

Reduction in the number of agents you have must also be notified one quarter in advance.

There are fees to be paid for recruiting, and for closing down agents and distributors.

The same should apply to internet operations, but you only need one distribution agent. The agent is appointed automatically when you start to operate on the internet, and should you close down your internet operation he will be dismissed.

If you wish to start an internet operation for the first time, you must decide how many internet ports your web-site will operate. Making this decision will signify the start of your operation, via a web-hosting Internet Service Provider (ISP). A distributor will be recruited automatically, and orders should begin to flow in the quarter after next.

Starting an internet operation incurs a substantial joining fee, and also, at least, a minimum support payment to the distributor.

Closing an Internet operation requires one quarter's notice, and is signalled by reducing the number of ports to zero.

Commission paid to agents in the European market is based on the value of orders received. Distributors in Nafta are paid commission based on the value of sales made. Your internet distribution agent is also paid a percentage of the value of sales. Agents and distributors are sensitive to the rewards they receive compared to your internet operation. If they feel that the internet operation is competing against them unfairly and undermining their profitability then they are likely to leave your organisation. This situation can be controlled by the level of commission paid.

The capacity of your web-site to handle potential customers at peak times is critical to your marketing image. People who can't access your web-site quickly, because of a lack of capacity, will simply go elsewhere. Statistics about your site are available to help you monitor its performance. Adding extra ports to an existing system will only have a partial impact on the number of orders received in the quarter they are added.

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Important detail about Internet Operations

Starting on the Internet

If you want to start trading on the internet for the first time, you must set up your operation one quarter in advance, by deciding on how many ports you want. There is a joining fee when you make this decision for the first time. Your system will then be available to use from the beginning of the quarter after next.

During this preliminary quarter, you will also appoint a distributor, for which there will be a setting-up cost, and you should decide on a support payment, otherwise the minimum will apply.

You will also need to design and develop your web-site software. This also takes one quarter, and so you must decide on development costs when you decide what capacity you want.

Website capacity

Deciding on the number of ports to have is not easy, because demand on your web-site will vary considerably from day to day, and also throughout the day. If you are not able to give quick and efficient service to visitors at peak times your marketing image may decline quite sharply.

Adding a port to your system means adding capacity 24 hours per day. A single port operating on its own is much less able to handle the varying web-site traffic than a system of multiple ports. For example, a realistic average capacity for a single port is only about one fifth of the capacity it would have if traffic were steady. But, as the number of ports is increased, the capacity rises more quickly because more ports allow more effective use. With a large number of ports the average approaches the maximum.

The following table gives a guide to the link between ports and service.

Number of parallel ports	1	2	5	10	20	50
Theoretical average capacity (number of visits per hour)	12	24	60	120	240	600
Practical working capacity (number of visits per hour)	2	7	31	81	190	537

If you wish to close down your internet operation, you should set the number of ports to zero. As you must give one quarter's notice of closure, your existing ports will continue to function until the end of next quarter. You must also pay closing down fees to both your ISP and distributor.

Back to Marketing or Operations

Important detail about Recruitment

Because of the time taken to advertise for, and interview workers, recruits will not begin work until the beginning of the quarter after next. The cost of recruitment includes the costs of advertising and interviewing expenses.

As an alternative to recruitment of experienced people, you can train unskilled unemployed people to the standard needed for assembly. Training takes place in the company's own training school at the factory. This limits the number that can be trained to nine per quarter. After decisions to train people have been taken, they are brought in from the local unemployed labour pool at the beginning of next quarter, complete the course and become available to work at the beginning of the quarter after next. The cost of training covers the trainees' wages, materials and training-staff. Training people is more expensive than recruiting them directly, but it ensures that you get the number you want, and that they stay and work for you for at least one quarter after their training is complete.

Skilled workers can be dismissed by making the appropriate decision. The decision to dismiss implies that notice is given at the beginning of next quarter, and that the workers continue to work for the remainder of the quarter before leaving at the end of it. Those who are dismissed are paid compensation). Dismissals tend to make the remaining workers restive, and demotivated.

The same general causes which influence people to leave for other companies will also create discontent among those skilled workers who remain, possibly leading to industrial unrest and strikes in the assembly shop. Official strike notice from the trade union is given in one quarter, determining the length of the strike (in weeks), which then takes place at the beginning of the next quarter regardless of any changes you may make to improve wages and conditions, and involves all your skilled workers. Unskilled workers do not belong to the same trade union and are content to stay at work while benefiting from any wage increases or improvements which may be won by the skilled workers.

When assembly workers take industrial action the total number of hours that can be worked is reduced by 48 hours per person, per strike-week (thirty-five hours basic, plus seven hours on Saturdays and six hours on Sundays).

Absenteeism can also reduce the number of hours of work available. In the case of unskilled workers this has no apparent effect, but it does affect skilled workers, and hours can be lost in the assembly shop because of genuine sickness, disaffection caused by too much over-time, and low motivation brought on by poor quality products or poor management.

Assembly workers may become ill, or suffer serious accidents so that they are off work for a significant length of time. When this happens you continue to pay them as normal, but their position is temporarily filled with skilled workers from an agency who charge twice the assembly wage rate. The cost of the agency workers can be covered by insurance.

Reductions in the number of machines or in the shift level means that you will have surplus unskilled labour. Because of a trade union agreement, only half of these workers can be dismissed at the beginning of next quarter. Any surplus still remaining are given labouring jobs around the factory, and paid the same average earnings as those workers who are still manning the machines. Half of this surplus will then be dismissed at the beginning of the quarter after next, and so on until all have gone, or an increase in the number of machines or shift level enables them to go back to productive work again. Unskilled workers who are forced to leave are paid compensation.

Back

Important detail about Pay

Assembly workers and machine operators are paid up to a maximum number of hours per person at basic rates of pay. Thereafter the rate is increased for additional hours worked on compulsory overtime on Saturdays which is paid at 50% more than the basic rate, and on Sundays which is paid at 100% more than the basic rate. No decision needs to be taken about overtime working, which is applied automatically at a lower management level. Basic hours are applied first, then Saturday working, then Sunday working up to the limits shown. After that no further work can be done, even though your delivery schedule may call for more products to be made than your labour force can produce.

