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**Formulating Competitive Strategy
in the UK Housebuilding Industry**

by

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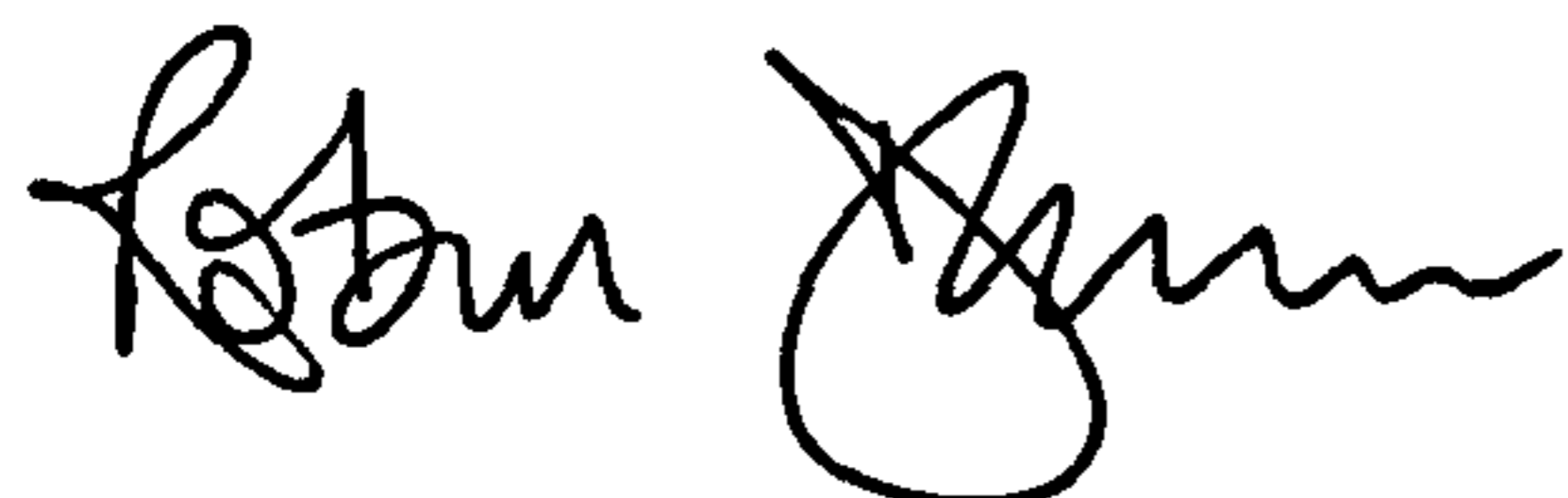
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Declaration

I declare that the work contained herein, unless otherwise acknowledged, is my own and has not been previously submitted for any academic degree.

A handwritten signature in black ink, appearing to read 'Robin John Davies', written in a cursive style.

Robin John Davies

Abstract

The UK housebuilding industry faces the challenge of meeting demands for higher quality and greater choice with a construction process that has not changed for many years and a diminishing pool of skilled labour. The situation is exacerbated by the difficulties of finding sufficient land for development. This has led to a strategic bias amongst housebuilding companies towards land acquisition and asset turnover which results in a lack of customer focus. The sector is therefore vulnerable to new entrants with new technologies and more professional customer care practices. These circumstances present an opportunity for a UK housebuilder to develop competitive advantage by pursuing a strategy of innovation leadership. Such a strategy has proved successful in other sectors such as the automotive industry.

This thesis analyses industry trends and lessons from best practice to shape a new competition framework for the UK housebuilding industry of the future. This suggests that research and development, product design, process and project management, relationships with customers, quality and innovation will be of growing strategic importance.

Techniques such as the Balanced Scorecard, Strategy Mapping and Technology Roadmapping can help firms to explore options and formulate strategies to compete effectively in changing competitive environments. These tools have been employed to create a strategy for a major UK housebuilding company, balanced across four perspectives: financial; customer; internal business processes; learning and growth.

This strategy has been implemented principally through the launch of three new businesses that have stimulated change within the core housebuilding business. Progress has been made in enhancing the company's value proposition downstream of its core business and in improving quality and efficiency through the introduction of off-site manufacturing into upstream operations. Early results suggest that innovation leadership can be an effective strategy for a UK housebuilder but progressive culture change across the industry is a key driver for long-term success.

Abbreviations

CAD	Computer Aided Drawing
CAM	Computer Aided Manufacturing
CIM	Computer Integrated Manufacturing
CSO	Central Statistical Office
DIY	Do It Yourself
DTLR	Department of Transport and
eps	Earnings per share
EPSRC	Engineering and Physical Science Research Council
EVA	Economic Value Added
fmcg	Fast moving consumer goods
FT	Financial Times
HBOS	Halifax Bank of Scotland
HOBMAN	House Building as a Manufacturing Process (research project)
IFA	Independent Financial Adviser
LSE	London Stock Exchange
MOC	Ministry of Construction (China)
NAHB	National Association of Home Builders (US)
NHBC	National House Builders Council (UK)
NOP	NOP Research Group (NOP.co.uk)
ODPM	Office of the Deputy Prime Minister
PC	Personal Computer
RMD	Regional Managing Director
ROCE	Return on Capital Employed
ROI	Return on Investment
SCM	Supply Chain Management
SWOT	Strengths, Weaknesses, Opportunities, Threats
TQM	Total Quality Management

Chapter 1

The Need for Change in the UK Housebuilding Industry

1.1 Introduction

Modern industries have been developed to satisfy human needs. The food industry is supported by a global network of supply chains, high-tech processing plants, highly efficient distribution channels and professionally managed retail outlets. Transport has become progressively more sophisticated as investment in new technologies has facilitated greater speed, safety and comfort. Human health is a global industry dominated by major pharmaceutical companies focused on long-term research and product development. The electronics industry is driven by innovation, characterised by ever decreasing product life-cycles and competition fought fiercely on features such as portability and multi-functionality. The leading companies in each of these sectors invest heavily in research and development and compete as world-class organisations. Continuous innovation is a vital part of their competitive edge. The survival of major companies in these industries depends on their success in developing new products and services that satisfy customer needs and on their ability to manage their business processes efficiently and cost effectively. The last few decades of the 20th century in particular were “the years of the consumer” (Miles 2002) in which manufacturers of consumer products from mobile phones to motor cars improved the quality and functionality of their products whilst reducing prices in real terms.

The UK House Building industry aims to satisfy one of the most basic human needs, a place to live. It accounts for about 40% of total construction output in the UK or around 4% of national income (Ball 1996). However, despite its scale and importance, it appears to have remained largely unaffected by improvement trends seen in other industries. A recent home buyer survey (New Homes Marketing Board 2002) found that the most commonly quoted reason for choosing not to buy a brand new home was “faults and after-sales issues”. Major players in the industry make negligible investment in research and development, product defects are common and the process of house construction is wasteful and fraught with repetitive faults. The UK housebuilding industry certainly lacks customer focus. As Gann (1999) observes “New housing is delivered in a way which largely accommodates the constraints of producers, rather than satisfies the needs and aspirations of consumers”.

This report describes the work I have done to explore the scope for improving the performance of housebuilders through the formulation and implementation of new business strategies. It starts with an outline of how the industry currently works and develops a view of how a new competition framework, based on best practice in more forward thinking industry sectors, might operate. This forms the basis of an investigation into how housebuilders might embrace modern management methods and technologies to compete differently in the future. International comparisons are drawn and alternative industry structures are considered. A critical analysis of the strategy literature is undertaken with regard to the process of formulating strategy, the use of different strategy models and the

strategic options that might be open to UK housebuilders. This is followed by an explanation of the strategy adopted by one major player, Westbury plc. The company's strategy has been formulated using the preferred technique arising from the literature review. Progress towards implementation of the strategy is explained in relation to the new industry model for competition and the approach is tested against future scenarios for the industry as a whole.

1.2 Key characteristics of the industry

The housebuilding industry operates in market conditions that are significantly different from markets for fast-moving consumer goods (FMCG) products and other consumer goods. The following features have been identified (Garnett *et al.* 1991, Gibb 1991) as distinguishing housing from other commodities:

- a house is designed to last for a long time;
- a house is a very expensive product in relation to average household income;
- a house is fixed in a specific location and features of that location (e.g. leisure facilities, shops, transport links) are consumed jointly with the house itself;
- housing is a complex and multi-faceted combination of features and services
- bad housing can contribute to adverse external effects (social costs);
- many would support the proposition that a certain minimum standard of housing is needed by and should be available for all households, regardless of ability to pay.

These differences give housing a greater social and political dimension than many other industries and it is therefore subject to a great deal of government and

legislative regulation through the imposition of building standards and the planning system. Further distinguishing features of the industry include the lengthy time required for the production of new houses and the dominance of second hand houses in the housing market, sales of which account for between 85% and 90% of all transactions. Short-term economic and financial factors affecting demand largely determine the state of the market. For example, in the mid-1980's, rising real incomes and low interest rates led to increased demand which, because of the slowness of supply response, translated into rapid growth in house prices (Bramley *et al.* 1995). Subsequent rises in interest rates coupled with increased prices severely depressed effective demand, leading to falls in house prices in many parts of the country in the early 1990's. This "boom bust" cycle in the housing market has been repeated three times since 1970 and has had a profound effect on the perceptions of all stakeholders in the industry.

The volatility of the housing market has been cited by some researchers (Barlow & King 1992, Ball 1999) as a root cause of the reluctance of firms to invest in process and product innovation. It has, they argue, inhibited the adoption of continuous improvement methods that have become commonplace in manufacturing firms. The fragmentation of the production process and the prevalence of subcontracted labour are further major factors that have constrained the improvement of quality. The demise of apprenticeships and low popularity of the industry as a source of employment for young people has also contributed to the housebuilding industry's difficulties. Ball (1996) describes housebuilding as "a labour-intensive industry plagued by skills shortages".

In summary, the industry is characterised by relatively unsophisticated organisations, operating in difficult and unpredictable conditions on site with sub-contracted teams of labourers in short supply. The cyclical nature of the housing market has engendered a short-term, survival culture that places little value on the research and process development activities that have driven major change in other industrial sectors. The industry's processes are widely acknowledged (Ball 1996, Alarcon 1997, Barlow 1999, Roy & Cochrane 1999) as wasteful and unsatisfactory from the end-user perspective. Manufacturing companies operating in this way could not expect to survive. A consideration of the competition framework for the housebuilding industry will help to explain how major companies in this sector continue to grow and prosper, despite such major shortcomings in their operational performance standards.

1.3 Current Competition Framework for the Industry

Housebuilders in the UK operate in a market in which supply is constrained by the limited availability of building land. According to the Minister for Housing, Lord Rooker, the number of households in the UK has recently exceeded the number of homes for the first time since records began (Weaver 2002). In such a "sellers' market" there is little competitive pressure to become more customer focused and there is insufficient importance placed on the delivery of high quality products. Quality becomes progressively more important as a market shifts from excess demand to excess supply (Figure 1.1, Karlof 1989).

The prime focus of competition for volume housebuilders is on finding and

purchasing land in desirable locations, rather than satisfying end users – the purchasers of the houses they build. A critical issue in successful land buying is

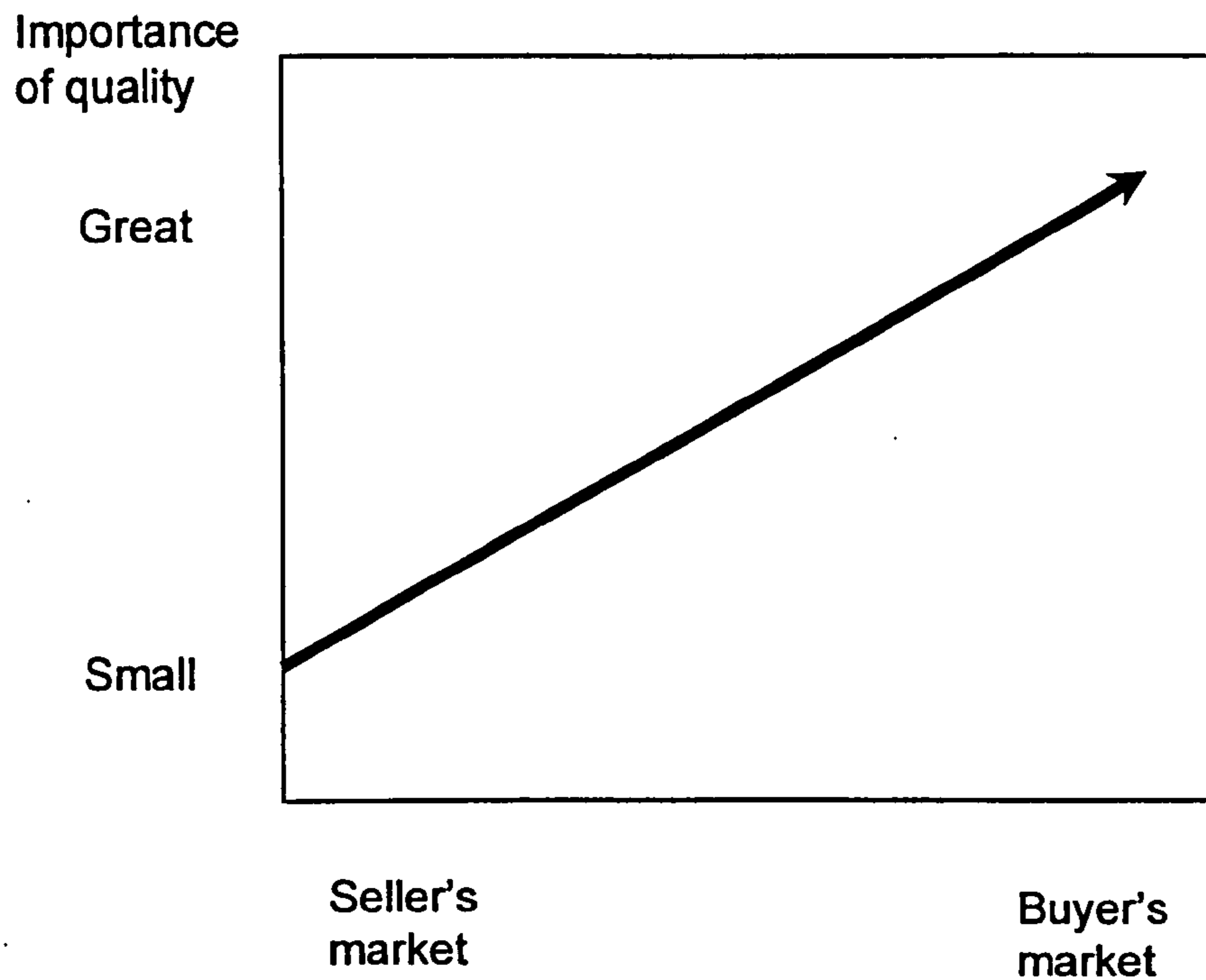


Fig 1.1: Quality becomes more important as the market balance shifts from excess demand to excess supply (Karlof 1989)

the development of site layouts using house designs that achieve higher density schemes than competitors. Given the capability to buy land in a competitive bid situation and positive market conditions, housebuilders seldom have difficulty in selling the homes they build. Unlike many other markets for consumer goods, there are few international competitors applying the competitive pressures of new product features, better quality or lower prices. Even basic product performance improvements, such as thermal insulation and ease of access for disabled users, have required government imposed building regulations to stimulate the necessary change.

The 1970s – 1990s competition framework

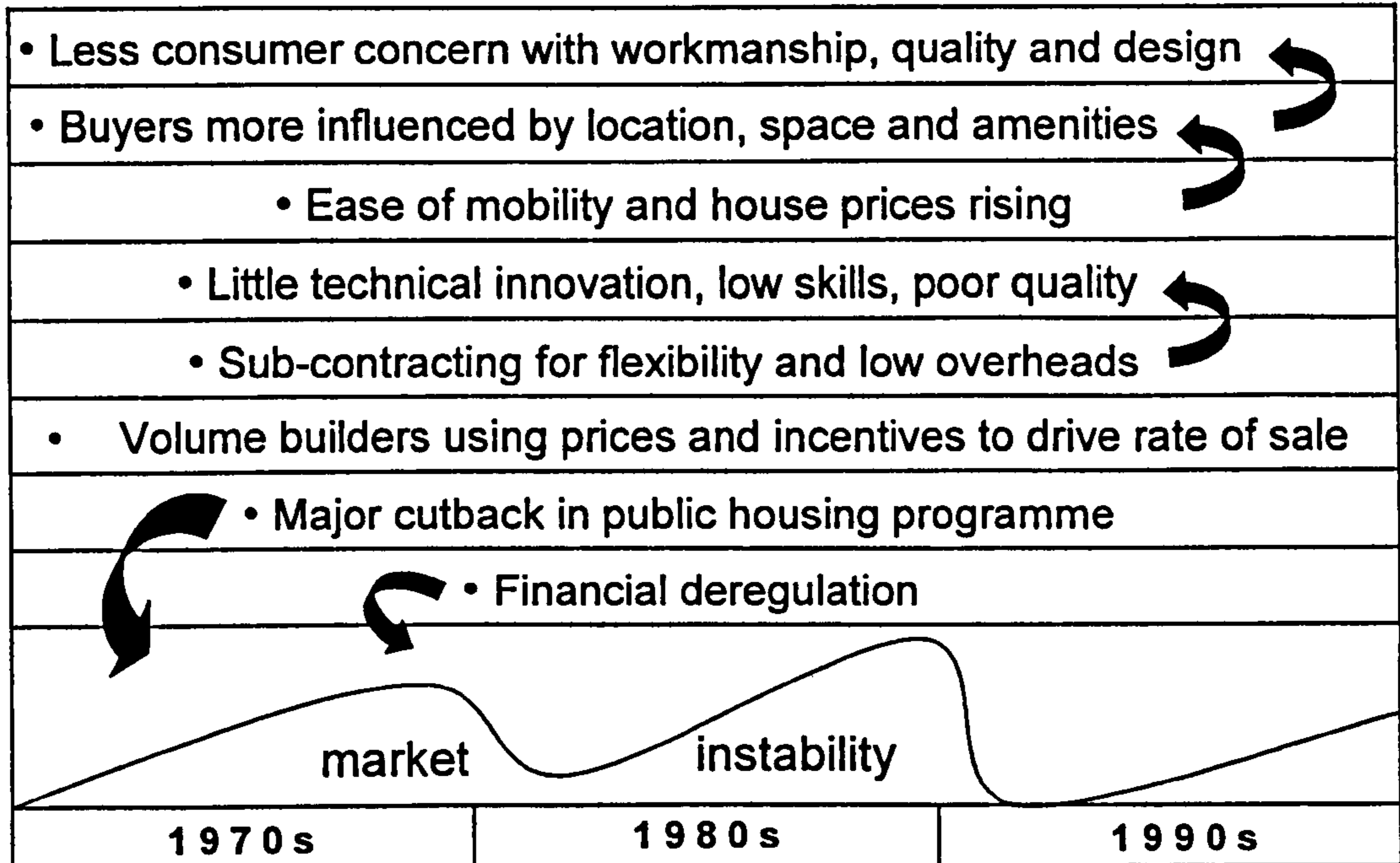


Fig 1.2: The 1970s – 1990s Competition Framework

Figure 1.2 summarises the characteristics of the competition framework for UK housebuilders during the last three decades of the 20th century. Companies placed a great deal more importance on land procurement than product development, quality improvement or customer service.

This land-based competition framework does not fit the micro-economic model shown in Figure 1.3 (Powell 2000) that can be readily applied to many other markets. As long as land is a scarce commodity and demand remains relatively buoyant, housebuilders will continue to place considerable emphasis in their competitive endeavour on the procurement of land.

The stages of competition shown in Figure 1.3 are not mutually exclusive with land-based competition, however. One of the main objectives of this project is to challenge the current bases of competition and chart a path for UK housebuilders to evolve from land and volume-based competition to more customer focused bases of competition, whilst accepting that land purchase will continue to be of critical importance.

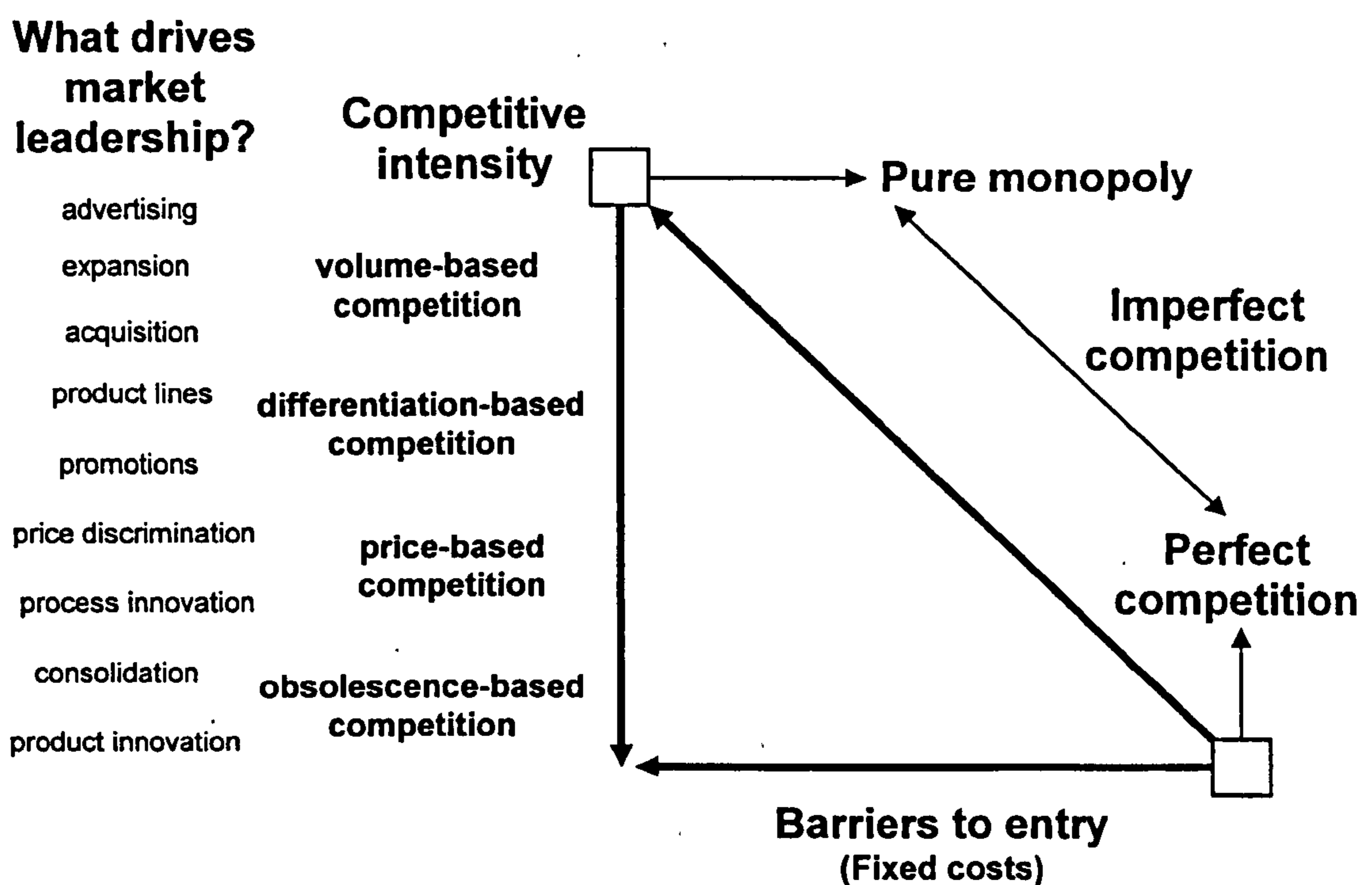


Fig 1.3: Stages of Competition Framework (Powell 2000)

The process, shown in Figure 1.3, starts with one company launching a new product that has never been offered to the market before. This creates a pure monopoly and potentially establishes the beginnings of a new industry. The commercial success of a new product attracts other firms into the market and a number of firms compete for market share through volume-based competition (stage one). In stage two, competitors launch new variations of the basic product

and seek opportunities to segment the market. This allows them to price discriminate through differentiation. When the scope for competing through differentiation becomes limited, firms strive to reduce costs through process innovation so that they can capture market share by offering lower prices (stage three). When this approach has reached its limits and prices have stabilised, then firms explore the potential for new product concepts that may make competing products obsolete (stage four). If obsolescence is not possible, the industry enters a stable maturity and profit margins decline. This process of reinventing products and services as new concepts often involves smaller competitors entering a market with a radical new idea. Larger companies with significant investment and resources allocated to current product technology often have difficulty in switching to unproven innovations, a syndrome described by Christensen (1997) as "*the innovator's dilemma*".

A housebuilder is able to avoid much of this competitive rivalry by creating its own, albeit temporary, monopoly by finding land in a desirable area devoid of other builders. Even when direct competition does occur it is often relatively short-lived and confined to those developments where other housebuilders nearby are offering the same type of products for sale at exactly the same time. As land becomes scarcer, the likelihood of time, product and location coinciding with competitors in this way diminishes.

1.4 Westbury's position within the Competition Framework

Westbury was floated on the London stock exchange as Westbury plc in 1986 following a management buyout of the family owned Westbury Homes Limited a

year earlier. In 1987 Westbury made its first acquisition, the house building arm of Christian Salversen. This provided the nucleus for a new Westbury region based in Northampton. Westbury went on to deliver record profits in the boom market of the late 1980s, building in excess of 2000 homes each year and aggressively buying land for further expansion. However, as house prices reached unsustainable levels and interest rates increased, the bubble finally burst and the market entered recession in the early 1990s. House prices began to fall and Westbury was left with land on its balance sheet at values beyond the level at which it could make a profit.

Westbury survived this crisis, partly because the majority of other major housebuilders found themselves in a similar position and were not able therefore to mount aggressive bids to acquire competitor companies. The impact of reduced sales revenues and balance sheet write-offs to re-value land banks at more realistic levels, led to a drastic collapse in share prices across the industry. The first six years of Westbury's operation as a plc had followed the land-based competitive strategy described above. This had not proved effective when the market entered the downward trend of the cycle. The board felt that a different strategy was needed to find ways of reducing the risk of the company falling victim to similar boom bust cycles in the future.

In 1992 Geoffrey Maddrell was appointed as Westbury's non-executive Chairman. He brought a broad range of experience from manufacturing and consumer product marketing and a more disciplined approach to the longer term planning of the business. He carried out a strategic review in 1993 and in

November of that year I was appointed as Group Marketing Director, bringing experience from manufacturing industry and with a brief to stimulate major change in the company's mode of operation. The board agreed the need to find new ways of operating that might reduce the risk exposure of the Group to the cyclical vagaries of the UK housing market. It was deemed that a more customer focused approach was required, together with the development of alternative revenue streams that might act in a counter-cyclical way to moderate the effects of a sudden downturn in the market for new homes. This change of emphasis is reflected in the key statements of strategy taken from the company's 1993 and 1994 Annual Reports:

1993 - "Our sales strategy is to direct the majority of houses we build towards the lower priced sector of the housing market." (Westbury Annual Report 1993, p1)

1994 - "Westbury will become the number one choice of homebuyers by focusing the experience of its highly trained staff on anticipating and satisfying customer needs with top quality homes and exceptional levels of service." (Westbury Annual Report 1994, p1)

By late 1994 the market had started to recover and Westbury developed a strategy to reposition itself with the objective of gaining the price premiums enjoyed by competitors such as Bryant Homes and David Wilson. The company commenced a progressive move upmarket, supported by investment in market and customer research and new product development. In early 1995 a six page questionnaire was mailed to over 11,000 previous Westbury customers. Over 40% were

completed and returned and a database of information was assembled from the responses. This provided a wealth of information for product development, brand positioning and the formulation of future strategy. The feedback contained a strong expression of customer dissatisfaction arising from the high incidence of product defects discovered after move in. However, the single most important issue for customers was the poor quality of service they received when they complained to the company about these defects.

In order to provide a focus for the progressive improvement of product design and specification, a new Group Product Development team was established as part of the Group Marketing Department in 1995 to replace the separate product development teams working in each of the five Westbury regional offices. The prime targets for improvement remained the quality of the finished product and the standard of after sales service. These are generic problems found throughout the house building sector, arising from values and beliefs deeply ingrained in the culture of the construction industry (Roy & Cochrane 1999). Recognising that there were unlikely to be any quick fix solutions, the possibility of carrying out research with a university to develop new ways of overcoming these problems was investigated.

Fortuitously it was around this time that the government announced the “Innovative Manufacturing Initiative”, a grant-funded programme to encourage collaborative research between universities and firms from specific industrial sectors. The aim was to assist the improvement of performance by funding relevant research projects in specific industries, one of which was construction. I

played a leading role in preparing a joint proposal for Westbury, Warwick University and the Welsh School of Architecture under the “Construction as a Manufacturing Process” category. The proposal was accepted by the EPSRC for grant funding and in 1995 Westbury embarked on the HOBMAN project (House Building as a Manufacturing Process) which I project managed through to its completion in 2002.

1.5 The Need for Change at Westbury

The objectives arising from Westbury’s strategic review instigated by the new chairman in 1993, set the agenda for the Group to seek ways of becoming more customer focused. Customer focus is a common objective for companies but one that is often more rhetorical than actual (Magretta 1998). Housebuilding is a very traditional industry with ingrained beliefs of how value can be created and it is not renowned for its willingness to change (Barlow 1998, Ball 1999, Craig & Roy 2003).

Baden-Fuller (1998) in a study of the strategies of mature businesses, describes a number of characteristics of mature firms that closely match the typical mindset of UK housebuilders. In mature firms, he observes, people seem to believe that if one group is doing well, it must be at the expense of another. For example, shop-floor workers may feel that pay rises for management are at their expense; managers may feel that they are being exploited when shareholders gain substantial benefits from the success of a company and firms often adopt a confrontational attitude with their suppliers and customers. These beliefs lead to

particular types of behaviour. When shareholders demand higher returns, the typical response from managers in mature firms is to cut standards of service to customers, tell staff to work longer hours, and attempt to extract larger discounts from suppliers. They see these as the only ways of delivering additional profit. They seem unable to recognise the possibility of doing something differently to offer better service to customers, getting staff to work smarter rather than longer hours, and collaborating more closely with suppliers to eliminate waste in the supply chain rather than negotiating for lowest prices.

In contrast, Baden-Fuller (1998) found that mature companies that had successfully rejuvenated themselves showed quite different characteristics. Managers in these businesses focused on rethinking the ways that they do business and they often started this process with their customers. He gives the example of Richardson Sheffield that rose from being an almost bankrupt UK knife manufacturer to becoming a world leader in profits and market share by adopting a customer focused approach. The company built customer value in stages in an industry whose service was traditionally dreadful. It began by giving speedier service and ensuring that goods always arrived on time. More accurate service exposed inefficiencies in production and operating systems as well as encouraging customers to pay on time and in full. Product quality was improved by eliminating errors and reducing rejects. Although this required investment, output costs were quickly lowered. Rapid innovation and new product introduction followed and again the focus was on giving customers more value. Because Richardson became so much better than its rivals, it could produce new

and attractive products with excellent performance at comparable or even lower prices than competitors and still obtain better and rising profitability. This customer focused approach was central to its strategy and was complemented by improving the terms and conditions for employees.

In 1993 Westbury shared many of the characteristics of mature firms in need of the kind of rejuvenation described above. The symptoms were:

- Organisational and management emphasis on land buying, obtaining planning consents and selling
- No marketing resource or long-term strategic planning
- Poor standards of product quality
- Confrontational attitudes towards suppliers and sub-contractors
- Cost minimisation approach in dealing with customer complaints
- Levels of profitability below the industry average
- No research and development
- City image as a traditional, regional housebuilder

Quite apart from the need for change to improve performance and competitiveness from an internal perspective, a number of external factors were gaining momentum as drivers of change within the industry as a whole. Two government sponsored reports, the Latham Report (1994) and the Egan Report (1998) injected fresh impetus to the call for improvements in the performance of the construction industry. As housebuilding is one of the few construction sectors which produces repetitive products, it is particularly well placed to benefit from more industrialised processes. Latham (1994) and Egan (1998) set an agenda for change towards more efficient, higher quality construction

processes.

It was clear from these various perspectives that Westbury needed to improve its performance and competitive position. In 1995 as the HOBMAN project was launched (Lorenz 2002), the Westbury board set the following objectives:

- to reduce the costs of rework incurred from poor quality construction
- to reduce Westbury's dependency on the diminishing pool of skilled labour
- to improve Westbury's reputation in the marketplace
- to offer more choice and customisation to customers
- to find new sources of revenue and improve levels of profitability

1.6 Objectives for Eng.D studies

My Eng.D studies have formed an integral part of the process I have followed to develop and implement Westbury's improvement strategy. My objectives for these studies were:

- To identify ways in which the UK house building industry can change to become a modern, customer focused industry.
- To devise a new competition framework for the UK house building industry.
- To find effective ways of formulating and implementing strategy that can be used in the housebuilding industry
- To explore strategic options for competing effectively within the new competition framework.
- To formulate a strategy to position Westbury as a leading competitor for the future.

1.7 Methodology

Figure 1.4 shows how the elements of my research methodology fit together. An analysis of the current competition framework within the UK housebuilding industry is conducted. This leads to an exploration of ways in which this might be changed, learning from transformations that have occurred in other industries and making comparisons with parallel industries in overseas markets. A consideration of the different ways in which housebuilders can compete leads to the formulation of a new model for the UK housebuilding industry's future competition framework.

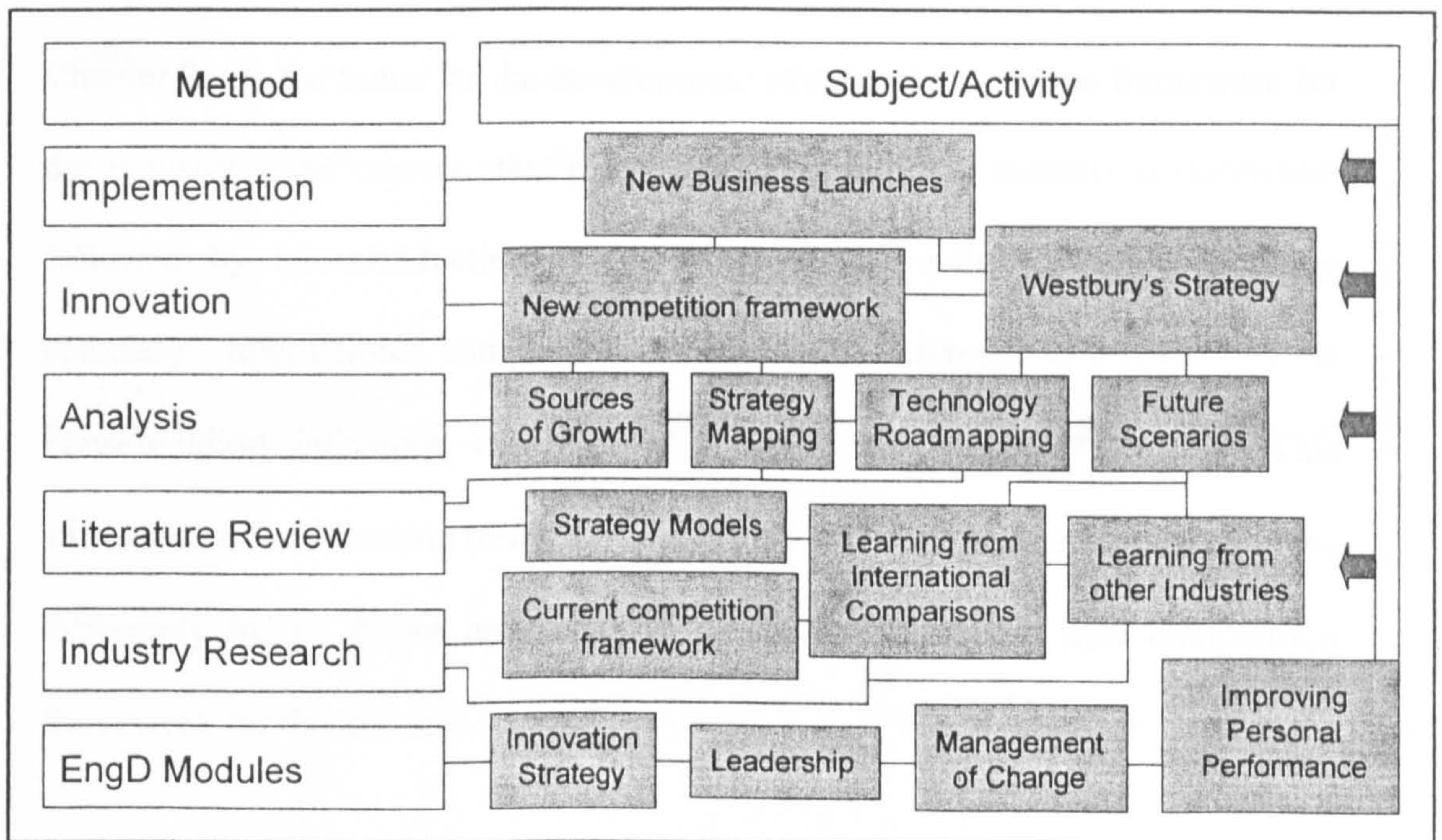


Fig 1.4: Research Methodology

The challenge of devising strategies for change to compete in the new competition framework is explored with reference to the extensive literature on strategy formulation, strategy models and strategic options. Strategy formulation workshops and the production of board proposals and business plans are used as

opportunities to experiment with different approaches to strategy development. A strategy map to guide Westbury's transformation into a leading competitor within the new competition framework is developed. The launch of new initiatives and new businesses forms part of the action research carried out in pursuing the chosen strategy. A critical review of this work is made, evaluating how successful the new strategy has been and projecting how it might be developed further in the future. Finally, conclusions are drawn, key learning points are summarised and future research needs are identified.

1.8 Chapter Plan

Chapter 2 sets the scene for the development of a new competition framework for the industry. The current state of the UK housebuilding industry is described, followed by an introduction to Westbury plc, a major UK housebuilding company. International comparisons are drawn by reference to a review of the housebuilding industries of the USA, Japan and Northern Europe. This stimulates a consideration of the ways in which UK housebuilders could compete differently in the future and leads to the formulation of a new competition framework for the industry.

Chapter 3 examines the concept of strategy in terms of formulation, models and the range of alternative generic strategies that might be considered by competitors in the house building industry. Davies (2003 (1)) provides a critical review of the strategy literature as a background to this work. The components and characteristics of an effective strategy are considered and a model is developed to

represent some of the key ideas arising from this review.

Chapter 4 describes a framework for formulating strategy based on the Balanced Scorecard. This comprises four perspectives: financial; customer; internal business processes; learning and growth. The second half of the chapter addresses the task of applying this approach to formulating a strategy for Westbury plc. The strategy is built up into the four separate components and the chapter concludes with a complete strategy map.

Chapter 5 outlines the work which I have carried out in applying Westbury's strategy. Three new businesses, launched as part of the implementation, are described and a model, the Westbury Channel, is explained as a tool for communicating the strategy. A new company, Space4 Limited, is described that has been established as an off-site manufacturer to produce components for housebuilding. This represents a very significant innovation arising from my work at Westbury.

Chapter 6 evaluates how successful the strategy has been to date in transforming Westbury into an effective competitor for the future. The company's financial performance over the past five years is reviewed and a SWOT analysis determines the future strategic needs of the business. The potential for developing Space4 into a business in its own right is explored. Technology Roadmapping, conducted with the Space4 management team, is used as a technique to continue the strategy formulation process in a way that links the

marketing objectives of this new business with its technology development plan.

In Chapter 7 the main conclusions arising from the research are drawn with particular reference to the innovation which has been achieved. This is followed by an outline of actions that Westbury needs to take to improve the effectiveness of its strategy. Key learning points are discussed and suggestions for further research are described.

1.9 Portfolio Plan

My portfolio provides evidence of the development of my thinking as the research has progressed. Apart from reports prepared as part of my academic research and this Executive Summary, submissions also include presentations made to conferences and seminars, papers and proposals prepared for Westbury board meetings and entries for national construction awards.

The suggested reading sequence is laid out in Figure 1.5. Chapter headings refer to the Executive Summary. The main documents are shown in heavy boxes.

