

Halma p.l.c. Business Briefing

19th September 2002

Halma held its second annual Business Briefing focussing on the Fire and Gas business sector and on Innovation and Technology within the Group. The presenters were Stephen O'Shea, Group Chief Executive; Neil Quinn, Director and Divisional Chief Executive; and Andrew Williams, Divisional Chief Executive. The principal audience consisted of shareholders and sell side analysts. No updates on current trading nor any forecasts were made.



In his introduction, Stephen O'Shea outlined Halma's profile and its emphasis on wealth creation through consistent delivery of very high returns on capital employed. Returns are considerably in excess of the cost of capital. Operating subsidiaries last year produced a 53% pre-tax return on operating assets.

Halma profile

Creating shareholder wealth
Coherent business
Saving lives and property
Excellence in selected niches

Consistent high returns

Even after adding back all goodwill, including that written off many years ago, the return on invested capital was 19%, a ratio typical of recent years' achievements.

Group subsidiaries develop strong products, manage their companies intensively and make effective use of their assets. Serving regularly-ordering customers with products that are often required to meet safety or environmental legislation, the Group has built up market-leading businesses with sales of £1/4 billion and profits of £50 million. Halma companies save lives, preserve health and protect property every day.

Key characteristics

Legislative / regulatory
Long term growth
Performance not price sensitive
Barriers to entry
High market share

Long-term stable growth

Halma operates in selected markets each with very similar characteristics. As an example, Stephen O'Shea cited Governments that tell water suppliers: "You must deliver clean water to customers and not waste it on the way". Halma solves the water utilities' problems in this area by providing high technology equipment for measuring water networks, managing leaks and controlling pressures in water pipes. Similarly, there is legislation on fire safety in almost every country and growing levels of legislation and regulation across the world.

Because the customer benefits of Halma products are much greater than the price paid, the Group's products are more performance than price sensitive. When human life depends on a product to warn of a hazard, the significance of price in the buying decision is greatly reduced. Most Halma

products are technically advanced and this raises barriers to competition and helps the Group build and retain high market shares.

Halma has a tight product focus - technology to save lives, preserve health and protect property, and a very diverse customer base in almost every industry and territory. This leads to consistently high performance. The Group has made over 17% return on sales for every one of the last 10 years. The Group's total sales are affected by world economic conditions because of the geographical and industrial diversity of its customers, however its flexible structure allows fast response to changes in these conditions.

Growth drivers

- Industrial change
- Legislation
- Recognition of risk
- Innovation

Favourable environment

The Group sells to almost every industry and in most countries. As legislation is tightened by Governments around the world, opportunities for Halma companies increase too.

The chief benefits to Halma are:

- increased penetration in current applications;
- new demands for safer working practices;
- wider recognition of risk and an increased willingness to take action to reduce the risk;
- there are new opportunities to create products to save lives and prevent injury.

The constant creation of new products is an important element of Halma's growth. Below, Andrew Williams examines a major growth driver - innovation.

The broadly favourable environments in which we have chosen to operate provide many opportunities. Most Halma businesses are electronics/software based and product development is continuous. Seven generations of Apollo fire detectors were produced between 1983 and 2002. The latest range will start to contribute to Group profits during the next financial year. It is technically advanced, easier for customers to use, will provide access to new markets and is designed for reliable, simple manufacture. Completing this project will mean the creation of new manufacturing processes as well as a new product range.

Halma buys from, and sells to, most of the world. Considerable progress has been made in subcontracting the manufacture of sub-assemblies and components to Eastern Europe, China and other lower cost territories. We do the final assembly and insert the software.

Of the products that we assemble in the UK, we export half. In the USA, however, we have yet to develop such strong exporting skills; we export less than 20% of what is produced there. Sales outside of the UK and USA have grown in the last three years by 30%, and there are further opportunities for growth.

Halma watchers will have noticed how we use a powerful market position to invade adjacent and related market segments. Each new piece added to the Halma jigsaw increases our opportunities for related expansion or acquisition.

Opportunities

- Products
- Processes
- Territories
- Applications
- Routes to market

Profitable growth

An example of this is in elevator electronics where we have expanded our range of elevator safety products. We are not constrained by our niche markets; they are a growth opportunity. Initially we owned the world leader in elevator door safety edges. We have now added several new and related products to build the most important elevator safety business in the world.