The skilled assembly workers operate only a single shift, but they can work overtime up to the limit shown in Table 16. They are paid only at the single shift rate. There is no guaranteed minimum number of hours worked for skilled workers, but a trade union agreement requires that the average weekly earnings of skilled employees (based on the number of weeks out of twelve worked) should not be less than that paid to unskilled workers, and any deficiency that occurs is made up by a 'parity payment'.

Unskilled workers are paid at a basic rate, which is set as a fixed proportion of the basic skilled rate, as agreed with the trade union.

If you decide to work more than one shift, all of your machines are manned fully on all of the shifts, and the rate of pay for all unskilled workers is increased by a shift premium.

Table 16 sets out the maximum hours that each person can work, and the rates paid. Unskilled workers are paid for hours worked, but each quarter there is a guaranteed minimum number of hours work per person. Unskilled workers are paid when machines are broken down and under repair, but not for maintenance, which is carried out when the factory is not working.

Any increase in your management budget will be implemented at the beginning of next quarter, but a decrease requires one quarter's advance notice and is limited to 10% in any one quarter.

Back

Important detail about Finance

At the beginning of next quarter your bank account (or overdraft) as shown on last quarter's balance sheet will be immediately adjusted to take account of any cash movements resulting from new decisions involving share transactions, long term loans, term deposits and any dividends paid.

Term deposits earn interest at the European Central Bank rate as announced in last quarter's management report. The interest is credited to your bank account at the end of next quarter.

The flow of cash into and out of your company for all other reasons is assumed to occur at a steady rate throughout the rest of the quarter.

The maximum authorised overdraft available to you next quarter is shown in your management report for last quarter.

Interest due on an overdraft, if any, is calculated from both the revised opening balance (as above) and the level of overdraft at the end of next quarter. A different interest rate could apply in each case, depending on whether the level is above or below your overdraft limit.

Any overdraft at the end of next quarter will include the interest charged, and this may sometimes take your overdraft above your authorised limit, even if the interest was charged at the lower rate.

The total medium term loan (or addition to an existing loan) is limited to your borrowing power. This varies from quarter to quarter and depends on the value of your company's shares on the Stock Exchange, the amount of any existing term loans and overdraft limit which your bank has set. Your borrowing power for next quarter is shown in last quarter's management report.

Interest on term loans is at a fixed rate and is calculated from the first day of each quarter.

Back

Important detail about Insurance

When disruption does occur, it is shown in the management report in the following ways -

- Physical loss of material and product stocks are reported directly in the report.
- Loss of machine time and assembly time are shown under breakdown time and absenteeism, respectively and are not separated from routine minor problems.
- Dangerous or ecologically unsound products are included in guarantee servicing, and are usually large quantities.

If disruption occurs in any of the above cases, the symbol "!" will occur alongside the relevant figure.

The total notional cost of disruption is combined into a single claims figure each quarter and if the total claim is greater than the value you have decided to underwrite yourself, you will then be paid the difference, immediately.

If you have no insurance cover you cannot make a claim.

Insurance premiums are calculated as a percentage of the total value of your non-current assets and inventories. This percentage varies with the amount of primary risk that you are prepared to accept yourself, before a claim is passed to the insurance company.

The larger the proportion of the risk that you are prepared to take on, the lower the premium will be on the remaining asset value to be covered.

There are four plans in which the proportion of primary risk which your company takes on itself rises successively from 0.1% to 0.4%, and the corresponding percentage premium which the insurance company will charge to cover the remaining asset value.

Back

More detail about balance sheet definitions

Machinery

The value of machines shown in the balance sheet for the quarter before last, less the depreciated value of any machines sold last quarter, all reduced by the quarterly rate of depreciation; plus the value of any machines purchased last quarter.

Product inventories

The numbers of each product held in the area warehouses multiplied by their valuations.

Component inventories

The numbers of each component held in stock, or on order, multiplied by their purchase costs.

Materials inventory

The total number of units held and on order, multiplied by a percentage (Table 21) of the lowest of the spot, 3-month or 6-month price for material next quarter given in the management report for last quarter. This price, in dollars, is converted to euros using the exchange rate quoted last quarter.

Cash and cash equivalents and overdraft

Cash and cash equivalents includes any term deposit, even if you have an overdraft.
Note that any overdraft at the end of a quarter will include the interest charged for that quarter. As a result, the overdraft may slightly exceed your authorised limit, but without penalty.

Trade payables

The cost of advertising, guarantee servicing, website development, maintenance, warehousing, business intelligence and hired transport, plus 50% of materials purchased (see Table 24).

Share premium account

When shares are issued at a price above the €1 par value, the corresponding surplus is added to this reserve account. Conversely, when shares are repurchased, the total premium paid above par value is deducted from it. This reserve cannot be used for paying dividends.

back

More detail about accounting practice

Cash collection and credit control

have associated costs which are a fixed amount per unit of product sold both for European and Nafta agents and also for servicing credit card payments by internet customers (see table 20).

Sales

made by your company are invoiced to customers for payment. Amounts due, but not paid before the end of a quarter are carried forward as trade receivables on your balance sheet. Payments from the different markets are expected in full within the target periods given in Table 23. However not all customers pay promptly so that these targets are never quite met. This does not apply to internet customers who pay in full by credit card (see below).

Purchases

made by your company are either paid in the same quarter as the purchase was made, or in a later quarter, in which case the amount owed is carried forward in your Balance Sheet as a liability (trade payables). Table 24 lists all types of purchase that can be made and the timing of these payments. Trade payables cannot be manipulated to assist your cash flow.

Company tax

is levied on taxable profit at a rate given in table 20. The tax year is the same as the calendar year, and an assessment of tax is made at the end of the fourth quarter. Any tax assessed is deducted immediately from the company's profit and entered as a liability on the balance sheet, where it remains until it is automatically paid in the second quarter of the following year. Any losses are accumulated, and offset against future taxable profits.

back

More detail about Investment Performance

This measures the value of your company to its initial shareholders.

Investors in your company will have purchased a number of shares and probably received some dividends. In addition, they may have sold some of their shares back to the company (if the company had made such an offer) or purchased more shares (again, if such an offer was made).