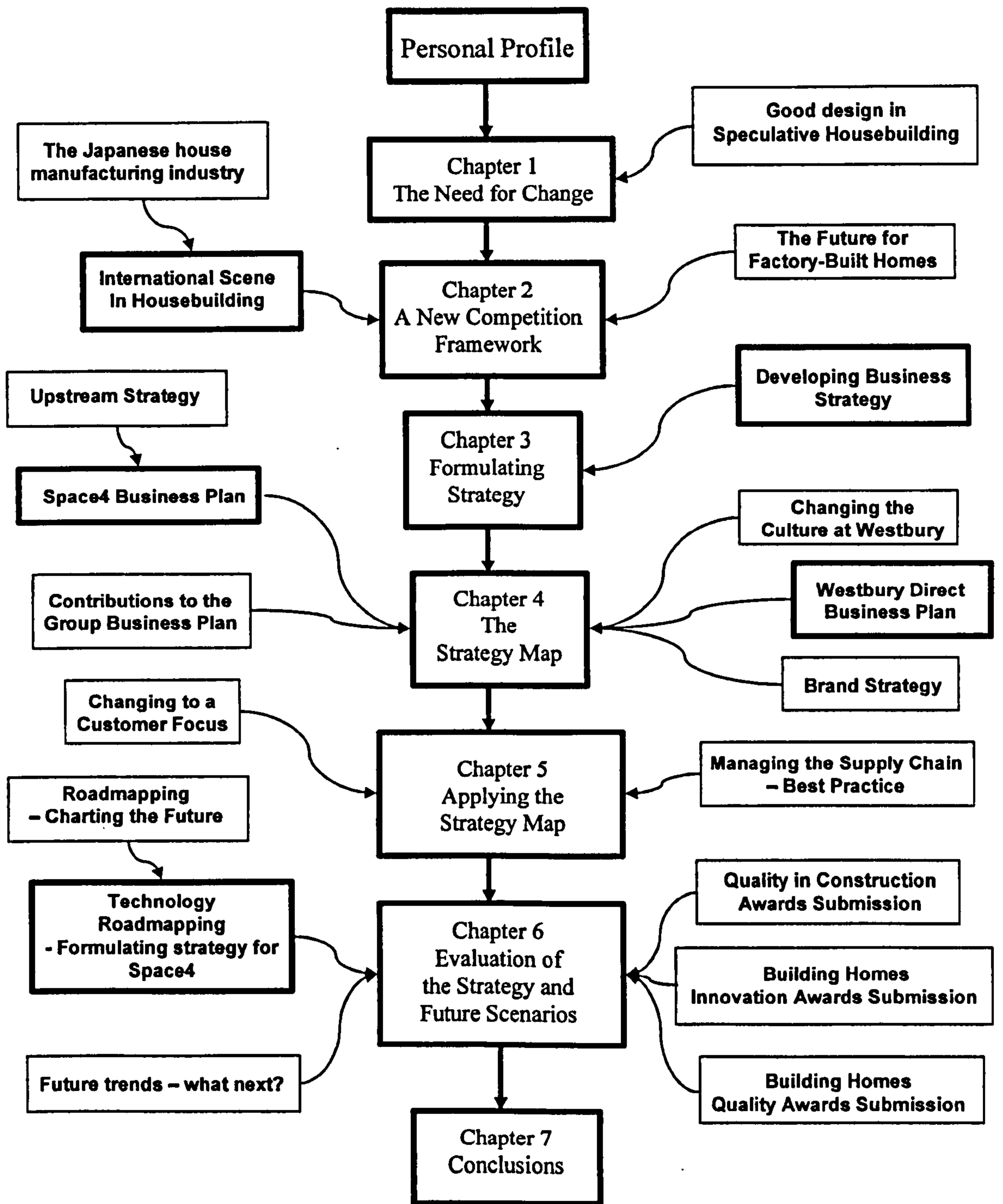


Fig 1.5: Suggested reading sequence of the research portfolio

Chapter 2

The Development of a New Competition Framework for the UK Housebuilding Industry

2.1 The UK Housebuilding Industry

The UK housebuilding industry fills the gap between supply and demand in the far larger second hand homes market. New homes currently represent around 11% of total housing transactions in the UK, against a 40 year average of 14% (Hardy 2000, CSO 2000). This equates to a total market size of around 150,000 units per annum, a little below the 30 year average of 155,000 units (HSBC 2000) and a current market value of almost £19 billion.

The industry is relatively fragmented compared with many other industries, although a number of the leading companies in the sector have actively pursued consolidation in recent years. The market share of large (500+ units pa) companies is now over 60% (NHBC 2001). The predominant firms are regional housebuilding subsidiaries of large corporations (Bramley 1995).

The top 20 UK housebuilders of 1997 are shown in Table 2.1 with an outline of their year-end 2000 and 2001 forecast position. Companies that have been acquired by others are shown in italics. The prospective top 10 house builders, following the current round of consolidation, are highlighted in bold.

	Housebuilder	Sales Units		Comment/Forecast
		1997	2000	
1	Wimpey	11560	11437	2001 f/c: 11300 (No.3)
2	Barratt	7710	10636	2001 f/c: 11400 (No.2)
3	<i>Beazer</i>	<i>7177</i>	<i>8223</i>	<i>Acquired by Persimmon 2001</i>
4	Persimmon	6700	7035	2001 f/c: 14000 (No.1)
5	Bellway	4500	5714	2001 f/c: 5750 (No.4)
6	Wilson Connolly	4100	4056	2001 f/c: 4835 (No.6)
7	<i>Bryant</i>	<i>4040</i>	<i>3961</i>	<i>Acq'd by Taylor Woodrow 2001</i>
8	Westbury	3534	4355	2001 actual: 3914 (No.7)
9	Wilson Bowden	3007	3604	2001 f/c: 3800 (No.8)
10	<i>McAlpine</i>	<i>2674</i>	<i>4007</i>	<i>Acquired by Wimpey, Nov 2001</i>
11	Redrow	2629	3338	2001 f/c: 3450 (No.9)
12	<i>Bovis</i>	<i>2363</i>	<i>2429</i>	<i>2001 f/c: 2360</i>
13	Berkeley	2222	3210	2001 f/c: 2948 (No.10)
14	<i>Fairview</i>	<i>2087</i>	<i>1459</i>	<i>MBO 1999</i>
15	<i>Crest Nicholson</i>	<i>1965</i>	<i>1731</i>	<i>2001 f/c: 1500</i>
16	<i>Fairclough</i>	<i>1627</i>	<i>1707</i>	<i>Acquired by Centex (USA) 1998</i>
17	<i>Tay Homes</i>	<i>1584</i>	<i>931</i>	<i>Acquired by Redrow 2002</i>
18	Taylor Woodrow	1500	1919	2001 f/c: 5270 (No.5)
19	<i>Prowting</i>	<i>1340</i>	<i>1533</i>	<i>Acquired by Westbury 2002</i>
20	<i>Wainhomes</i>	<i>1253</i>	<i>1371</i>	<i>Acq'd by Wilson Connolly 2000</i>

Table 2.1: The top 20 UK housebuilders 1997

Source: Annual Reports 2000, Credit Lyonnais 2001

	Housebuilder	2001 Sales Forecast (units)
1	Persimmon	14000
2	Barratt	11400
3	Wimpey	11300
4	Bellway	5750
5	Taylor Woodrow	5270
6	Wilson Connolly	4835
7	Westbury	3914
8	Wilson Bowden	3800
9	Redrow	3450
10	Berkeley	2948

Table 2.2: The “new” Top Ten UK Housebuilders 2001

Source: Credit Lyonnais 2001, FT

The “new” top 10 house builders are listed in Table 2.2, ranked on the basis of their year 2001 sales forecasts. A “super league” of house builders is emerging - those building over 10,000 homes per annum. Industry commentators (Hardy 2000) expect the gap between the top three and the rest to widen as a result of further acquisition activity over the next few years.

Over the past twenty years household growth in the UK has exceeded the growth of the housing stock, reducing the surplus to just 0.2% by 2000 (DTLR website 2001). However, actual demand is heavily influenced by affordability, the relationship between house prices and earnings impacting at local levels. It is not surprising therefore that most of the current “housing deficit” is in London and the South East (see Figure 2.1).

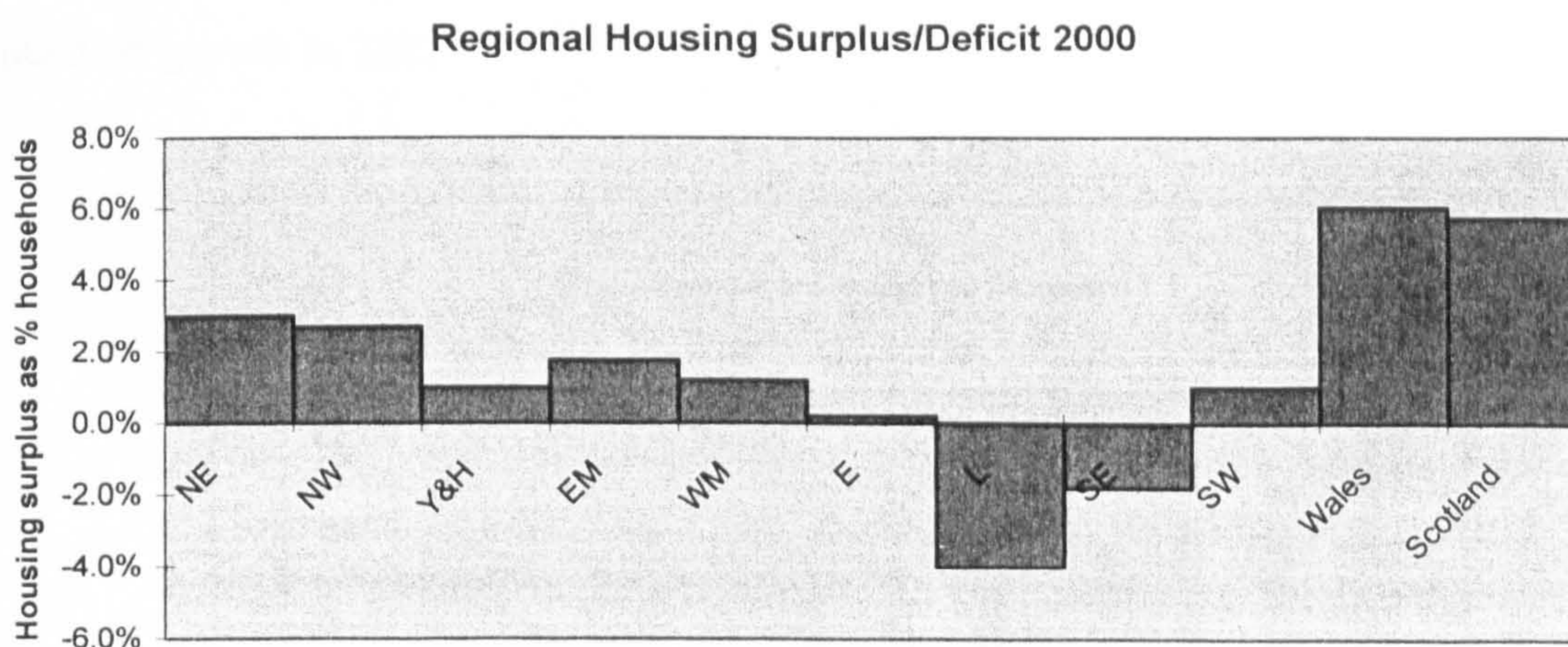


Fig. 2.1: Regional Housing Surplus/Deficit 2000
(Housing stock as % households) *Source: DTLR 2002*

Between 1985 and 1998 the UK invested a lower share of GDP in housing (3.3%) than any other major industrial country (Wilcox 2001). Germany, Canada, Japan, Netherlands, Australia and Italy each invested at least 5% of GDP

over this period. UK completions per 1000 population (3.1 per year) are among the lowest in the EU and well below the EU average (5.4) (European Commission, 1998).

These statistics show how the relatively fixed level of annual output from the industry over the past twenty years has failed to match the accelerating growth in housing need. A significant proportion of this need translates into demand in the private sector of the market that will not be fully satisfied over the medium term unless output levels are significantly increased. The main factors driving private sector demand for new homes are demographic trends, public confidence in the economy, levels of unemployment and the affordability of new homes in relation to personal income levels. Figure 2.2 shows the Government's forecast for population growth to 2021.

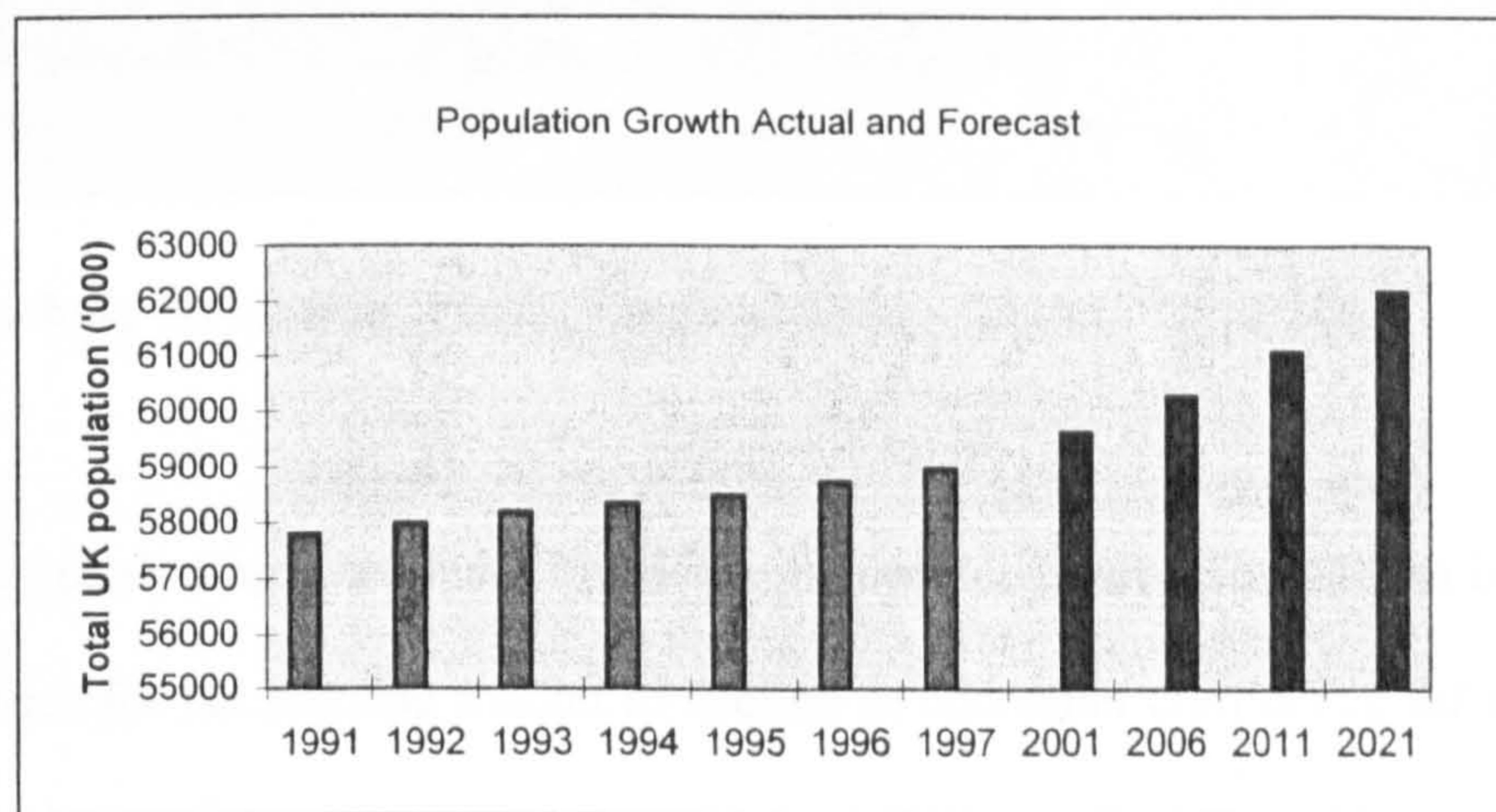


Fig 2.2: UK Population Growth Forecast (Source: CSO 2000)

Significant growth of the population over the next twenty years is expected to lead to a corresponding growth in household formation, boosted further by the

underlying trend of growth in single person households (Figure 2.3) driven by factors such as divorce and longevity. However, Bramley *et al* (1995) explain a counter-trend in what they describe as “the major demographic downturn” associated with the age structure of the population. This refers to the trend of fewer young couples forming new households as explained by Ermisch (1990).

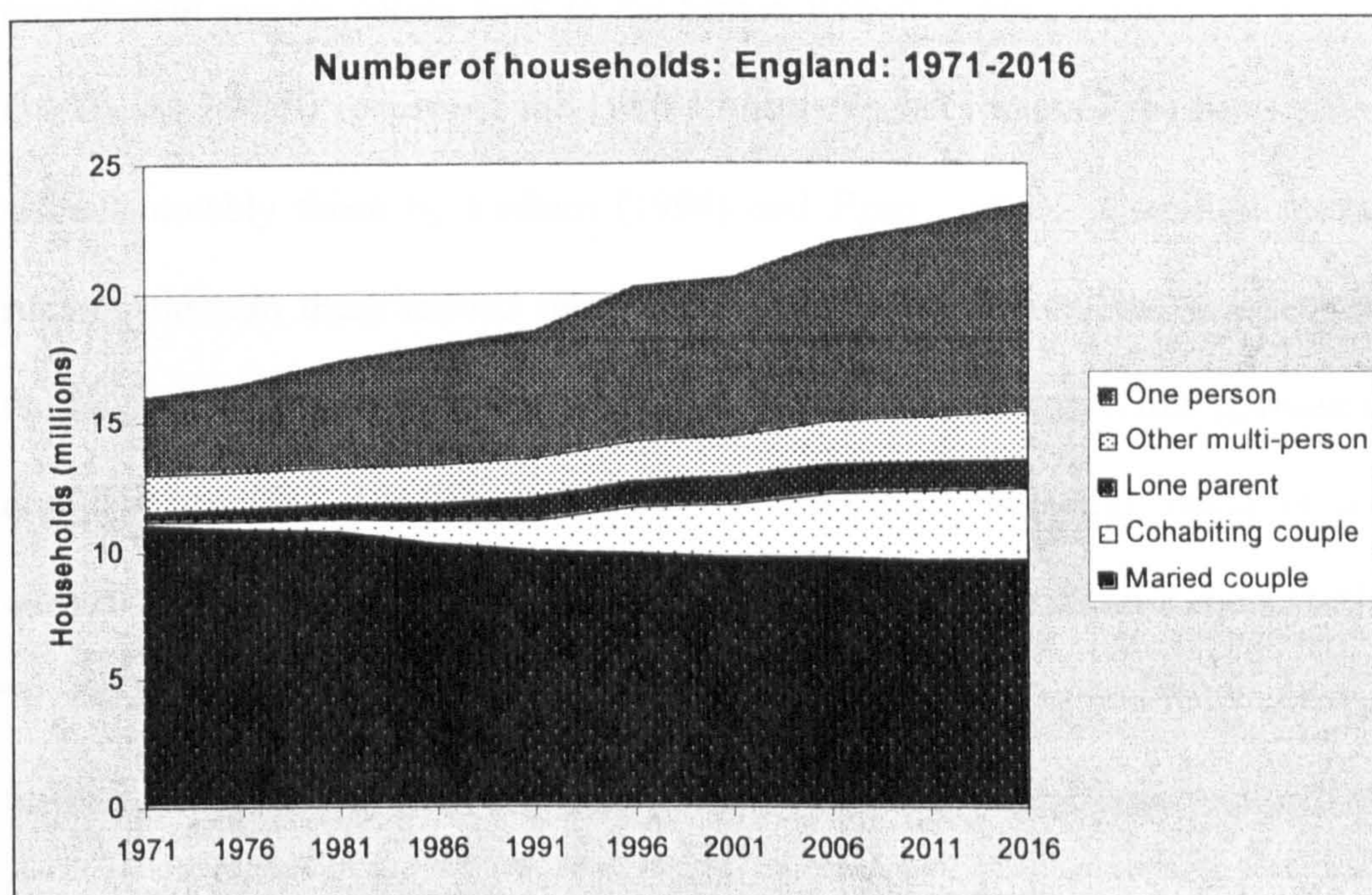


Fig 2.3 Household formation trends, England 1971 – 2016 (ODPM 2003)

Measuring and predicting consumer confidence is more difficult. The pattern in the past has been for the housing market to decline as consumer confidence falls. However, this has usually been accompanied by a decrease in affordability as wage growth falls and interest rates rise. In the current cycle, this has not happened. Demand has evened out as the economy has slowed but housing affordability has been rising as interest rates have fallen. Some analysts (Hardy 1999) expect this combination of factors to dampen the severity of any downturn

in the housing market. This may in turn lead to the avoidance or evening out of “boom bust” cycles in future, creating a more stable and favourable economic backdrop which could facilitate major change in the industry.

The UK housebuilding industry has been widely criticised for its poor record on quality, efficiency, supplier relationships and customer focus by numerous government reports dating back to the Simon Report (1944), Emmerson Studies (1962) and NEDO reports of the 1980’s. More recent reports have been just as critical, notably those by Latham (1994) and Egan (1998). Common themes running through these reports include the absence of international competition, the fragmented nature of the industry, the lack of investment in training, research and development, adversarial supplier relationships, wasteful business and construction processes and inadequate customer focus. The Egan Report (1998) “Rethinking Construction” has become a significant driver behind recent change towards quality and process improvement in the industry. The Construction Task Force that authored the report identified five drivers for change:

- Committed leadership
- Focus on the customer
- Product team integration
- Quality driven agenda
- Commitment to people

Four areas for process improvement were identified in the report:

- Product development
- Project implementation
- Supply Chain Partnering
- Production of Components

A fundamental shift in the culture of the construction industry is required if it is to rise to the challenge of such wide ranging change and improvement. The report did not cover the housebuilding process in detail. This is unfortunate in view of the importance of the housing sector within the construction industry and the repetitive nature of its products that offer a good opportunity to demonstrate the value of a continuous improvement ethos to the rest of the industry. However, the Egan report is proving to be of lasting value in driving improvements in the housebuilding industry, notably in the social housing sector.

From an investment community perspective, the UK house building industry is undoubtedly regarded as “old economy”. This has been reflected in persistently low and declining P/E ratios for all the major players over the past few years (see Figure 2.4). Hardy (2000) attributes the low rating of the sector to “investors’ broad disaffection with the way the sector operates, with many of the working practices little changed since the 1950’s, perhaps even the 1920’s”. The call from institutional investors is for larger, better managed and more growth-oriented businesses.

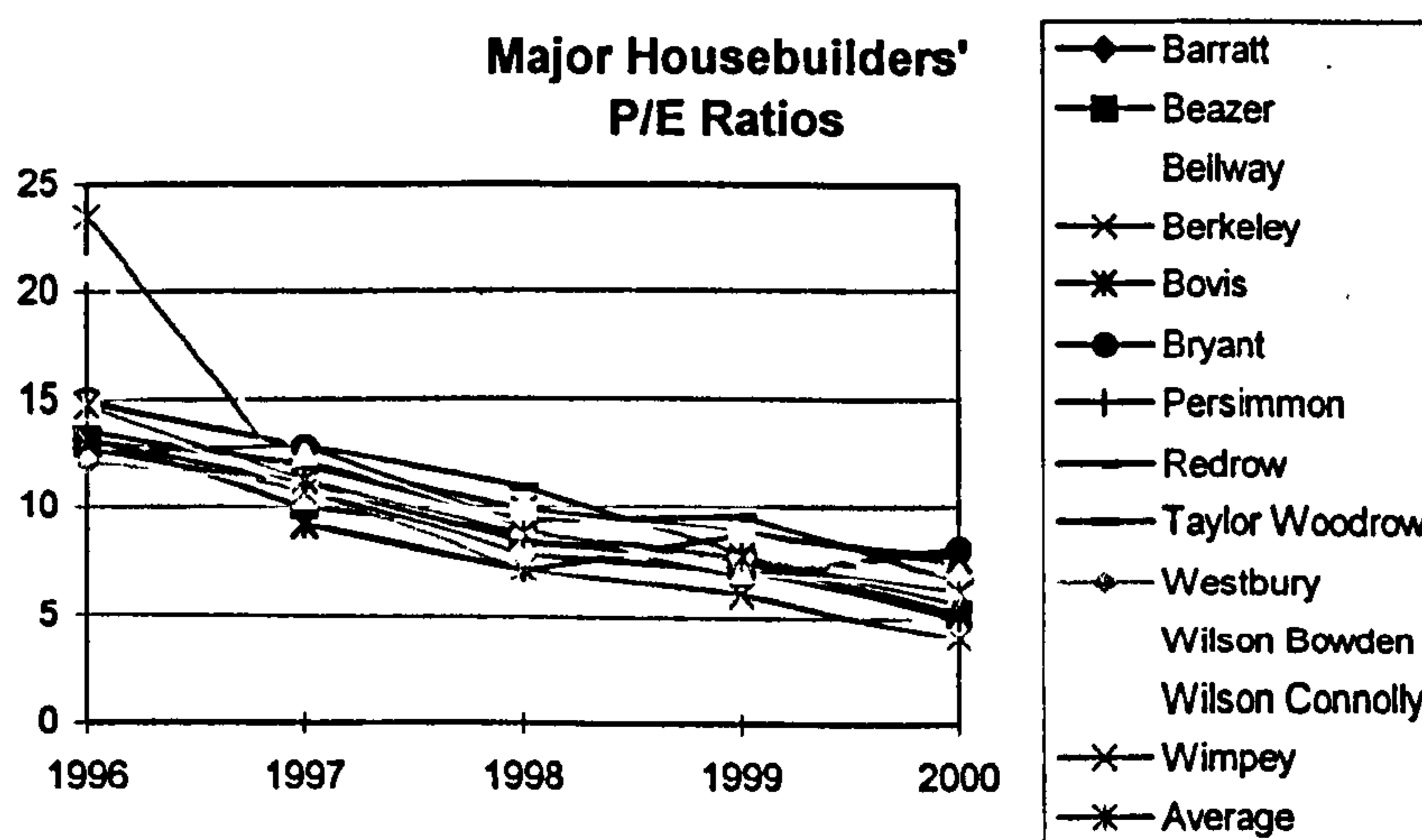


Fig 2.4: Average P/E ratios for major housebuilders 1996 - 2000
Source: Company reports, FT

On the supply side of the equation, a more general constraint is the availability of the industry's most vital raw material - building land. The scarcest resource is often not the land itself but timely planning consent for residential development. The planning system has acted to constrain the volume of houses built for many years and there seems little prospect of accelerated release of land for private house building in the foreseeable future (Humber & Stewart 2002).

The industry has been widely criticised for being excessively standardised, delivering relatively low quality products with high construction costs. "As a product, new homes need significant further work to repair and maintain them. This work is often undertaken by an even more inefficient repair and maintenance industry. The building industry invests little in training and research and therefore it is difficult to see how it might improve itself to provide better quality products at lower cost." (Ball 1996).

Ball (1996) also explains how new housing demand in the UK has been highly volatile by international standards. This, he says, is largely the result of a housing supply that has been too low for too long, resulting in a repetitive boom-bust cycle. He explains how the cycle starts with a general improvement in personal wealth that stimulates demand for higher quality housing. As the production capacity of the housebuilding industry is virtually fixed, prices increase sharply. When prices reach an unsustainable level relative to average earnings, demand collapses.

Such a high risk market environment has not been conducive to innovation and investment for longer-term benefits. Ball (1996) further argues that the strategies

pursued by major housebuilders are based more on the personal judgements of individuals at the head of these companies, than through an industry wide ethos to improve standards of best practice by increasing productivity, enhancing quality, creating customer value and reducing costs. He sees major barriers to innovation arising from the volatility of the market, the lack of interest in new techniques amongst subcontractors and the reluctance of housebuilders to invest in training. He explains that construction is relatively unresponsive to rapid fluctuations in demand. It is a “resource sticky” industry, the greatest problem being labour availability. Construction is often described as an occupation of last resort on account of the long periods of cyclical unemployment typical of the sector. There is, he says, a relatively fixed amount of labour available for construction work, but as most building sectors ebb and flow simultaneously, there is competition for resources within this fixed pool. This is particularly noticeable when major projects such as the Channel Tunnel or new airport terminals are underway. Alongside the decline in output for the industry as a whole, there has been a corresponding reduction in the numbers of skilled tradesmen working in and entering the industry. The diminishing pool of skilled labour is further constraining the ability of the industry to increase its output, even during favourable market conditions.

Figure 2.5 shows how economic factors drive demand for new homes and why housebuilding is rated as a relatively high risk sector in the city. Favourable levels of confidence and affordability create a rate of sale that eventually proves unsustainable, given a finite pool of labour and the inefficiency of the land supply system. This results in a delayed response in the rate of build. The resulting

shortage of houses for sale drives prices higher and stimulates speculative behaviour in the market. As house prices rise, land prices increase at a steeper rate. Land and house prices subsequently overshoot what the market is prepared to pay and a correction occurs. Historically the volatility of this cycle has generated the risk of sudden halting of growth and has been a major causal factor behind the short-term, conservative thinking characteristic of major players in the industry. Housebuilders have developed tactical responses to this cycle in striving to maximise profits in an upward swing and minimise the downside of a correction.

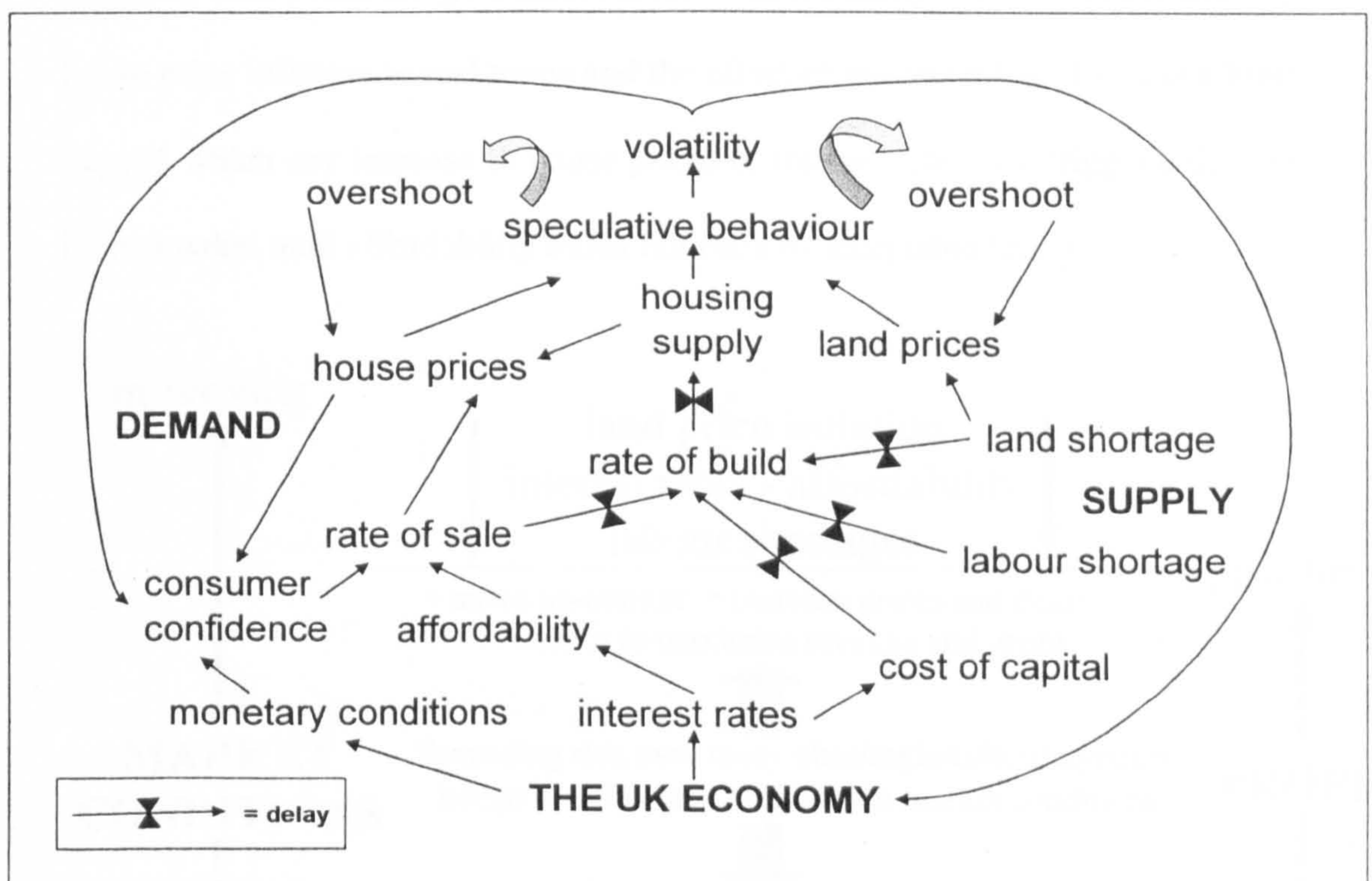


Fig 2.5: The drivers of imbalance between supply and demand in the private housing market

Figure 2.6 shows how the risks and rewards of tactical moves, made by housebuilders in response to the prevailing market conditions, are limited by

external factors beyond their control. Managing risk is easier for larger builders who are able to spread their exposure across a greater number of sites, regions and market sectors and by building a range of different housetypes that appeal to different customer groups. Housebuilders can enhance profitability by increasing the density of their developments and moving their products and building locations up-market. However, there comes a point when the shortage of labour constrains the rate of build and places a ceiling on the profit that can be generated in a particular upswing in the cycle. Similarly if increases in land prices exceed the point at which they can be passed through to consumers as part of house price inflation, then profit margins must recede. Affordability is influenced mainly by house price inflation in real terms and the effect of interest rates. There is a limit beyond which any increase in house prices or interest rates will trigger a decline in the market until affordability ratios fall back to acceptable levels.

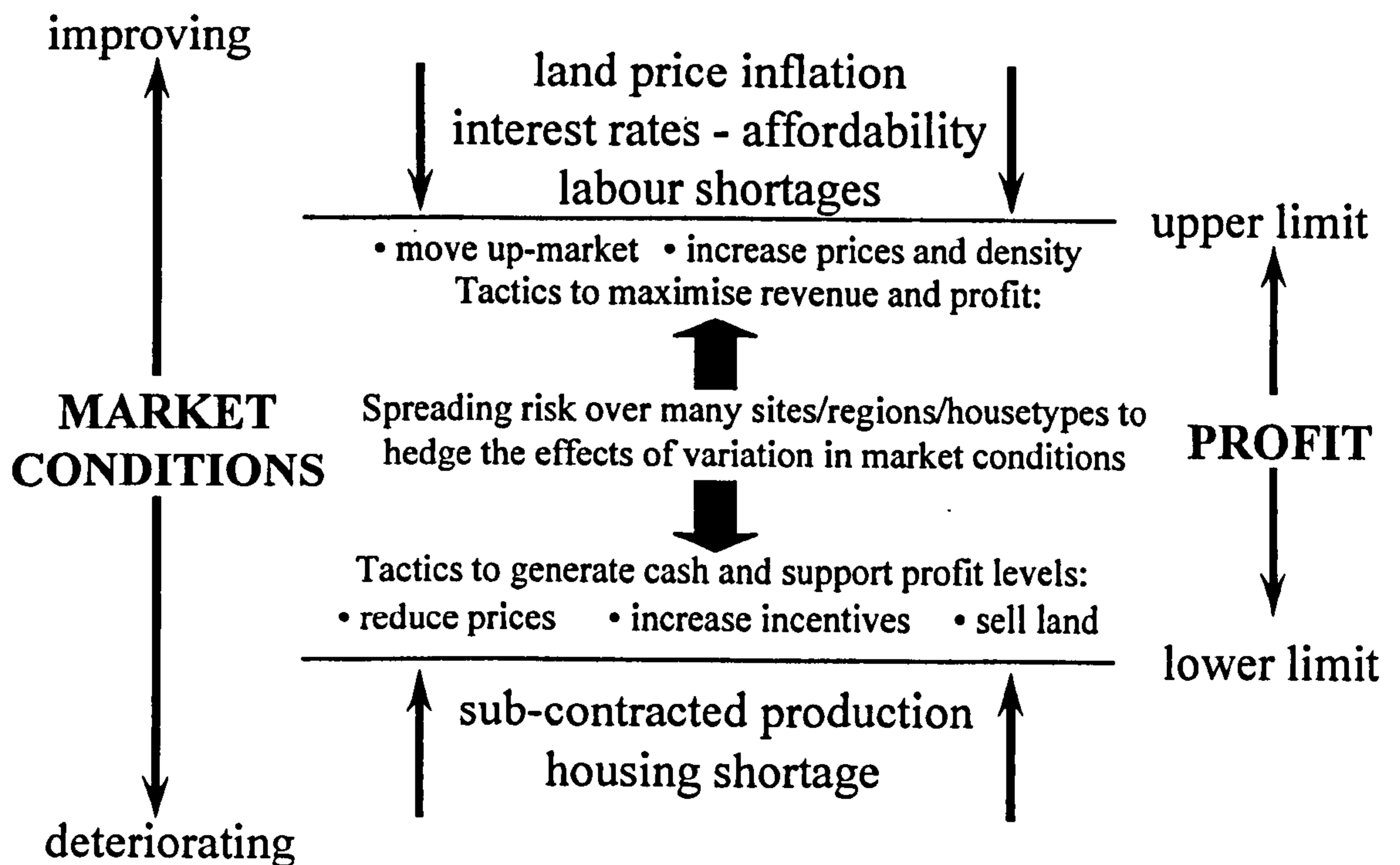


Fig 2.6: Tactical responses to changes in market conditions

When a downturn in demand is anticipated by housebuilders, one of their first responses will be to sell houses as far in advance as possible. This is known as “forward selling” and serves the purpose of creating a time buffer for production volumes to be adjusted in line with the expected reduced rate of sale. If margins are squeezed as a result of the price reductions required to forward sell in sufficient volumes, housebuilders may trade land to bridge profit shortfalls in the short-term. However, there is a limit beyond which this becomes an unsustainable practice. If house prices continue to fall and there is a general slowing of the market, land values will fall and it will be difficult to find buyers of land at acceptable prices.

The financial downside of a fall in the market is limited by two major factors, one short-term, the other longer term. The predominance of sub-contracted labour on site means that housebuilders do not carry the risk of major redundancy costs in the event of a significant downturn in demand. In the longer term, the underlying shortage of housing ensures that demand levels begin to grow again when economic drivers come back into balance and confidence returns to the market.

2.2 International Comparisons

In order to achieve significant improvements, the industry must be prepared to learn from examples of best practice, including those of firms operating in overseas housing markets. Skilled labour shortages and a need to improve

quality and efficiency appear to be issues shared across many countries as the demand for higher quality housing grows world wide. A recent study of innovations in the construction sectors of 15 countries including Japan, the US and the UK (Manseau & Seaden 2001) predicts that “ideas from advanced manufacturing and information technology will migrate more rapidly to the construction sector and novel approaches for site assembly will be developed”. However, several authors (Ball 1999, Barlow 1999, Chiang & Tang 2002) have questioned the capability of the UK housebuilding industry to embrace innovation and implement major changes in its culture and processes.

There are a number of reasons why the construction industry should be more able today to achieve a step change in performance, given the availability of cost effective and well proven new technology. For example, process change methods and advances in computer integrated manufacturing (CIM) technology have provided the means for major transformations in best practice manufacturing. This has progressed from task specialisation to mechanisation then to automation and finally to integration (Schlie and Goldhar 1995). Such a sequence of transformations could take place in housebuilding processes but as it is such a fragmented industry, there are no global corporations to lead this change. Learning from international comparisons and research is one way that UK housebuilders can drive improvements in their own processes.

The housebuilding industries of Northern Europe, North America and Japan have changed in different ways in recent years (Davies 2003(2)). A summary of the major trends and learning points for UK housebuilders now follows with a

particular emphasis on the use of off-site manufacturing methods, a major trend across the world.

2.2.1 Northern Europe

Europe comprises 54 different countries with a combined population of over 870 million people. Standards of living vary greatly and housing in Europe is very variable in terms of standards, quality and durability.