This sector illustrates underlying Halma strategy:

- powerful business in selected markets;
- tight asset base management to create a continuous flow of free cash that funds both company and dividend growth;
- a structure which encourages our entrepreneurs in markets that have long-term sustainable growth;
- a loyal, diverse customer base that includes local specialists and multinational corporations;
- high margin businesses where product performance is more important than price;
- investment in new product development, creation of new processes, building new applications, development of new markets and doing things in new ways.

Against this background Andrew Williams reviewed the role of innovation in Halma's success.

A key Halma company characteristic is the intimacy it has with its marketplace. This is a major factor affecting our companies' ability to turn ideas into commercial success on a sustained basis.

Halma - Innovation

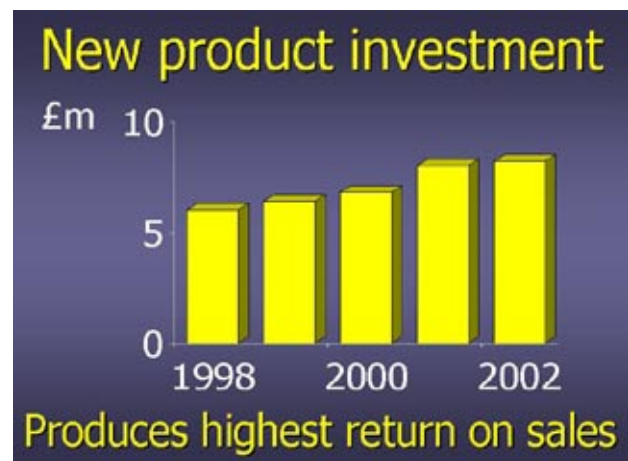
80% profit from market leaders
20% new product sales annually

World class financial returns

The presentation is split into 4 main areas, looking at the meaning of innovation in Halma, reviewing our strategy, identifying our innovation processes, and looking at some examples.

Many Halma businesses are recognised as among the world leaders in their particular fields, with 80% of profits coming from businesses recognised as leaders in their home markets or world markets.

This market leadership position is driven by innovation in all areas, but particularly in new product development. Indeed, approximately 20% of annual sales derive from products developed in the last year. Profits from spares and servicing run on after the major part of the product cycle has passed. These factors contribute to the world class financial returns of Halma over the past three decades.



Increasing spend on R&D activities within the Group recognises the value of innovation. Many millions are spent on innovation projects each year; around £30m has been invested in new product development in the past 5 years.

The Group has increased annual R&D expenditure to a record figure of £8.2m over the last five years. This is equivalent to a compound annual rate of increase of 8%. The last 5-year spend of £30m compares very favourably with the £50m spent on acquisitions. Our investment level is 50% higher than the sector average.

Increasing the level and effectiveness of R&D spend is central to Group strategy. This objective is accomplished through the efforts of subsidiary companies. It is therefore no surprise that a significant proportion of Halma's senior people have the background, expertise and experience to make it happen.

to comply with the Health and Safety Commission guidelines in this area.

One of our specialist businesses supplies heater products to government sectors and is constantly responding to increasing competition in their market niche. They made significant changes to their manufacturing processes and operations which resulted in stock turns increasing to more than 30 per year from a start point of 6. Lead times more than halved and our market share moved up.

Innovation ?

Products
Production
Markets
Distribution & Delivery
Forms of organization

A multi-functional activity

So, what does innovation mean to Halma? R&D is the major part of our innovation activity - but this is not the whole story. Innovation pervades every part of our businesses and is not limited to new products.

One of our water instrumentation businesses has bundled together several water quality tests to make a special kit to help monitor the threat of Legionnaires' Disease in air conditioning systems. It's so simple, a maintenance man can use it every week. The recent Legionnaires' Disease outbreaks in the UK emphasise the need for operators

Innovation in action



New processes

Organisational innovation can be a powerful profit driver. One of our businesses that had handled customers from a series of local offices in several European countries found that local overheads were consuming profits. The solution was to establish a central telephone sales unit in the North of England and staff it with multilingual sales people. When an Italian customer telephones the old

Innovation in action



New markets

Innovation in action



New organisation

Italian office number, the call automatically redirects to the UK and the call is answered by an Italian speaker. In this way, the company has maintained customer service but cut overhead costs.

Halma strategy is to develop innovative products and services based on proven technologies, rather than investing heavily in 'blue-sky' research. We operate in specialised niche markets in which we are often the technical leaders and key innovators. However, we have competitors and our markets are increasingly subject to reducing product life cycles due to rapid technological advance.