Over the whole period of their investment, there may have been a number of such cash flows both to, and from, your shareholders.

It is assumed that, after their initial investment, all cash flows will have been made to (or from) your shareholders' bank accounts, with an interest rate the same as the bank rate at that time.

The value of your shareholders' investment is, therefore, not just the value of their shares (i.e. your stated 'market valuation'), but must include these changes in their notional bank accounts.

You can think of this calculation as the reverse of discounted cash flow (i.e. future cash flows are discounted at an appropriate interest rate and then added in order to yield 'net present value').

To assess Investment Performance for your shareholders correctly, these past cash flows (both positive and negative) are augmented at the relevant bank rate(s) and then combined with your present market valuation. This provides a consistent measure of the value of their investment.

back

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
- Year and quarter
- Advertising
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- Implement improvements
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- Assembly times
- Premium materials
- Subcontracting
- Agents
- Materials to buy
- Plant maintenance
- Shift level
- Internet ports
- Website development
- Assembly workers
- Assembly trainees
- Wage rate
- Management budget
- Staff training
- Share issue
- Dividend
- Long term loan
- Term deposit
- Machines to buy
- Machines to sell
- Factory - build
- Insurance plan
- Market shares ♦
- Business intelligence

Use the 'back' button or backspace key for immediate return to the manual

Decision Form

Identity

Group [1] Company [1] ID Code [ ]

Period

Year [2012] Quarter [1] Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot [0] 3mth [0] 6mth [0]
Plant maintenance (hr) [ ] Shift level (1, 2 or 3) [ ]
Internet ports [ ] Website development [ ]

Personnel

Assembly workers: hire [0] Assembly trainees [0]
Wage rate (cents/hr) [ ]
Management budget [ ] Staff training (days) [ ]

Finance

Shares (issue/cancel) [0] Dividend (cents/share) [ ]
Long term loan (€'000) [0] Term deposit (€'000) [0]
Machines - to buy [0] Machines - to sell [0]
Factory - build (sq m) [0] Insurance plan (0-4) [ ]

Information

Market shares [1] Business intelligence [0]

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
- Year and quarter
- Advertising
- Pricing
- Deliveries
- Implement improvements
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- Materials to buy
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- Shift level
- Internet ports
- Website development
- Assembly workers
- Assembly trainees
- Wage rate
- Management budget
- Staff training
- Share issue
- Dividend
- Long term loan
- Term deposit
- Machines to buy
- Machines to sell
- Factory - build
- Insurance plan
- Market shares
- Business intelligence ♦

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Decision Form

Identity

Group 1 Company 1 ID Code

Period

Year 2012 Quarter 1

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot 0 3mth 0 6mth 0

Plant maintenance (hr) Shift level (1, 2 or 3)

Internet ports Website development

Personnel

Assembly workers: hire 0 Assembly trainees 0

Wage rate (cents/hr)

Management budget Staff training (days)

Finance

Shares (issue/cancel) 0 Dividend (cents/share)

Long term loan (€'000) 0 Term deposit (€'000) 0

Machines - to buy 0 Machines - to sell 0

Factory - build (sq m) 0 Insurance plan (0-4)

Information

Market shares 0 Business intelligence 1

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
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Decision Form

Identity

Group [1] Company [1] ID Code [ ]

Period

Year [2012] Quarter [1]

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe	250	350	0
Nafta	0	0	0
Internet	299	399	0

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot	0	3mth	0
6mth	0		
Plant maintenance (hr)		Shift level (1, 2 or 3)	
Internet ports		Website development	

Personnel

Assembly workers: hire	0	Assembly trainees	0
Wage rate (cents/hr)			
Management budget		Staff training (days)	

Finance

Shares (issue/cancel)	0	Dividend (cents/share)	
Long term loan (€'000)	0	Term deposit (€'000)	0
Machines - to buy	0	Machines - to sell	0
Factory - build (sq m)	0	Insurance plan (0-4)	

Information

Market shares	0	Business intelligence	0

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
- Year and quarter
- Advertising
- Pricing
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- Website development
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- Staff training
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- Machines to buy
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Decision Form

Identity

Group [1] Company [1] ID Code [ ]

Period

Year [2012] Quarter [1]

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)	0	50	100

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot [0] 3mth [0] 6mth [0]

Plant maintenance (hr) [ ] Shift level (1, 2 or 3) [ ]

Internet ports [ ] Website development [ ]

Personnel

Assembly workers: hire [0] Assembly trainees [0]

Wage rate (cents/hr) [ ]

Management budget [ ] Staff training (days) [ ]

Finance

Shares (issue/cancel) [0] Dividend (cents/share) [ ]

Long term loan (€'000) [0] Term deposit (€'000) [0]

Machines - to buy [0] Machines - to sell [0]

Factory - build (sq m) [0] Insurance plan (0-4) [ ]

Information

Market shares [0] Business intelligence [0]

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
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- Materials to buy
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- Shift level
- Internet ports
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- Assembly workers
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- Staff training
- Share issue
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- Machines to buy
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Decision Form

Identity

Group [1] Company [1] ID Code [ ]

Period

Year [2012] Quarter [1]

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)	10	15	20
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot [0] 3mth [0] 6mth [0]

Plant maintenance (hr) [ ] Shift level (1, 2 or 3) [ ]

Internet ports [ ] Website development [ ]

Personnel

Assembly workers: hire [0] Assembly trainees [0]

Wage rate (cents/hr) [ ]

Management budget [ ] Staff training (days) [ ]

Finance

Shares (issue/cancel) [0] Dividend (cents/share) [ ]

Long term loan (€'000) [0] Term deposit (€'000) [0]

Machines - to buy [0] Machines - to sell [0]

Factory - build (sq m) [0] Insurance plan (0-4) [ ]

Information

Market shares [0] Business intelligence [0]

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

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- Advertising
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- Deliveries
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- Product development
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- Premium materials
- Subcontracting
- Agents
- Materials to buy
- Plant maintenance
- Shift level
- Internet ports
- Website development
- Assembly workers
- Assembly trainees
- Wage rate
- Management budget
- Staff training
- Share issue
- Dividend
- Long term loan
- Term deposit
- Machines to buy
- Machines to sell
- Factory - build
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Decision Form