In common with the UK housebuilding industry, investment in modern industrial methods and facilities in the rest of Europe has been generally well below the levels that have been seen in manufacturing sectors. “The industry has yet to advance to where the automotive industry was 25 years ago” (Atkin & Wing 2000). However, there are parts of Northern Europe where industrialised processes are well established as part of the housebuilding supply chain. For example in the Netherlands, construction sites are generally more mechanised and there is widespread use of pre-assembled components. The “Open Building” concept is particularly evident in the Netherlands (Sarja 1998). This is based on a series of principles and technologies that achieve a distinct separation between the interior fit-out of a house and its external cladding and structural shell. This means that services such as electrical cabling and plumbing can be installed and maintained independently of the structure and cladding of the building. This allows greater flexibility in design and enables maintenance work and component replacement to be carried out more easily during the building’s lifetime. Open Building also presents an opportunity to

rationalise the combination of skills and knowledge required to build a house. This concept fits logically with the use of multi-skilled teams of assemblers who would construct a house using a prefabricated kit of parts. This approach could be applied to the housebuilding process as a whole by simplifying it into three or four stages – infrastructure and foundations, shell assembly, internal fit-out and external cladding (Roy *et al* 2003).

In Sweden and Finland, the predominant housing technology is timber frame due to the ready availability of raw material and its superior thermal performance including air tightness. The Swedish prefabricated builder-woodworker industry had 14% of total world export value for these products in 1985 (Porter 1985). Scandinavian countries such as Finland and Sweden use industrialised processes for housing construction to a far greater extent than the UK partly due to their shorter building seasons.

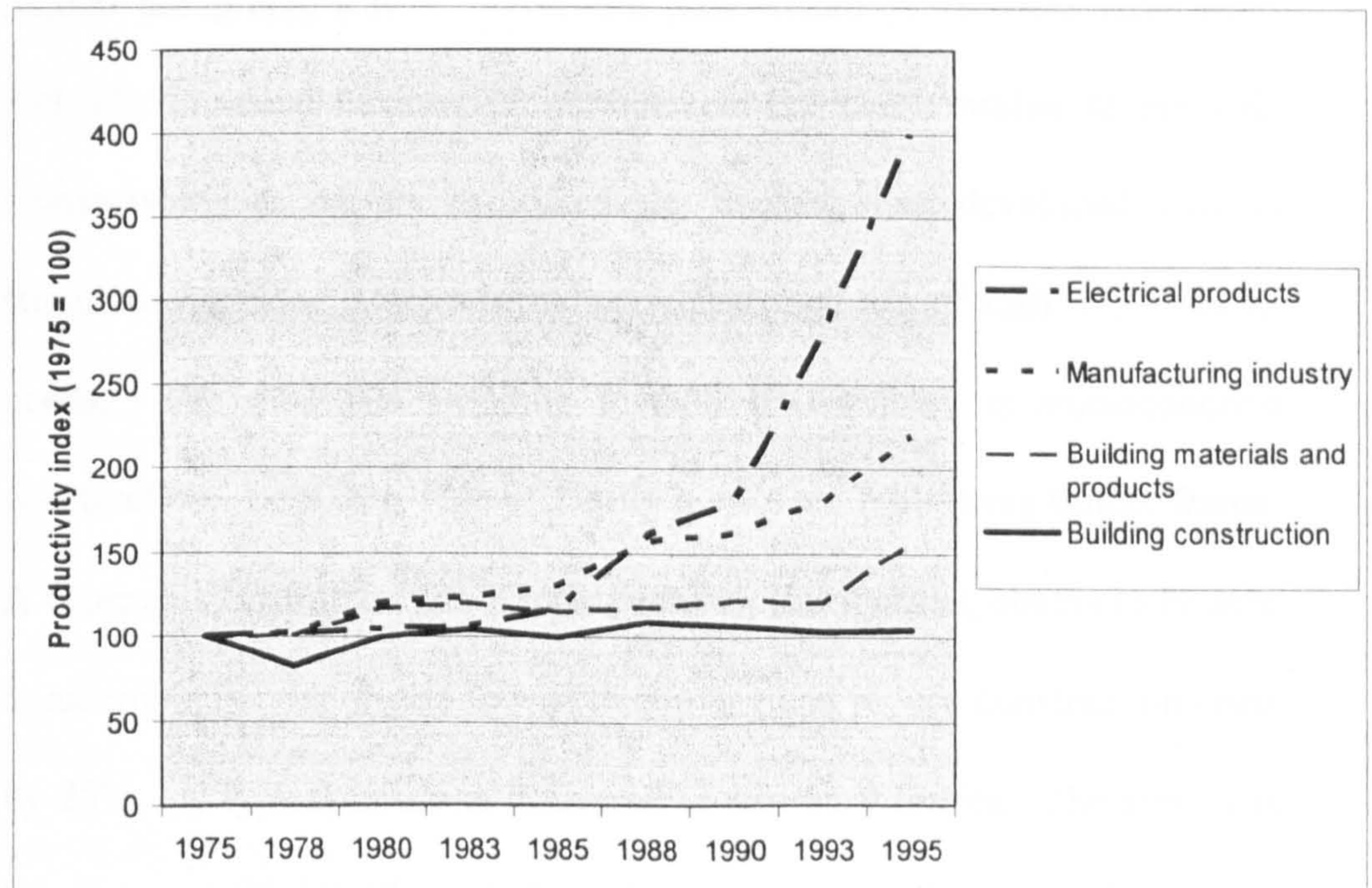


Fig 2.7: Productivity increase in some industrial branches of Finland over a 20 year period (adapted from Sarja 1998)

Despite the relatively high efficiency of the Finnish housebuilding sector, Figure 2.7 shows how poorly it has performed in terms of productivity improvement, compared with other sectors over the past 20 years.

In Sweden some firms assemble site factories as temporary manufacturing facilities for larger sites. These are temporary buildings that are removed once construction is complete. Several Swedish companies, such as Scandia-hus and Swedish Homes market their products to the UK self-build sector. They typically offer high quality, energy efficient panellised systems that are prefabricated and assembled on site in a few days by specialist crews.

Germany builds around 200,000 new homes per annum, of which over 30,000 are prefabricated. Over the past fifteen years there have been cutbacks in social housing programmes in Germany, similar to the UK. Consequently a deficit in affordable housing has developed that is stimulating greater interest in industrialised methods of fulfilling housing needs. The dominant building method in Germany is stone/concrete construction. Less than 10% of family homes are built using timber frame. A German steel frame system manufacturer, Europahaus, claims to be able to assemble houses on site in less than a day and reduce construction costs by 25%. A typical house is delivered to site on 9 lorries. The system is based on prefabricated steel framed components and is assembled by a team of 8 using a weather proof tent to cover the entire plot. Although

there is a general trend in German building technology towards industrially produced products and increasing automation in building materials factories, progress has been hampered by strict standardisation and quality control systems which do not support prefabrication (Sarja 1998).

2.2.2 North America

The US market is ten times the size of the UK market with over 1.5 million homes built new every year. The relatively low cost of land, materials and energy in the USA leads to consumers considering buildings to be easily replaceable. The willingness of the population to relocate means that people are more likely to move to a new property rather than adapt or renovate their current home. The shorter life expectancy of housing generates an acceptance of cheaper forms of construction and lower quality finishes. As a result, housing is seen as a consumer item in the USA rather than an investment as it is in the UK.

The following methods of construction are used in the USA today:

- Conventional, site constructed timber-frame/stick-built homes. Almost all single family homes and over 80% of apartment blocks are built using timber frame construction (Stehn & Bergstrom 2002).
- Panelised homes, using factory made floor, wall and roof panels assembled on site are starting to replace stick construction in many parts of the USA. These include structurally insulated panels (SIPs).

- The term “manufactured homes” has a particular meaning in the USA. It refers to factory made homes produced under a federal regulatory system or “HUD-Code” that are shipped throughout the USA. These homes are based on movable or mobile homes that gained in popularity during the 1960s and 1970s. The volume of HUD-Code homes more than doubled in the 1990s and they now account for over 25% of all new homes sold in the USA. HUD-Code homes are increasingly being placed on permanent foundations using more than one modular section and they can be financed by 30 year mortgages.
- Modular homes are constructed from a number of volumetric modules which are assembled on site on permanent foundations. Between 30,000 and 40,000 homes of this kind are built annually in the USA.

A number of major public-private partnership research projects have been launched in response to the US government’s efforts to stimulate change and improvement in the construction industry. These include the “Partnership for Advanced Technology in Housing” (PATH) initiative that was created with the following objectives:

- Reduce the monthly cost of new housing by 20% or more (costs of ownership).
- Cut the environmental impact and energy use of new housing by 50% or more and reduce energy use in at least 15 million existing homes by 30% or more.
- Improve durability and reduce maintenance costs by 50%.

- Reduce by at least 10% the risk of loss of life, injury and property destruction from natural hazards and decrease by at least 20% residential construction work illnesses and injuries.

The cost breakdown shown in Figure 2.8 was devised by the NAHB Research Center to identify the scope for cost savings. The research team concluded that even total elimination of any single cost component would not reduce monthly cost by the targeted 20%. This graphically illustrates the dominance of land cost in the overall cost equation for new homes.

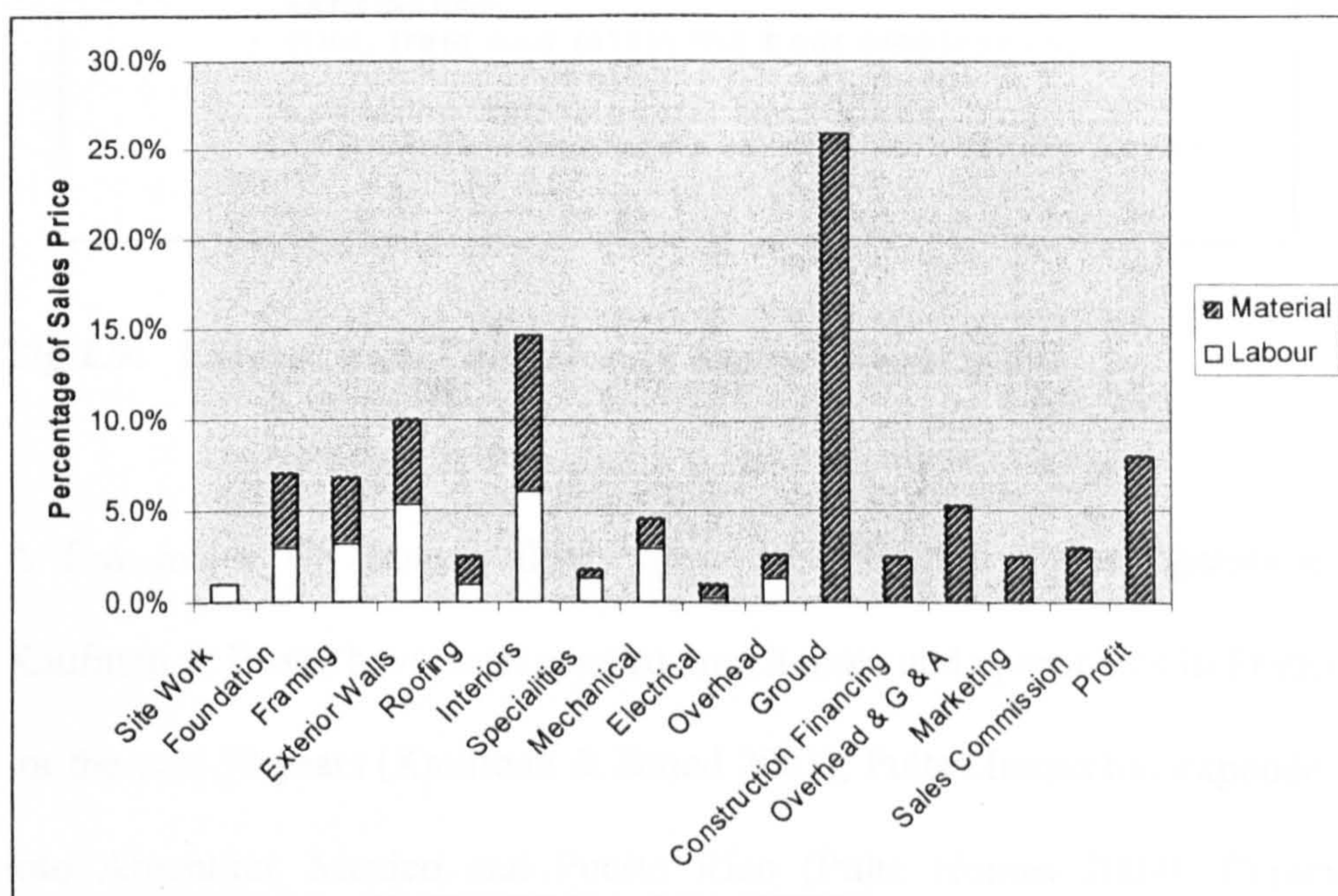


Fig 2.8: Average New Home Cost Components (PATH 2000)

There are signs that major US housebuilders are taking up the challenge of improving efficiency and customer satisfaction. Pulte Homes is the largest US housebuilder. The statements shown in Figure 2.9, taken from its Annual Report 2001, are now typical of major US housebuilders. The

message reflects an incremental approach to change but a firm commitment to delivering better quality, greater efficiency and customer satisfaction.

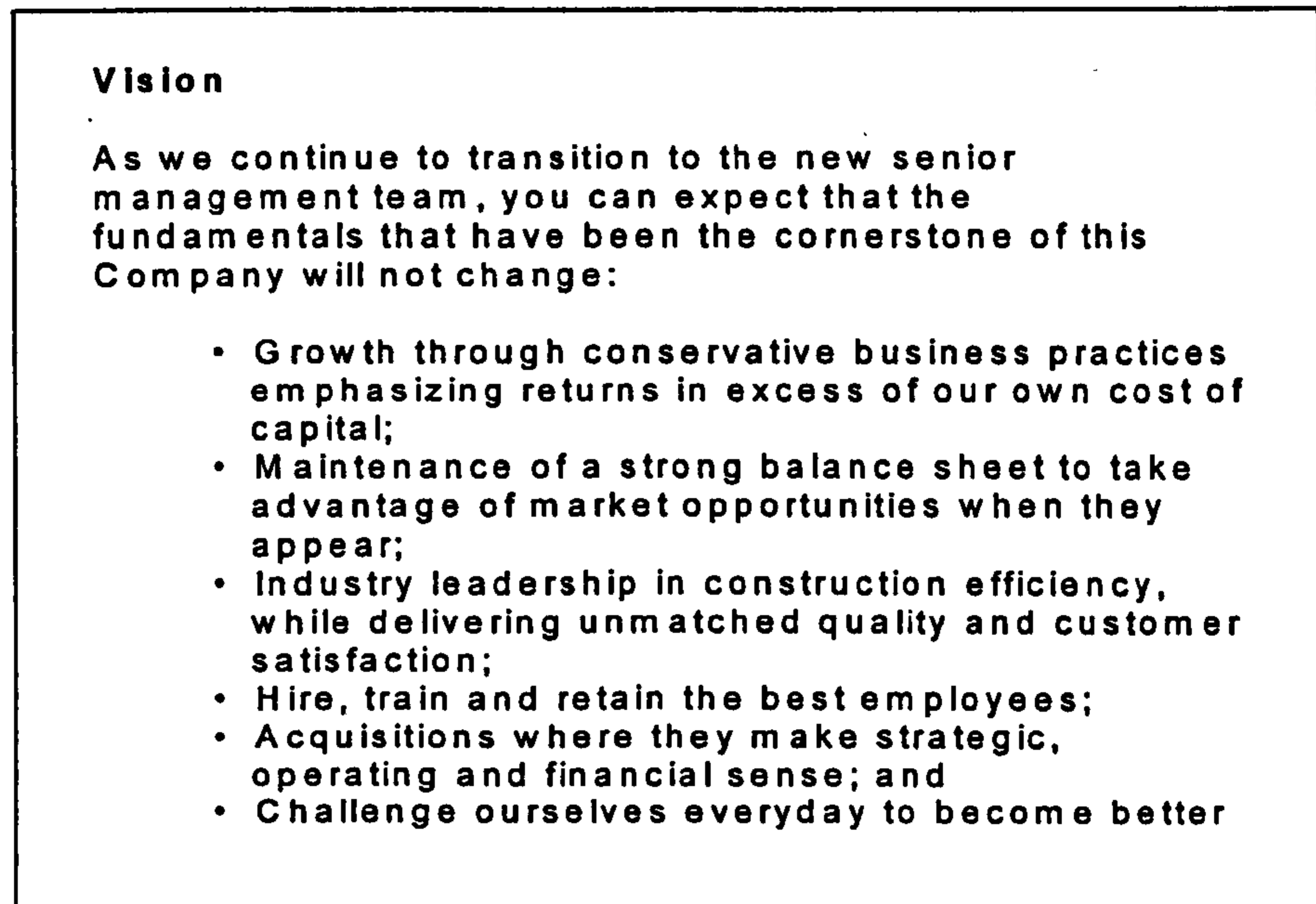


Fig 2.9: Extract from Pulte Homes Annual Report 2001

A few major US housebuilders have established overseas operations. Kaufman & Broad have been constructing houses and apartments in France for the past 30 years (Kaufman & Broad 2003); Pulte Homes has expanded into Argentina, Mexico and Puerto Rico (Pulte Homes 2003); Centex entered the UK market by acquiring Fairclough in 1998.

The Canadian housing market has reacted positively to system based approaches to house construction. This has facilitated the development of a wide range of different technologies in Canada from pre-engineered, panellised or modular systems to log homes, post and beam systems,

sandwich panel systems and others. Characteristics of the Canadian housing market include:

- A climate that requires high levels of thermal insulation
- Consumer demand for energy efficiency
- A growing awareness of indoor air quality
- Increasing environmental concern

Up to 10% of Canadian new housing stock is constructed using modular technology. In many cases this includes a lightweight cladding that is also installed in the factory. Assembly of an average house on site takes from 2 to 5 days.

2.2.3 Japan

With a volume of between 1 and 1.5 million units per annum, Japan is also one of the world's largest housing markets. There is a dominance of new build, with little renovation or DIY and short building lives. Similar to the

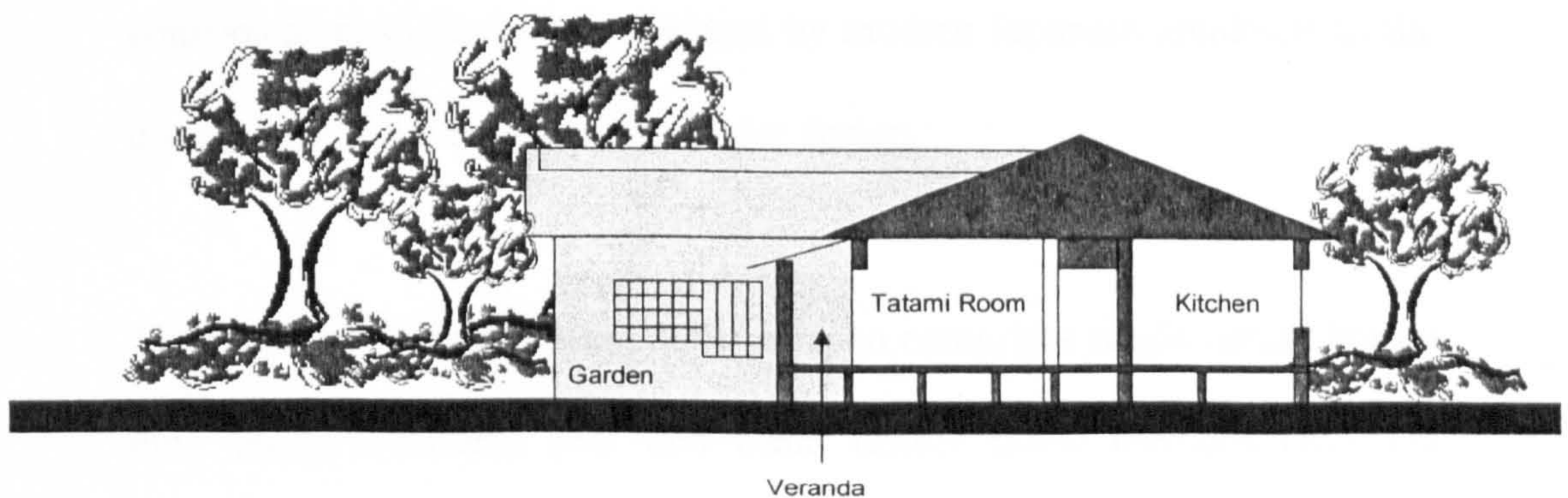


Fig 2.10: A typical cross-section of a traditional wooden Japanese house (Building Center of Japan 1998)

USA, the house is seen as a product to be consumed rather than as an investment. The industry has a well defined framework for innovation formed by government and industry. This includes regulations and significant public and private investment in research and development (Building Center of Japan 1998).

There are significant cultural differences between Japanese and Western approaches to house design. For example, a traditional Japanese house does not have a clear dividing line between its inside and outside. Figure 2.10 shows a cross-section of a typical traditional wooden Japanese house. Openings are partitioned by paper sliding doors (*Shoji*). The inside can be visually connected to the outside of the house by keeping the doors open.

Floors are built about 50cm above ground level to provide ventilation during humid summer conditions. Even new houses often include a traditional *Tatami* room which is used for a variety of functions including sleeping, entertaining guests and dining. The floor is usually covered by “*Tatami* mats” that measure around 900mm x 1800mm. This provides a convenient modular unit that is used by modern Japanese architects as the dimensions of the basic grid for house design.

The majority of new housing built in Japan comprises single family homes built using traditional post and beam timber frame methods (Iwashita 2001). In parallel with the many thousands of small local contractors who construct these custom-built homes, there is an industrialised housing sector led by some of the largest and most sophisticated house

manufacturing firms in the world. Two of the largest of these, Sekisui and Daiwa, entered the housebuilding sector from a manufacturing base (Davies 1998 (3)). There are several other Japanese companies with a similar background, including Toyota which has transferred skills and processes from its automotive plants to modular house manufacturing factories in Japan. The leading firms each produce over 50,000 houses per annum – a scale of operation unmatched across the world. As Sawada (1998) explains, the establishment of a “new housing industry” commenced in Japan during the 1960s as part of post-war rapid urbanisation. A further driver was the search for new markets by materials producers such as the steel industry (Gann 1996). Housing construction using industrial building components and prefabricated house production tripled productivity between 1960 and 1990 (Sawada 1998). This was partly due to the shortage of skilled labour required to build traditional post and beam housing and the slowness of this construction technique that led to an exploration of industrialised methods. Sawada (1998) explains that “capital concentration was needed in order to transform business corporations during this period”. This took the form of mergers and acquisitions amongst sub-contractors and manufacturers of prefabricated houses, resulting in the emergence of ten major companies. These leading companies adopted planning, manufacturing and marketing technologies from car and home electronic product manufacturers. Sawada (1998) observes that “The prefab industries were losing characteristics of the construction industry and taking up characteristics of the manufacturing

industry”. He cites two important elements that supported this transformation:

- A new business organization concept was developed to manage the whole process from market research, planning, design, production and maintenance of the products and services.
- The companies developed computer-based automation of information handling in this work process.

Two separate industries currently operate to deliver manufactured housing in Japan:

- prefabricated house manufacturers
- general contractors

Sawada (1998) predicted further efficiency gains in the future via the integration of these two separate processes into single company operations.

Iwashita (2001) reported the realisation of this trend in the emergence of “super subcontractors” – firms that have vertically integrated building component supply and installation and horizontally integrated roofing and exterior finishing work into their span of control.

From the initial aim of producing basic accommodation as rapidly as possible, the Japanese house manufacturing industry has developed to provide high quality, long lasting homes with short site construction periods, while reducing costs (Steel Construction Institute 2000). Japanese housing producers make most of their profits from construction, not from

land transactions (CIRIA 1996). Therefore producers focus more on the improvement of construction processes than their UK counterparts. There is also a far greater emphasis on customisation for individual customers in Japan. 80% of detached houses are one-off designs for individual customers who own the site which is a recycled infill plot for 60% of new home buyers (Building Center of Japan 1998). This provides a financial incentive for house providers to develop more efficient techniques for production and customisation. The Japanese housing market has the following characteristics:

- It is driven by customer choice and providing flexible solutions to meet different requirements.
- The house is viewed as a product to be consumed rather than an investment. There is little renovation or DIY in Japan
- There is a distinct framework for innovation formed by government and industry including regulations and significant public and private investment in research and development.
- Industrialisation is seen as a way of providing customer choice, including the provision of high quality and flexibility, not just cost reduction.
- There is a strong commitment to the use of and development of software tools for visualisation, design and improving the production process.
- There is a willingness amongst firms to exchange ideas to help develop the sector as a whole.

Over two thirds of houses in Japan are timber frame but the proportion of non-wooden structures such as reinforced concrete and steel-frame has been increasing for several years (Building Center of Japan 1998).

Lightweight, prefabricated housing in Japan is mainly of two types:

- Factory made panels using timber or steel with cladding and linings.
- Modular, room sized volumetric units usually based on light steel framing and cladding, lining and fitting out in the factory.

In recognition of the premium cost of housing manufacture in Japan, there has been an active investigation of international practice by Japanese firms.

In recent years this has included the importing of kits for prefabrication of houses from North America and Europe.

2.3 Learning from manufacturing industry

Parallels have often been drawn between the UK housing industry and the automotive industry which emerged in the late 1800s (Miles 1996, Barlow 1999).

The earliest car producers operated on a craft production basis, employing a highly skilled work force using general purpose machine tools to produce customised vehicles. After World War I the industry moved into mass production methods, pioneered by Henry Ford in 1913 and perfected by Alfred Sloan at General Motors in the 1920s (Womack *et al* 1990). In the last few decades of the twentieth century mass production was superseded by lean manufacturing, developed by the Toyota Motor Company of Japan. In each of

these major transformations, many previously successful companies lost the ability to compete effectively.

The construction industry has not experienced a change in its processes from craft production to mass production. Furthermore, the quality of the skills base on which its construction capability depends has deteriorated significantly in recent decades (Ball 1999). This has been compensated for to some extent by the introduction of manufactured components such as staircases and windows but there are many aspects of the finish quality of a house that are delivered to varying degrees of quality, depending on the level of construction worker skills available. Ford's methods were based on standard, interchangeable parts and the breakdown of the production process into repetitive, simple tasks (Womack *et al* 1990). There is relatively little standardisation of parts in housebuilding, other than modular materials such as bricks and blocks, and tradesmen are typically self-employed specialists, having trained as carpenters, plumbers, bricklayers or dry-liners for example. It is unlikely that the predominantly sub-contracted on-site workforce would be willing to tolerate the monotony of a mass production process if such a change were attempted in the construction industry.

The transition from craft based production into lean processes is seen by some authors a feasible proposition for the construction industry (Alarcon 1997, Barlow 1999). However, creating a continuous improvement culture is a major challenge that requires fundamental changes in attitude and a significant investment in training and development. As the sub-contractor workforce is employed predominantly by small, unsophisticated firms, this is unlikely to

happen unless larger companies move to the direct employment of construction workers.

On a tactical level there are many opportunities for the transfer of ideas from the manufacturing sector to construction. For example, the automotive industry concept of “late configuration” that involves the delayed installation of features of the car that are subject to customer choice until the final stages of assembly, could be readily adopted in the building of a house. A further example is the implementation of quality improvement methods such as quality circles and quality action teams.

2.4 Lessons for the UK Housebuilding Sector

No single role model for UK housebuilders emerges from this review of international and manufacturing industry trends. Although they have many processes and raw materials in common, housebuilding industries across the world have developed very differently in different countries.

The following sections draw out lessons that may prove of value in formulating competitive strategy for UK housebuilders. Significant differences are also identified as these may highlight the need to modify features and processes for application in this country.

2.4.1 Choice, design and materials

The best examples of customisation are to be found in Japan. Extensive catalogues of components and materials are presented to customers who

can choose every detail of their new home right down to the species of wood for each door architrave. Japan is also a leader in the use of alternative cladding materials for housing. A less constraining planning regime allows far more experimentation with new effects than would be permitted in the UK mass market. Ceramic claddings of different dimensions from mosaics to large rain-screen tiles are common. These provide an almost limitless range of colours and textures that can have a major effect on the external appearance of a house.

Although house design is partly a function of the legislative regime in each country, architects and those responsible for briefing and approving designs have the power to offer new ideas to planners, even in areas where vernacular styles are the order of the day. There has been little importation of foreign house designs into the UK other than for niche developments or individual architect-designed homes.

2.4.2 Customer focus

Both Japan and the USA provide impressive examples of customer focus that the UK can learn from for different reasons. In Japan the major house manufacturers have focused on developing their production processes to become more flexible and thereby offer wider choice and customisation. In the USA, major housebuilders offer a wide range of choice but the majority of them still use the same labour intensive on-site processes. As Pine (1993) says “people don’t want choice, they just want exactly what they want”. The challenge for housebuilders is to develop

processes that can create individual homes at no extra cost. There is also a need to find ways of enabling customers to visualise their chosen options without having to build full-scale room sets. Toyota is a leader in this area, offering computer based visualisation to their customers. A further important aspect of customer focus is the service provided by housebuilders. Once again excellent examples can be found in Japan and the USA. It is not uncommon for sales personnel to spend months servicing individual customers in Japan. In the USA there is a more of a customer service culture than in the UK and this extends to the housebuilding sector.

2.4.3 Home-related products and services

All of the top five US housebuilders offer a finance package and a house design service to prospective customers. The “one-stop-shop” approach is firmly established as a means of making the housebuying process more convenient for customers and to create new sources of revenue for housebuilders.

In Japan home-related products and services are often integrated into the house buying process. For example, volumetric modular house manufacturers incorporate many additional features which the customer can choose from a catalogue to individualise their homes.

2.4.4 Off-site manufacturing

Japan was the first country where major investments were made in house manufacturing facilities. Japanese manufacturers still lead the world in terms of the scale and variety of their housing factories. However, more flexible and cost effective examples of housing manufacturing facilities can be found in Scandinavia and Germany. There is a global trend towards industrialised construction methods and it is important to monitor closely new technologies as they are developed in Japan, the USA, Europe and in the future, China.

2.4.5 Industry Structure

Construction industries worldwide are typically very fragmented. This means small local builders who service a limited geographical area or housing developers who employ small firms of specialist contractors. This makes on-site processes difficult to standardise and very labour intensive. The Japanese housing sector shows the most radical move away from this fragmentation driven by the growth of large scale firms that focus on product design and component manufacture or mechanised on-site assembly. The recent emergence of “super sub-contractors” is consolidating on-site processes further under single corporate entities.

2.4.6 Culture change

Culture is defined collectively by all members of a community (Block 1993). Consequently it is very difficult to change. In order to integrate new processes effectively with existing on-site processes, it is necessary

to change the traditional culture of the construction industry. For example, eliminating the fragmented approach to construction that results in tradesmen having no incentive to complete jobs on time or take responsibility for handing over high quality to the next stage in the process. These aspects of culture will have a critical effect on the chances of success for new strategies and innovation (Davies1998(5)). Cultural change is often stimulated by crisis and can take several years to take full effect. Several studies have shown that culture change programmes must be linked to actions for improvement (Baden-Fuller & Stopford 1994). “Grand schemes for change without action seldom work” (Beer *et al* 1990). However, as has been demonstrated in Japan, the emergence of a “super-contractor” sector from a manufacturing background could have a profound effect on the culture of the construction industry in the future.

2.5 The needs and opportunities for change

It is clear from the literature covering the performance of UK housebuilding from a government perspective (Latham 1994, Egan 1998) an academic viewpoint (Ball, 1999, Barlow 1999, Roy & Cochrane 1999) and city opinion (Hardy 2000) that the industry needs to change. The more stable economic environment of the early 21st century provides favourable conditions for major change to take place. Table 2.3 shows a summary of the needs and opportunities for change that have been identified in the course of this study.

Need	Root Cause of inability to satisfy need	Opportunities to satisfy need
Improve the quality of finished products	Reliance on skilled tradesmen of varying ability and low levels of onsite supervision	Transformation from on-site construction to industrial housing processes
Offer wider choice and customisation	Inflexible construction processes and cultural resistance	Modular product design with integral flexibility for customisation
Reduce dependency on ageing skilled labour force	Diminishing pool of skilled labour, young people not attracted to the industry, inadequate training	Invest in training, provide more attractive career paths, reduce need for specialist skills on site. Improve working conditions on site.
Develop greater responsiveness to changes in market demand	Cyclical demand limits availability and flexibility of labour	Flexible manufacturing facilities capable of supplying non-housing sectors
Reduce costs and increase return on capital	Waste of materials, time and labour. Inefficient supply chains and on-site processes	Alternative materials, prefabrication, streamlining processes, lean manufacturing methods

Table 2.3: Summary of the needs, causes and opportunities for change in the UK housebuilding industry.

The UK housebuilding industry shows many of the characteristics of the automotive industry 30 years ago before it embarked on major transformation. A new competition framework for the industry would drive improvements in choice, quality and service that consumers have benefited from in the market for new cars.

2.6 Trends towards a New Competition Framework

There are a number of trends that may lead to the emergence of a new Competition Framework for the UK housebuilding market. Some of these trends are part of the global transition to a “new competitive landscape” (Bettis & Hitt

1995) that has been described in summary as “the customer’s victory” (Dupuy 1999). Economic power has been passed from the producer to the consumer who, as a result, enjoys “more quality, more for the money, more choice, more service” (Hammer and Champy 1993). Pine (1993) identifies the following as features of the competitive landscape of the 1990s:

- Time-based competition
- Proliferating variety
- Just-in-time production
- Regional marketing
- Continual improvement
- Shortening product life cycles
- Market-driven quality
- Globalization
- Networked organizations
- Micromarketing
- Increased customization
- Lean production
- Cycle time reduction
- Total quality management
- Flattening hierarchies
- Computer-integrated manufacturing
- Process re-engineering
- Heightened importance of services
- Fragmented markets
- Quick response
- Flexible manufacturing systems
- Database marketing

These features create the general market environment that are driving competition in other sectors and that consumers are becoming accustomed to. Specific trends within the house building industry are shown in Figure 2.11. There are some early signs of convergence between these two series of trends as housebuilding consolidates and begins to modernise as an industry. One major assumption for housebuilders is that there will be a more stable UK housing market which does not suffer the boom-bust cycles typical of the late 20th century. The current pent-up demand in the market is forecast to be progressively eased by a combination of a major demographic downturn associated with the age structure of the population (Ermisch 1990) and a major government sponsored drive to build more affordable homes in areas that suffer from acute housing shortage (Stewart 2002). Concentration within the industry is

expected to continue, resulting in greater market share for the major players at the expense of small and medium sized building firms. The market will become even more dominated by regional subsidiaries of large plc companies. The growing complexity and costs of dealing with planning issues such as contaminated land and consortium collaborations will continue to reinforce this trend and favour larger firms.

• Growing demand for self-build and customisation in the private sector	
• Developing a reputation for quality will become an important element of strategy	
• More professional marketing will tailor products/services for specific segments	
• Less land development gain in housebuilders' profit, need for greater cost focus	
• Buyers more concerned with workmanship, quality, design and operating cost	
• Buyers moving more for lifestyle reasons – to improve quality of life	
• More diverse demand – need for flexible house designs	
• Process change – prefabrication/mechanisation to improve quality and de-skill	
• Less sub-contracting, more direct labour on site	
• Greater dominance by large volume housebuilders	
• Major government driven housing programme in selected areas of the UK	
• More stable private sector housing demand	
market stability	
2000s	2010s

Fig 2.11: Trends towards a new Competition Framework

Bramley *et al* (1995) believe that more stable housing demand may mean that the performance of housebuilders will be more closely related to activities in housebuilding *per se* than to their engagement in speculative land development. If this proves to be the case, then housebuilders must focus more on improving

their business and construction processes, rather than relying on speculative gains to compensate for high levels of waste and inefficiency. It is likely that this would lead to more extensive use of prefabricated components and mechanisation on site. This would reduce the reliance of housebuilders on increasingly scarce tradesmen with specialist skills such as plastering, carpentry, plumbing and bricklaying. Information technology would have an important role to play in the implementation of more automated processes on site and the more disciplined management of construction supply chains.

Demographic trends predict fewer young couples forming new households (Ermisch 1990) and an increase in the proportion of single person households (Figure 2.3). The ageing UK population will represent a more sophisticated and demanding customer base than has ever been served by the industry before. This will require a move away from the mass marketing of standard housetypes to the flexible production of customised homes that match a wide range of lifestyle aspirations and life stage changes. The first-time buyer sector is of far less importance than ten years ago, having fallen from 53% of all new mortgages in 1995 to 38% in 2002 (Stewart 2002a). A more discriminating customer base will be more demanding in terms of quality and service. Housebuilders with flexible and user-friendly ways of tailoring products to match customer needs and aspirations will be more successful in this new competition framework than those that focus mainly on the land acquisition side of their businesses.

There is evidence to suggest that the government will progressively claim a higher share of land development gains that currently support housebuilders'

profit margins. This will probably be achieved by the government imposing higher quotas of affordable housing, infrastructure and community facilities that housebuilders will have to provide as part of the conditions for granting planning consents. Some of this lost profit would be channelled back to land vendors in the form of reduced land prices but the pressure on housebuilders' margins would generate greater focus on controlling the costs of building and marketing houses than has been the case in the past. This trend, combined with focus on process improvement and the need to satisfy more discerning customers will heighten the importance of quality on the business strategy agendas of housebuilders.

There is also a trend towards instilling a "stewardship" role for housebuilders, reflecting the government's desire that housebuilders should accept greater responsibility for nurturing "living communities" in the housing developments they create. This is being promoted through the government sponsored Millennium Community projects that have been launched across the UK over the past few years.

Finally, self-build or self-promoted homes, as the ultimate form of customisation, are expected to continue to grow in popularity and are likely to become a more significant source of competition for major housebuilders in the future. Self-build accounts for over 14% of the UK market (Duncan & Rowe 1993). It is more common in other European countries such as France and Italy, both of which have had a self-promoted housing sector representing more than 50% of the market since the 1980s (Duncan & Rowe 1993).

2.7 Ways of Competing for UK Housebuilders

A new competition framework for the UK housebuilding market would require major housebuilders to find new ways of competing. The following attributes could form the basis of competitive advantage in this new framework:

- Workmanship and Quality
- Customer Service
- Distinctive design
- Range of choice and specification
- Customisation
- Speed and reliability of delivery
- Technology in the home
- Operating costs of the home
- Specialised niches such as sheltered housing for the elderly
- Sustainability and environmental friendliness
- Community support and services
- After-sales service
- Complementary products and services for the home
- Branding and lifestyle positioning

The organisational structures and core skills of major housebuilders operating in the 1990s do not match the competences required to achieve real competitive advantage on the basis of the majority of these attributes. A major shift in emphasis and investment in change would be necessary to re-align firms more closely in tune with the needs of consumers and improve their abilities to satisfy

a more discriminating customer base. If housebuilders accept that a new framework is likely to emerge, they can choose to pioneer by investing in a major change process to lead the development of a new competition framework or they can adopt a “me-too” strategy, following others only when new ideas have been proven in the marketplace.