Innovation strategy

Evolution rather than 'blue-sky'
 Small teams
 Close to customers & markets
 Financial discipline
 Board level involvement

Driven by profit growth

Group companies are structured to respond to these changing market needs and to ensure that the communication chain between the user and designer is as short as possible. Speed of decision making is crucial and creates an entrepreneurial culture.

Innovation process

1. Getting Ideas
 2. Evaluation & Selection
 3. Innovation Projects
 4. Exploiting Intellectual Assets
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Driven by profit growth

The creative process is complimented by a commercially-driven evaluation and control process - from concept through to well after sales launch. This ensures the best possible chance of creating innovative solutions which actually deliver the profit growth that our excellent operating ratios demand.

How does it all happen, and how can we be sure that the money invested is well spent? To answer this, the innovation process has been split into 4 key stages taking us from concept through to the hard commercial benefits.

Most of the processes and techniques Halma uses are common in other businesses. However, these tools are particularly powerful when developed through small, specialised innovation teams with an intimate knowledge of their customers and markets, and which are empowered to make change happen.

Note also the feedback loop for the first 2 stages of our process. This reflects the commercial rigour of our processes. If a project does not promise to deliver the returns we require, we will seek new opportunities rather than progress for the sake of it.

Getting ideas

Structured Methods
 Unstructured Methods
 Responsive Solutions
 Acquisitions

An innovation pipeline

As you might expect, the use and relative merits of these techniques varies across the Group depending on the people, products and markets of the various businesses.

Structured methods involve asking a series of questions concerning products, processes and markets which logically identify areas

of opportunity. Unstructured methods have been particularly useful in some of our process safety businesses operating in markets where product life cycles are relatively long and hence the rate of product innovation has, historically, been relatively slow.

Maintaining close contact with our markets and customers lets our businesses quickly identify new product or application opportunities and provide responsive solutions.

Increasingly close working relationships within and between Group businesses are enabling us to identify opportunities more quickly and implement them more effectively. Finally, acquisitions bring new ideas and a new perspectives into the Group.

intensive, slow and highly skilled, making it especially difficult for water suppliers to reduce leakage levels fast to meet regulatory targets. Permalog is an instrument that lets unskilled operators survey large areas automatically simply by driving around in a van. Productivity gains of more than 50:1 and 100:1 have been achieved.



An example of the benefits of the structured methods approach to idea generation can be seen in one of our Resistor businesses that identified the requirement for high power resistors in elevators. Through close co-operation with our Elevator division, they have used existing elevator distribution channels to exploit this new market.

An example of responding to a customer and market need can be found in our water leak detection business. In the UK and in a number of places around the world water leak surveys are carried out manually using armies of operators lifting valve/stop tap covers trying to listen for leaks using a wooden or metal rod. This process is labour



Once ideas have been generated, it is crucial to assess them and select the most profitable ones for development. Assessment is not just a technical process limited to one department, but includes a detailed commercial appraisal at the outset.

The process is primarily focused on generating sales and margin growth, and not just replacement of sales and margins already delivered by existing products, by improving performance and raising barriers to competitors. Evaluation is done at local level and no significant expenditure is made



on the project until that process is complete. We frequently find projects payback in under 2 years.

If there are multiple projects to choose from, options are ranked in terms of potential profit generation, timing and technical risk. Clearly those projects which are of low risk, have high potential returns and can be delivered quickly are favoured.

It is often necessary to increase the speed to market of a particular project based on this information and additional internal or external resources are allocated at the project outset.

Once a project is given the go-ahead it is bench-marked against original criteria at key milestones to ensure it complies with the major objectives or, based on more recent market information, may be modified.



This pragmatic approach to project selection is exemplified by the Permalog instrument referred to earlier. After launch in mid-1999, the next project carried out by the design team was a Mark II version which simplified manufacturing and improved the product's suitability for overseas markets. It would have been far more attractive for the design team to embark on something new and technically more exciting, but the commercial appraisals showed that a Mark II logger would deliver the best return. As a result, Permalog is now used in more than 30 countries and by 95% of UK water companies.



Usually, innovation projects are implemented by small teams based in the subsidiary businesses. These teams are intimate with their products and markets and are empowered to make things happen. Establishing the feasibility of the idea at the earliest time is a key objective to ensure that resources are not wasted.