Identity

Group 1 | Company 1 | ID Code

Period

Year 2012 | Quarter 1

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	1	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot 0 | 3mth 0 | 6mth 0

Plant maintenance (hr) | Shift level (1, 2 or 3)

Internet ports | Website development

Personnel

Assembly workers: hire 0 | Assembly trainees 0

Wage rate (cents/hr)

Management budget | Staff training (days)

Finance

Shares (issue/cancel) 0 | Dividend (cents/share)

Long term loan (€'000) 0 | Term deposit (€'000) 0

Machines - to buy 0 | Machines - to sell 0

Factory - build (sq m) 0 | Insurance plan (0-4)

Information

Market shares 0 | Business intelligence 0

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

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- Year and quarter
- Advertising ♦
- Pricing
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- Premium materials
- Subcontracting
- Agents
- Materials to buy
- Plant maintenance
- Shift level
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- Machines to buy
- Machines to sell
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Use the 'back' button or backspace key for immediate return to the manual

Decision Form

Identity

Group 1 Company 1 ID Code

Period

Year 2012 Quarter 1

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe	10	15	15	0
Nafta	0	0	0	0
Internet	10	10	10	0

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot 0 3mth 0 6mth 0

Plant maintenance (hr) Shift level (1, 2 or 3)

Internet ports Website development

Personnel

Assembly workers: hire 0 Assembly trainees 0

Wage rate (cents/hr)

Management budget Staff training (days)

Finance

Shares (issue/cancel) 0 Dividend (cents/share)

Long term loan (€'000) 0 Term deposit (€'000) 0

Machines - to buy 0 Machines - to sell 0

Factory - build (sq m) 0 Insurance plan (0-4)

Information

Market shares 0 Business intelligence 0

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
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- Advertising
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- Deliveries
- Implement improvements
- Product development
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- Premium materials
- Subcontracting
- Agents
- Materials to buy
- Plant maintenance
- Shift level
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- Website development ♦
- Assembly workers
- Assembly trainees
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- Machines to buy
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- Insurance plan
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Decision Form

Identity

Group 1 Company 1 ID Code

Period

Year 2012 Quarter 1

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot 0 3mth 0 6mth 0

Plant maintenance (hr) Shift level (1, 2 or 3)

Internet ports Website development 15

Personnel

Assembly workers: hire 0 Assembly trainees 0

Wage rate (cents/hr)

Management budget Staff training (days)

Finance

Shares (issue/cancel) 0 Dividend (cents/share)

Long term loan (€'000) 0 Term deposit (€'000) 0

Machines - to buy 0 Machines - to sell 0

Factory - build (sq m) 0 Insurance plan (0-4)

Information

Market shares 0 Business intelligence 0

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

Use the 'back' button or backspace key for immediate return to the manual

Decision Form

Identity

Group [1] Company [1] ID Code [ ]

Period

Year [2012] Quarter [1]

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents	3	8	9
Nafta distributors	0	0	0
Internet distributor		10	7

Operations

Materials to buy: spot [0] 3mth [0] 6mth [0]

Plant maintenance (hr) [ ] Shift level (1, 2 or 3) [ ]

Internet ports [ ] Website development [ ]

Personnel

Assembly workers: hire [0] Assembly trainees [0]

Wage rate (cents/hr) [ ]

Management budget [ ] Staff training (days) [ ]

Finance

Shares (issue/cancel) [0] Dividend (cents/share) [ ]

Long term loan (€'000) [0] Term deposit (€'000) [0]

Machines - to buy [0] Machines - to sell [0]

Factory - build (sq m) [0] Insurance plan (0-4) [ ]

Information

Market shares [0] Business intelligence [0]

Reset

Note: money values are in €'000 unless shown otherwise

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Decision Form

Identity

Group 1 | Company 1 | ID Code

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Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor		10	7

Operations

Materials to buy: spot	0	3mth 0	6mth 0
Plant maintenance (hr)		Shift level (1, 2 or 3)	
Internet ports	8	Website development	10

Personnel

Assembly workers: hire	0	Assembly trainees	0
Wage rate (cents/hr)			
Management budget		Staff training (days)	

Finance

Shares (issue/cancel)	0	Dividend (cents/share)	
Long term loan (€'000)	0	Term deposit (€'000)	0
Machines - to buy	0	Machines - to sell	0
Factory - build (sq m)	0	Insurance plan (0-4)	

Information

Market shares	0	Business intelligence	0

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

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Decision Form

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Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot	0	3mth 0	6mth 0
Plant maintenance (hr)		Shift level (1, 2 or 3)	
Internet ports		Website development	

Personnel

Assembly workers: hire	0	Assembly trainees	0
Wage rate (cents/hr)			
Management budget	100	Staff training (days)	

Finance

Shares (issue/cancel)	0	Dividend (cents/share)	
Long term loan (€'000)	0	Term deposit (€'000)	0
Machines - to buy	0	Machines - to sell	0
Factory - build (sq m)	0	Insurance plan (0-4)	

Information

Market shares	0	Business intelligence	0

Reset

Note: money values are in €'000 unless shown otherwise

Global Management Challenge

Sample form entries -

- ID Code
- Year and quarter
- Advertising
- Pricing
- Deliveries
- Implement improvements
- Product development
- Assembly times
- Premium materials
- Subcontracting
- Agents
- Materials to buy
- Plant maintenance
- Shift level ♦
- Internet ports
- Website development
- Assembly workers
- Assembly trainees
- Wage rate
- Management budget
- Staff training
- Share issue
- Dividend
- Long term loan
- Term deposit
- Machines to buy
- Machines to sell
- Factory - build
- Insurance plan
- Market shares
- Business intelligence

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Decision Form

Identity

Group [1] Company [1] ID Code [ ]

Period

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Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot	0	3mth [0] 6mth	0
Plant maintenance (hr)		Shift level (1, 2 or 3)	2
Internet ports		Website development	

Personnel

Assembly workers: hire	0	Assembly trainees	0
Wage rate (cents/hr)			
Management budget		Staff training (days)	

Finance

Shares (issue/cancel)	0	Dividend (cents/share)	
Long term loan (€'000)	0	Term deposit (€'000)	0
Machines - to buy	0	Machines - to sell	0
Factory - build (sq m)	0	Insurance plan (0-4)	