2.8 A New Competition Framework for UK Housebuilders

In summary, a new competition framework could develop amongst UK housebuilders as a result of the trends that are occurring within the industry and in a wider context. Figure 2.12 provides a summary of how currently

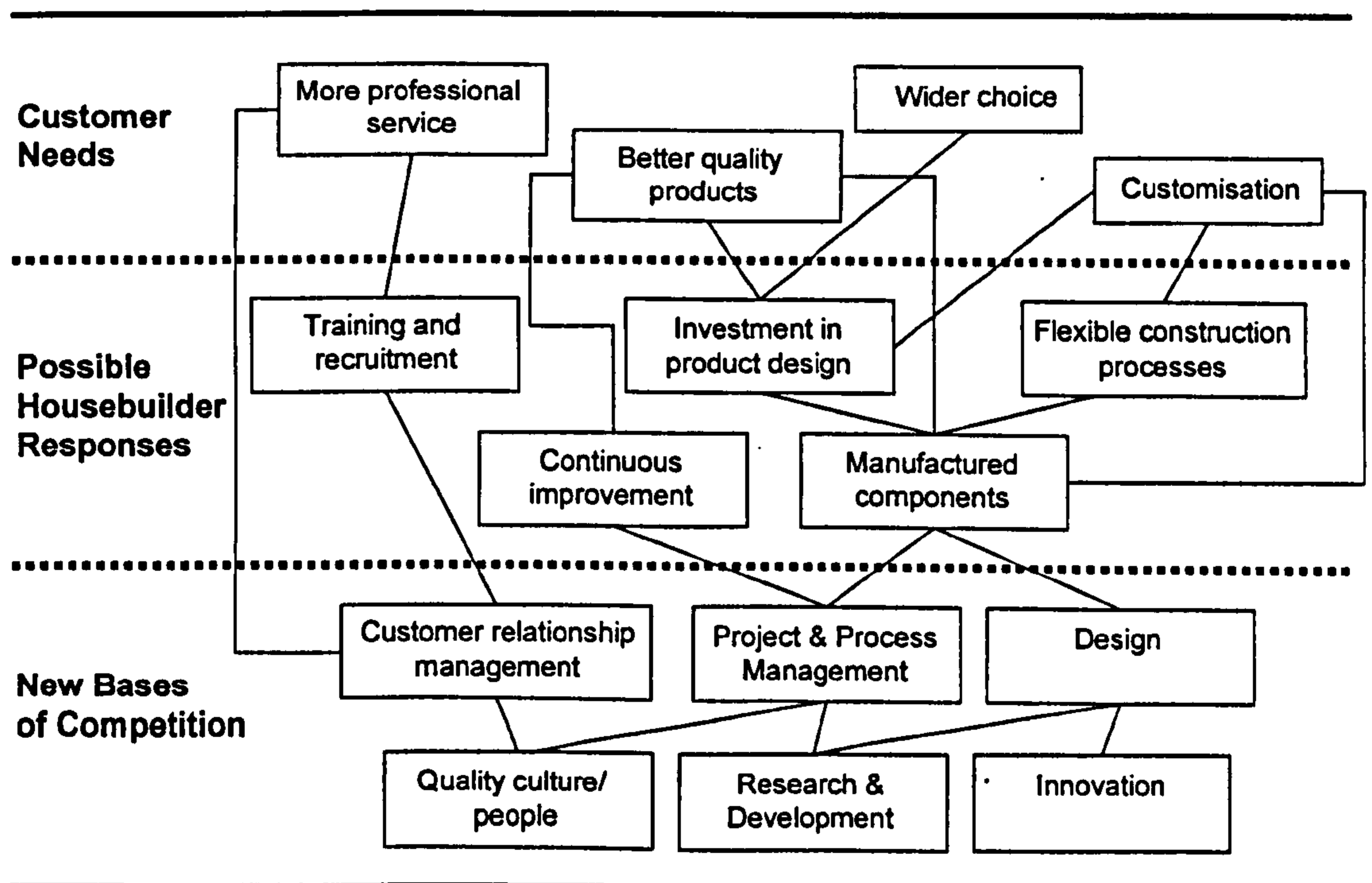


Fig 2.12: A New Competition Framework for UK Housebuilders

unsatisfied customer needs could stimulate a number of responses amongst housebuilders to create new bases of competition for the industry. This would help to create a more modern and professional industry that would compete on more customer focused bases such as quality, service, design and innovation. It is not clear if major housebuilders have the will and the capability to make the necessary transformations in processes, attitudes and culture to respond in this way. However, this rationale for a new framework highlights the vulnerability of traditional housebuilders to new competitors entering the market who are better equipped to satisfy customer needs more fully.

Given this insight, the opportunity arises for a UK housebuilder to stimulate a transformation of the industry by adopting an innovation leadership strategy in the same way that the Toyota Motor Company led the lean manufacturing revolution in the automotive industry. This will now be explored from Westbury's perspective.

2.9 Westbury's Future Competitive Position

As the eighth largest UK housebuilder in 1997, Westbury needed to gain a competitive position that would enable it to survive the expected consolidation amongst the top 20 firms (Table 2.1). This meant a need for differentiation and aggressive growth. As part of the commencement of the necessary change, a series of positioning workshops was held with the Regional Managing Directors (RMDs) to define how Westbury competed and where the company was positioned against other housebuilders in terms of its chosen performance

measures. The following bases of competition were identified by the Regional Managing Directors:

- Value for money
- Price
- Exterior design
- Specification
- Customer service
- Reputation

The RMDs then scored the performance of Westbury and major competitors against each of these criteria and identified the desired position for Westbury in the future. This exercise led to the generation of a number of positioning matrices that were used to agree a series of common objectives aimed at re-positioning Westbury over the next five years. These included:

- To improve the design and customer appeal of Westbury product range
- To improve the standard of customer service offered
- To re-position the Westbury brand and create a more customer friendly, homely and up-market image in the market place

These represented the short-term goals, the achievement of which would enable the company to improve its competitive position. A number of actions have been taken to prepare the ground for change within Westbury. These commenced with the launch of the Westbury Values programme in November 1997. This introduced a series of core values for Westbury employees:

- Our business is based upon customer focus
- We strive constantly for excellence and exceed quality standards
- We encourage innovation and achieve objectives through teamwork

- We respect and recognise individual contribution

This represented the beginning of a programme of culture change announced by the Chief Executive to all Westbury employees at the “Westbury Values” launch event held at the NEC in Birmingham. This was followed by briefing sessions throughout the organisation. A 360 degree feedback process was also employed, providing feedback to the Executive Directors from a sample of employees at different levels. This was designed to identify how behaviour and perceptions aligned with the core values.

Incentive schemes have been introduced in order to link rewards with the achievement of key strategic objectives. For example, Regional Directors’ annual bonuses are indexed to customer satisfaction scores for their areas of operation.

Visits to companies in Japan, USA, Germany, Holland and Sweden have helped to stimulate new ideas and maintain an outward view within the company. The Chief Executive joined the visit to Japan. This helped to inform the board about the scope for change and quality improvement in Westbury’s operation – a vital stage in the process of introducing new construction methods.

The development of a continuous improvement culture is one of the most challenging objectives facing the Group. A major initiative has been launched, working with the Unipart Group to map Westbury’s business processes and introduce ways of improving quality and efficiency.

The HOBMAN project (Roy & Cochrane 1999) proved to be a very effective

means of identifying the need for change and proposing new ideas and improvements. Amongst the many outcomes of the research, there has been a significant contribution to the development of quality improvement programmes and customer research.

A detailed and rigorous business planning process has been introduced that provides a framework for implementing strategic change. This was first applied as a Group process in 1995 and has been progressively developed to include individual business plans for each Region and new business unit.

A substantial amount of work has been carried out towards understanding customer needs more fully and measuring the Group's success in satisfying these needs (Craig 2003). A process has been developed with the NOP Research Group to measure customer satisfaction at two stages in the customer journey, six weeks and six months after move-in. This has generated detailed reports of satisfaction levels for each Westbury region (Appendix I).

A customer database has been assembled. This is updated annually from the results of a customer questionnaire survey. The series of questions asked has included the collection of ideas for widening the range of home-related products and services offered to Westbury Homes customers.

Brand strategy has included the development and launch of a new corporate identity to support the re-positioning of Westbury Homes and the origination of the Space4 and Incresco brands. The "brand wheels" shown in Figure 2.15 have been devised for each new business to distil the prime values associated with each brand.

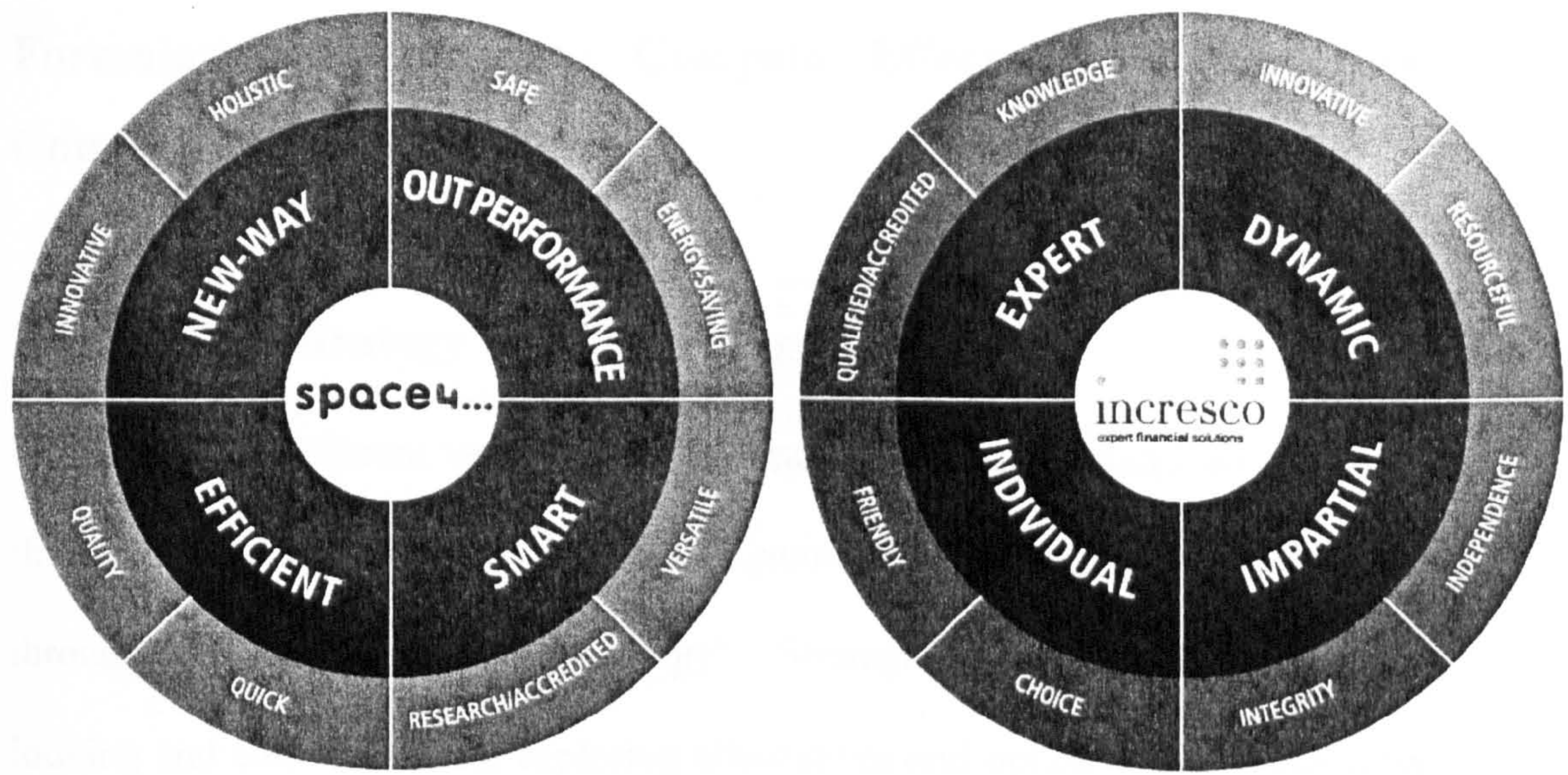


Fig. 2.13 Brand Wheels for Westbury's new businesses

This work established a foundation for change at Westbury in preparation for a more coordinated drive towards becoming an innovation leader in the context of the new competition framework. This required a thorough review of the broader strategic alternatives and more effective techniques to formulate competitive strategy. The search for these techniques and options forms the content of the following chapter.

Chapter 3

Formulating Strategy to Compete Effectively in the New Competition Framework

3.1 Defining Strategy

Despite all the different ways of defining and categorising strategy and strategic thinking (Davies 2003 (1)) there are a number of common themes running through what people mean by “strategy”. Strategic thinking is always forward looking and concerned with exploring alternatives and options. It is focused on the external factors that may affect an organisation’s ability to compete and tries to anticipate how markets and competitors may behave in changing circumstances. When strategy is rigorously implemented, significant resources are allocated to make it happen and this is really what distinguishes strategy from tactics.

Some strategies are inherently more effective than others. A good strategy targets a competitive position with high potential for value creation and aims to establish a position where value is hard for others to capture because needs are difficult to meet. A good strategy also strives to gain a position that a company has the ability to serve.

3.2 Approaches to Strategic Thinking

In the 1960’s, the new discipline of strategic planning was seen as the “one best way” to devise strategies that would improve a business unit’s ability to compete

(Ansoff 1965). This involved a rather mechanistic step-by-step approach, prescribed by specialist strategic planners that treated strategic thinking as a process separate from other functions within organisations. The strategy making process often followed a check-list (Pumpin 1987) such as:

- Analyse the industry
- Analyse the competition
- Analyse your company
- Devise a strategy

Such classical analytical approaches to strategic planning have been criticised by a number of authors as inadequate ways of planning a company's future success (Tannenbaum & Schmidt 1973, Mintzberg 1994, Campbell & Alexander 1997, Noy 1998). They argue that these approaches rely too much on analysis and exclude the "basic ingredient of a good strategy – insight into how to create value" (Campbell & Alexander 1997). More recent methods have attempted to correct this perceived imbalance between analysis and creativity (Chaharbagi & Willis 1998, Sanderson 1998). Analysis still forms an important part of these new approaches but it is complemented by greater employee involvement, creativity and customer focused methods.

Today a commonly accepted prime objective for business strategy is to maximise the value of a company (Segal-Horn 1998, Ward & Grundy 1996, Burgelman 2002). Therefore several current approaches to strategy focus on two key issues:

- the creation of value
- the development of competitive advantage

The rationale behind this is that businesses deliver benefits to customers by satisfying their needs. The value they create is the difference between the costs they incur and the value of the benefits offered to their customers. The best way to protect a value generating position is to find needs that are in some way hard to meet and develop some advantage relative to the competition (Coyne 1984). So a key decision at the outset of formulating strategy is which needs to meet for which customers. This choice is called a company's "competitive position" (Forbis & Mehta 1979).

The other half of strategy formulation is about identifying and building sources of competitive advantage that will allow a company to serve its chosen position better or cheaper than its competition (Gluck *et al* 1980, Porter 1985, Bettis & Hitt 1995, Zairi 1996). Companies must choose positions and advantages that are the optimum balance between attractiveness and achievability both now and in the future.

3.3 Strategic Decision Making

Strategy is fundamentally about deciding what new competitive position a firm wishes to achieve, formulating a plan to get there and then allocating resources so that the organisation moves progressively towards that position. There are several generic types of strategic options that managers can choose from to

develop effective strategies. Different authors define these options in different ways.

Much of the literature on strategy is concerned with different ways of conducting analysis to identify and evaluate a range of alternative courses of action. For example, consumers in any specific market have a range of needs that may not be fully satisfied by a single product or service. The classic way of dealing with this issue is called segmentation. Segmenting a market allows companies to identify customers with similar needs so that they can satisfy needs more accurately (Datta 1998). A single business unit is unlikely to satisfy the needs of all segments effectively. The competitive positioning of a business unit defines which segment(s) of an industry it will seek to serve. This is a combination of decisions about what products and services it will deliver to what customers in what geographic locations with what degree of vertical integration (Fronmueller & Reed 1996) and through which distribution channels.

The ultimate strategic objective for an organisation is to survive and for most businesses this means finding ways of sustaining *growth*. Growth can be achieved in a number of ways and the chosen routes to growth often govern the scope for other strategic decisions. A range of alternative growth strategies are shown in Figure 3.1 in the form of a decision tree (Hansen 1996). Fundamental decisions to expand a core business or launch new businesses can lead to a range of further options for driving growth via product range expansion, increases in the geographical range of the target market and backward or forward vertical integration. Different growth strategies require different organisational structures

(Day 2001) and can require the development of new competences (Post 1997). Conversely, the recognition of current core competences can lead to the development of opportunities for growth through diversification into new businesses (Bakker *et al* 1995).

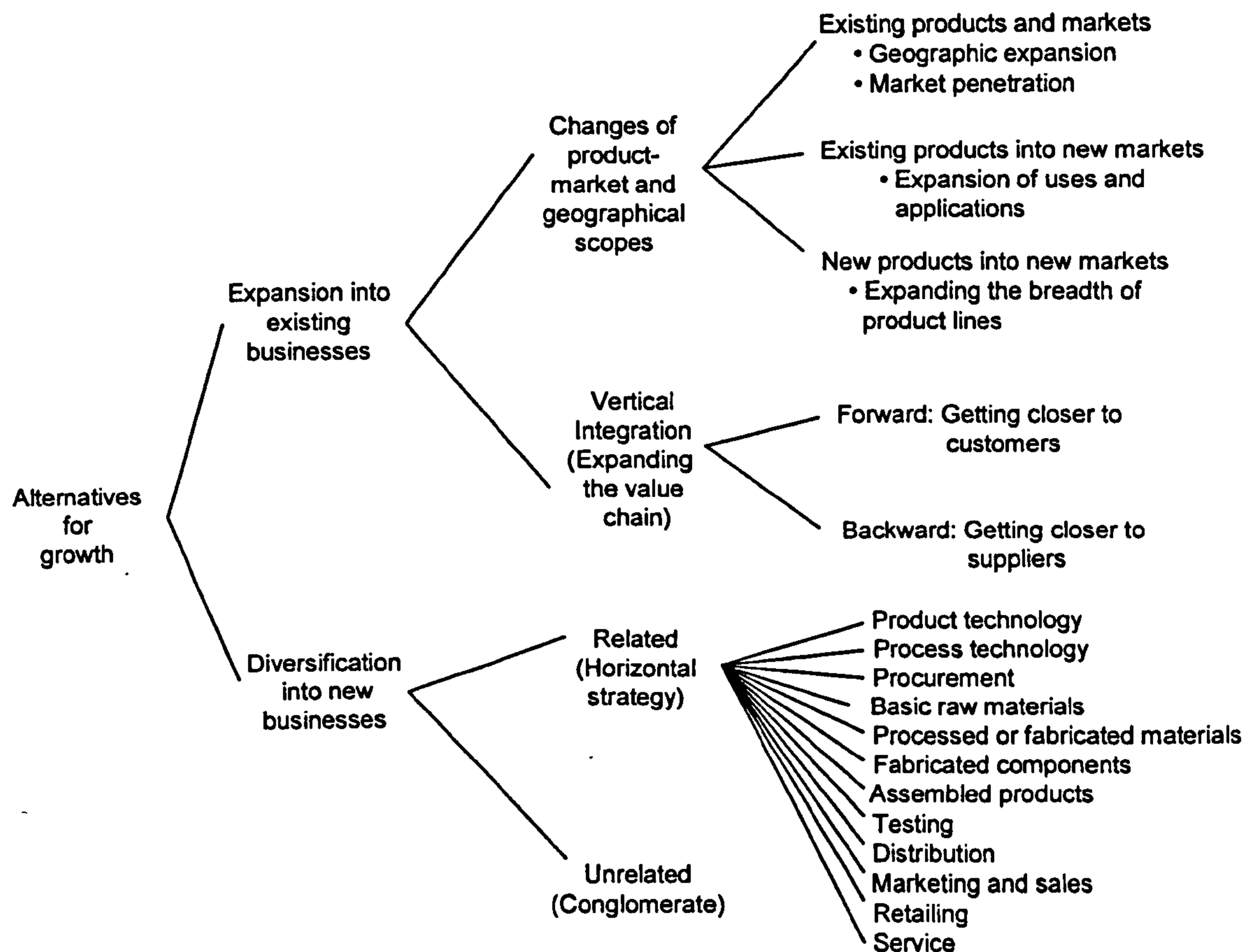


Fig 3.1: Alternatives for Growth and Diversification (Hansen 1996)

A further important aspect of strategic decision making is finding new competitive positions that no other firm has identified (Kumar *et al* 2000). More generally, companies need to find competitive positions that are inherently *attractive*. This means positions where the value to be created is large and growing and where that value can be protected against competitive forces. These positions must also fit with a firm's strengths and weaknesses. A company has a

competitive advantage when customers perceive a difference between its products and those of its competitors and when competitors can't easily close the gap. The leading theorist in this field is Michael Porter – “a company can outperform rivals only if it can establish a difference that it can preserve” (Porter 1985). Porter (1985) has identified three generic strategies for competitive advantage which are shown in Figure 3.2 and are described below.

		COMPETITIVE ADVANTAGE	
		Lower Cost	Differentiation
COMPETITIVE SCOPE	Broad Target	1. Cost Leadership	2. Differentiation
	Narrow Target	3A. Cost Focus	3B. Differentiation Focus

Fig 3.2: Three Generic Strategies (Porter 1985)

Cost leadership involves a firm aiming to become *the* low cost producer in its industry. This means finding and exploiting all sources of cost advantage. However, Porter (1985) emphasises that a cost leader must also achieve “parity

or proximity” in the bases of differentiation relative to its competitors to become an above average performer.

In a differentiation strategy, a firm seeks to be unique in its industry in a way that is widely valued by customers. The firm selects one or more attributes that many buyers perceive as important and positions itself to meet those needs more effectively than other competitors. Achieving this objective in a unique way enables the firm to obtain a price premium. This price premium must exceed the extra costs incurred in being unique for the firm to become an above average performer. Furthermore, a differentiator must also aim at cost “parity or proximity” relative to its competitors, by reducing costs in all areas that do not affect its differentiation.

Porter’s (1985) third generic strategy is focus. This is different from the first two because it involves the selection of a narrow competitive scope. The firm generates competitive advantage by tailoring its strategy to serve selected segments to the exclusion of all others. Cost focus exploits differences in cost behaviour in some segments, while differentiation focus exploits the special needs of buyers in selected segments. The assumption here is that the selected segments are poorly served by more broadly based competitors.

The majority of major UK housebuilders are, in Porter’s (1985) terms “stuck in the middle” from a competitive advantage perspective. This means that they are not achieving superior performance on the basis of cost leadership, differentiation or cost/differentiation focus. McCarthy & Stone is one notable exception. This

company focuses on the provision of housing specifically for the retirement market. Cost leadership is a difficult competitive strategy to sustain in the housebuilding sector in view of the highly competitive market for the industry's most important raw material – land. However, there is a great deal of waste in the construction process that could be eliminated through the supply chain to create a construction cost advantage.

The inherent resistance to change within the industry enhances the opportunity for a differentiation advantage by becoming the first firm to adopt an innovation leadership strategy. Joseph Schumpeter (1939) was one of the first economists to recognise the value of industrial innovation. He defined five types of innovation which still have relevance today:

- Introduction of a new product or a qualitative change in an existing product
- Process innovation new to an industry
- The opening of a new market
- Development of new sources of supply for raw materials or other inputs
- Changes in industrial organisation

The challenge for firms seeking competitive advantage through innovation is “to acquire or develop superior assets and distinctive capabilities that can deliver unique features and benefits that are valued by customers to yield premium prices” (Porter 1985). For example, a firm could become the first high volume UK housebuilder to offer customisation in terms of space configuration and

detailed specification.

Coyne (1984) holds that a sustainable competitive advantage can result from “a combination of superior assets, distinctive capabilities and privileged relationships”. Scarce resources and superior assets can include patents (Hufker & Alpert 1995), good locations, a superior distribution or sales network and a recognised brand. Distinctive capabilities include the capability to innovate continuously and manage information (Post 1997).

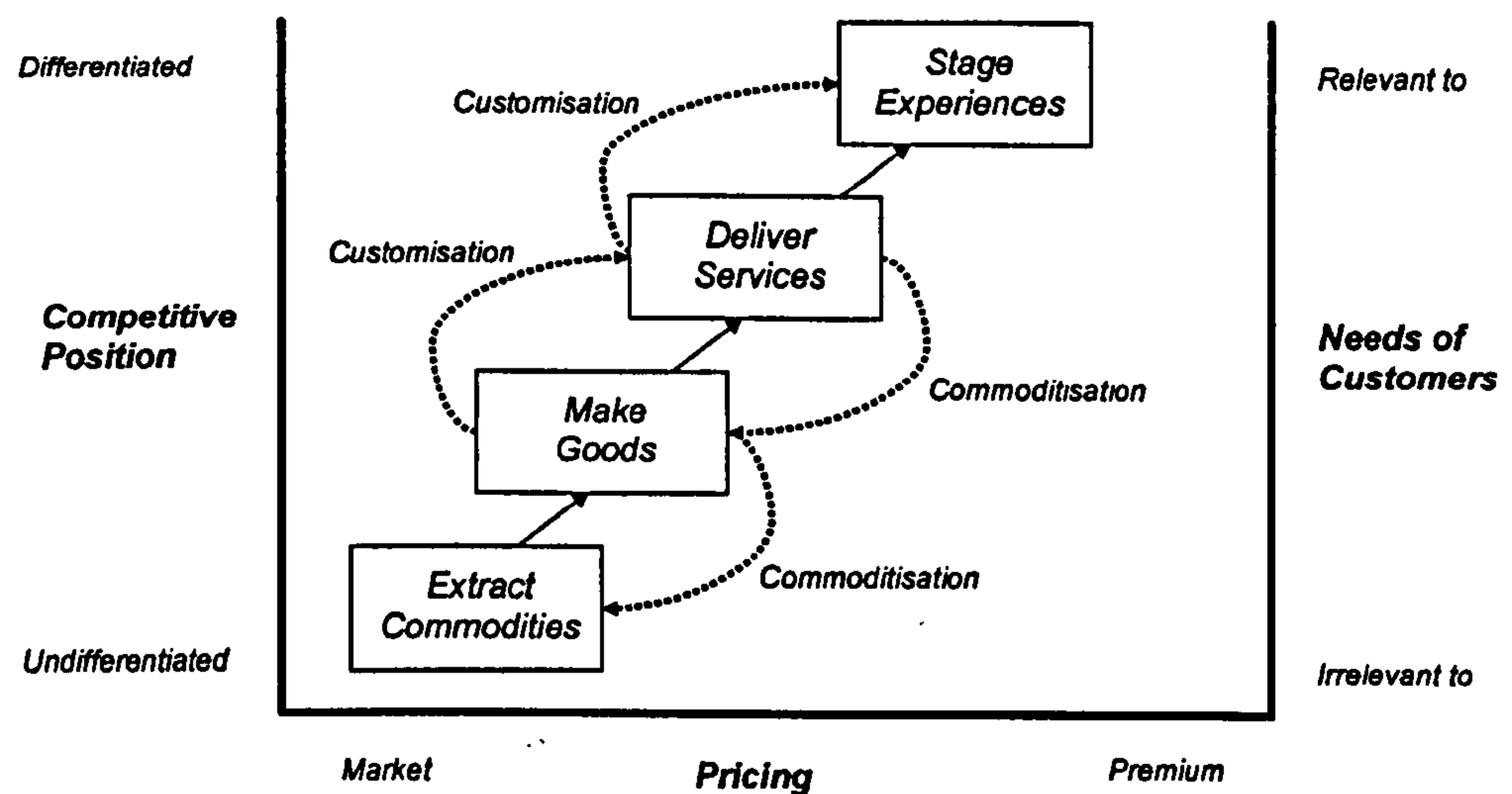


Fig 3.3: Shifting up the Progression of Economic Value
(Pine & Gilmore 1999)

Pine and Gilmore (1999) believe that firms can obtain premium prices by differentiating what they deliver to customers, progressing from commodities through goods to services and ultimately to create “experiences” that are increasingly relevant to the satisfaction of individual customer needs. This path of progressive customisation is shown in Figure 3.3 as a model of how a firm’s offering can be transformed from goods to the ultimate “stage experience” that

commands a premium price by satisfying the specific needs of individual customers. The challenge for firms pursuing such a strategy is to deliver customised goods and services at the same cost as mass produced goods and services – a concept known as “mass customisation” (Pine 1993).

Pine (1993) describes how the automobile industry has progressed from a mass production focus in the 1970’s towards mass customisation in the 1990’s. He quotes a wide range of product innovations that have been introduced including all-wheel drive, all-wheel steering, air bags, synthetic engine materials, microprocessors controlling more functions, automatic overdrive transmissions and navigation systems. Process innovations have included manufacturing automation technologies, robotic welders and painters and the process improvement techniques introduced by the Japanese such as just-in-time production and total quality management. With the development of integrated information technology systems and automated manufacturing, mass customisation is becoming a cost effective option for a wider range of industries.

3.4 A Preferred Model for Formulating Strategy

Effective strategic decision making doesn’t appear to follow a rigid recipe. A practical approach is required that can identify key issues that need to be resolved and deal with them in a dynamic and interrelated way. One such approach has been devised by Kaplan & Norton (2001) who believe that “*Strategic decision making is a dynamic, iterative process*”. The first step, they advise, is to diagnose the key issues facing the company. It is important to take a broad

strategic view and gain the right perspective on the relative importance of issues so that decision making can be prioritised. The second step involves understanding the company's competitive position and generating ideas about how this can be improved. This may require planning a shift to a new position or taking steps to make an existing position more attractive. The third step is about making the most of the company's sources of competitive advantage and finding ways to develop them further. The fourth step is where strategic choice comes into effect. The attractiveness of different competitive positions is considered against the match with possible sources of competitive advantage. Finally, a process is needed to review the chosen strategy at regular intervals. In summary the process comprises:

- Diagnose issues
- Generate ideas: Positioning
- Generate ideas: Advantage
- Select and Refine

The process of identifying issues and opportunities must be continuous and will frequently stimulate whole new cycles of strategic decision making (Beinhocker 1999).

Burgelman (2002) gives great emphasis to the combination of external and internal forces that shape a company's destiny. These dual aspects of strategy are reflected in Kaplan and Norton's (2001) architecture of a strategy map (Fig 3.4) which forms the basis of their book "Creating the Strategy-Focused Organization". A strategy map is a model for formulating and communicating

strategy. It provides a structure to deal with the potentially conflicting priorities of long-term versus short-term objectives or growth versus profitability. This approach reflects the more complex reality businesses actually face. Kaplan and Norton (2001) have found that executives often separate their strategies into several focused themes to take account of the multi-faceted nature of real businesses. These themes provide a way of segmenting a strategy into a series of general categories as shown in Figure 3.4.

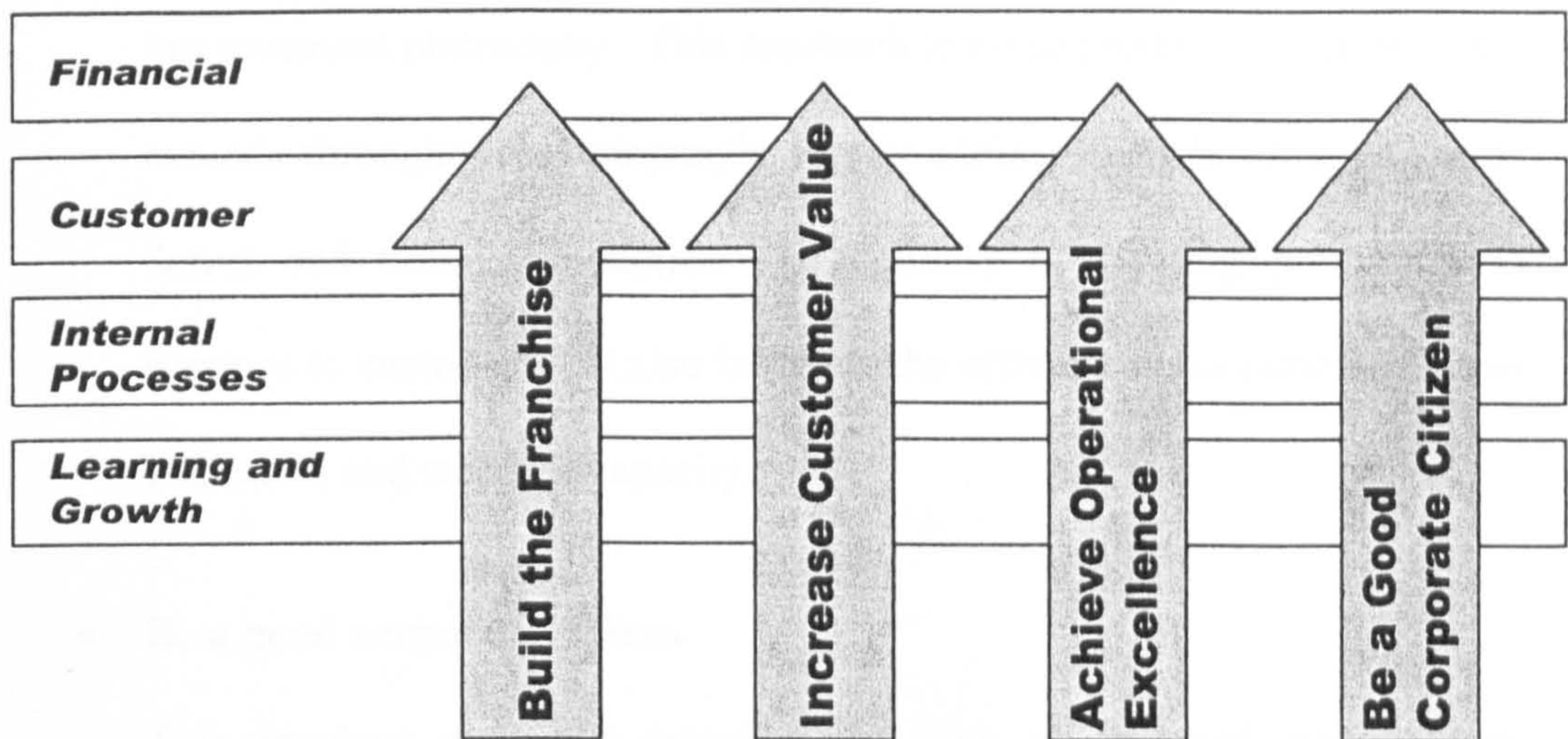


Fig 3.4: Architecture of a Strategy Map (Kaplan & Norton 2001)

The themes are described in Kaplan and Norton's (2001) terms below.

- **Build the franchise**

This involves creating value for the long-term – new product development, new business streams and expansion into new markets and customer types.

- **Increase customer value**

This involves expanding, deepening or redefining relationships with existing customers. This may involve the implementation of concepts such as customer relationship management and pursuing a “customer for life” policy.

- **Achieve operational excellence**

This involves improving business processes and adopting a continuous improvement philosophy. This approach leads to productivity growth and extends throughout a company’s supply chain to enable efficient, zero-defect and timely production and delivery of existing products and services to customers. It also involves the efficient management of asset utilisation and resource capacity.

- **Be a good corporate citizen**

This involves managing relationships with all external stakeholders, suppliers, employees, customers, communities and investors and is particularly relevant for industries subject to regulation or safety and environmental risk.

By approaching strategy in this way, accountability can be assigned to those managers responsible for each element of implementation. Specific measures of success are identified for each “pillar” of the strategy. These are linked to clearly defined cause and effect relationships for each major strategic theme (Figure 3.5). This approach is a development of the Balanced Scorecard methodology devised by Kaplan and Norton (1996). This defines the set of near-term objectives and

activities that will differentiate a company from its competitors and contribute to long-term customer and shareholder value.

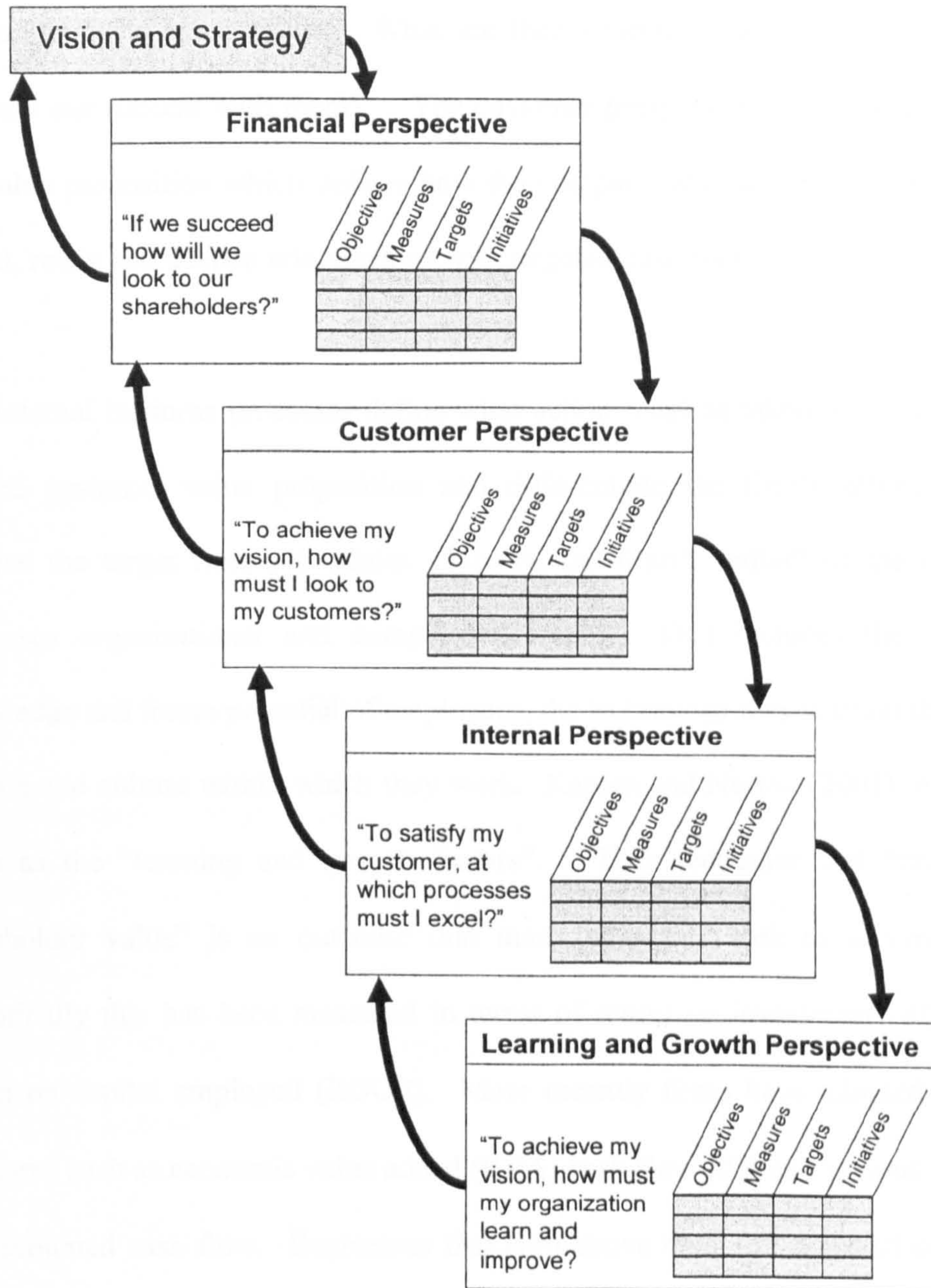


Fig. 3.5: Defining the Cause and Effect Relationships of Strategy
(Kaplan & Norton 2001)

The process commences with top management clearly defining financial and customer satisfaction objectives by asking “What are the financial objectives for

growth and productivity?” and “What are the major sources of growth?” Once these financial objectives have been set, the process continues by asking “Who are the target customers that will generate revenue growth and a more profitable mix of products and services? What are their objectives and how should we measure our success with them?” The customer perspective must also include the value proposition which defines how the company will differentiate itself to attract, retain and deepen relationships with targeted customers.

The internal business processes define what action must be taken to deliver the desired customer value proposition and differentiate the firm’s offerings to achieve the target financial results. Finally, the fourth “pillar” of the model addresses organisational and competence issues. This includes the skills, knowledge and future potential of employees, the technology they use and the climate and culture within which they work. Kaplan and Norton (2001) refer to these as the “learning and growth factors”. They recognise that “creating shareholder value” is an outcome that many strategies seek to accomplish. Historically this has been measured in terms of return on investment (ROI) or return on capital employed (ROCE). More recently firms have adopted other measures such as economic value added (EVA) cash-flow ROI and various forms of discounted cash flow. Businesses that earn above their risk-adjusted cost of capital are said to be creating shareholder value, whereas those that earn less than their cost of capital are destroying shareholder value. Whether companies use ROI, ROCE, EVA or some other value-based measure of financial success, they have two fundamental strategies for driving their financial performance: growth and productivity (see Figure 3.6)

The revenue growth strategy focuses on developing new sources of revenue and profitability. It is generally made up of two parts, one involves finding new sources of revenue, including the acquisition of other companies, and one is concerned with expanding relationships with existing customers.