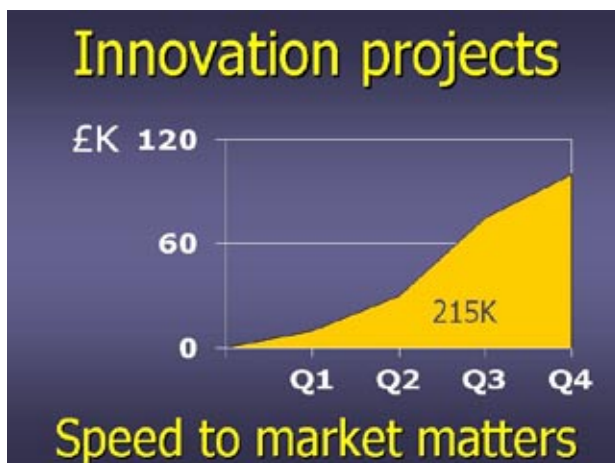
A key to modern development processes is continuous modelling and trialling of new products or processes. The use of Rapid Prototyping Techniques, such as emulation (for electronics or new production systems) are commonplace. Recently, an advanced modelling technique called Stereolithography has revolutionised the mechanical aspect of product development. It provides replica models for mechanical parts within 24 hours of completing a computer-based design. Benefits include realistic prototypes to show customers, early field testing, the ability to modify and re-test designs repeatedly,



improved sales launch promotional materials and a dramatic reduction in production tooling lead times.

Above is the latest Halma water leak detection product - a fully digital leak noise correlator. The housing is a complex combination of curves and other mechanical features. However, within 24 hours of completing the computer design we could evaluate user ergonomics and manufacturability. From the final production moulding, shown on the right, it can be seen that the user keypad design has changed to make the buttons larger and more widely spaced - a response to feedback from our US subsidiary after they had used the prototypes.

Having refined the prototype design, we were able to produce a final Stereolithography model before emailing our 3D Design files to a tooling manufacturer in China. They completed production tooling in one third of the time and at one half of the cost of doing the job in Europe.



Speed to market is vitally important and the impact of delay is often underestimated.

Above is a graph showing the first year's sales of a representative new product. Sales gradually pick-up from £10K in Q1 to £100K in Q4 for total annual sales of £215K. If this represented a financial year, one would think that since Q1 sales were only £10K, the impact of delaying launch by three months would be relatively minor.

In reality, the impact of delay is the loss of Q4 sales, and the overall sales loss in that year would be almost 50%. The reality could be even worse when the availability of competitive products is taken into account. For this reason, the focus on profit growth, timescales and resources are critical factors for Halma businesses.



Once we have decided to investigate a particular project, we immediately work on assessing commercial potential.

Clearly, patents and trademarks can exploit and protect our intellectual assets. Each subsidiary funds and manages its own portfolios, although close involvement of the Divisional Chief Executive ensures that no major opportunities are missed - especially if intellectual property may be of significant benefit elsewhere in the Group.

However, we are not interested in generating patents and trademarks for the sake of it. We adopt a pragmatic approach of identifying core intellectual assets which provide major profit streams and invest heavily in protecting them. We have a continuous stream of patent applications covering core technologies across all divisions. Patents require disclosure of the best method of implementing the invention. As a result, where we are market leaders and products have short life cycles we often choose to keep our technology secret and not patent it.



Trademarks are particularly useful in fast changing markets with relatively short product life cycles, where patents may be transient. Since a high proportion of our businesses are leaders in their field, their trademarks are often synonymous with the product type - the biro or Hoover of their markets.

In certain markets, technical approvals are a major barrier to entry. This map shows just the major national and regional approvals which are required to sell fire/smoke detectors. Indeed, our fire detector businesses possess over 800 approvals. These approvals clearly represent a significant barrier to entry and a significant element of the intellectual assets of these businesses.

There are certain key factors which underpin the multitude of innovation activities which continue to drive Halma businesses forward.



We adopt approaches which deliver the greatest value on a sustained basis

Summary

- Innovation gives best returns
- Focused on profit growth
- A growing investment
- A major strategic focus

Innovation delivers profit

We utilise the strengths of our operating structures and culture. We recognise the importance of self-created profit growth and are committed to making the necessary investments in our business to make it happen.

The proof of the strategy at work is illustrated by some telling facts.

The result

- World leading businesses
- Retains and promotes entrepreneurs
- Competitors become customers
- Delivers sustainable growth

World class financial returns

Our businesses are world and national leaders in their fields. Halma has an excellent record of retaining and developing entrepreneurial people who often join us through acquisition. Indeed over 50% of Halma's Executive Board joined the Group through acquisition.

There are many examples where the pace and quality of our innovation has led to

competitors buying products and services from us.