Information

Market shares	0	Business intelligence	0

Reset

Note: money values are in €'000 unless shown otherwise

Global Management Challenge

Sample form entries -

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Decision Form

Identity

Group [1] Company [1] ID Code [ ]

Period

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[Send]

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot	0	3mth [0] 6mth	0
Plant maintenance (hr)	20	Shift level (1, 2 or 3)	
Internet ports		Website development	

Personnel

Assembly workers: hire	0	Assembly trainees	0
Wage rate (cents/hr)			
Management budget		Staff training (days)	

Finance

Shares (issue/cancel)	0	Dividend (cents/share)	
Long term loan (€'000)	0	Term deposit (€'000)	0
Machines - to buy	0	Machines - to sell	0
Factory - build (sq m)	0	Insurance plan (0-4)	

Information

Market shares	0	Business intelligence	0

[Reset]

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
- Year and quarter
- Advertising
- Pricing
- Deliveries
- Implement improvements
- Product development
- Assembly times
- Premium materials
- Subcontracting ♦
- Agents
- Materials to buy
- Plant maintenance
- Shift level
- Internet ports
- Website development
- Assembly workers
- Assembly trainees
- Wage rate
- Management budget
- Staff training
- Share issue
- Dividend
- Long term loan
- Term deposit
- Machines to buy
- Machines to sell
- Factory - build
- Insurance plan
- Market shares
- Business intelligence

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Decision Form

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Group [1] Company [1] ID Code [ ]

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Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	1000	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot	0	3mth	0
		6mth	0
Plant maintenance (hr)		Shift level (1, 2 or 3)	
Internet ports		Website development	

Personnel

Assembly workers: hire	0	Assembly trainees	0
Wage rate (cents/hr)			
Management budget		Staff training (days)	

Finance

Shares (issue/cancel)	0	Dividend (cents/share)	
Long term loan (€'000)	0	Term deposit (€'000)	0
Machines - to buy	0	Machines - to sell	0
Factory - build (sq m)	0	Insurance plan (0-4)	

Information

Market shares	0	Business intelligence	0

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

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Identity

Group 1 Company 1 ID Code

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Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe	2000	900	0
Nafta	0	0	0
Internet	1000	500	0

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot	0	3mth 0	6mth 0
Plant maintenance (hr)		Shift level (1, 2 or 3)	
Internet ports		Website development	

Personnel

Assembly workers: hire	0	Assembly trainees	0
Wage rate (cents/hr)			
Management budget		Staff training (days)	

Finance

Shares (issue/cancel)	0	Dividend (cents/share)	
Long term loan (€'000)	0	Term deposit (€'000)	0
Machines - to buy	0	Machines - to sell	0
Factory - build (sq m)	0	Insurance plan (0-4)	

Information

Market shares	0	Business intelligence	0

Reset

Note: money values are in €'000 unless shown otherwise

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Decision Form

Identity

Group 1 Company 1 ID Code

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Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe	2000	-200	0
Nafta	0	0	0
Internet	1000	500	0

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot	0	3mth	0
		6mth	0
Plant maintenance (hr)		Shift level (1, 2 or 3)	
Internet ports		Website development	

Personnel

Assembly workers: hire	0	Assembly trainees	0
Wage rate (cents/hr)			
Management budget		Staff training (days)	

Finance

Shares (issue/cancel)	0	Dividend (cents/share)	
Long term loan (€'000)	0	Term deposit (€'000)	0
Machines - to buy	0	Machines - to sell	0
Factory - build (sq m)	0	Insurance plan (0-4)	

Information

Market shares	0	Business intelligence	0

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

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Decision Form

Identity

Group [1] Company [1] ID Code [ ]

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Year [2012] Quarter [1] [Send]

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot [10] 3mth [5] 6mth [0]

Plant maintenance (hr) [ ] Shift level (1, 2 or 3) [ ]

Internet ports [ ] Website development [ ]

Personnel

Assembly workers: hire [0] Assembly trainees [0]

Wage rate (cents/hr) [ ]

Management budget [ ] Staff training (days) [ ]

Finance

Shares (issue/cancel) [0] Dividend (cents/share) [ ]

Long term loan (€'000) [0] Term deposit (€'000) [0]

Machines - to buy [0] Machines - to sell [0]

Factory - build (sq m) [0] Insurance plan (0-4) [ ]

Information

Market shares [0] Business intelligence [0]

[Reset]

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
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- Agents
- Materials to buy
- Plant maintenance
- Shift level
- Internet ports ♦
- Website development
- Assembly workers
- Assembly trainees
- Wage rate
- Management budget
- Staff training
- Share issue
- Dividend
- Long term loan
- Term deposit
- Machines to buy
- Machines to sell
- Factory - build
- Insurance plan
- Market shares
- Business intelligence

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Decision Form

Identity

Group 1 Company 1 ID Code

Period

Year 2012 Quarter 1

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot	0	3mth 0	6mth 0
Plant maintenance (hr)		Shift level (1, 2 or 3)	
Internet ports	5	Website development	

Personnel

Assembly workers: hire	0	Assembly trainees	0
Wage rate (cents/hr)			
Management budget		Staff training (days)	

Finance

Shares (issue/cancel)	0	Dividend (cents/share)	
Long term loan (€'000)	0	Term deposit (€'000)	0
Machines - to buy	0	Machines - to sell	0
Factory - build (sq m)	0	Insurance plan (0-4)	

Information

Market shares	0	Business intelligence	0

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
- Year and quarter
- Advertising
- Pricing
- Deliveries
- Implement improvements
- Product development
- Assembly times
- Premium materials
- Subcontracting
- Agents
- Materials to buy
- Plant maintenance
- Shift level
- Internet ports
- Website development
- Assembly workers ♦
- Assembly trainees
- Wage rate
- Management budget
- Staff training
- Share issue
- Dividend
- Long term loan
- Term deposit
- Machines to buy
- Machines to sell
- Factory - build
- Insurance plan
- Market shares
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Decision Form