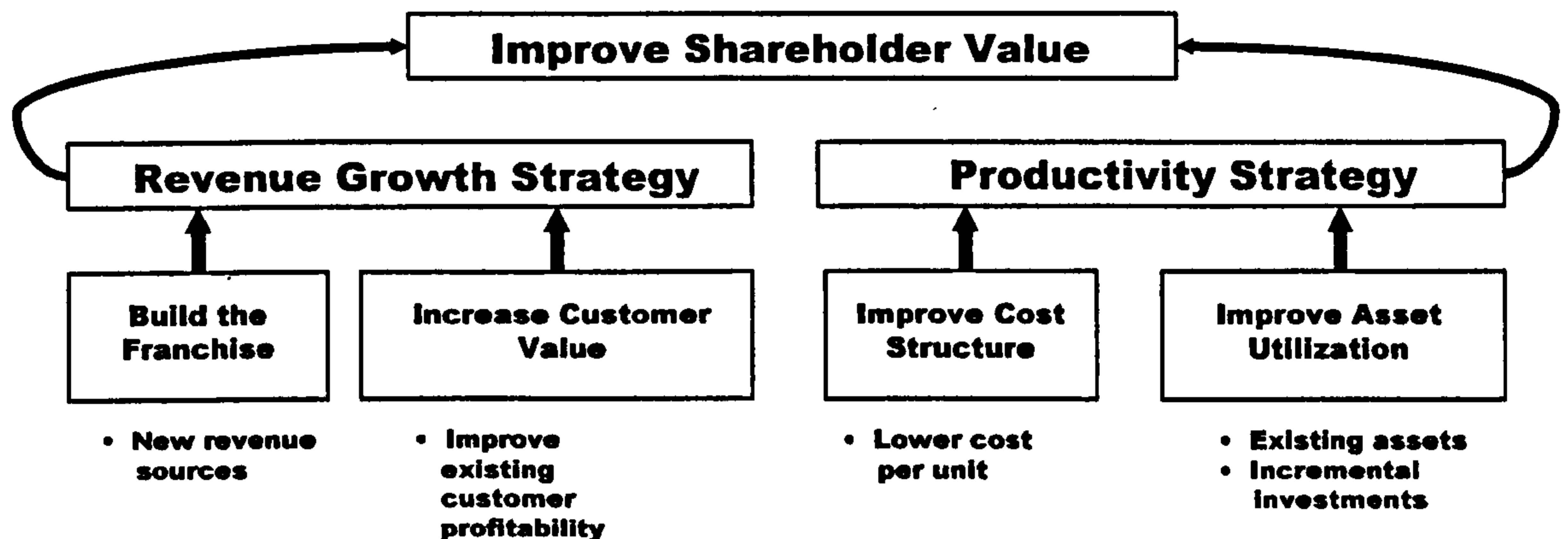


Fig 3.6: Building the Strategy Map: The Financial Perspective
(Kaplan & Norton 2001)

The productivity strategy focuses on taking action to improve the efficiency of operational processes that serve existing customers. This is typically made up of two parts, one focuses on reducing direct costs of products and services, the other is concerned with reducing the working capital and fixed investment needed to support the business.

The essence of Kaplan and Norton's (2001) approach to translating strategy into operational terms is to segment the firm's value chain into four sets of business processes, corresponding to the four strategic themes shown in Figure 3.7. They acknowledge that all these processes are important and must be performed well by every organisation. In common with Porter's (1985) view, however, they

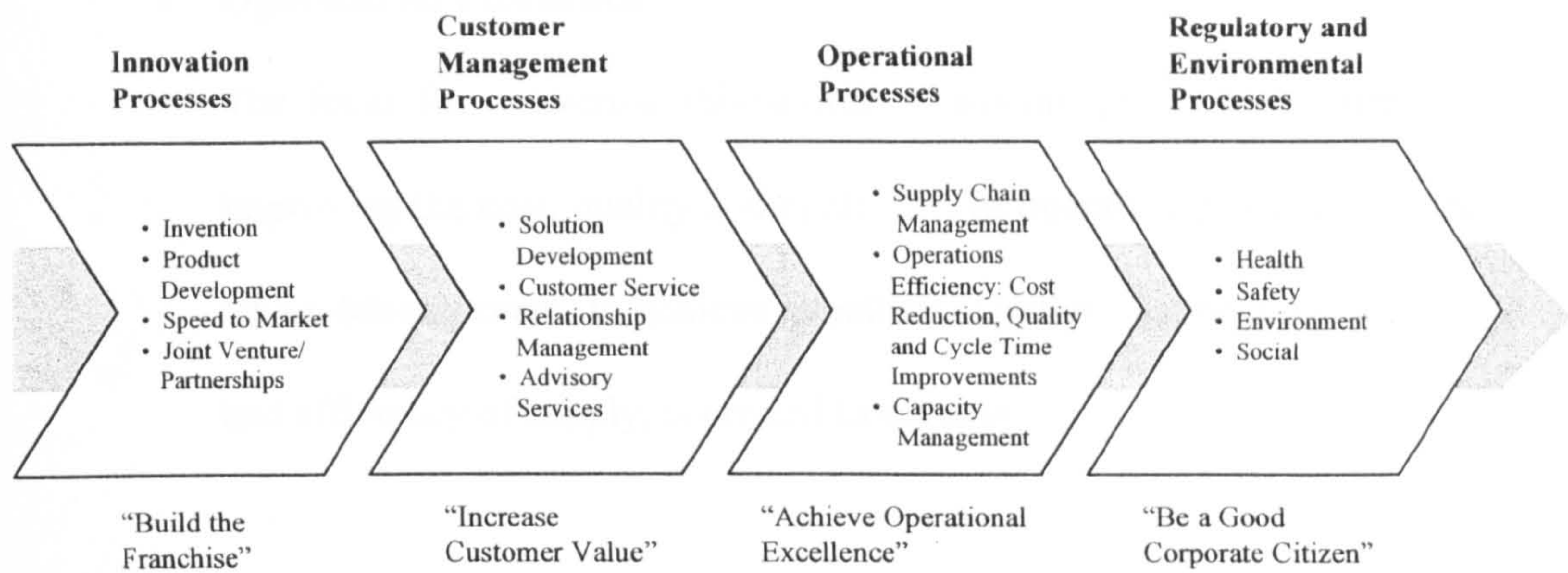


Fig 3.7: A Generic Organisation's Value Chain (Kaplan & Norton 2001)

emphasise that companies must excel at the one process that has the maximum impact on its customer value proposition. Kaplan and Norton (2001) believe that there are three generic routes to achieve competitive advantage:

- **Product leadership strategy**

This requires investment in processes capable of delivering a consistent stream of innovations to create new products with best-in-class functionality, brought rapidly to market.

- **Customer intimacy strategy**

This requires excellent customer management processes such as relationship management and the development of integrated solutions that will present a seamless service. Innovation processes need to focus on satisfying the needs of clearly defined customer groups with those new product and service enhancements that hold the greatest potential for delighting customers.

- **Operational excellence**

The focus for delivering this source of advantage is on measuring and improving the cost, quality and cycle time of operating processes. Supply Chain Management, to achieve excellent supplier relationships and speed and efficiency of supply, is critical to success.

3.5 Applying Strategic Thinking to the Housebuilding Sector

3.5.1 Market Segmentation

There is little evidence of market segmentation amongst major UK housebuilders (Dibb 1992). Over 30% of the houses built in the UK are standard house types built by the top ten builders. These are typically marketed to local mass markets on the basis of price and location. The usual argument against an approach that targets specific customer types with a tailored value proposition is that as location is the prime criterion in the purchasing decision, many different types of people may wish to live in a particular area for many different reasons. Ability to afford a particular house is cited as the key criterion and once again this factor is held to be spread across a wide range of customer types.

Exceptions to the mass market positioning adopted by the major builders include niche players like McCarthy & Stone in the retirement sector and Berkeley who build exclusive apartment projects in city centre locations, targeting affluent singles and couples seeking a city lifestyle.

3.5.2 Product and Service differentiation

There is limited product differentiation amongst major housebuilders. This is perhaps surprising, given the complexity of the product and the extensive range of features that could be designed differently to improve their customer appeal. The influence of the planning system and the conservatism of the house buying public are often cited as reasons for less adventurous design amongst housebuilders. The similarity of materials and designs leads to price competition when the same types of houses are offered for sale simultaneously by two or more major builders in the same geographical area.

Opportunities for more effective product differentiation include:

- More imaginative house design
- More integrated technology in the home
- Higher quality materials and finish (Djebarni & Eltigani 1996)
- The use of new materials (eg external cladding)
- Customisation
- One-stop-shop for home-related products and services

There is certainly scope for competitive advantage for companies that can develop the competencies to deliver superior customer service.

Opportunities for more effective service differentiation include:

- More professional pre-sales service
- More professional after-sales service

- Maintenance contracts for regular service of house and garden
- Offering a wide range of home services from shopping to decorating
- Using techniques such as *hoshin kanri* and quality function deployment to improve service quality (Pun *et al* 2000)

3.5.3 Geographical differentiation

Geographical differentiation does occur in the housebuilding sector. Despite a general shortage of land for development, quality of location is the most noticeable difference that distinguishes an “up-market” housebuilder from the rest. However, over 50% of the new houses built in the UK are on “brown field” or previously used locations where it can prove challenging to generate positive geographical differentiation.

Opportunities for more effective geographical differentiation include:

- Lifestyle segmentation for specific location types (e.g. waterside, retirement, city convenience, countryside)
- Sub-branding developments to promote the benefits of each individual location and create a “sense of place”.

3.5.4 Vertical Integration

Vertical integration is not common in the housebuilding industry. There are some examples such as Wilson Bowden’s carpentry facility and Stuart Milne’s timber frame production plants but the majority of major housebuilders define their business as buying land, obtaining planning

consent, sub-contracting the construction and marketing the finished homes.

Opportunities for vertical integration include:

- Upstream vertical integration of materials suppliers and construction component manufacturers.
- Downstream vertical integration of product and service suppliers providing home buying customers with financial services, white goods, floor coverings, conservatories and many other home-related products and services.

3.5.5 Channels of Distribution

The predominant “channel of distribution” is the site-based sales office. Although it is clearly important for prospective customers to visit the location of their future home, the search process can be time consuming.

Opportunities for more effective Channels of Distribution include:

- High street retail outlets marketing new homes for a specific geographical area
- Home design centres incorporating a wide range of home-related products and services along with an architectural design facility to match customers’ needs with available homes
- Internet-based “virtual show homes” offering virtual reality tours of the home and neighbourhood.

3.6 Strategic Options for Housebuilders

International comparisons can provide alternative “theories of the business” (Drucker 1994) that might be considered by UK housebuilders. For example, the move towards “industrialised” housing production in Japan (Davies 1998 (3)) has led to the growth of specialist house manufacturing firms. This has resulted in a very different value chain for these businesses, compared with the typical UK housebuilder. Structural change may become an important part of the development of the UK housing industry as it moves towards more efficient and professional modes of operation. This may mean the creation of new categories of competitors and re-engineering of traditional supply chains. A simple model of the current structure of the industry is represented in Figure 3.8.

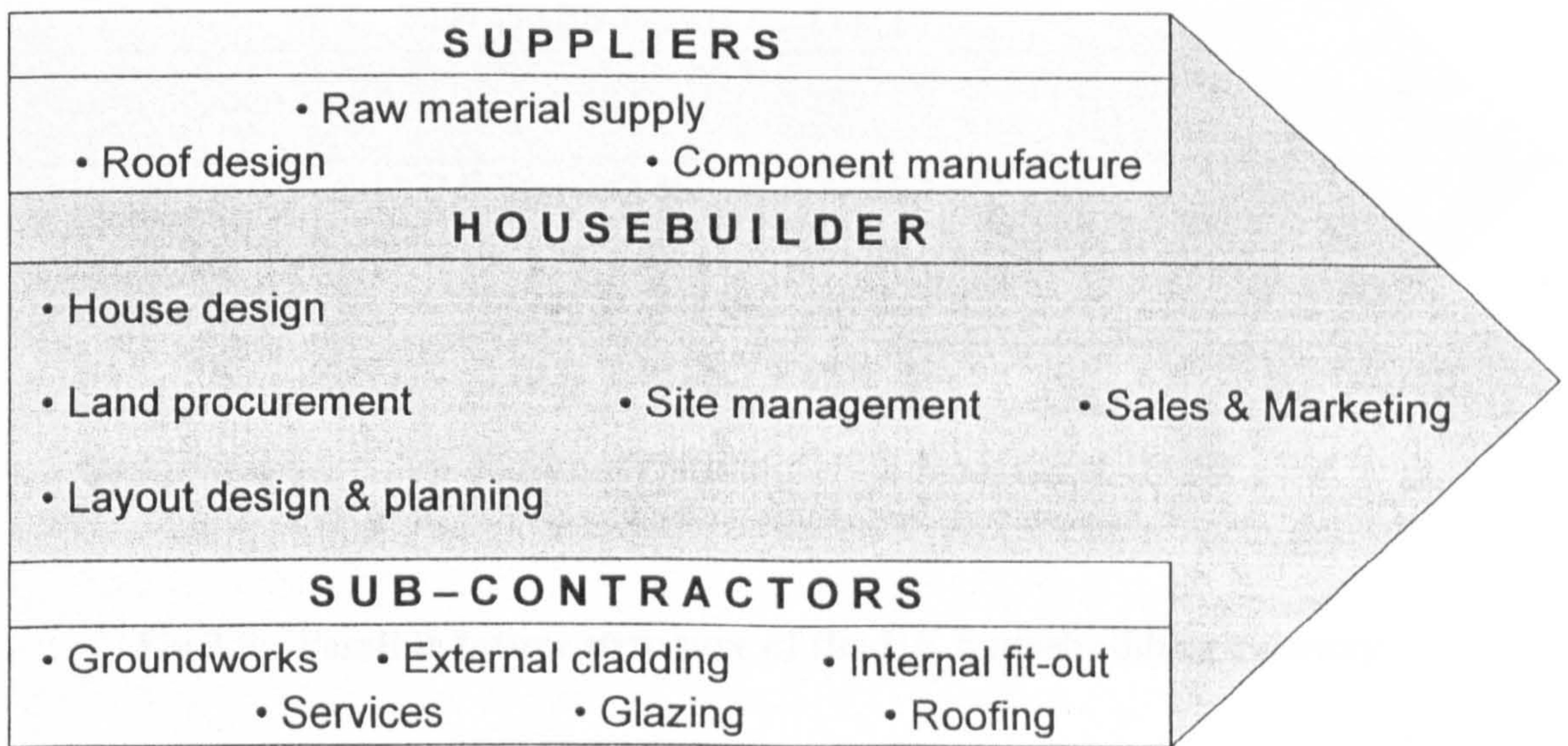


Fig 3.8: The current structure of the UK housebuilding industry

However, this is not proving to be a very effective configuration for process improvement, particularly with regard to construction processes. Housebuilders

are too pre-occupied with land procurement to allocate adequate resources to continuous improvement on site and the current sub-contractor base is made up of relatively small, unsophisticated firms that invest very little in training, development and research. The increasing trend towards a systems approach to house building creates an opportunity for a new “super-contractor” role in the supply chain, similar to the Japanese “super sub-contractor” model. Figure 3.9 shows a new structure that may develop in the UK as off-site manufacture becomes more mainstream and the process of house construction moves progressively towards the automotive model of component assembly.



Fig 3.9: Possible future structure of the UK housebuilding industry

This would leave “housebuilders” with the tasks covered by their core competences of land procurement, layout design and obtaining planning consents and sales and marketing of completed houses. A new “super-contractor” sector could emerge which takes the role of a “systems integrator” for the entire construction process. House design would become more integrated with the

construction process by introducing “design for manufacture” and “design for assembly” approaches. Therefore it is likely to become a shared process between housebuilders and super-contractors, facilitated by specialist architects/product designers. There is also a possibility that “super-contractors” could choose to procure land, obtain planning consents and market completed homes under their own brands, perhaps part-funded by joint venture arrangements with major banks. There is some evidence of this trend in the Social Housing sector where firms such as Mansell and Wilmot Dixon tender for major house building projects and take full operational responsibility for the design and delivery of completed schemes.

There are several options for growth open to UK housebuilders. The most prevalent of these to date has been expansion of existing businesses with existing products through organic growth or acquisition into new geographical areas. With the growing importance of inner-city developments driven by government policy, there has been some development of new products, mainly multi-storey apartments, into new location types.

Further possible alternative growth paths include:

- Vertical integration, both upstream and downstream.
- Diversification into new businesses in related markets that could include product technologies, process technologies, prefabricated components, assembled products and a range of associated services.
- International expansion, driven by the development of proprietary technology solutions.

3.7 Conclusion

The literature on strategy formulation suggests that formal, analytical methods are less effective than creative, iterative approaches that focus on key issues and the leverage of sources of competitive advantage. Kaplan & Norton's (2001) Strategy Mapping technique fulfils these criteria and provides a methodology that provides a good match with the practical requirements of UK housebuilder firms.

There is a need to maintain an appropriate balance between long and short term issues. The focus on four different aspects of the business (Figure 3.7) in Kaplan & Norton's (1992) model would help to ensure that core competences are developed alongside actions needed to achieve growth objectives. Quality improvement techniques such as *Hoshin Kanri* (Davies 2003 (1)) would provide a further check on the balance of activities to make sure that objectives do not run ahead of capabilities.

Figure 3.10 shows "The Balanced Growth Model". This illustrates the balance that housebuilders must achieve between growing their businesses and preparing for growth. The desired outcome is a growing organisation with the capability to take advantage of new market opportunities without over-stretching its resources. Businesses that drive for growth without investing the necessary resources in improving their future capabilities run the risk of becoming "overgrown". The consequences for companies demonstrating such an imbalance can range from a slowing down in revenue and profit growth, as the firm's ability to control its operations becomes progressively diluted, to a sudden crisis that could result in take-over or company failure.

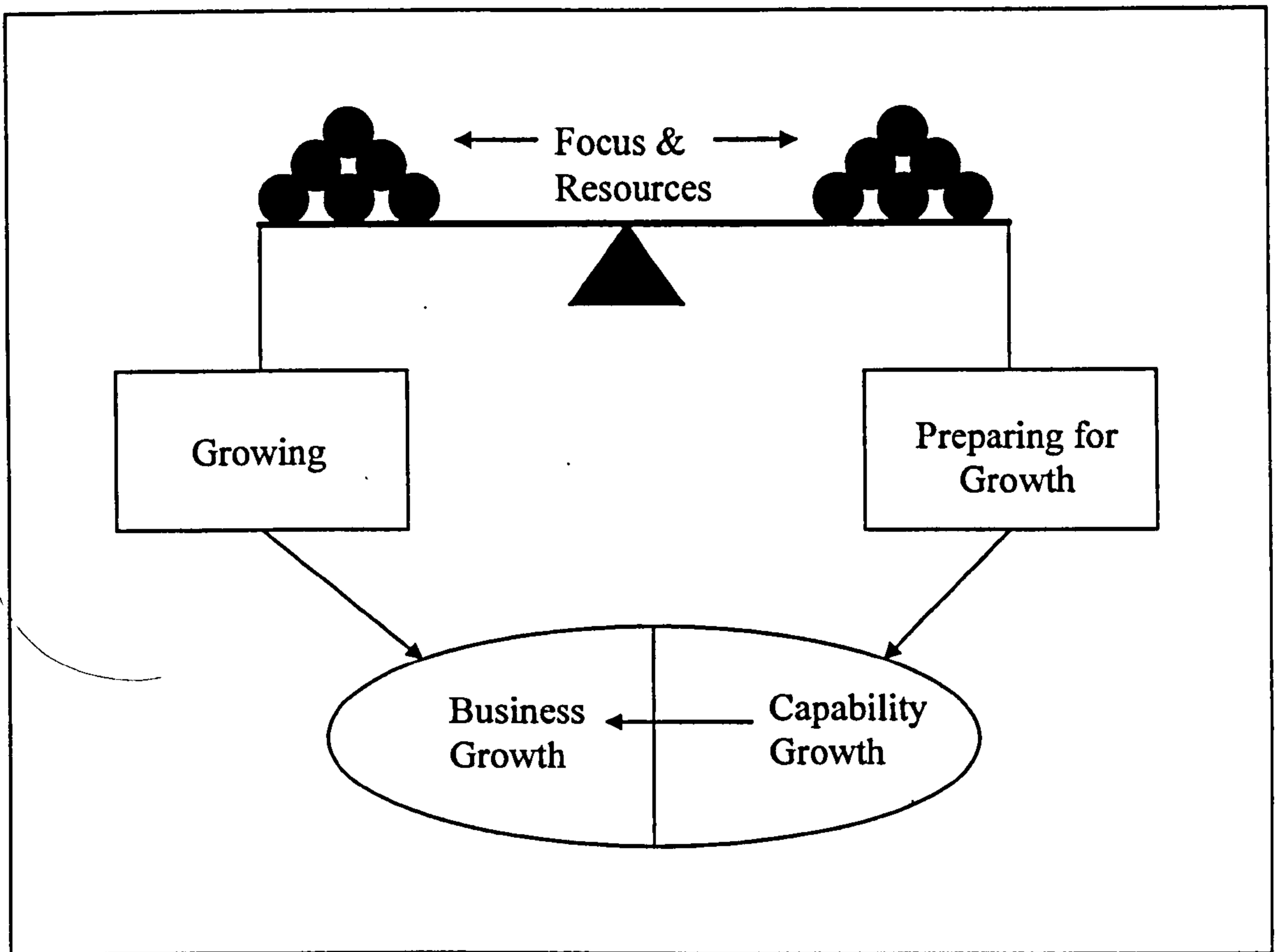


Fig 3.10: Balanced Growth Model

An imbalance in the opposite direction would be created by investment in improving capabilities ahead of commensurate growth achievement. This would be perhaps a healthier imbalance in its early stages as a company begins to develop the potential to exploit opportunities beyond those currently available. However, it is important that growth follows rapidly behind such investment to avoid an erosion of profitability or the attention of potential predators who may spot an opportunity to deliver greater value. Figure 3.11 shows a model for strategy formulation that combines capability development with effective competitive advantage to achieve balanced growth by attaining attractive but achievable competitive positions. Companies can drive progressive

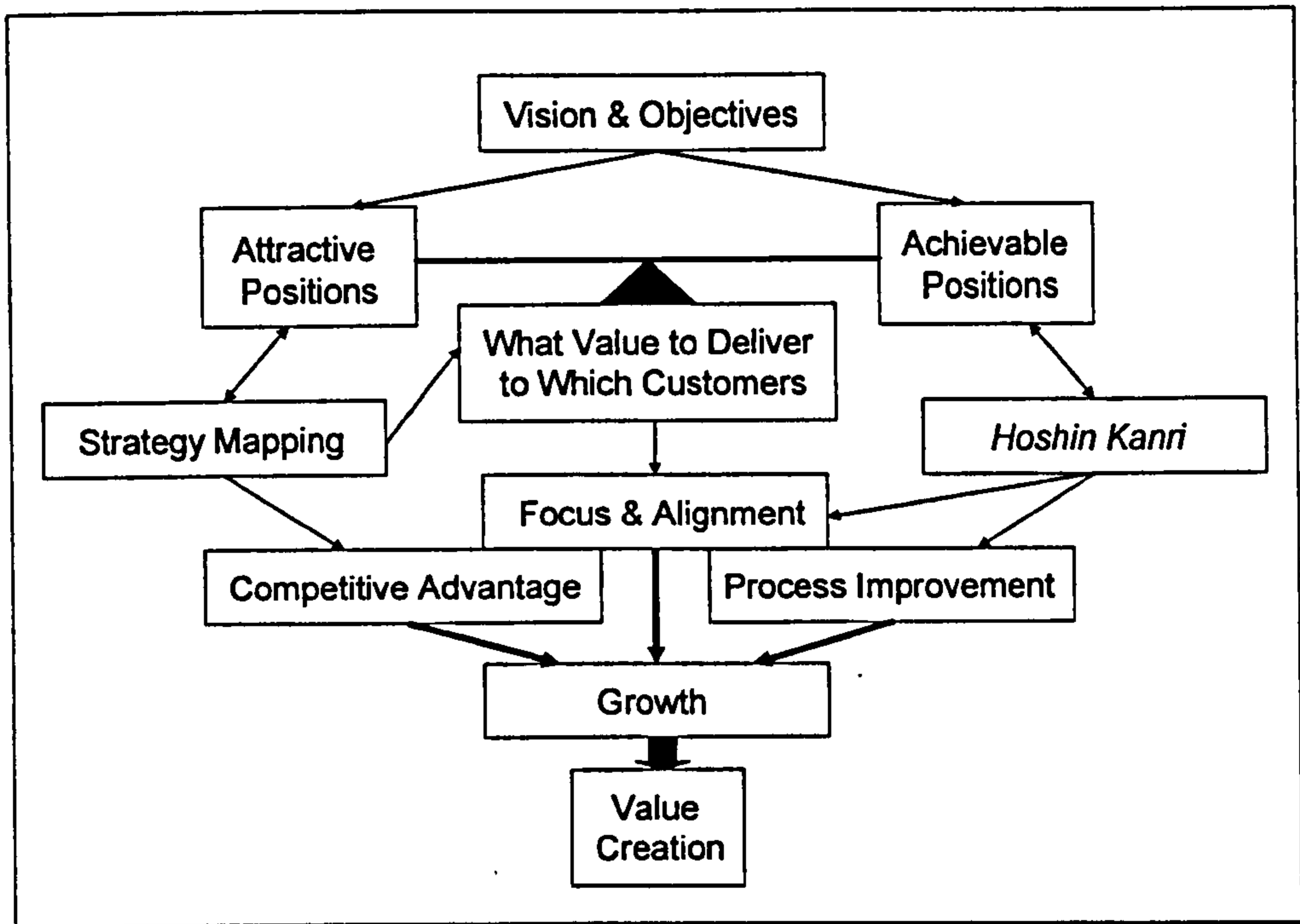


Fig 3.11: A Model for Integrated Strategy Formulation

improvement in their financial performance by delivering higher added value products and services to their customers. However, they must invest in the resources necessary to improve continuously their capabilities and focus and align their people on the key features that deliver competitive advantage. As a company improves its capabilities in areas of strategic importance, it becomes able to deliver even greater value to more demanding customers in ways that are difficult for its competitors to follow. This is the essence of an effective competitive strategy.

Chapter 4

Competitive Strategy Formulation for a Major UK Housebuilding Company

4.1 A Framework for Formulating Westbury's Strategy

Kaplan and Norton's (1996) Balanced Scorecard approach provides a methodology for the development of Westbury's strategy that can be used to chart a path to a leadership role in the new competition framework. In their more recent work, Kaplan and Norton (2001) have investigated the factors that distinguish the most effective firms applying the Balanced Scorecard approach in



Fig 4.1: The Principles of a Strategy-Focused Organisation
(Kaplan and Norton 2001)

achieving industry leading competitive positions – the “early adopters”. Figure 4.1 shows the five principles defined by Kaplan and Norton (2001) that distinguish these successful early-adopting companies from less successful competitors. These principles are explained in more detail below.

Principle 1: Translate the Strategy to Operational Terms

As we have seen in Chapter 3, there are many different ways of describing a strategy. In order to implement a strategy effectively, it is essential that all employees understand clearly what the strategy means and how they can contribute to its implementation. To facilitate this process, Kaplan and Norton (2001) have devised a new framework that they call a “strategy map”. This provides a model for designing a series of targets and measures that forms the basis of a new “strategic management system”. The purpose of a strategy map is to explain the links from intangible assets and competences, through business processes, customer propositions and tangible assets of the firm to the achievement of shareholder value. The strategy mapping technique has been used to formulate Westbury’s strategy and to translate it into operational terms. This process is described in the latter part of this chapter.

Principle 2: Align the Organisation to the Strategy

Organisations are made up of numerous profit centres, business units and specialist departments, each with its own strategy. These individual strategies must be linked and integrated for the organisation to perform to the best of its abilities. This is a considerable challenge for a company like Westbury with

geographically dispersed business units and sales and construction teams working in difficult conditions out on site, highly dependent on the work of sub-contractors. Like many traditionally designed firms, Westbury is organised into functional specialties such as finance, sales and marketing, construction, technical and land procurement. Each department has its own body of knowledge, language and culture. These functional “silos” have become a major barrier to the consistent and coordinated implementation of strategy. Kaplan and Norton (2001) believe that their “Strategy-Focused” approach can break through dysfunctional barriers such as this. The key to implementing their approach is in replacing formal reporting structures with strategic themes and priorities. These can be used to communicate a consistent message and a consistent set of priorities across every separate unit in the organisation.

Principle 3: Make Strategy Everyone’s Everyday Job

As explained in Principle 1, the understanding of the company strategy by all employees in an organisation is essential for the effective application of the strategy-focused approach. Kaplan and Norton (2001) emphasise that this requires “top-down communication” *not* “top-down direction” and they found that the most successful companies do not assume that their employees are incapable of understanding strategic objectives. They educate their employees at all levels of the organisation about key strategic concepts and link reward to the achievement of strategic objectives. Strategy becomes everyone’s everyday job if they understand it and if they are motivated to work towards it.

Principle 4: Make Strategy a Continual Process

Although many organisations review their strategies once or twice a year, their routine management processes are built around budgets and operating plans alone. Kaplan and Norton (2001) found that 85% of management teams spend less than one hour per month discussing strategy. They identified three themes amongst firms that had developed new ways to manage strategy as part of their routine management processes. Firstly, organisations began to link strategy to the budgeting process. For example if capital expenditure proposals failed to demonstrate their potential for strategic impact, they were discarded as “non-strategic”. Secondly, organisations introduced a *simple management meeting* to review strategy. These meetings involved a broad spectrum of managers who were invited to have a say in the strategy. Information systems were designed to support this process. Some companies even went as far as creating *open reporting*, making performance results available to everyone in the organisation. Thirdly, a *process for learning and adapting the strategy* evolved. This became the mechanism for testing strategic hypotheses and fine tuning the measures and targets to match the true drivers of performance improvement. This became a much more rapid way of ensuring that key measures were relevant to the strategic objectives, rather than waiting for the next annual budgeting meeting to make changes.

Principle 5: Mobilise Change through Executive Leadership

Kaplan and Norton (2001) point out that the single most important condition for successfully creating a strategy-focused organisation is the “ownership and active

involvement of the executive team” - “If those at the top are not energetic leaders of the process, change will not take place, strategy will not be implemented, and the opportunity for breakthrough performance will be missed”. Kotter (1996) describes how transformational change starts at the top of organisations with three discrete actions by the leaders:

1. Establish a sense of urgency
2. Create a guiding coalition
3. Develop a vision and a strategy

The first job for executive leaders, Kotter (1996) says, is to make the need for change obvious to all. Once the change process is launched, executives must establish a governance process to guide the transition. As the process evolves, executives should modify their current management system to consolidate progress and reinforce the changes. However, for effective managers there is no such thing as “steady-state” – the competitive landscape changes constantly and requires the modification of strategies to take account of new opportunities and threats. This is summed up by Kotter (1996): “Strategy must be a continual process and maintaining a constructive balance between stability and change is at the core of the art of leadership”.

4.2 Strategy Mapping to formulate strategy at Westbury

The Balanced Scorecard provides a framework to formulate strategy aimed at creating value from the following four different perspectives (Kaplan and Norton 2001):

1. **Financial.**
2. **Customer.**
3. **Internal Business Processes.**
4. **Learning and Growth**

My work at Westbury has been focused on developing a long-term business development approach to value creation to balance the traditional short-term, financial perspective that is ingrained within the company's culture. The objective is to transform an organisation that is inwardly focused, principally on financial goals, into one that is capable of becoming an innovation leader in the new competition framework outlined in Chapter 2. The remainder of this chapter describes how this task has been approached using the five principles of a strategy-focused organisation.

4.2.1 Translating the Strategy into Operational Terms

Historically, Westbury has competed by using price and promotional deals to maintain the required rate of sale that will achieve budget objectives. Its major competitors have pursued a similar strategy, most competition taking place on the basis of price and location. Because of the nature of the industry – capital intensive, high cost of land and little product differentiation in the mass market for new homes – Westbury and its competitors have devoted much of their energies to land buying and basic cost control. When I joined Westbury at the end of 1993, the Board was beginning to explore alternative ways of competing; they wanted something more than just cutting costs by reducing product

specification and relying on low prices to achieve their sales targets. Some of Westbury's competitors had large, relatively low cost land banks, so a cost leadership position would be difficult to sustain in the long term. Westbury wanted a strategy for growth and differentiation and one that would provide some hedging against the cyclical nature of the new homes market.

In 1993 the company was recovering from a severe and prolonged downturn in the housing market. In some parts of the country, Westbury had a reputation as the housebuilder to go to if you might have difficulty in affording to buy or securing a mortgage. Westbury's newspaper advertisements featuring special offers such as "Move in for £99" and "House of the week, £2000 off", reinforced this positioning. During my strategy workshops with the Executive Board and the Regional Managing Directors, I discovered that there was a growing recognition of the opportunity to move up-market and attract more affluent customers, rather than servicing those who could just about afford to buy a relatively small house. The Regional Managing Directors realised that it took the same effort to build and sell a larger, more profitable house as it did to build and sell a starter home.

Customer research found that more affluent buyers spend a great deal of money on their new home in the first few years after moving in. Furthermore, it showed that there was a strong interest amongst more affluent buyers in the idea of purchasing a wide range of home-related products and services through their home builder. There was an opportunity to develop long-term relationships with

customers that could considerably enhance earnings per customer and create the potential to sell customers their next home. The development of this life-time customer, “one-stop-shop” approach could lead to Westbury progressing from being just a seller of houses (products) to becoming a provider of home and home-related services. However, the greatest obstacles to continuing the relationship with customers after they had moved in were found to be poor product quality – a high incidence of faults – and poor standards of service when dealing with customer complaints. Therefore, the strategic objectives agreed amongst the Westbury board, arising from the strategy workshops were two pronged:

1. Improve the quality of the finished product and reduce the dependency of right-first-time quality on the availability of skilled tradesmen
2. Position Westbury as a more up-market home builder, marketing premium-priced homes and home-related products and services.

If successful, Westbury would grow its business and improve its margins and this would create the drivers for achieving the board’s overall financial objective of consistent growth in earnings per share.

4.2.2 Financial Perspective

Westbury set its highest level objective as: *consistent growth in earnings per share (eps) of 10% per annum*. In view of the difficult times the company was emerging from, the Board considered this to be a stretch target. Two financial themes, *productivity* and *revenue growth*, were identified to drive this

performance (see Figure 4.2). The productivity theme consisted of two components: more efficient construction processes and more effective supply chain management. The growth theme also had two components: moving up market and developing new sources of non-house revenue. Westbury wanted a higher proportion of its sales in premium market sectors. So it set two measures for this growth component: average selling price and the average living area of houses sold.

The second revenue growth component represented the opportunity to sell products other than houses to Westbury customers. The “one-stop-shop” concept proved popular with prospective home buyers in the customer research interviews. Busy householders, for example those comprising two adults, both in

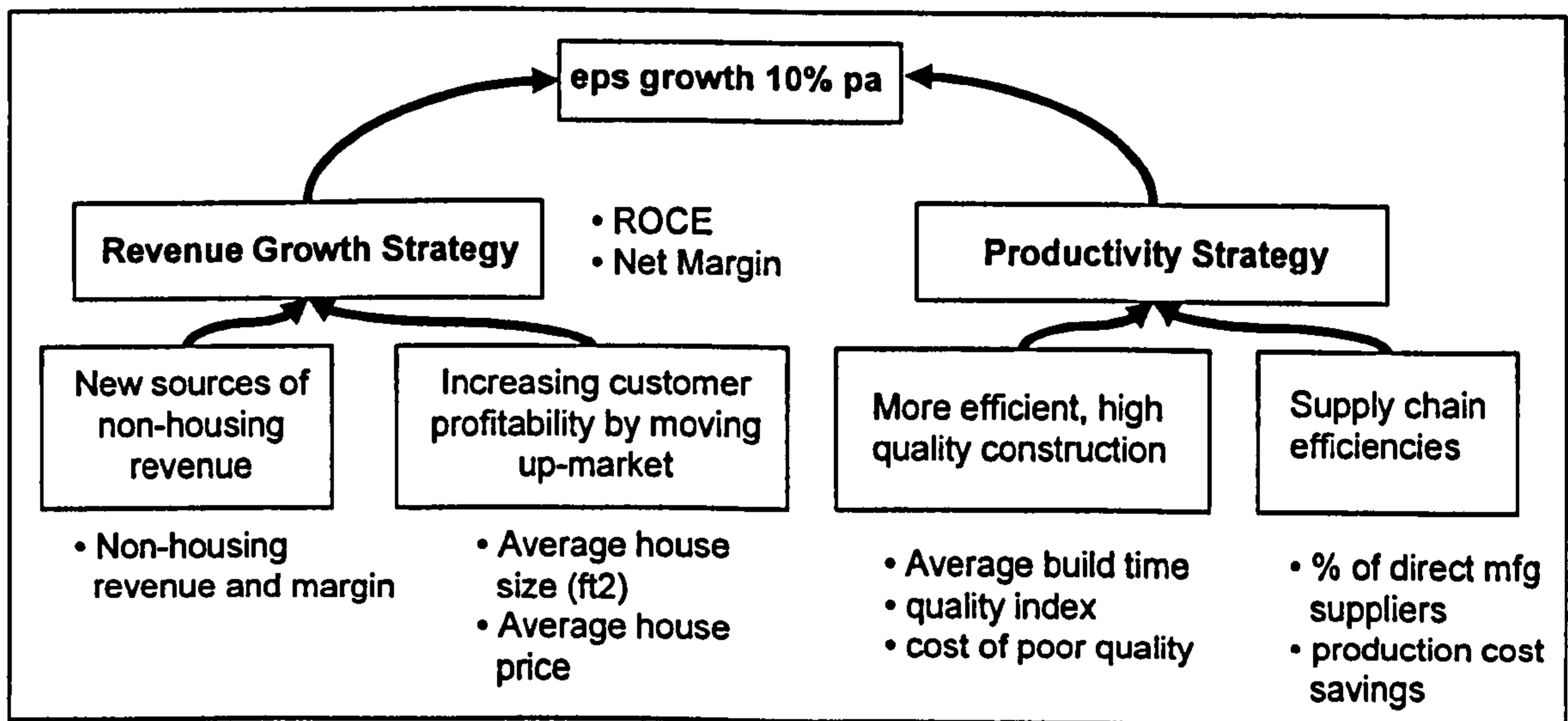


Fig 4.2: Westbury's Strategy Map: *Financial Perspective*

full-time employment, have the typical “cash-rich, time-poor” profile for whom the idea of choosing wall and floor coverings, curtains, tiles, white goods, furniture, electrical goods and even garden landscaping and conservatories from a

single source integrated with the house buying process is a very attractive proposition. Westbury set a financial growth objective to develop new sources of revenue, using the key measures of non-house revenues and margins.

4.2.3 Customer Perspective

The Board was initially sceptical of the potential for generating non-house revenue from home-related products and services. Findings from customer surveys were critical in persuading the Board that there was real potential for enhancing customer profitability in this way. My proposal was to establish a new company to market home-related products and services to Westbury customers and future owners of Westbury homes. This company was named "Westbury Direct" in recognition of the potential for establishing a long-term "one-to-one" relationship with every customer using the internet as a prime channel of communication. Westbury Homes was selling over 4000 homes per annum to customers in the UK private housing market. In addition to its prime function as a place to live, a house can be thought of as an "installed base" for a wide range of complementary products and services. Just like computer games consoles, razors or motor cars, that generate more profit as a result of sales of related products and services than is generated by the core products themselves, houses can be seen as generators of incremental revenue. Home-related products and services account for a substantial share of household expenditure but housebuilders typically only benefit from the sale of the house itself plus a very limited range of related products such as carpets and curtains sold during the pre-move-in period. Questionnaire research with the Westbury customer base, which was undertaken annually from 1995, identified a valuable opportunity to establish

lifetime relationships with home buying customers with a view to becoming the preferred supplier for a wide range of home-related products and services for many years after the purchase of the house.

The lifetime customer proposition was presented to the Westbury board in September 1998 and in May 1999 the new Westbury Direct business was launched (Davies 1999 (2)). Westbury Direct markets a wide range of products and services to customers before and after the purchase of their home. During its first full year of operation, Westbury Direct contributed over £1 million of profit for Westbury and it is on track to triple this performance during 2002/03. The objective of creating a “one-stop-shop” for home buyers has been measured by monitoring the success of Westbury Direct as a separate profit centre. This customer strategy is represented in Figure 4.3.