Finally, the breadth of our innovation activities is such that we have a proven record of delivering long-term, sustainable growth in our business.

Today Fire & Gas protection is a key subject, it is an area of high innovation in the Group. Neil Quinn explained the strength of this business and its opportunities.

The human race has always faced the twin threats of fire and gas. Until relatively recently, the only warning of these hazards came from our own senses, sight and smell. However, in the last sixty years automatic detection equipment has become a reality.

Fire & Gas detection business

Year to 30 March 2002

Sales	£70.4m
Pre-tax profit	£14.8m
Profit Margin	21%
ROI	73%

Cash inflow = profit

Today, the fire and gas sector is a global market characterised by long-term growth, significant barriers to entry and opportunities for innovation.

With technology moving at a fast pace, product life cycles are reducing. A ten year cycle was the norm in the 1970s and 80s, but this has already reduced to five and it will continue to shorten. Technological advancement is such that a single Halma smoke detector uses more computer processing power than the 1969 Apollo lunar landing. The fire and gas sector is a high volume business requiring a multitude of engineering skills to develop successful new products.



Our detectors not only warn of smoke formation, but also track the spread of smoke, often before it can be seen by outside observers. Halma smoke detectors were able to reduce the damage caused by the fire at Windsor Castle in 1992. 75% of the building was protected by detectors, and the information they provided to firefighters allowed these areas to escape major damage.

Similarly, the fast response of firefighters to the incident at Buckingham Palace prior to this year's Golden Jubilee pop concert was due to the operation of Apollo smoke detectors.

The architecture of modern public buildings, such as the recent redevelopment of the British Museum, favours large open areas with maximum natural light. Beam detectors have been developed which use infrared light to cover a wider area. These products are made by a company we acquired eighteen months ago. Joint developments with sister companies have significantly improved the product offering since then, and our investment in the acquisition will be recovered in less than four years.

Smoke, not fire, is the biggest killer. 84 people died in a major fire at the MGM Grand Hotel in Las Vegas in 1980, many overcome by smoke carried away from the source of the fire and around the building by air conditioning ducts. Disasters such as this encouraged the development of in-duct

detection systems, which warn of smoke in ducts and vent it to the atmosphere. These products are made by a company which we acquired three years ago and which will again repay our investment within four years of joining Halma.



Gas hazards are frequently encountered in industry, and we produce detectors to measure, quantify and report these. These hazards fall into three types: toxic gas, flammable gas, and fluctuating oxygen levels. We produce units to detect all of these, using a wide range of sensors for specific gases such as methane, hydrogen sulphide, carbon monoxide, chlorine, ammonia and oxygen. There are two distinct markets: portable detectors and fixed systems. Lightweight portable instruments are carried for personal protection by workers in potentially hazardous atmospheres, while fixed systems provide continuous monitoring across wider



areas in places such as industrial plants, refineries and oil rigs, as in the illustration. We operate in both markets.

All of our businesses have invested in skills which aid quick development timescales, cost-effective production and a customer-responsive culture. Productivity has doubled in the last five years, and our commitment to extensive marketing has resulted in a success rate in new product introductions of over 90%.



We sell to over 80 countries, and our products are already market leaders in the UK, the EU, Scandinavia and Australia. A broad range of sales territories minimises the impact of short-term, local market fluctuations. We achieve this global spread through well-developed distribution networks which maximise marketing intelligence and enhance service to the end user.

The dominance of the world market by Europe and the USA is very noticeable, with 80% of total spend going into these areas. Although the primary purpose of the products is a universal one - the saving of life - this 80% spend covers only 11% of the world's population.

As an example, while in Norway there are nine smoke detectors for each head of population - of which we supply about 30%. In China there is just one detector for every 4000 people. However, the developing world is rapidly increasing its infrastructure needs, and this represents large growth



opportunities through the networks we have already established.

All detectors have a finite life, so replacement business is a significant driver alongside new sales growth. We seek out profitable opportunities, recognising that increasing net returns are more desirable than absolute market growth. For this reason we are



committed to new product development and a continual drive to reduce costs, ensuring that we protect profitability as we expand our markets.

Our competitors in fire detection are all well known names who have entered the market primarily through acquisition. They have developed a full-service approach to the market, offering hardware, installation and maintenance. Although they are competitors they are also, uniquely, our customers, and

we have embarked upon joint developments with Tyco, Honeywell, Novar, Coopers and Kidde companies. We maintain this approach because we are recognised as the leading supplier of focussed, discrete products within the market.