Identity

Group 1 Company 1 ID Code

Period

Year 2012 Quarter 1

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Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot	0	3mth 0	6mth 0
Plant maintenance (hr)		Shift level (1, 2 or 3)	
Internet ports		Website development	

Personnel

Assembly workers: hire	5	Assembly trainees	0
Wage rate (cents/hr)			
Management budget		Staff training (days)	

Finance

Shares (issue/cancel)	0	Dividend (cents/share)	
Long term loan (€'000)	0	Term deposit (€'000)	0
Machines - to buy	0	Machines - to sell	0
Factory - build (sq m)	0	Insurance plan (0-4)	

Information

Market shares	0	Business intelligence	0

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
- Year and quarter
- Advertising
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- Implement improvements
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- Assembly times
- Premium materials
- Subcontracting
- Agents
- Materials to buy
- Plant maintenance
- Shift level
- Internet ports
- Website development
- Assembly workers
- Assembly trainees ♦
- Wage rate
- Management budget
- Staff training
- Share issue
- Dividend
- Long term loan
- Term deposit
- Machines to buy
- Machines to sell
- Factory - build
- Insurance plan
- Market shares
- Business intelligence

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Decision Form

Identity

Group [1] Company [1] ID Code [ ]

Period

Year [2012] Quarter [1] Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot [0] 3mth [0] 6mth [0]

Plant maintenance (hr) [ ] Shift level (1, 2 or 3) [ ]

Internet ports [ ] Website development [ ]

Personnel

Assembly workers: hire [0] Assembly trainees [5]

Wage rate (cents/hr) [ ]

Management budget [ ] Staff training (days) [ ]

Finance

Shares (issue/cancel) [0] Dividend (cents/share) [ ]

Long term loan (€'000) [0] Term deposit (€'000) [0]

Machines - to buy [0] Machines - to sell [0]

Factory - build (sq m) [0] Insurance plan (0-4) [ ]

Information

Market shares [0] Business intelligence [0]

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
- Year and quarter
- Advertising
- Pricing
- Deliveries
- Implement improvements
- Product development
- Assembly times
- Premium materials
- Subcontracting
- Agents
- Materials to buy
- Plant maintenance
- Shift level
- Internet ports
- Website development
- Assembly workers
- Assembly trainees
- Wage rate
- Management budget
- Staff training ♦
- Share issue
- Dividend
- Long term loan
- Term deposit
- Machines to buy
- Machines to sell
- Factory - build
- Insurance plan
- Market shares
- Business intelligence

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Decision Form

Identity

Group 1 Company 1 ID Code

Period

Year 2012 Quarter 1

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot 0 3mth 0 6mth 0

Plant maintenance (hr) Shift level (1, 2 or 3)

Internet ports Website development

Personnel

Assembly workers: hire 0 Assembly trainees 0

Wage rate (cents/hr)

Management budget Staff training (days) 10

Finance

Shares (issue/cancel) 0 Dividend (cents/share)

Long term loan (€'000) 0 Term deposit (€'000) 0

Machines - to buy 0 Machines - to sell 0

Factory - build (sq m) 0 Insurance plan (0-4)

Information

Market shares 0 Business intelligence 0

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
- Year and quarter
- Advertising
- Pricing
- Deliveries
- Implement improvements
- Product development
- Assembly times
- Premium materials
- Subcontracting
- Agents
- Materials to buy
- Plant maintenance
- Shift level
- Internet ports
- Website development
- Assembly workers
- Assembly trainees
- Wage rate ♦
- Management budget
- Staff training
- Share issue
- Dividend
- Long term loan
- Term deposit
- Machines to buy
- Machines to sell
- Factory - build
- Insurance plan
- Market shares
- Business intelligence

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Decision Form

Identity

Group [1] Company [1] ID Code [ ]

Period

Year [2012] Quarter [1] [Send]

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot	0	3mth [0] 6mth	0
Plant maintenance (hr)		Shift level (1, 2 or 3)	
Internet ports		Website development	

Personnel

Assembly workers: hire	0	Assembly trainees	0
Wage rate (cents/hr)	1100		
Management budget		Staff training (days)	

Finance

Shares (issue/cancel)	0	Dividend (cents/share)	
Long term loan (€'000)	0	Term deposit (€'000)	0
Machines - to buy	0	Machines - to sell	0
Factory - build (sq m)	0	Insurance plan (0-4)	

Information

Market shares	0	Business intelligence	0

[Reset]

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
- Year and quarter
- Advertising
- Pricing
- Deliveries
- Implement improvements
- Product development
- Assembly times
- Premium materials
- Subcontracting
- Agents
- Materials to buy
- Plant maintenance
- Shift level
- Internet ports
- Website development
- Assembly workers
- Assembly trainees
- Wage rate
- Management budget
- Staff training
- Share issue ♦
- Dividend
- Long term loan
- Term deposit
- Machines to buy
- Machines to sell
- Factory - build
- Insurance plan
- Market shares
- Business intelligence

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Decision Form

Identity

Group 1 Company 1 ID Code

Period

Year 2012 Quarter 1

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot	0	3mth 0	6mth 0
Plant maintenance (hr)		Shift level (1, 2 or 3)	
Internet ports		Website development	

Personnel

Assembly workers: hire	0	Assembly trainees	0
Wage rate (cents/hr)			
Management budget		Staff training (days)	

Finance

Shares (issue/cancel)	100	Dividend (cents/share)	
Long term loan (€'000)	0	Term deposit (€'000)	0
Machines - to buy	0	Machines - to sell	0
Factory - build (sq m)	0	Insurance plan (0-4)	

Information

Market shares	0	Business intelligence	0

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
- Year and quarter
- Advertising
- Pricing
- Deliveries
- Implement improvements
- Product development
- Assembly times
- Premium materials
- Subcontracting
- Agents
- Materials to buy
- Plant maintenance
- Shift level
- Internet ports
- Website development
- Assembly workers
- Assembly trainees
- Wage rate
- Management budget
- Staff training
- Share issue
- Dividend ♦
- Long term loan
- Term deposit
- Machines to buy
- Machines to sell
- Factory - build
- Insurance plan
- Market shares
- Business intelligence

Use the 'back' button or backspace key for immediate return to the manual

Decision Form

Identity

Group [1] Company [1] ID Code [ ]