**“One-stop-shop
for homebuyers”**

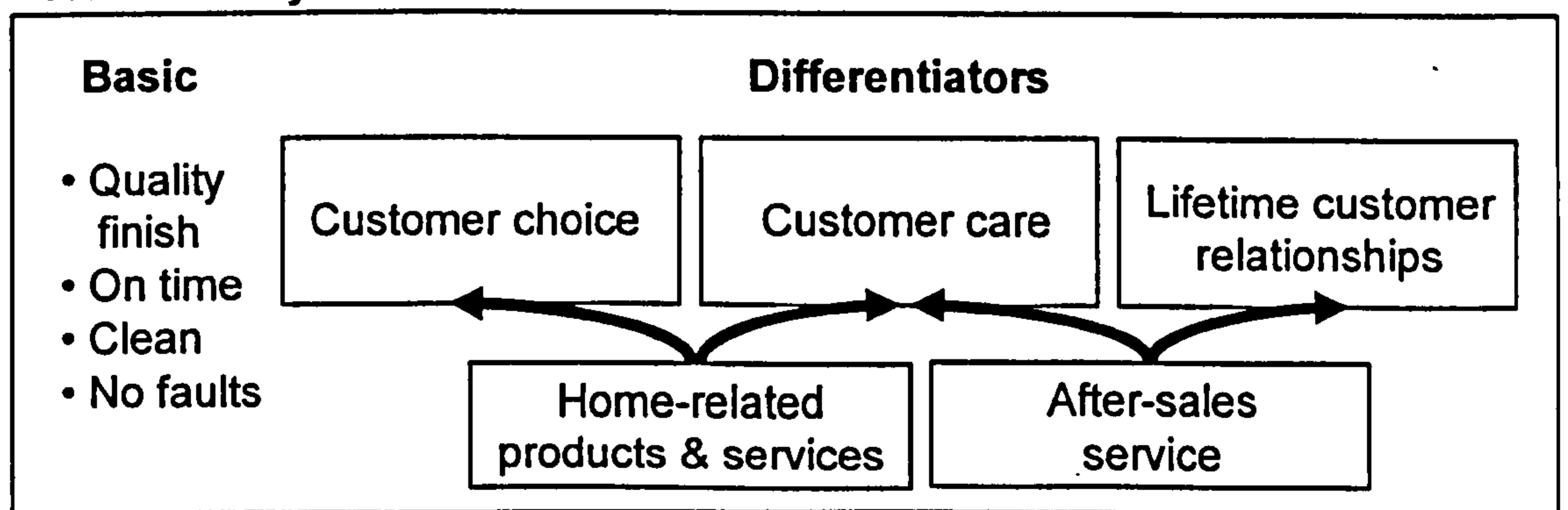


Fig 4.3: Westbury's Strategy Map: *Customer Perspective*

Financial Services, in particular the offering of mortgage and insurance products to home buyers, was a very successful part of the Westbury Direct operation from

launch. In view of the fragmented structure of the independent financial advisor (IFA) market for the new homes sector, a separate financial services business called Incesco, was launched in January 2001. Incesco offers over 4000 mortgage products, 400 insurance products and a wide range of other financial products such as personal loans and credit card accounts. Customers can obtain advice and apply for these products online via the website (incesco.co.uk) by telephone or face to face with an Incesco IFA. The conversion rate is currently over 30% for new Westbury customers seeking a mortgage and Incesco is expected to become a valuable business for Westbury and a small number of other major housebuilders over the course of the next few years.

Westbury Direct and Incesco constitute the “downstream” elements of the new strategy. These new businesses are designed to generate additional revenue as part of a lifetime customer relationship strategy.

4.2.4 Internal Business Process Perspective

The margin-enhancing effects of marketing home-related products and services to customers had been proven but the frequency of faults and the poor quality of Westbury’s customer service seriously constrained the scope to continue relationships with customers after move-in. The next step was to address the challenging task of improving the quality of Westbury’s products and business processes. This stage of strategy formulation involved two important internal process objectives:

1. Integrate non-housing products and services into the core business.

2. Develop a more efficient, higher quality construction process.

The first objective reflected the recognition that the Westbury Direct concept could not be fully implemented until the product quality issues had been resolved. However, by integrating this process into the core housebuilding business, customer objectives can be partly achieved and profits will be enhanced in the short-term, while longer-term objectives are pursued.

The second objective addressed the quality issues directly. The outcome of the Hobman research (Roy *et al* 2003) was an influential driver in formulating the criteria for a new construction process for Westbury. This led us down the path of seeking a higher proportion of factory-made components, suitable for rapid assembly on site. If Westbury could adopt such an approach, this would contribute to the financial objectives of more efficient, high quality construction and supply chain efficiencies and improve customer satisfaction.

In addition to processes aimed at achieving customer and financial objectives, several objectives and measures in Westbury's internal business process perspective for the company's site-based operation were also included. Most of these measures relate to construction quality and supply chain improvements in the financial perspective. The major objectives for Westbury's internal business process perspective are shown in Figure 4.4.

The sources of differentiation for Westbury are in its downstream non-housing product and service offering, the quality and reliable delivery of its core housing

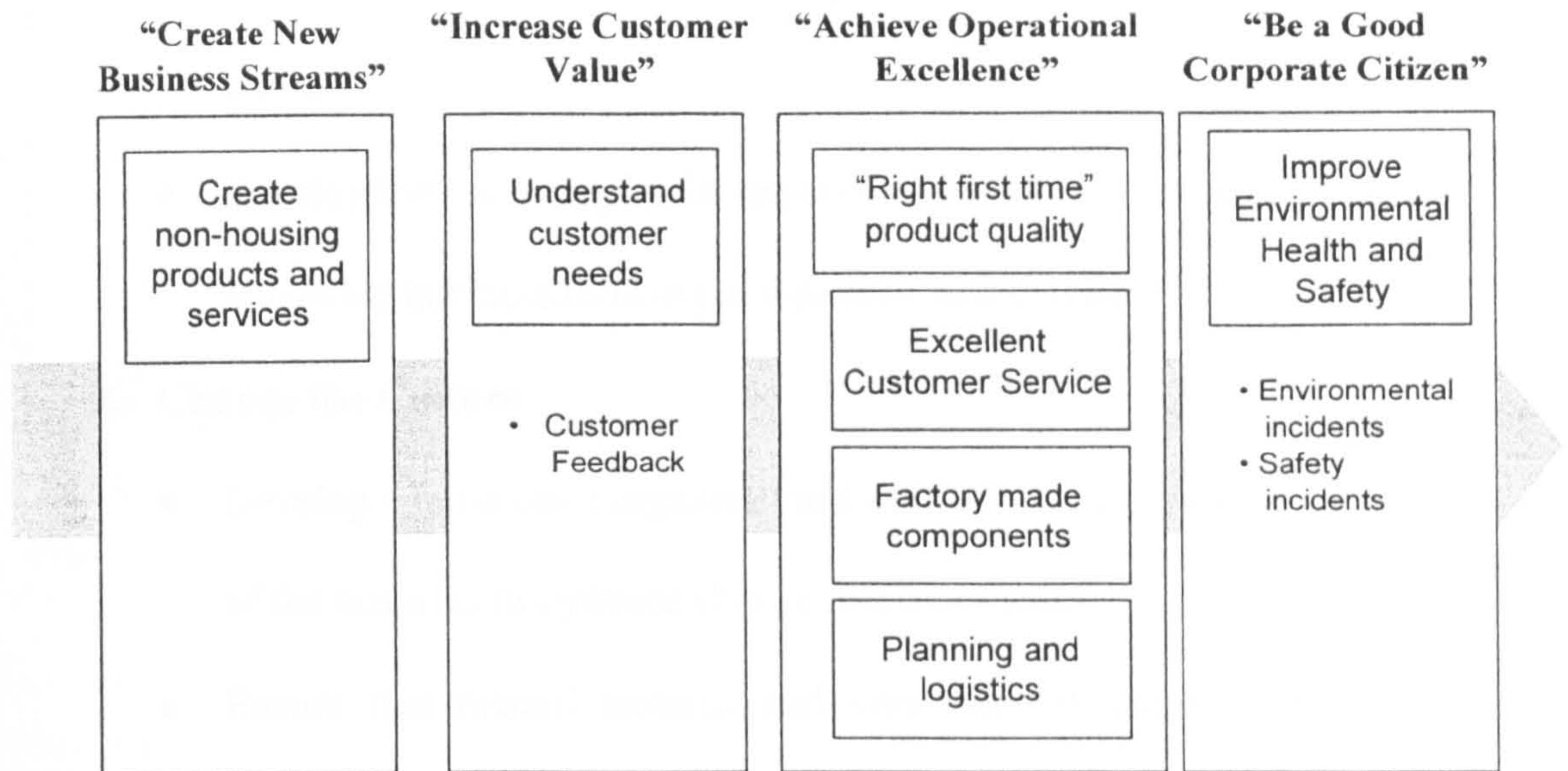


Fig 4.4: Westbury's Strategy Map: *Internal Business Process Perspective*

products and in the supply chain for its construction components. Westbury needed to follow an operational excellence strategy in its basic construction process as the principle driver behind this overall strategy. Right first time quality became a necessary but not sufficient goal for Westbury to establish the basis of a leadership position in the new competition framework.

4.2.5 Learning and Growth Perspective

The final set of objectives provided the foundation for Westbury's strategy: skills and motivation of its employees and changing the organisational culture. Three strategic objectives for the learning and growth perspective have been identified:

1. Core competences and skills

- Encourage our people to gain a broader understanding of the house building business as a whole.

- Build the level of skills and competences necessary to execute our vision.
- Develop the leadership skills required to articulate the vision, promote integrated business thinking and develop our people.

2. Change the Culture

- Develop a more open organisational culture which grows the capacity of the business to embrace change and innovation.
- Ensure that reward systems and improvement actions are closely linked with the culture change process.

3. Organisational Involvement

- Enable the achievement of our vision by promoting an understanding of our organisational strategy and by creating a climate in which our employees are motivated and empowered to strive towards that vision.

The measures to support these three objectives proved to be among the most difficult to specify. Ideally, Westbury wanted to identify the specific skills and attitudes each individual should have to enhance internal process performance and deliver the value proposition to its customers. These might include, for example, measures such as customer orientation and willingness to take on ideas from outside the organisation. The company had to defer actual measurement, however, until it could develop measurement instruments. For the third objective, Westbury implemented an employee survey designed to measure people's understanding of the new strategy and their motivation to help the company achieve its targets. These objectives are shown in Figure 4.5.

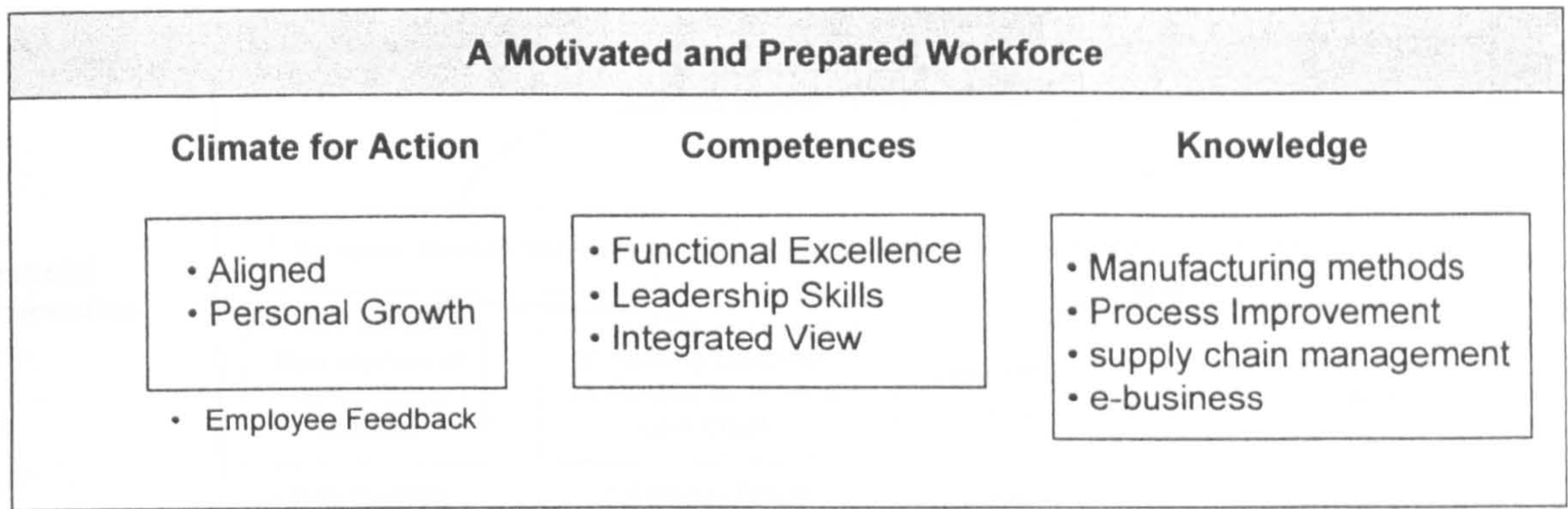


Fig 4.5: Westbury's Strategy Map: *Learning and Growth Perspective*

This completes the representation of Westbury's strategy and fulfils the first process in creating a Strategy-Focused Organisation by translating vision and strategy into a set of objectives and measures in the four perspectives. The complete strategy map for Westbury, shown in Figure 4.6, graphically represents the cause-and-effect linkages across the four perspectives. The process of assembling this map has proved to be an effective means of formulating a competitive strategy for Westbury and the map itself provides a means of communicating the strategy to the rest of the organisation.

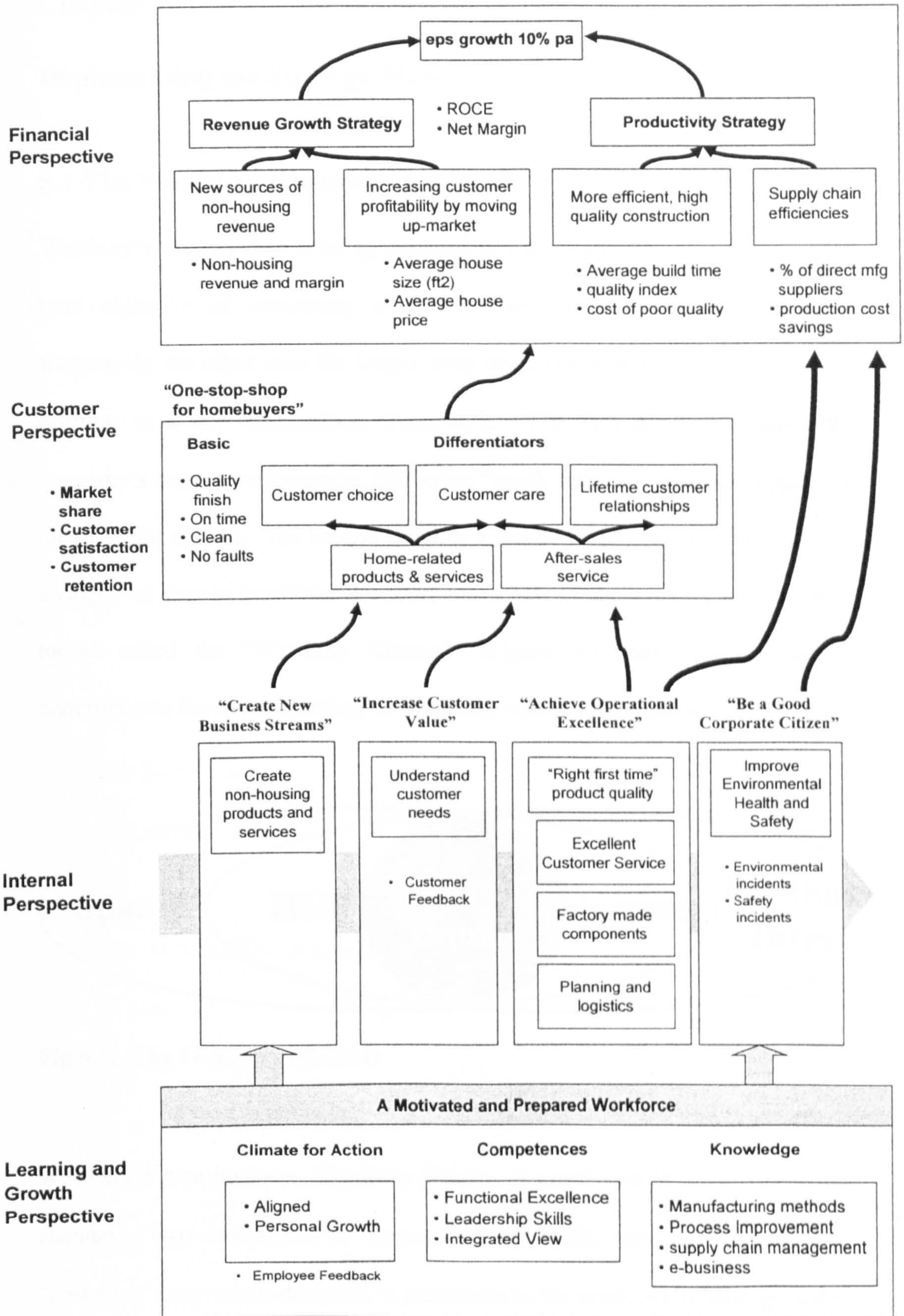


Fig 4.6: Westbury's Strategy Map

Chapter 5

Implementing the Strategy Map

5.1 The Westbury Channel

Westbury's strategy map is being implemented on two levels; one with the short term objective of competing more effectively in the current competition framework; the other with the longer term objective of developing a leadership position in a new competition framework. The first aims to enhance the company's current performance, delivering "quick wins" to maintain support for the drive for change. The second requires a longer-term process of fundamental change that aims to transform Westbury into a new kind of competitor. A simple model called the "Westbury Channel" (Figure 5.1) has been devised to communicate the overall strategy to Westbury's employees (Davies 2002(11)).

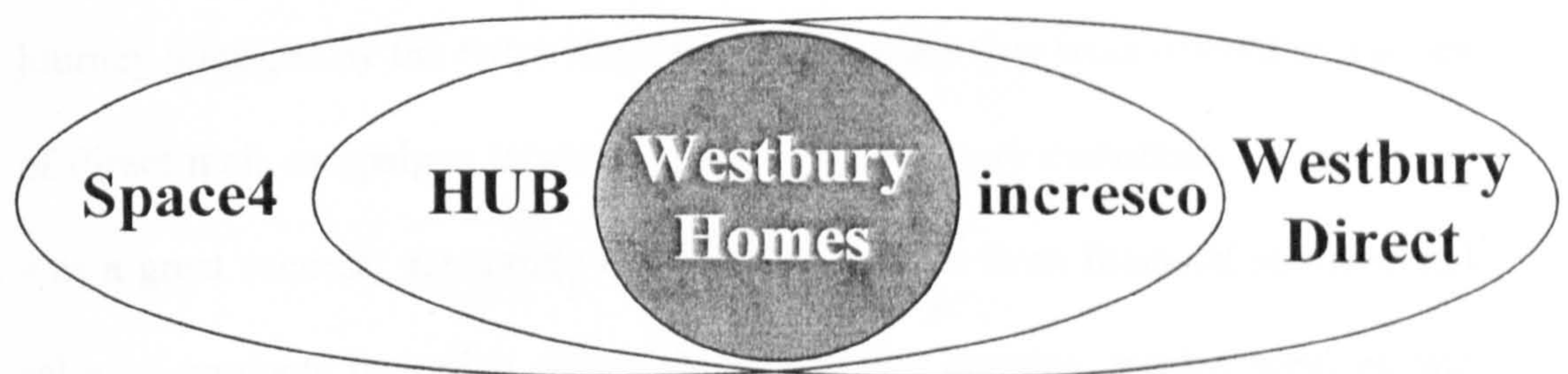


Fig 5.1: The Westbury Channel

Westbury's core business, Westbury Homes, is positioned in the centre of the channel. Two new ventures, Space4 and the HUB, have been launched as "upstream" innovations designed to contribute to the productivity strategy and to facilitate the delivery of right-first-time quality. Two further new ventures,

inresco and Westbury Direct, have been launched as “downstream” innovations designed as integral parts of the revenue growth strategy and to give effect to the customer perspective objective of creating a “one-stop-shop” for home buyers and deliver the benefits of lifetime customer relationships.

5.2 Westbury Direct

Westbury Direct was the first new venture to be launched. It was established as a new business in May 1999 and pioneered the concept of offering a wider choice of home-related products and services to buyers of new homes. A separate management team was appointed to establish this business which was based at Quedgeley in Gloucestershire. The team established collaborative arrangements with a number of leading branded goods manufacturers. These goods and services were marketed to customers in two ways. Firstly they were offered to Westbury homebuyers during the house buying process as part of the customer journey managed by the Sales Negotiator. Secondly they were offered in a series of direct mail campaigns targeted at existing Westbury customers. The former was a great success, generating commission income from financial services and sales of products including white goods, carpets, curtains, garden services and conservatories. The marketing campaigns directed at existing Westbury customers enjoyed more limited success, partly due to the deterioration in customers’ relationships with Westbury during the later stages of the home buying process. Action was needed to address the quality failures occurring in the construction process that generated an unacceptable number of defects discovered by homebuyers after moving into their new homes and discouraged

them from trading with Westbury in the future.

5.3 Space4

The Hobman Project (Lorenz 2002, Roy *et al* 2003) explored the scope for improving Westbury's construction processes with a view to establishing a foundation for right-first-time quality. A number of alternative systems were reviewed. Figure 5.2 shows a summary of pre-assembly options, categorised into four different levels of modularity (Gibb 2001). The options considered in the research focused on level 2, non-volumetric pre-assembly. The research led to the construction of a series of prototype houses that were built using a number of

Various materials			Steel, precast concrete, timber, aluminium, advanced composites, hybrids						
Door furniture, windows, etc	Bricks, Tiles, etc	Items always made in a factory and never considered for on-site production		Pre-assembled units which do not create usable space	Structural frames	Cladding wall panels	Bridge units, services etc		
		Factory-made components	Component sub-assembly Level 1						
		Sub-assemblies							
Edge of town retail units, motels, prison blocks, medium rise residential	Factory clad	Modular Building Level 4	Non-volumetric pre-assembly Level 2	skeletal	planar	complex	Within another building		
	Clad on site							Volumetric pre-assembly Level 3	Onto another building
	Pre-assembled volumetric units which form the actual structure and fabric of the building								
Steel frames, stressed skin plywood, pre-cast concrete, various cladding materials, advanced panel systems			Dry-lined lightweight steel frames, precast concrete, advanced composites, wood based panel systems						

Fig 5.2: Pre-assembly in construction (Gibb 2001)

alternative construction methods including steel frame and composite panel systems. Some promising process improvements arose from these prototypes (Roy *et al* 2001) but Westbury could not find a manufacturer in the marketplace with sufficient capacity to meet its requirements in terms of design, quality and cost. However, a small company based in Cornwall was found to be experimenting at pilot scale with a new construction system that came very close to satisfying Westbury's criteria. This company was called Thermotech and was owned by Keith Williams, an inventor who had worked in the timber frame construction sector in North America and the UK for many years. Early in 1999, Keith Williams produced enough panels through his pilot plant to construct a prototype house using his system in the yard of his timber-frame workshop at St Austell. The Westbury board visited the site to evaluate the result. This led to the acquisition by Westbury of Thermotech's pilot plant and intellectual property rights for Keith Williams' invention. This was worked up into a full production scale process and in December 1999 I presented the case to the Westbury board for a £13 million investment in new factory facilities to prefabricate high precision walls and floors using a scaled-up version of Keith Williams' original ideas.

The plan was to establish a new business called Space4 that would produce three major components for house assembly in quality controlled conditions (Davies 2000 (4)). Following approval of the plan and commercial validation by a team of external consultants, a 220,000 ft² factory was acquired at Castle Bromwich in the West Midlands in April 2000. The factory was commissioned in April 2001

with the capacity to produce floor cassettes, internal timber stud walls and timber frame, insulated external wall panels for over 5000 homes per annum. Figure 5.3 shows the process flow of the factory. The precision engineered external wall panels are manufactured from kiln dried timber which is assembled into a frame and covered with cement particle board and plaster board to form an enclosed

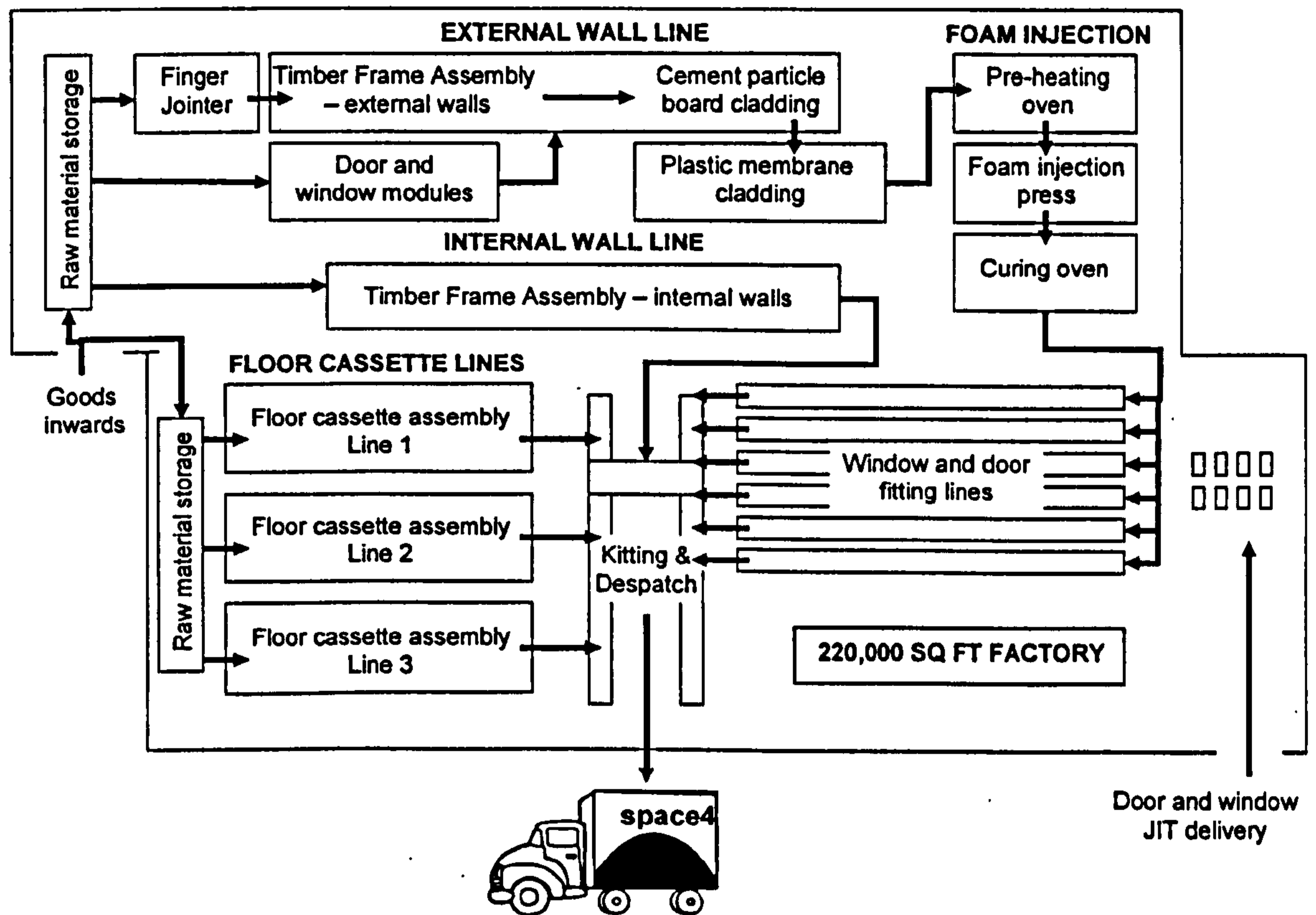


Fig 5.3: Production flow diagram of Space4 factory

panel. These panels contain conduits that act as service channels and have external doors and windows fitted in the factory. High performance insulating foam is injected into each external panel using a unique patented process and external doors and windows are fitted on-line. The factory has been designed as

a just-in-time flow line, supported by computer based CAD/CAM systems and configured for e-business transactions with suppliers and customers. It produces one standard house shell per hour and has the capacity to manufacture between 5000 and 6000 shells per annum operating on three shifts.

The shell for an average 1200 square foot Space4 house is assembled in a single working day. The wall panels are delivered to site the day before assembly. Starting with a precision foundation and a pre-made roof, a team of four specially trained assemblers works with a crane driver to assemble each house. The floors arrive on a second lorry around mid-day and are craned directly onto the ground-floor walls. The final stage of the assembly process involves craning on the roof which takes around 30 minutes. A Space4 house is finished by cladding with conventional brick, stone or render, and fitting out internally in the usual way. The use of the Space4 system reduces the overall time to build a house from 16-20 weeks to 10-12 weeks. The finished product is of superior quality and has excellent thermal insulation properties. The first six Space4 homes were built at Taunton in May 2000. By the end of 2002 over 1000 Space4 houses had been assembled.

5.4 The HUB

The second upstream innovation, launched by Westbury in 2000, was a proprietary e-business portal called the HUB that provides a means of exchanging information and executing transactions across a supply network via the internet. The HUB provides a live link between Space4 and Westbury,

providing real-time visibility of the Westbury Homes production schedule for Space4 houses. The schedule is frozen by Space4 four weeks before the Space4 shells are manufactured. This allows Westbury to change their schedule up to this point but enables Space4 to order windows and doors within the lead-times required by suppliers. The HUB is also being used by a range of suppliers to Westbury Homes to achieve more efficient supply chain management (Davies 2001(7)).

5.5 Inresco

The financial services arm of Westbury Direct proved to be an excellent source of additional revenue. In 2001 we decided to spin this element of Westbury Direct into a stand-alone company called Inresco. The vision for Inresco is to become “the leading multi-channel financial services company for the new homes sector”. A business plan for Inresco was approved by the board early in 2001 and the company was launched in May 2001.

The company has developed two main channels of business. The first is the conventional route of providing mortgages and protection insurance for buyers of Westbury homes via face-to-face appointments with Inresco’s team of independent financial advisers. The second channel provides mortgage and insurance search and application facilities directly through the internet. Online business is the fastest growing part of Inresco and provides the scope for creating an asset of considerable value to the Group.

5.6 Development of the Westbury Channel

The change programme at Westbury has involved launching complementary businesses upstream and downstream of the core business. Success in delivering upstream improvements and driving process change through the core business is essential before the downstream strategy, built on lifetime customer relationships, can be fully developed. As upstream processes are being integrated and quality improved, Westbury is focusing its downstream activities on new customers during the house buying process. This is proving successful in generating further revenue streams but the benefits of the strategy will not be fully delivered until right first time quality is achieved consistently within the core business.

The growth of the Westbury Homes business has been driven predominantly by three major acquisitions: Clarke Homes, acquired from BICC in 1996, the John Maunders Group plc, acquired in 1998 and Prowting plc, acquired in 2002. The Clarke Homes product portfolio supported Westbury's move up-market, assisted by investment in prime location sites.

Westbury Direct has made a significant contribution to the Group's profits over the past few years (2002/03 profit £2.5m). With more substantial fixed costs to be covered, Incresco and Space4 are still on growth paths towards profitability, expecting to achieve breakeven during 2003. However, Space4 is enhancing performance of the core business through waste reduction, greater efficiency and quality improvement.

Figure 5.4 shows how the elements of implementation described above form part of Westbury's "first generation" Strategy Map. This represents the first steps that

have been taken towards implementation of the new strategy. Culture change is a slow process and as there is a need for it to keep pace with process change for effective strategic development to maintain momentum, implementation appears somewhat disjointed at this stage. The company has the additional pressure of needing to maintain growth simultaneously with the drive for new sources of competitive advantage. Acquisitions, the main source of growth, have absorbed a great deal of senior management time, leaving limited resources available for change management in other parts of the business. However, three new businesses have been established by focusing dedicated resources on business development. Although these new businesses have been launched successfully, there is a need to develop the capabilities of the core business further in order to derive full benefit from new processes. Therefore the next stages of implementation must involve greater integration of the elements shown in Figure 5.4 and the introduction of enterprise-wide strategies that will take the whole organisation forward.

There is a further major opportunity to develop Space4 from being a supplier to Westbury into becoming a significant business in its own right. This would require further investment, possibly via a joint venture with a partner that can offer manufacturing expertise and effective routes to market both in the UK and overseas. This would shift Space4 in the strategy map from the internal perspective to the financial perspective.

These objectives and opportunities will be considered as part of the evaluation of the strategy and projection of future scenarios that follows.

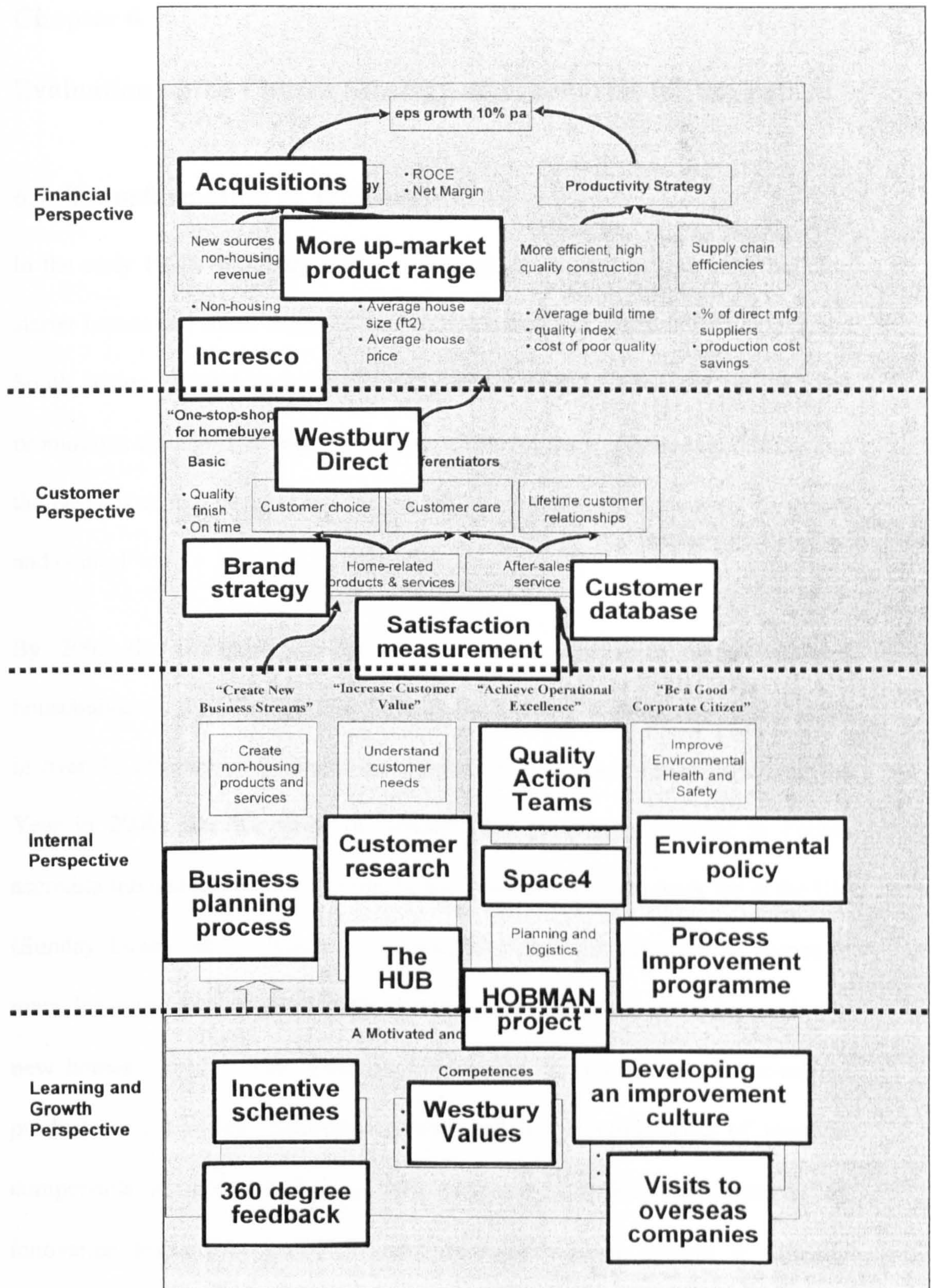


Fig 5.4 Strategy implementation to date (first generation)

Chapter 6

Evaluation of the Chosen Strategy and Scenarios for the Future

6.1 Transformation of Westbury

In the early 1990s Westbury was a traditional, provincial housebuilder building starter homes and small detached houses in Central and South-West England and South Wales. It sold its houses mainly on the basis of price and special offer promotions through five regional offices. The company planned its business on the basis of annual budgets and the prevailing management style was “command and control”.

By 2002 the company had grown to become the sixth largest national housebuilder in the UK, operating through ten regions, building up-market homes in over 40 counties of England and Wales. It was voted Housebuilder of the Year in 2000, was the first UK housebuilder to receive Investor in People accreditation and has been voted one of the best companies to work for in the UK (Sunday Times 2002). Westbury commands a premium price for its homes in many locations, having developed one of the most distinctive brand images in the new homes market. The Westbury Group has diversified into home-related products and services, financial services and the manufacturing of modular components for house building. The company is widely recognised as an innovation leader and its Space4 off-site manufacturing system is radically changing the way that houses are built and setting new standards for construction efficiency and thermal insulation. Space4 has already received a number of

industry awards for innovation and building efficiency (Davies 2001 (9) Davies 2001 (10) Davies 2002 (11)).

This transformation of Westbury has not taken place solely as a result of the strategy outlined in Figure 4.6. However, formulating this strategy has provided a routemap for the company to chart its direction in a balanced way from risk-averse follower to innovation leader.

6.2 Financial Results

Westbury has been very successful in delivering its revenue growth strategy over the past six years. This has been the main driver behind the company's over-achievement of its prime financial objective of 10% annual growth in earnings per share since 1997 (see Figure 6.1).

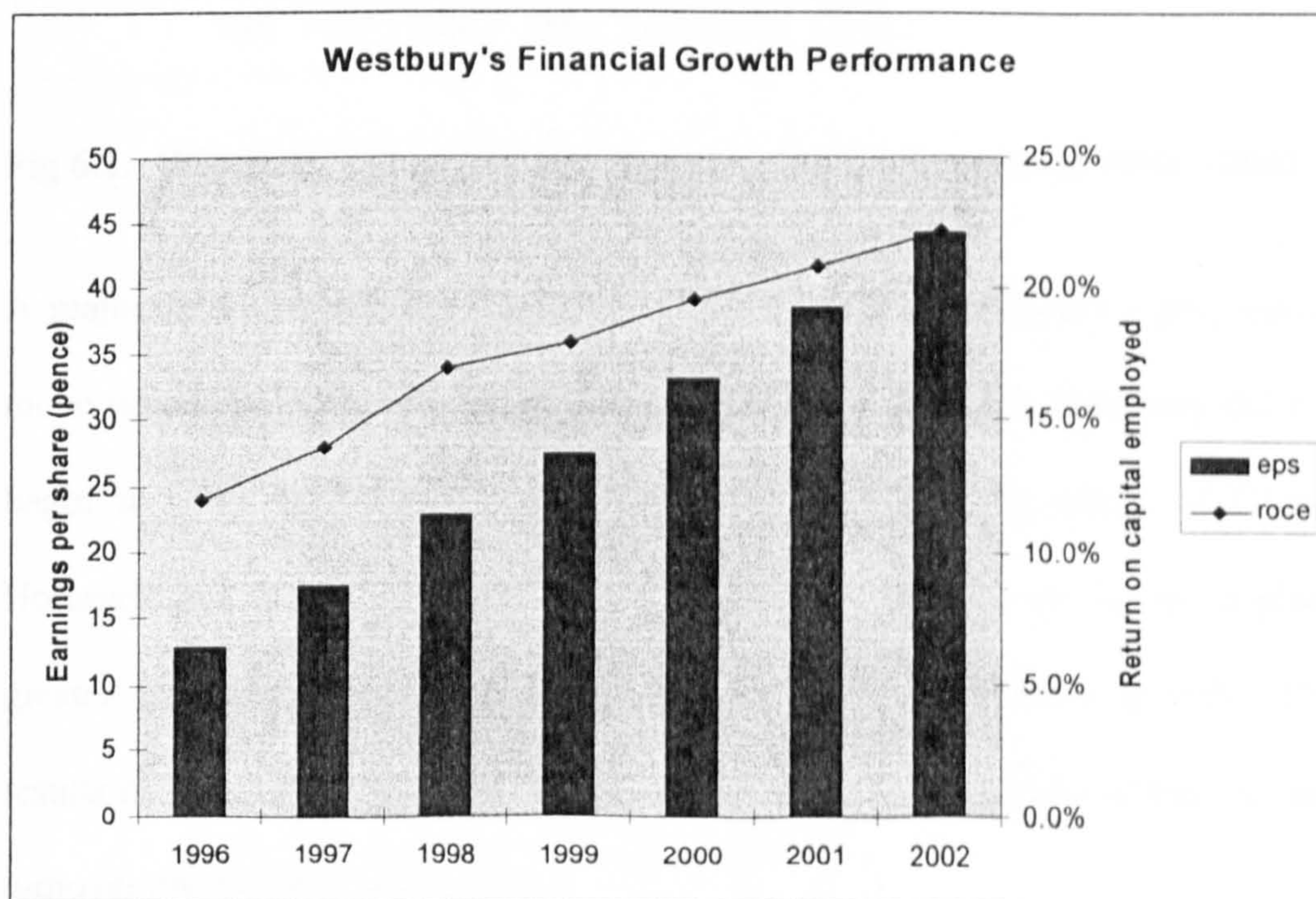


Fig 6.1: Westbury's record of earning per share (eps) growth and improvements in return on capital (roce) 1996 – 2002

Over the past five years Westbury has achieved an average of 25% annual growth in earnings per share (eps). Return on capital employed has increased every year (Figure 6.1) along with profit margins and absolute profit levels (Figure 6.2).