Growth drivers

- Human & financial cost
- New construction & refurbishment
- Legislation, regulation, insurance
- Technology
- Global

Long term outlook

One of the latest market entrants through acquisition is GE, which has acquired Interlogix, a major user of Halma products. The figures above are based on published accounts and clearly demonstrate the step difference in returns achieved by Halma in the market.

There is a growing worldwide awareness of the impact of losses due to fire and gas. Last year over 100,000 people died from these causes, and financial losses exceeded £120 billion. Clearly these losses are unacceptable.

Barriers to entry

- Approvals, regulations
- Multi-disciplinary technology
- Conservative customer base
- Pre sale investment

Profitable business

Installations in new buildings account for 25% of our fire detector sales, with the remainder coming from building refurbishment, changes of building use and replacement technology.

The industry is governed by third party approvals to ensure the reliability of equipment. We have over 800 national and international approvals - more, we believe, than any of our competitors. The annual revenue investment in obtaining and maintaining these approvals is over £2.5 million. There is no universal standard for detection products and their use; products are developed uniquely for specific markets. For example, products for the USA differ functionally and technically from their European equivalents. We have nonetheless used our development skills to minimise the commercial impact of these differences on our product range.

However, saving lives should not be considered solely in terms of the price of products, and performance and quality are still the main drivers. Technology is moving rapidly and the markets demand products that respond faster to hazards, produce fewer false alarms and are simpler to use.

We deal primarily with distributors rather than end users. We focus on a commitment to effective product development, global marketing and manufacturing improvements. We believe with this approach we can double current sales using essentially the same direct workforce.

Wide-ranging scientific and engineering skills are needed to be successful. The abundance of third party approvals and international quality standards demands a high level of skill and experience from manufacturers, limiting opportunities for new market entry other than by acquisition.

As these are safety-critical products, the importance of making the right choice means that customers tend to remain loyal to a trusted supplier. This sort of long-term partnership provides beneficial insights into market trends and needs. However, the pre-sale investment necessary to achieve this is significant, and if not well managed and focussed it could destroy a new market entrant.

Summary

Compelling growth and market drivers
 Product innovation
 Significant barriers to entry
 Broad spectrum of applications
 Organic and acquisitive growth

A real Halma business.....

Growth strategy

New product development & innovation
 Exploit existing market position
 Export markets
 Technology focussed acquisitions

Long term confidence

We have a comprehensive programme of ongoing product development within the business. Key areas of product innovation include:

- Higher sensitivity detection
- Reduction of false alarms
- Simplified product maintenance

We currently target only 15% of the world's total fire and gas markets. Therefore we can expand in a low-risk manner on the basis of our existing success. The export markets offer excellent prospects. There is no reason why the Asian market should not grow to match the USA and Europe over the next five to ten years.

We have made and will continue to make focussed acquisitions which enhance

our technology, product offerings and profitability. Our aim is to grow sales rapidly over the coming years, retaining and improving on our current financial performance.

We operate successfully in a market which has inherent growth. We have a proven track record in generating high returns and are able to compete with significantly larger companies because of our focus. We manage our business realistically and can still acquire niche businesses and make them more successful.

As the hazards of fire and gas will always be with us, so will demand for our products. Our businesses offer short-, medium- and long-term growth as we continue to meet the challenge of saving lives and property.

Concluding the briefing Stephen O'Shea summarised the principles underlining Halma, all of which had been illustrated during the meeting.

- building powerful businesses in selected markets
- high margins where performance is more important than price, particularly when life depends on the product
- investment in new products, processes and operating methods for profit growth or to raise barriers to competition
- innovation as a key growth driver
- organic growth supplemented with related acquisitions funded from cash generated within the company
- effective use of resources by high quality management leading to outstanding returns on capital employed

Dedication to these principles has led to a Group whose businesses are:-

sustainable - with market and product opportunities in each sector;

creative - consistently refreshing intellectual assets to maintain high financial returns and produce sector beating performance;

self funding - creating free cash to fund growth, investment in subsidiaries, make acquisitions and create new products;

robust - with long term customers buying products required by legislation and of benefit to profit and the environment.

Presenters, organisers and guests were thanked.

CAUTIONARY NOTE. *The information contained in this summary is correct at 19th September 2002. This document may include forward-looking statements that are not factual. Such statements involve both known and unknown risks. The actual results of Halma p.l.c. may differ from results that are anticipated or implied by any forward-looking statements. The content of presentations, including any forward-looking statements, is not revised after publication.*