Period

Year [2012] Quarter [1]

[Send]

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot [0] 3mth [0] 6mth [0]

Plant maintenance (hr) [ ] Shift level (1, 2 or 3) [ ]

Internet ports [ ] Website development [ ]

Personnel

Assembly workers: hire [0] Assembly trainees [0]

Wage rate (cents/hr) [ ]

Management budget [ ] Staff training (days) [ ]

Finance

Shares (issue/cancel) [0] Dividend (cents/share) [3]

Long term loan (€'000) [0] Term deposit (€'000) [0]

Machines - to buy [0] Machines - to sell [0]

Factory - build (sq m) [0] Insurance plan (0-4) [ ]

Information

Market shares [0] Business intelligence [0]

[Reset]

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
- Year and quarter
- Advertising
- Pricing
- Deliveries
- Implement improvements
- Product development
- Assembly times
- Premium materials
- Subcontracting
- Agents
- Materials to buy
- Plant maintenance
- Shift level
- Internet ports
- Website development
- Assembly workers
- Assembly trainees
- Wage rate
- Management budget
- Staff training
- Share issue
- Dividend
- Long term loan
- Term deposit ♦
- Machines to buy
- Machines to sell
- Factory - build
- Insurance plan
- Market shares
- Business intelligence

Use the 'back' button or backspace key for immediate return to the manual

Decision Form

Identity

Group 1 | Company 1 | ID Code

Period

Year 2012 | Quarter 1

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot 0 | 3mth 0 | 6mth 0

Plant maintenance (hr) | Shift level (1, 2 or 3)

Internet ports | Website development

Personnel

Assembly workers: hire 0 | Assembly trainees 0

Wage rate (cents/hr)

Management budget | Staff training (days)

Finance

Shares (issue/cancel) 0 | Dividend (cents/share)

Long term loan (€'000) 0 | Term deposit (€'000) 500

Machines - to buy 0 | Machines - to sell 0

Factory - build (sq m) 0 | Insurance plan (0-4)

Information

Market shares 0 | Business intelligence 0

Reset

Note: money values are in €'000 unless shown otherwise

Global Management Challenge

Sample form entries -

- ID Code
- Year and quarter
- Advertising
- Pricing
- Deliveries
- Implement improvements
- Product development
- Assembly times
- Premium materials
- Subcontracting
- Agents
- Materials to buy
- Plant maintenance
- Shift level
- Internet ports
- Website development
- Assembly workers
- Assembly trainees
- Wage rate
- Management budget
- Staff training
- Share issue
- Dividend
- Long term loan ♦
- Term deposit
- Machines to buy
- Machines to sell
- Factory - build
- Insurance plan
- Market shares
- Business intelligence

Use the 'back' button or backspace key for immediate return to the manual

Decision Form

Identity

Group [1] Company [1] ID Code [ ]

Period

Year [2012] Quarter [1]

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot	0	3mth	0
		6mth	0
Plant maintenance (hr)		Shift level (1, 2 or 3)	
Internet ports		Website development	

Personnel

Assembly workers: hire	0	Assembly trainees	0
Wage rate (cents/hr)			
Management budget		Staff training (days)	

Finance

Shares (issue/cancel)	0	Dividend (cents/share)	
Long term loan (€'000)	100	Term deposit (€'000)	0
Machines - to buy	0	Machines - to sell	0
Factory - build (sq m)	0	Insurance plan (0-4)	

Information

Market shares	0	Business intelligence	0

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
- Year and quarter
- Advertising
- Pricing
- Deliveries
- Implement improvements
- Product development
- Assembly times
- Premium materials
- Subcontracting
- Agents
- Materials to buy
- Plant maintenance
- Shift level
- Internet ports
- Website development
- Assembly workers
- Assembly trainees
- Wage rate
- Management budget
- Staff training
- Share issue
- Dividend
- Long term loan
- Term deposit
- Machines to buy
- Machines to sell
- Factory - build ♦
- Insurance plan
- Market shares
- Business intelligence

Use the 'back' button or backspace key for immediate return to the manual

Decision Form

Identity

Group 1 Company 1 ID Code

Period

Year 2012 Quarter 1

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot	0	3mth 0	6mth 0
Plant maintenance (hr)		Shift level (1, 2 or 3)	
Internet ports		Website development	

Personnel

Assembly workers: hire	0	Assembly trainees	0
Wage rate (cents/hr)			
Management budget		Staff training (days)	

Finance

Shares (issue/cancel)	0	Dividend (cents/share)	
Long term loan (€'000)	0	Term deposit (€'000)	0
Machines - to buy	0	Machines - to sell	0
Factory - build (sq m)	200	Insurance plan (0-4)	

Information

Market shares	0	Business intelligence	0

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
- Year and quarter
- Advertising
- Pricing
- Deliveries
- Implement improvements
- Product development
- Assembly times
- Premium materials
- Subcontracting
- Agents
- Materials to buy
- Plant maintenance
- Shift level
- Internet ports
- Website development
- Assembly workers
- Assembly trainees
- Wage rate
- Management budget
- Staff training
- Share issue
- Dividend
- Long term loan
- Term deposit
- Machines to buy ♦
- Machines to sell
- Factory - build
- Insurance plan
- Market shares
- Business intelligence

Use the 'back' button or backspace key for immediate return to the manual

Decision Form

Identity

Group 1 Company 1 ID Code

Period

Year 2012 Quarter 1

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot	0	3mth 0	6mth 0
Plant maintenance (hr)		Shift level (1, 2 or 3)	
Internet ports		Website development	

Personnel

Assembly workers: hire	0	Assembly trainees	0
Wage rate (cents/hr)			
Management budget		Staff training (days)	

Finance

Shares (issue/cancel)	0	Dividend (cents/share)	
Long term loan (€'000)	0	Term deposit (€'000)	0
Machines - to buy	2	Machines - to sell	0
Factory - build (sq m)	0	Insurance plan (0-4)	