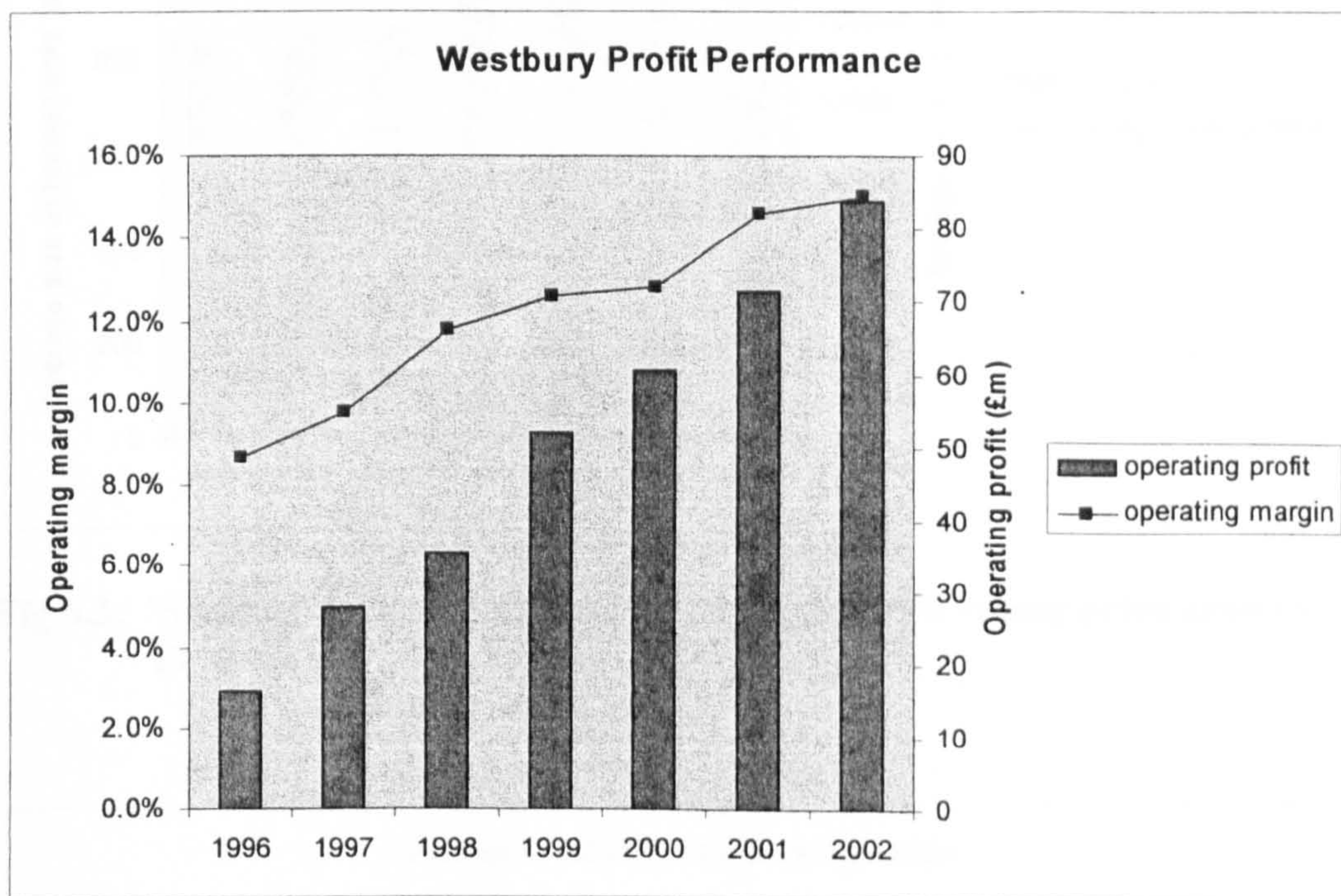


Fig 6.2: Westbury's record of margin and profit performance 1996 – 2002

A major factor in delivering these results has been the company's progressive move up market, although the average size of houses built by Westbury did not begin to grow significantly until 1999, following the acquisition of Clarke Homes (Figure 6.3). This was also the time when the company began to place greater emphasis on turnover and profit growth than on volume growth. The results of this strategic decision are clearly reflected in the pattern of volume and turnover growth seen in Figure 6.4.

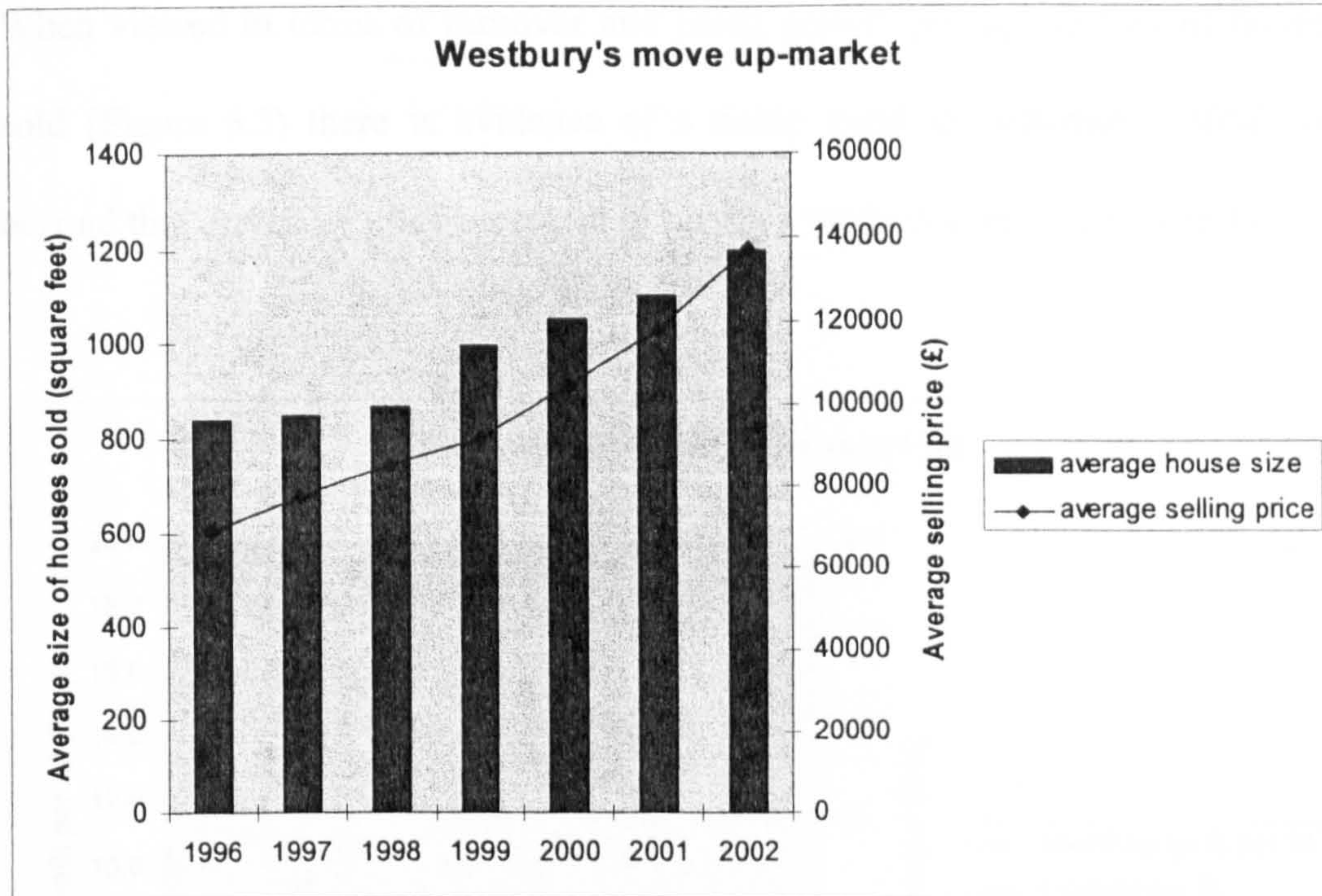


Fig 6.3: Westbury's record of average house size and selling price growth 1996 – 2002

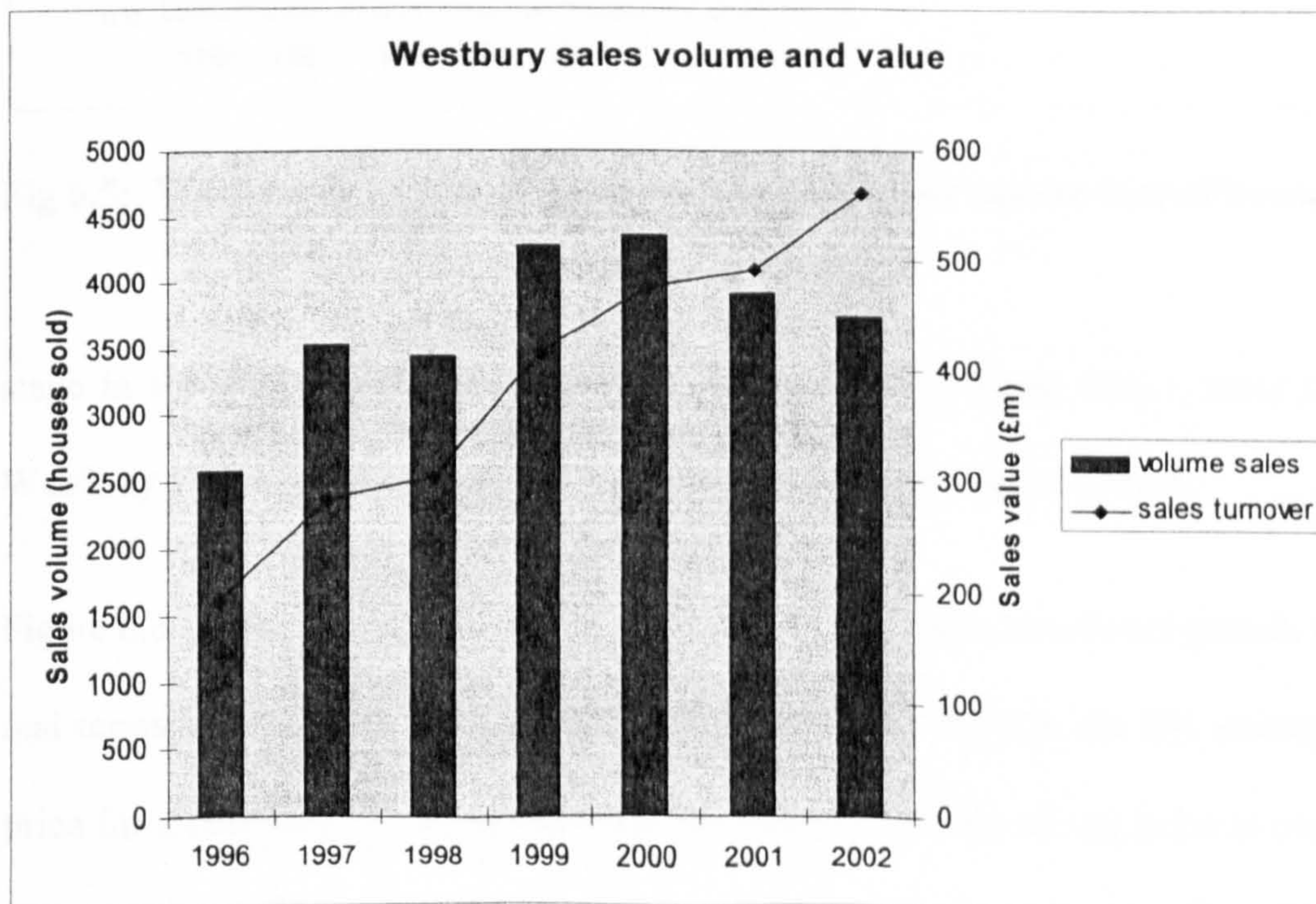


Fig 6.4: Westbury's record of sales volume and turnover value 1996 – 2002

When viewed in terms of turnover and profit growth per square foot of houses sold (Figure 6.5) there is evidence of a rising trend in customer profitability beyond that driven by price increases in the core product alone. At this early

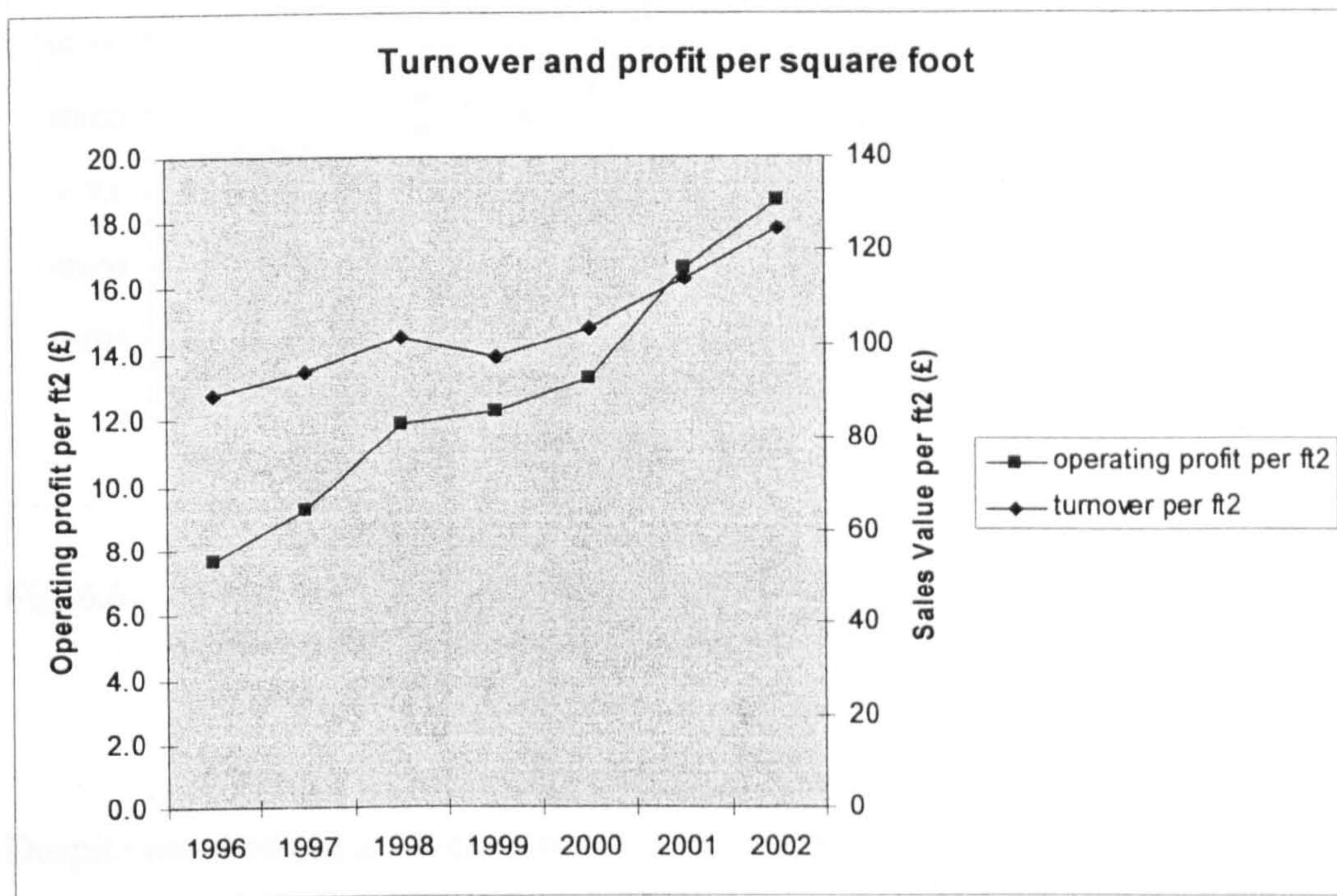


Fig 6.5: Westbury's record of turnover and profit per square foot of houses sold 1996 – 2002

stage in the implementation of the new strategy, this is being driven more by Westbury Direct profit enhancement than by productivity improvements.

Figure 6.6 confirms that Westbury's performance represents consistent growth in real terms. Westbury's average selling price was very close to the UK average price for a new home in 1996. In 2002 Westbury's average selling price is over 19% higher than the average price of a new home in the UK.

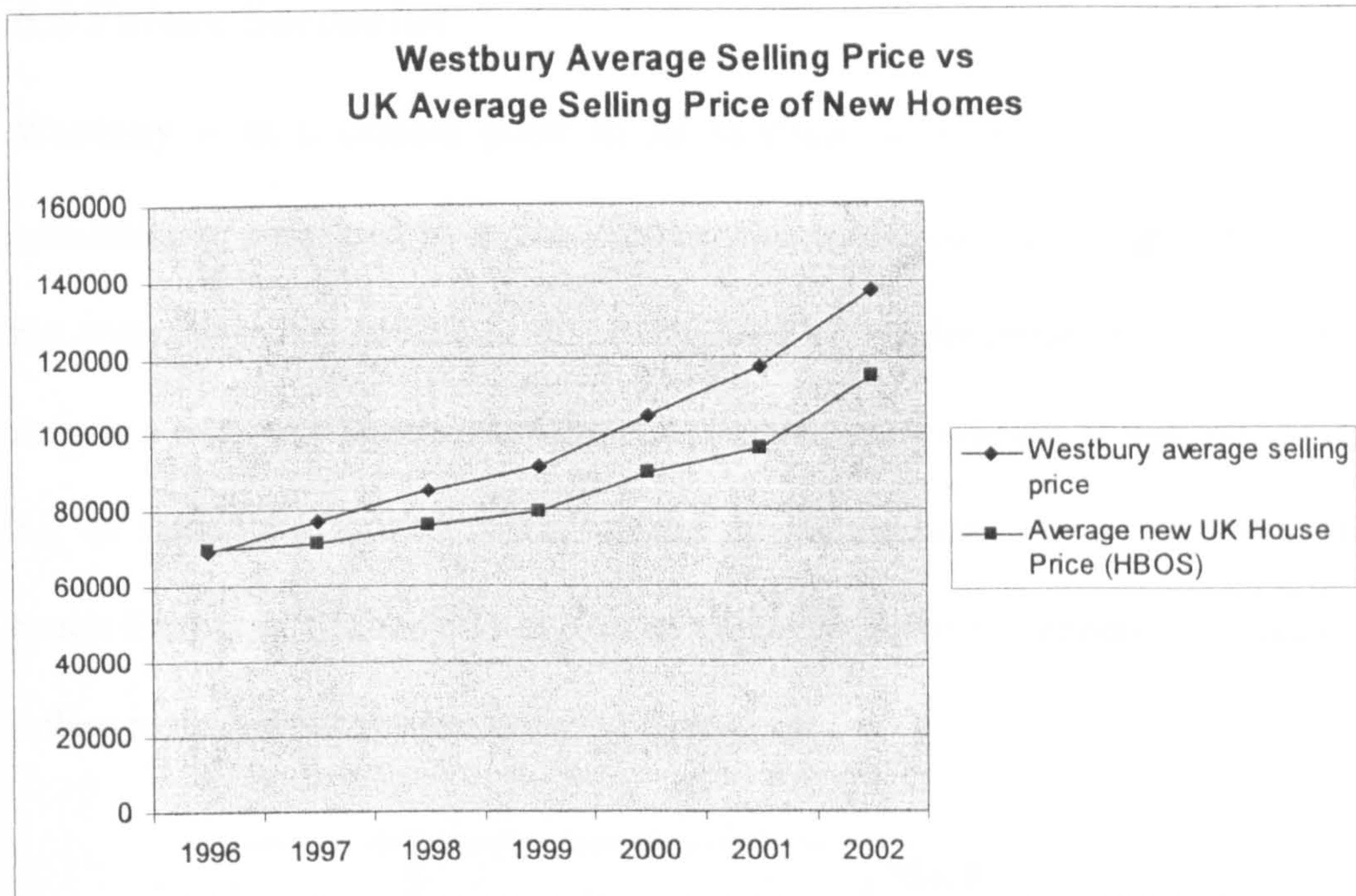


Fig 6.6: Westbury's record of average selling price per house vs average selling price of new UK houses sold 1996 – 2002
(Source: HBOS website)

Despite maintaining an impressive rate of growth in turnover and profit over the past seven years, Westbury remains at risk from larger competitors. Further growth must continue in parallel with advances in its ability to implement process improvements, achieve right first time quality and develop a customer focused culture.

The first generation of strategy implementation has focused on growth and the development of new capabilities for differentiation. The next generation of implementation must build on this foundation to create competitive advantage from these new capabilities within the changing competitive environment.

6.3 Future Scenarios

Westbury is at a critical point in its strategic development. Its innovative activities are perceived by several industry commentators as a negative factor in the company's risk profile at this early stage of implementation. Furthermore, despite a relatively aggressive acquisition record, the company is still only ranked 11th in the table of market capitalisations of housebuilders quoted on the London Stock Exchange (Table 6.1) and must therefore remain vulnerable to takeover unless rapid and substantial growth takes place.

Ranked	Company	Market Capitalisation (£m)
1	Persimmon	1054
2	Taylor Woodrow	998
3	Barratt	930
4	Wimpey	907
5	Berkeley	839
6	Wilson Bowden	749
7	Bellway	559
8	Redrow	418
9	Wilson Connolly	370
10	McCarthy & Stone	349
11	Westbury	333
12	Crest Nicholson	221
13	Countryside	132

Table 6.1: Market Capitalisations of housebuilders quoted on the LSE (6th April 2003)

The trends identified in this report suggest the following future developments:

- Progressive industrialisation of housebuilding across the world and the growth of international competitors, especially in Japan, the USA and China.

- International competitors may enter the UK market with higher quality products, more efficient processes and superior customer focus.
- New types of competitors such as “super contractors” and major brands from other product sectors may enter the market.
- The UK government will require housebuilders to provide more affordable homes and create communities, rather than housing estates.
- Customers will continue to demand improvements in quality and the flexibility and choice to customise their new homes
- The scope for land profits will diminish and housebuilders will have to derive a higher proportion of their profits from construction efficiency, creating customer value and enhanced service delivery
- Restructuring of the industry will take place, changing the role of housebuilders in the supply chain for new homes
- Several major UK housebuilders will grow but may remain resistant to change.

Figure 6.7 shows the results of a SWOT analysis for Westbury based on implementation of its strategy to date and projected future market trends. This highlights the need for the company to grow significantly to avoid becoming prey to further consolidation in the sector. However, growth alone is not sufficient to secure long-term survival. New sources of competitive advantage must also be

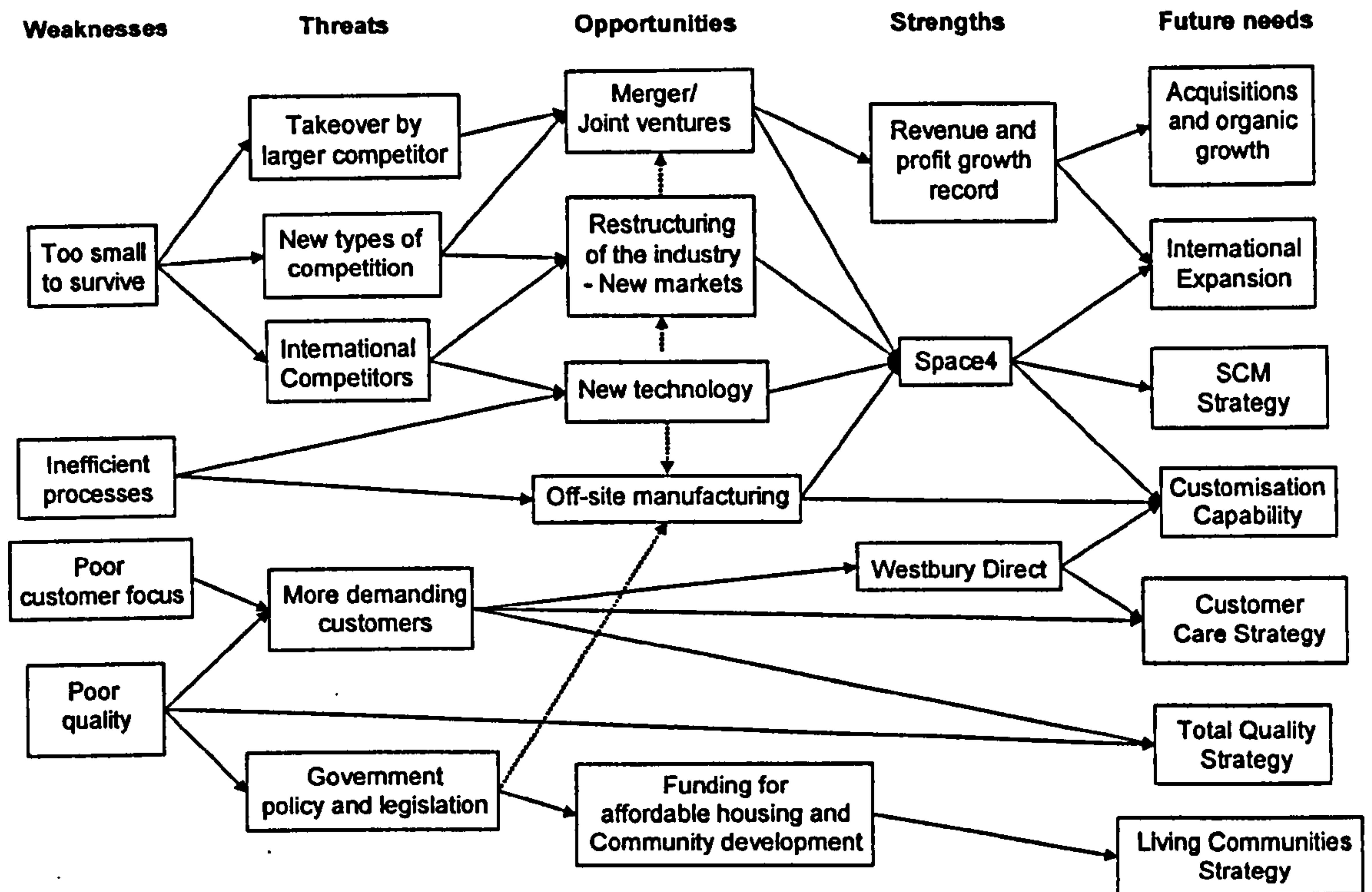


Fig 6.7: Future Scenario SWOT analysis

developed. As the diagram shows, this can be achieved by addressing sources of weakness, exploiting opportunities, capitalising on areas of strength and developing further strategies that will meet future needs.

The six key areas for future strategic development are:

- Customer Care
- Total Quality
- Supply Chain Management
- Living Communities
- Customisation
- Off-site Manufacturing

These fit into Westbury's strategy map as shown in Figure 6.8 to create a second generation of strategy implementation.

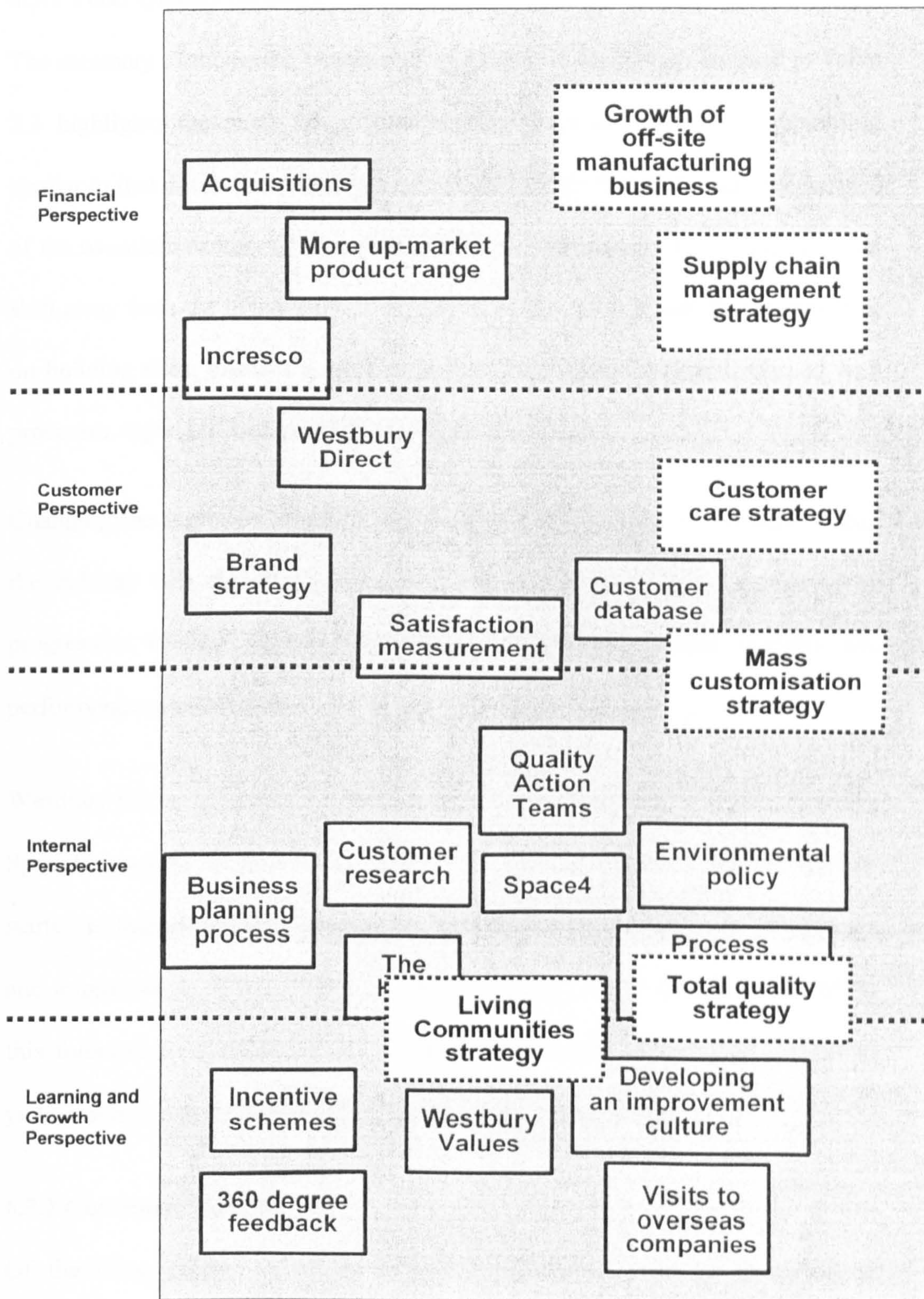


Fig 6.8: Westbury's Strategy Map – second generation

These new elements of strategy are described below.

6.3.1 Total Quality Strategy

The summary of the needs, causes and opportunities for change outlined in Table 2.3 highlights the need for a “total quality” approach within housebuilding similar to that developed within the automotive sector during the last few decades of the twentieth century (Womack *et al* 1990). There is need for a fundamental shift away from the blame culture of functional and trade “silos” that is prevalent on building sites, towards a more team-based, integrated approach aligned with processes, typical of best-practice manufacturing firms.

Changing the ingrained attitudes and the traditional modes of operation within the industry will require a great deal of investment in training, supported by progressive change in policies covering recruitment, reward systems and performance measurement.

Westbury has an opportunity to accelerate this transformation of culture by using Space4 as a catalyst for driving change in its core business. This has already started to happen in some Regions, as reflected in the reduction of build times and improvement of build quality. The next generation of change can build on this foundation by streamlining the post-Space4 stages of the build process to yield maximum benefit from the off-site manufacturing strategy.

6.3.2 Customer Care Strategy

Of the three generic routes to achieve competitive advantage described in Chapter 3 (Kaplan and Norton 2001) “customer intimacy strategy” offers the

greatest potential for Westbury in the housebuilding sector in the medium term. The scope for product leadership is limited by the influence of the planning system and operational excellence will require longer-term investment. Customer care can be delivered through the training and development of people and a willingness to change processes to become more customer focused.

An effective Customer Care Strategy will lay the ground for maintaining a positive relationship with customers after they have moved into their new homes. In the same way that customers return to car dealers for servicing and parts, home buyers may be prepared to buy home-related products and services from housebuilders throughout their period of occupation of their new home. This is fundamental to the original Westbury Direct strategy.

The planning and implementation of a customer care strategy is not only a feasible objective for Westbury but it also addresses a key weakness and is a necessary prerequisite for the fulfilment of the second phase of the Westbury Direct implementation that will generate a further stream of revenue from existing customers.

6.3.3 Supply Chain Management Strategy

The design and specification of components, procurement of materials and deliveries to site are processes managed in a very fragmented way by UK housebuilders. Consequently there must be significant scope for the elimination of waste, compression of lead-times and reduction of costs by adopting more

professional supply chain management principles.

Space4 has already started to exploit this source of performance enhancement by implementing e-business practices and rationalising deliveries into full loads, delivered just-in-time to the factory. However, as Space4 components currently account for approximately 20% of construction costs for each house built, the greatest potential for improvement remains untapped.

6.3.4 Mass Customisation Strategy

Developing the capability to offer customers the flexibility to customise their homes in an affordable way is a key part of Westbury's strategy to create competitive advantage. Space4 and Westbury Direct are both initiatives in this direction. However, further work is required to engineer a cost effective customisation process. This will include the standardisation of components where possible and the design of homes in a way that offers a number of customisation options that can be implemented before and after the house has been built.

On-site assembly and completion processes will also require re-engineering. For example a late configuration strategy may be employed that ensures that the installation of those elements subject to customer choice is left until a late stage in the construction process.

6.3.5 Living Communities Strategy

The government is seeking greater commitment from housebuilders towards the creation and maintenance of communities, rather than simply building housing

estates (ODPM 2003). There will be a need for housebuilders to learn how to respond to this requirement. The concept of “community stewardship” is new to the industry and firms will find it necessary to develop new competences if they are to make meaningful contributions, other than financial, to this new perspective on the role of housebuilders in the future.

These are the future elements for the next phase of development for Westbury’s strategy. However, as the balanced growth model (Figure 3.8) suggests, only so much change is possible for an organisation over a specified time period before the limits of its capability are reached. This second generation of strategy implementation will require careful planning to maintain an effective balance between change and capabilities.

6.4 Expansion of Space4 as an independent business

Space4 has been established with a separate management team and it is feasible therefore to undertake the expansion of this business in parallel with the strategic development of Westbury’s core housebuilding business as a further means of creating value for the Group. The first milestone in this process is to prove the financial viability of Space4’s business model. Figure 6.9 shows the scale of growth in volume sales required to achieve profitability. Breakeven is forecast for the second half of financial year 2003/04 when the first sales of 300 units to non-Westbury customers are anticipated. Sales to Westbury are planned to peak at around 2500 units, leaving the remaining 3000 units of capacity available for sale to more profitable external customers.

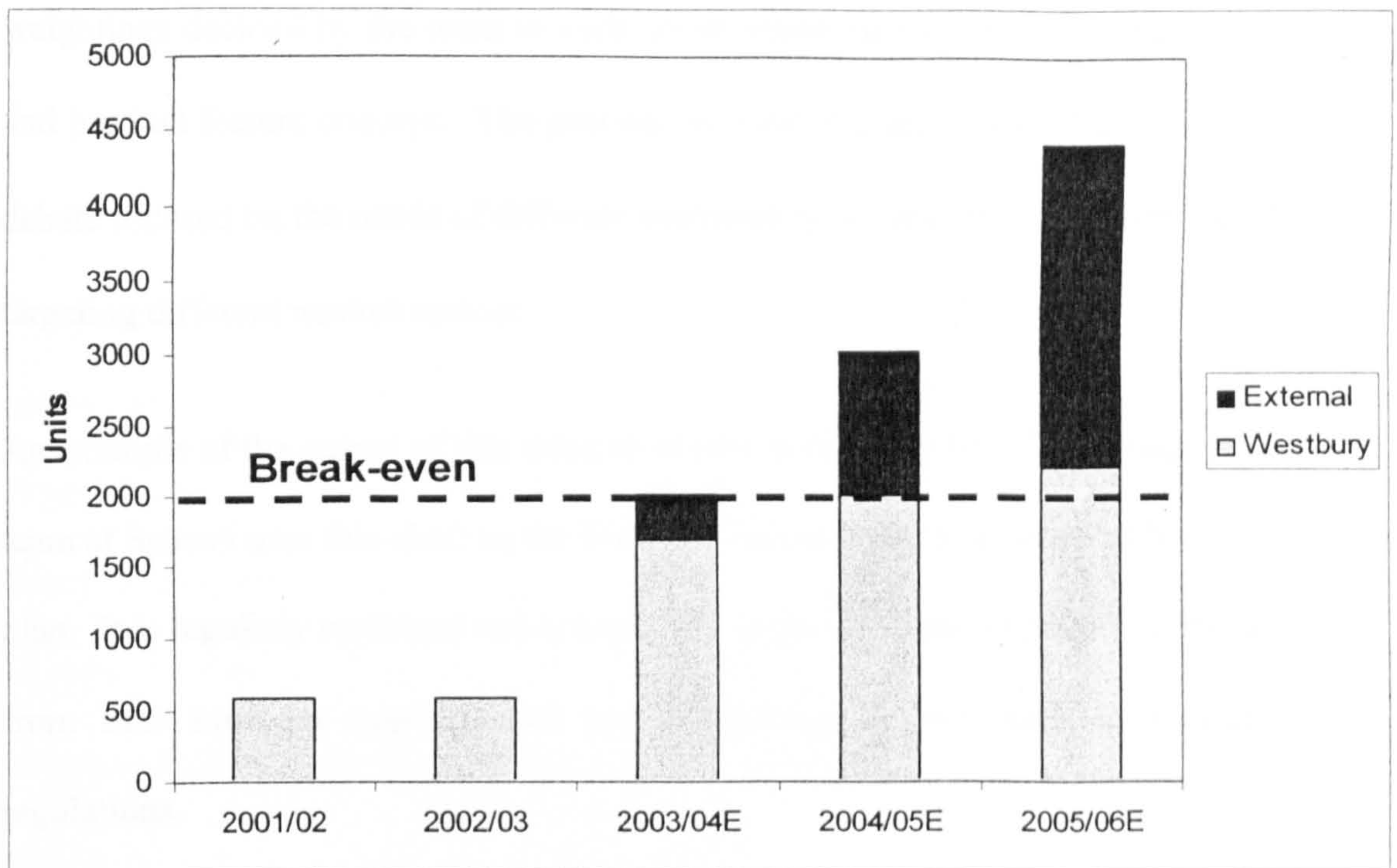


Fig 6.9: Space4 projected volume growth

6.4.1 Technology Roadmapping – developing Space4’s capabilities

Space4 is a new technology company. Its future is dependent on maintaining a lead in the development of product features and processes that can create value for builders and consumers. The development of technology can easily become separated from the central strategy of an organisation. Technology Roadmapping is a technique for linking technology management to market drivers as part of an integrated approach to business strategy formulation (Davies 2003(3)). This method has been applied as part of the formulation of future strategy for Space4. In view of the broad range of possible market opportunities for Space4’s prefabricated building components, the roadmapping exercise has proved to be an effective way of prioritising objectives. Once target market sectors had been identified, the product features required to service these were defined. This work led to the construction of an analysis grid that applies the priorities and

weightings decided by the team to each combination of market or internal driver and product feature concept. The process stimulated a great deal of constructive debate focused on the needs of different customer types and the relative merits of targeting different market sectors.

An example of the output of this work is shown in Figure 6.10. The management team at Space4 uses this chart as the basis for the company's operational business plan. It is regularly reviewed and amended to reflect changes in priorities arising from new business opportunities and technology drivers such as building regulations.