Information

Market shares	0	Business intelligence	0

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
- Year and quarter
- Advertising
- Pricing
- Deliveries
- Implement improvements
- Product development
- Assembly times
- Premium materials
- Subcontracting
- Agents
- Materials to buy
- Plant maintenance
- Shift level
- Internet ports
- Website development
- Assembly workers
- Assembly trainees
- Wage rate
- Management budget
- Staff training
- Share issue
- Dividend
- Long term loan
- Term deposit
- Machines to buy
- Machines to sell ♦
- Factory - build
- Insurance plan
- Market shares
- Business intelligence

Use the 'back' button or backspace key for immediate return to the manual

Decision Form

Identity

Group 1 Company 1 ID Code

Period

Year 2012 Quarter 1

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot 0 3mth 0 6mth 0
Plant maintenance (hr) Shift level (1, 2 or 3)
Internet ports Website development

Personnel

Assembly workers: hire 0 Assembly trainees 0
Wage rate (cents/hr)
Management budget Staff training (days)

Finance

Shares (issue/cancel) 0 Dividend (cents/share)
Long term loan (€'000) 0 Term deposit (€'000) 0
Machines - to buy 0 Machines - to sell 2
Factory - build (sq m) 0 Insurance plan (0-4)

Information

Market shares 0 Business intelligence 0

Reset

Note: money values are in €'000 unless shown otherwise

GLOBAL MANAGEMENT CHALLENGE

Sample form entries -

- ID Code
- Year and quarter
- Advertising
- Pricing
- Deliveries
- Implement improvements
- Product development
- Assembly times
- Premium materials
- Subcontracting
- Agents
- Materials to buy
- Plant maintenance
- Shift level
- Internet ports
- Website development
- Assembly workers
- Assembly trainees
- Wage rate
- Management budget
- Staff training
- Share issue
- Dividend
- Long term loan
- Term deposit
- Machines to buy
- Machines to sell
- Factory - build
- Insurance plan ♦
- Market shares
- Business intelligence

Use the 'back' button or backspace key for immediate return to the manual

Decision Form

Identity

Group 1 Company 1 ID Code

Period

Year 2012 Quarter 1

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot 0 3mth 0 6mth 0

Plant maintenance (hr) Shift level (1, 2 or 3)

Internet ports Website development

Personnel

Assembly workers: hire 0 Assembly trainees 0

Wage rate (cents/hr)

Management budget Staff training (days)

Finance

Shares (issue/cancel) 0 Dividend (cents/share)

Long term loan (€'000) 0 Term deposit (€'000) 0

Machines - to buy 0 Machines - to sell 0

Factory - build (sq m) 0 Insurance plan (0-4) 2

Information

Market shares 0 Business intelligence 0

Reset

Note: money values are in €'000 unless shown otherwise

Decisions	Units	Minimum	Maximum	Default
Advertising	€'000	0	99	repeat
Product prices	euros	0	999	repeat
Delivery to Europe **Delivery to Nafta** **Delivery to Internet**	number	-999 0 -999	9999	repeat
Implement improvement	yes/no	0	1	0
Product development	€'000	0	99	repeat
Product 1 assembly **Product 2 assembly** **Product 3 assembly**	minutes	100 150 300	999	repeat
Premium materials	%	0	100	repeat
Subcontracting	number	0	9999	0
Agents/distributors wanted	number	0	99	repeat
Support payment	€'000	5	99	repeat
Commission rate	%	0	99	repeat
Materials to buy	'000	0	99	0
Plant maintenance/machine	hours	0	99	repeat
Shift level	number	1	3	repeat
Website ports	number	0	99	repeat
Website development	€'000	0	999	repeat
Assembly workers to recruit	number	-9	99	0
Assembly workers to train	number	0	9	0
Assembly wage rate per hour	cents	900	9999	repeat
Management budget	€'000	30	999	repeat
Staff training consultant	days	0	60	repeat
Share issue/repurchase	€'000	-999	999	0
Dividend to pay	%	0	99	0
Additional loan	€'000	0	9999	0
Term deposit	€'000	-999	9999	0
Machines to buy or sell	number	0	99	0
Factory - build	sq. m.	0	9999	0
Insurance plan	number	0	4	repeat
Information wanted	yes/no	0	1	repeat

Use the 'back' button or backspace key for immediate return to the manual

Decision Form

Identity

Group 1 Company 1 ID Code

Period

Year 2012 Quarter 1

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot	0	3mth	0
		6mth	0
Plant maintenance (hr)		Shift level (1, 2 or 3)	
Internet ports		Website development	

Personnel

Assembly workers: hire	0	Assembly trainees	0
Wage rate (cents/hr)			
Management budget		Staff training (days)	

Finance

Shares (issue/cancel)	0	Dividend (cents/share)	0
Long term loan (€'000)	0	Term deposit (€'000)	0
Machines - to buy	0	Machines - to sell	0
Factory - build (sq m)	0	Insurance plan (0-4)	

Information

Market shares		Business intelligence	

Reset

Note: money values are in €'000 unless shown otherwise

Use the 'back' button or backspace key for immediate return to the manual

Decision Form

Identity

Group 1 Company 1 ID Code

Period

Year 2012 Quarter 1

Send

Decisions about your Products

Advertising

	Corporate	Product 1	Product 2	Product 3
Europe				
Nafta				
Internet				

Prices (€)

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Deliveries

	Product 1	Product 2	Product 3
Europe			
Nafta			
Internet			

Quality

	Product 1	Product 2	Product 3
Implement improvements	0	0	0
Product development (€'000)			
Assembly times (min)			
Premium materials (%)			

Subcontracting

	Product 1	Product 2	Product 3
Components to order (units)	0	0	0

Decisions about your Resources

Agents

	Number	Support	Commission %
European agents			
Nafta distributors			
Internet distributor			

Operations

Materials to buy: spot 0 3mth 0 6mth 0

Plant maintenance (hr) Shift level (1, 2 or 3)

Internet ports Website development

Personnel

Assembly workers: hire 0 Assembly trainees 0

Wage rate (cents/hr)

Management budget Staff training (days)

Finance

Shares (issue/cancel) 0 Dividend (cents/share) 0

Long term loan (€'000) 0 Term deposit (€'000) 0

Machines - to buy 0 Machines - to sell 0

Factory - build (sq m) 0 Insurance plan (0-4)

Information

Market shares Business intelligence

Reset

Note: money values are in €'000 unless shown otherwise