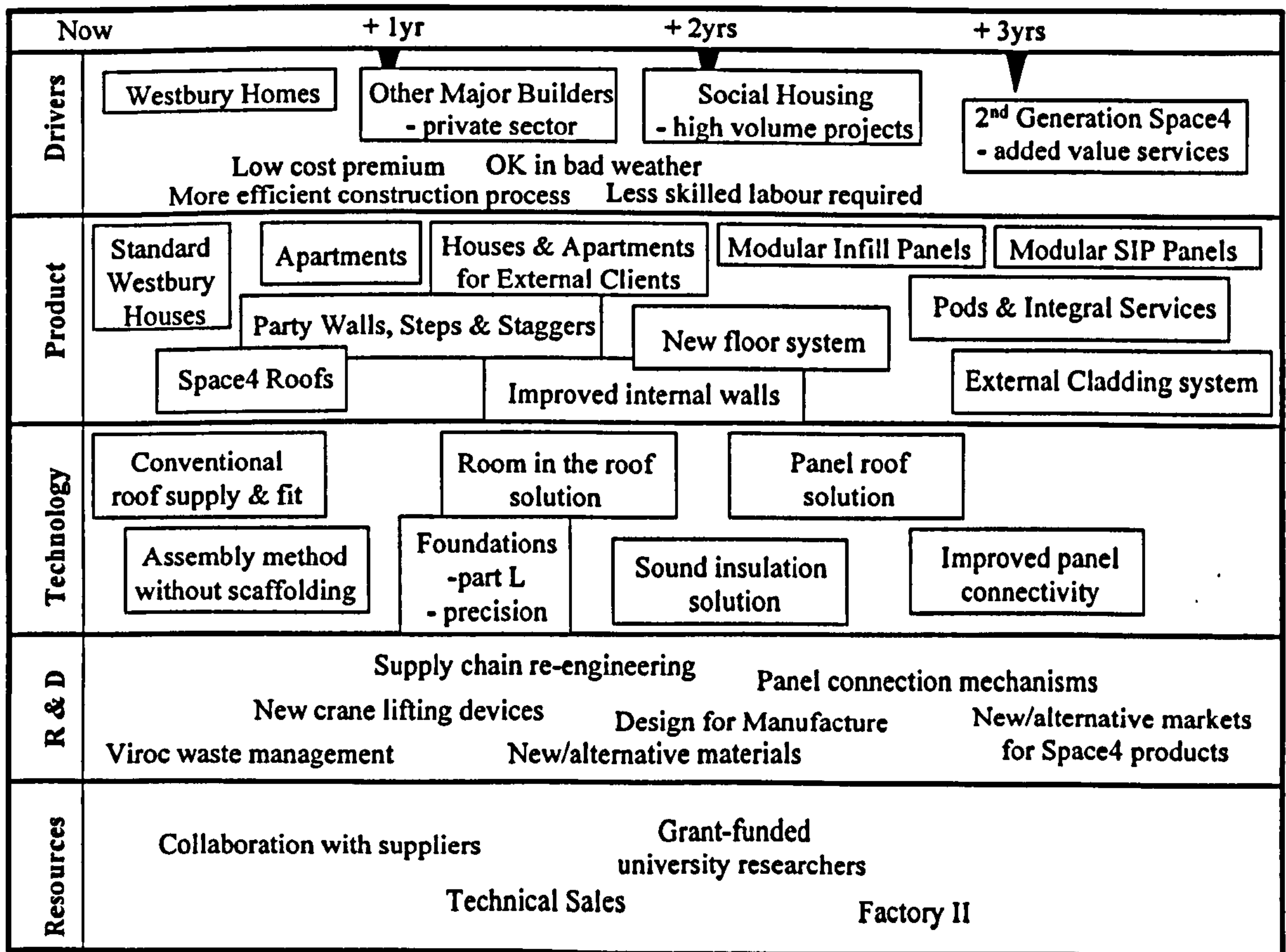


Fig 6.10: Space4 Technology Roadmap, October 2002

6.4.2 Space4 Expansion Strategy

At the current rate of growth, the Group will need to commence plans for a second Space4 factory during 2004/05. The scope for expansion will depend on the demand for Space4's products from the private housebuilding sector and public sector bodies such as the Housing Corporation and individual Housing Associations. Figure 6.11 shows the scope for Space4 in terms of current and future product types. The Space4 system is currently approved for up to four storeys. Further development work is underway to extend this scope to include five and six storey apartments. Space4 is currently in direct competition with

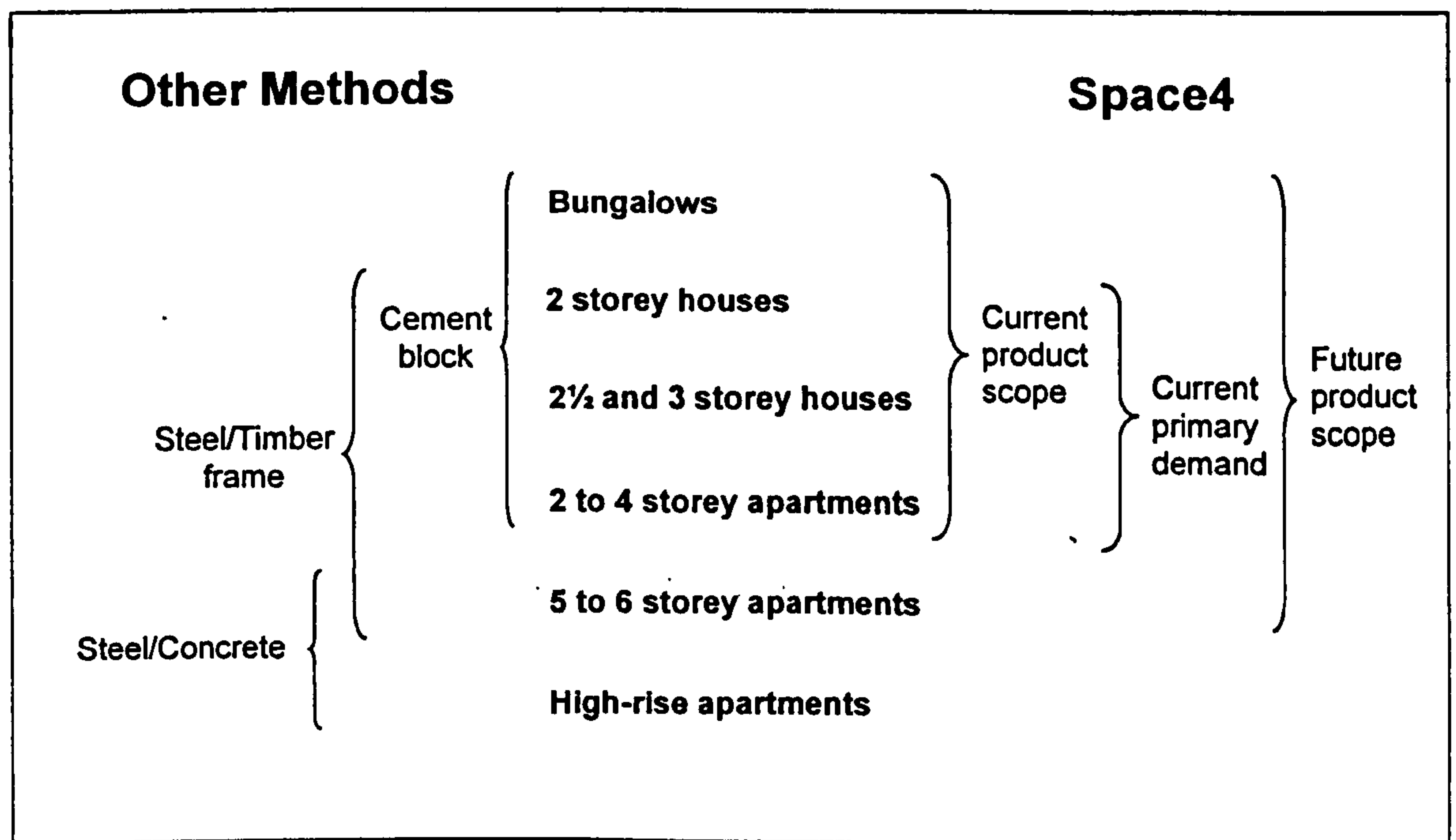


Fig 6.11: Product scope for Space4 expansion

“traditional” blockwork construction methods, although its prime markets overlap more closely with timber frame and increasingly light steel frame.

6.4.3 Post-move-in Extensions and Remodelling

This represents the second phase of the Westbury Direct strategy combined with the design of expansion options and replaceable components through Space4 design. The UK approach to “remodelling” houses is less structured and professional than the equivalent US market in this respect. Therefore it is reasonable to expect that there would be a market here for these services if offered by a trusted, major housebuilding company with a reputation for excellent customer care. With the superior finish quality and precision of Space4, there is a real opportunity to improve levels of customer satisfaction and provide more professional after-sales service.

6.4.4 International Growth Potential for Space4

The pioneering aspects of the Space4 manufacturing operation are the level of automation achieved by applying a sophisticated CAD/CAM system and the patented foam injection process. There is potential to exploit these advantages in international markets. This could be achieved by licensing Space4 technology to firms who wish to produce similar products overseas or by entering into joint ventures with manufacturing companies operating in selected foreign markets. Interest in Space4 has already been expressed from firms in the USA and Australasia.

As the Space4 technology roadmap is implemented, a wider range of value-adding features will be incorporated into the shell. The ultimate vision is to integrate all the services required to operate a house such as heating, electricity,

ventilation and communication services into the cassette floor structure. The floors would be craned into position and these services would be networked by making simple connections via the wall panels to create a “plug and play house”. Connecting Space4 control units in every installed house to a central server via the internet would provide the potential to monitor performance of the house systems and upgrade control software on a regular basis. This could also form a channel for additional services for customers such as security monitoring, home shopping and routine maintenance. This is a scalable business concept that could have considerable potential for international expansion.

Chapter 7

Conclusions and Further Work

7.1 Conclusions

The shortage of land for development in the UK causes UK housebuilding companies to focus a great deal of their competitive activity on the procurement of this basic raw material to fuel their future growth. Constraints on land availability have widened the gap between the demand for housing and the volume of supply over the past twenty years. The resulting long-term “sellers’ market”, combined with the absence of international competitors in this sector has insulated UK housebuilders from the consumer-driven, global competitive pressures that have stimulated change in other industries such as automotive and electronics. The “land-based” competition framework of the UK housebuilding industry instils an inward looking culture which views innovation as unnecessary risk and aims to serve customers at lowest cost rather than by adding value. Unlike leading manufacturers, housebuilding firms invest very little in research and development, design and process improvement. Consequently, there is still a great deal of waste and excess cost in housebuilding processes and even basic customer needs frequently remain unsatisfied.

From a customer perspective this inward-looking, land-based approach is in urgent need of step-change improvement. However, many housebuilders perceive no financial advantage in embarking on more customer focused strategies that may increase their costs in the short-term. The pressure of

institutional shareholders demanding consistent growth in earnings and dividends, adds further disincentive for housebuilders to pursue strategic initiatives with pay-back periods in excess of 12 months. Therefore strategies that detract from the core activities of buying land and selling houses are generally unpopular amongst major housebuilders.

The pervasive conservatism of the sector creates an opportunity for a forward thinking company to gain a significant advantage by adopting an innovation leadership strategy. New revenue streams are not the only potential source of financial benefit from such a strategy. Eliminating waste from supply chains and re-engineering construction processes also hold considerable potential for increasing margins and thereby enhancing the ability of a firm to compete more effectively in the land market. A new competition framework could be forced onto the industry as a whole by a forward thinking competitor in the same way that Toyota changed the basis of competition in the automotive sector through the introduction of lean manufacturing methods (Womack *et al* 1990). This is a major challenge that would require the development of new competences to improve business processes and customer care performance. This research has investigated how such a strategy can be developed.

Two major themes have been followed. The first is concerned with understanding why and how the competition framework needs to change and identifying the key drivers that may lead to such a change. The second explores ways in which a major competitor, Westbury plc, can become an

innovation leader within the new competition framework.

The strategy formulation process itself can be critical in preparing organisations for change. There are many different models and approaches to strategy. These range from simple decision tools such as the Boston Matrix to sophisticated scenario planning systems used by major companies such as Shell (Segal-Horn 1998). There is a need to maintain a balance between the development of organisational capability and the implementation of change in planning strategy. UK housebuilders need a practical approach rather than a formal, bureaucratic process. Recent best practice in this field includes a number of “strategy mapping” techniques. These can be used to cover a wide range of issues through a “hands-on” workshop approach. The holistic nature of these maps avoids the pitfalls of focusing entirely on a single dimension of strategy such as financial objectives. Strategy maps facilitate the integration of activities by linking culture change and capability enhancement with customer focus and financial performance. To avoid perception of a strategy as an unachievable “grand plan”, it is useful to split the process into a series of phases or “generations”. Successive strategy maps can provide an effective way of placing more immediate issues and shorter-term objectives in the context of longer term strategic objectives. Kaplan and Norton’s (2001) Strategy Mapping methodology based on the Balanced Scorecard meets these requirements and has been selected in this project as the preferred strategy formulating technique.

Kaplan & Norton’s (2001) approach divides strategy into four separate but

interrelated perspectives – financial, customer, internal and learning. Westbury’s strategy has been formulated in two generations across these four perspectives. The first generation strategy elements are shown in figure 7.1.

Perspective	1st generation strategy
Financial	<ul style="list-style-type: none"> • Acquisitions • Move up-market • New revenue streams
Customer	<ul style="list-style-type: none"> • Enhanced value • Brand re-positioning • Satisfaction measurement as a driver for change
Internal	<ul style="list-style-type: none"> • Process improvement • Off-site manufacturing capability
Learning and Growth	<ul style="list-style-type: none"> • Corporate values • Improvement culture

Fig 7.1 Westbury’s Innovation Leadership Strategy (1st generation)

One of the most significant trends in the industry is the growing use of off-site manufacturing methods. This will require UK housebuilders to integrate new technologies into their modes of operation. As technology grows in importance it will become necessary for companies to closely align research and development activities with their strategic objectives. Technology Roadmapping is a further mapping technique that has proved effective in facilitating this alignment by charting links between market exploitation plans, product development, technology management and R & D.

The main output from my research is the formulation and implementation of competitive strategy based on this analysis and the application of these techniques. A summary of the innovation arising from this work follows.

7.2 Innovation Summary

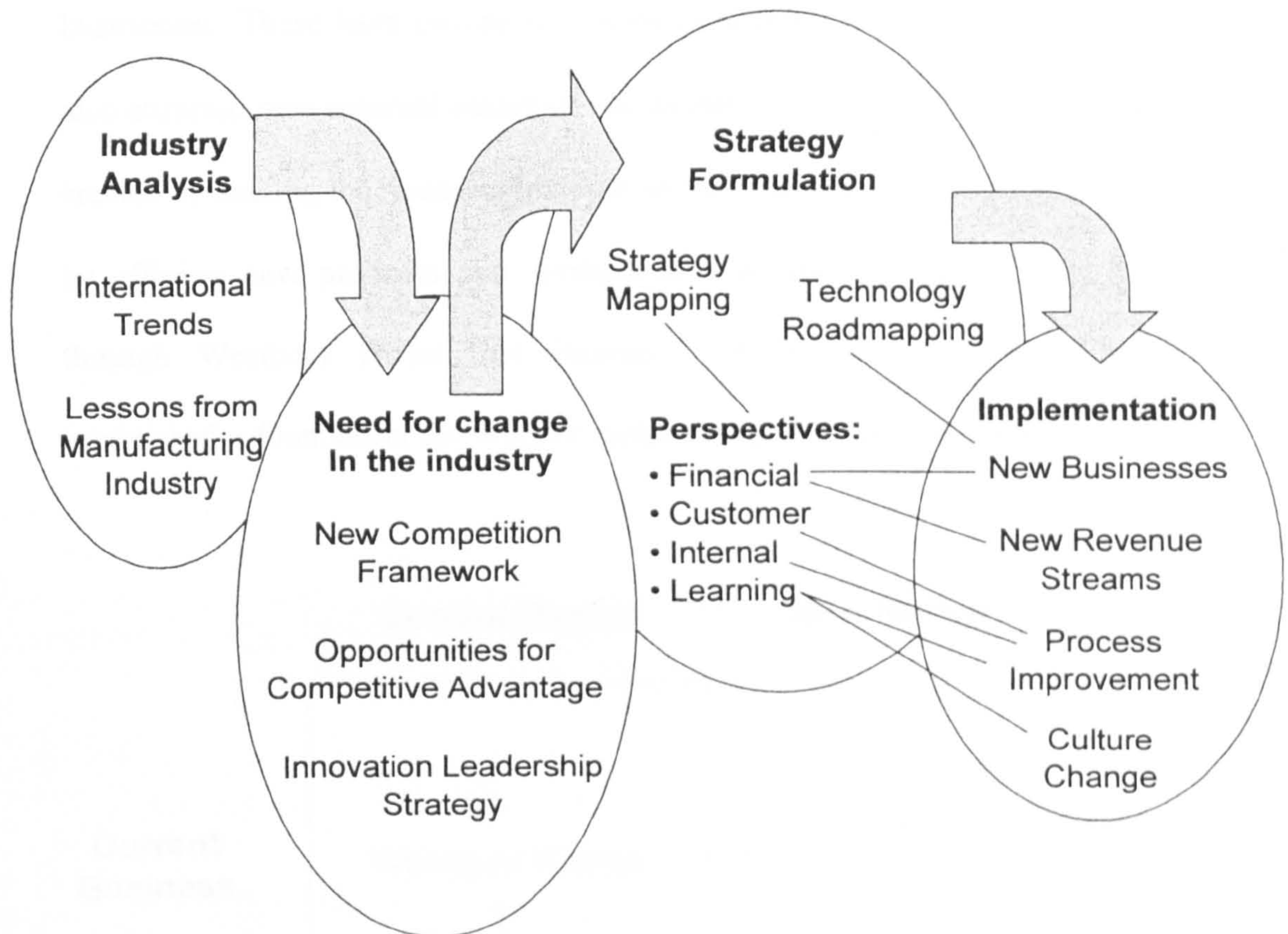


Fig 7.2: Summary of Innovation

As shown in figure 7.2, the innovation process commenced with an analysis of the industry and the recognition of a need for change. The industry was reviewed against international and best practice industrial trends and a new competition framework was devised. This is based on customer relationship management, process and project management, design excellence, research and development, a quality culture and continuous innovation. A range of strategic options were considered and a strategy was developed in the form of a strategy map to reposition Westbury as an innovation leader within the new framework for competition.

Implementation of this strategy has included the launch of three new businesses. These have created new revenue streams for Westbury and have also attracted new external customers as shown in figure 7.3. Value has been created by making the housebuying process more satisfying for customers and by offering new products and services to a greater number of customers through Westbury Direct and Inresco. These new businesses have established a foundation for lifetime customer relationships and have created

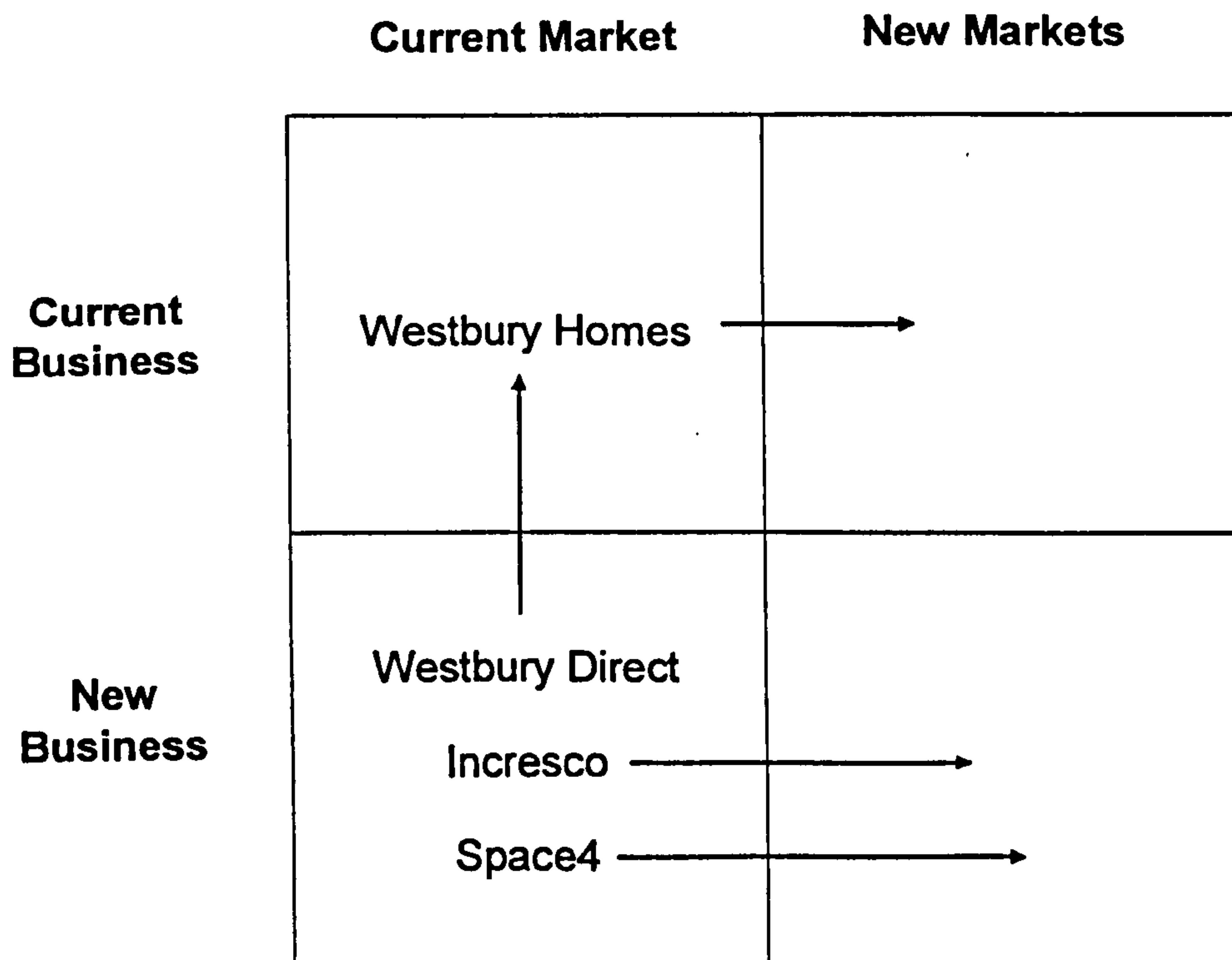


Fig 7.3: Business and market matrix

the potential for Westbury to transform itself from a product focused company into a service company in the future. Westbury's core housebuilding business has undergone major change as a result of this new

strategy. The new businesses form upstream and downstream elements of the Westbury Homes processes as part of an integrated concept which has been named the Westbury Channel. This has helped to explain how these innovations relate to established practices.

The strategy for Space4 is a major innovation in itself that will contribute to Westbury's future strategy from both a financial and internal perspective. The launch of this new business may prove to be a first step in the creation of a new industrial sector for the UK with the potential for significant international growth.

7.3 Action needed for Westbury to improve the effectiveness of its strategy

Although Westbury has been successfully repositioned as a leading innovator within the sector, there is still much to be done. The company has reached a critical stage in implementation. The future value of its strategy has not been fully recognised by city analysts and Space4 in particular is currently having a negative influence on Westbury's share price. The only way to overcome such a short-term view is to deliver early results that demonstrate the commercial viability of the strategy. For Space4 and Incresco this means reaching a break-even position as soon as possible.

Given success in proving the financial viability of the new businesses, the next step for Westbury will be to implement the second generation elements of its strategy as shown in figure 7.4. The greatest challenges for Westbury in

this second phase of implementation are to establish a total quality culture and develop the capability for mass customisation. Achieving these objectives would powerfully underpin its innovation leadership position and create a significant competitive advantage. Space4 is a major step towards these objectives but there is a need to address major issues concerned with culture change, product design and the streamlining of supply chains. Westbury also needs to invest more in training and resources to enable it to manage change more effectively. This should include recruiting people with relevant knowledge and skills from more progressive industry sectors

Perspective	2nd generation strategy
Financial	<ul style="list-style-type: none"> • Growth of off-site manufacturing business • Supply chain strategy
Customer	<ul style="list-style-type: none"> • Customer care strategy • Customised options
Internal	<ul style="list-style-type: none"> • Mass customisation capability • Total quality strategy
Learning and Growth	<ul style="list-style-type: none"> • Stewardship capability • Total quality culture

Fig 7.4 Westbury's Innovation Leadership Strategy (2nd generation)

Developing a more customer focused culture remains a major challenge for Westbury. Measuring customer satisfaction and implementing a continuous improvement process to deliver right first time quality are essential starting points. However, a step improvement in quality delivery is needed and this will require radical change.

The feasibility of achieving the scale and scope of change necessary to transform the culture of Westbury's core housebuilding business remains unproven. This raises a question regarding the future role for Space4 in the change process. If internal process improvement is the priority for Westbury, Space4 could continue to be used as a catalyst for change within the core housebuilding business. If financial objectives prove more important, it could give priority to pursuing rapid growth in external markets to become a major business in its own right.

7.4 Scope for further research

The demands being made on UK housebuilders are likely to put further pressure on their outdated processes, conservative cultures and lack of customer focus. Research in the following areas could facilitate the change required to modernise the industry further:

- Explore different ways in which the UK housebuilding industry could be structured differently in the future with particular regard to the role for off-site manufacturing firms such as Space4.
- Develop a modular system of standard components for use across the industry to reduce costs, facilitate customisation, add value to off-site manufacturing and simplify the assembly process on site.
- Model supplier networks with a view to rationalising supply chains and exploiting the benefits of long-term supplier relationships.

- Develop an effective change management methodology for the UK housebuilding industry to facilitate the major change necessary.

Unless the industry achieves a step change improvement in its capabilities, it will fail to respond adequately to the increasing demands that are being placed upon it. Furthermore, if the “protective blanket” of land shortages and planning delays are subsequently removed, the sector could become vulnerable to new entrants from overseas and from other industrial sectors with more advanced processes and greater customer focus. Innovation leadership is one strategy that can prepare a major UK housebuilder for the challenges and uncertainties of the future.

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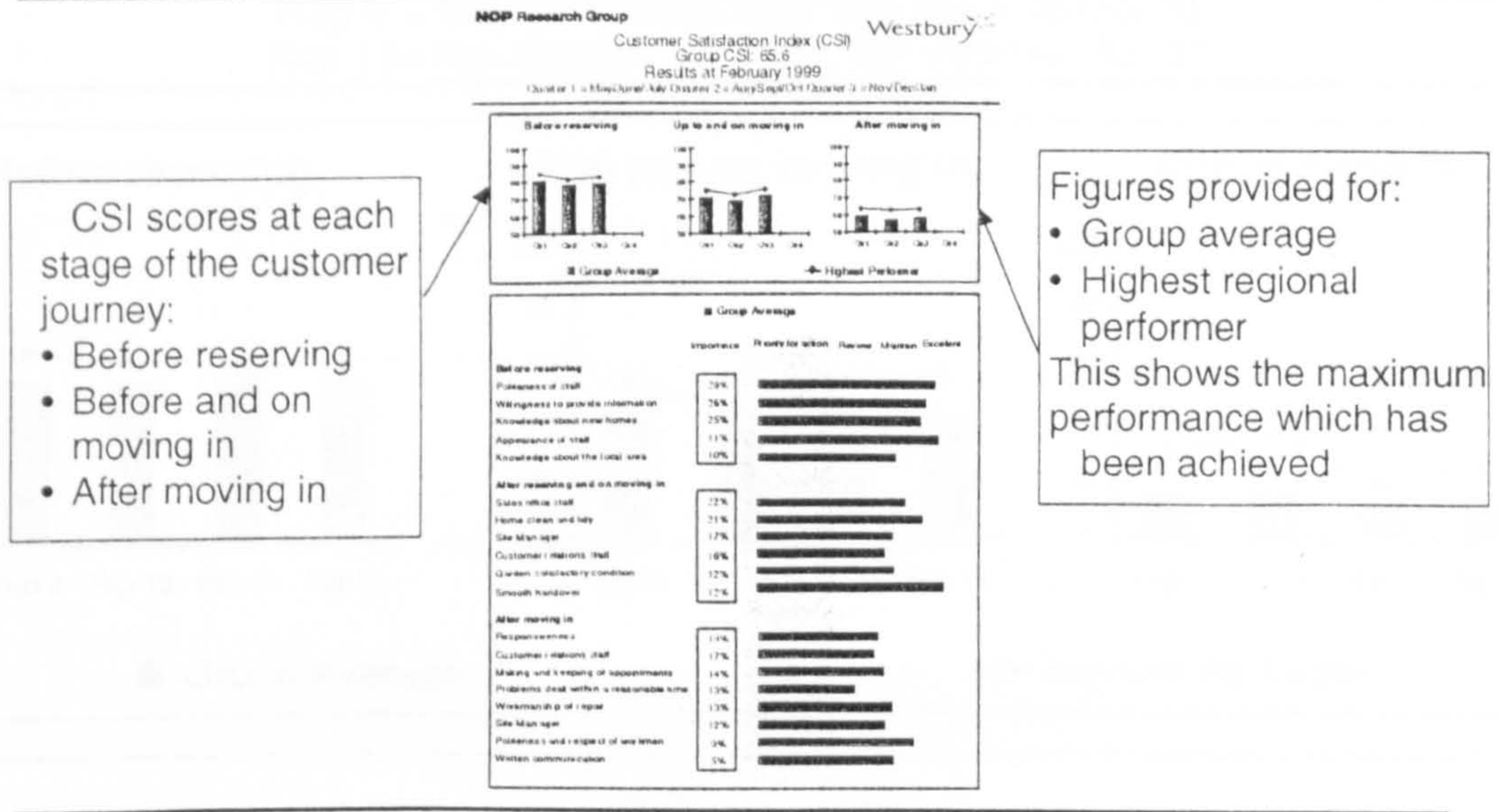
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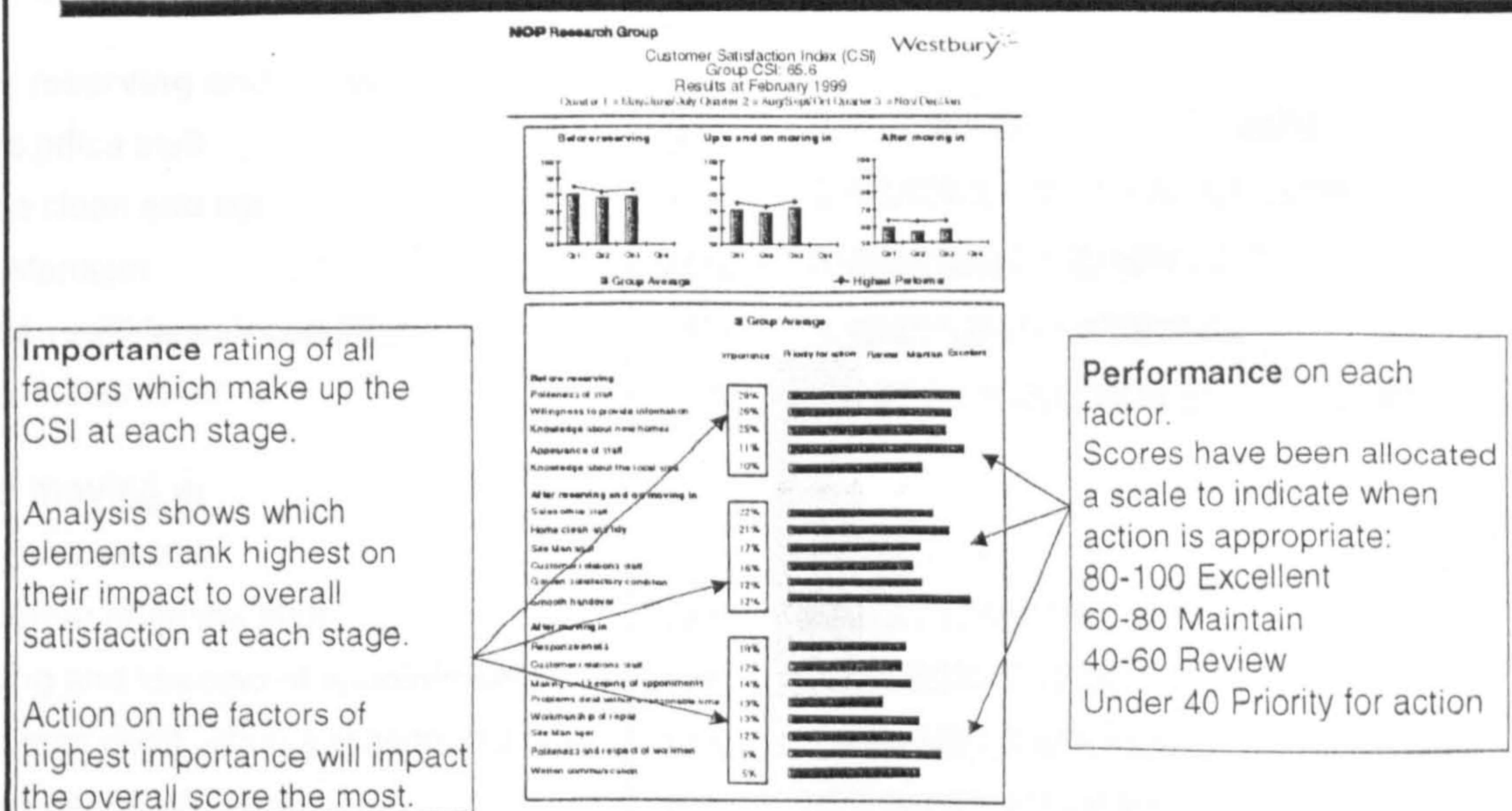
Appendix I

NOP Research Report

A Customer Satisfaction Index



A Customer Satisfaction Index



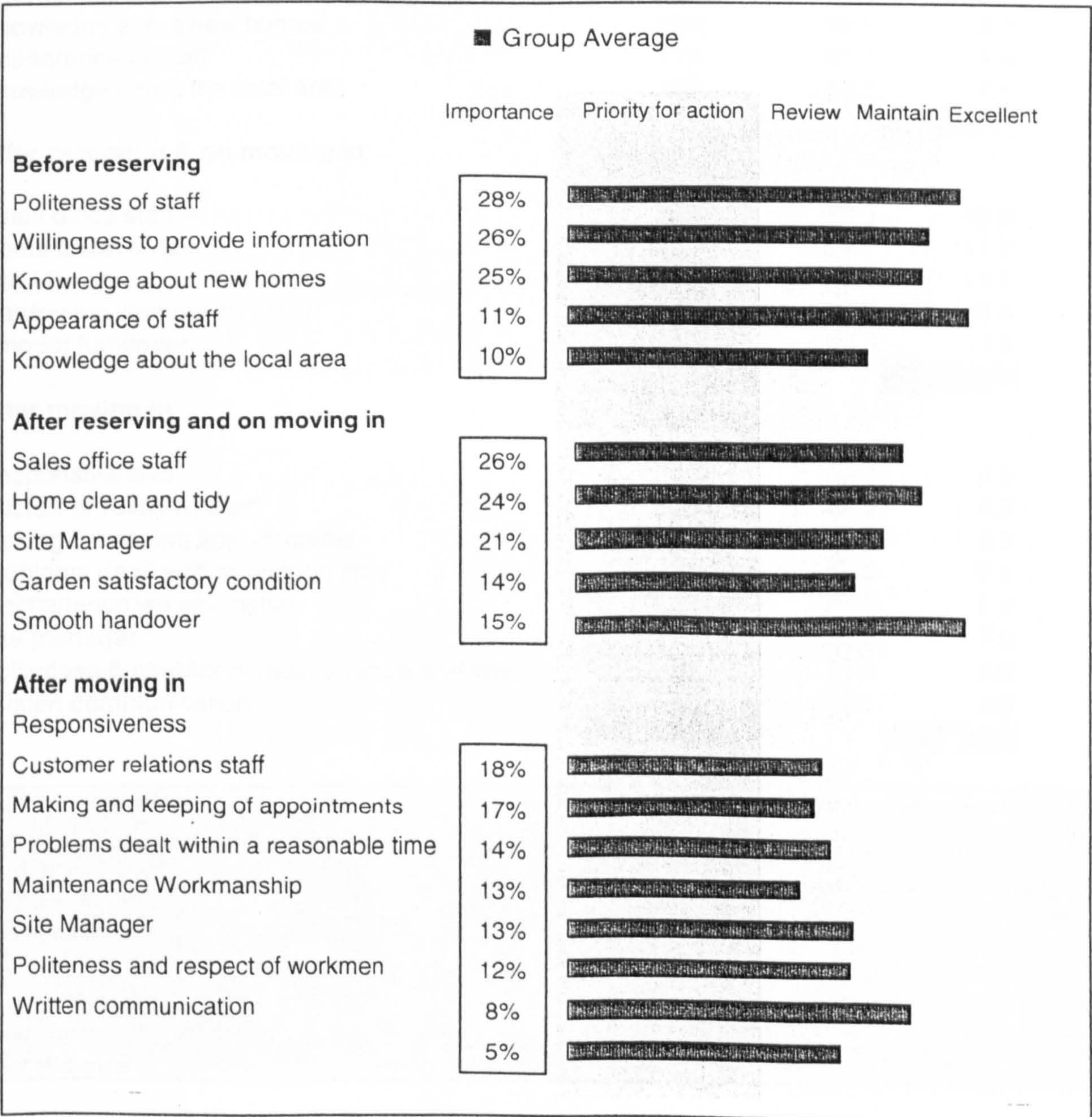
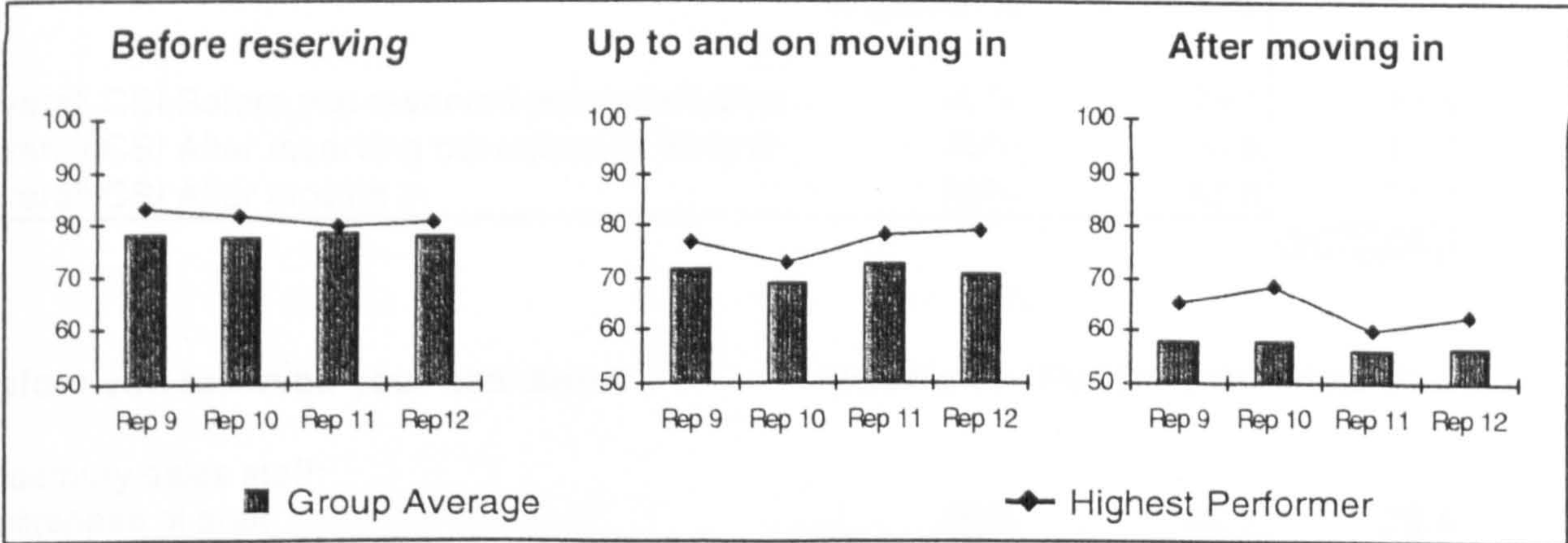
Customer Satisfaction Index (CSI)

Group CSI: 64.6

Results at May 2001

Rep 9 = May/Jun/Jul 00 Rep 10= Aug/Sep/Oct 00

Rep 11= Nov/Dec/Jan 01 Rep 12= Feb/Mar/Apr 01



Westbury Customer Satisfaction Monitor / May 2001

Interviews in Feb01, Mar01 and Apr01 (West 1, 436; West 2, 607)

Group

Overall CSI Score	64.6
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	Importance	CSI	
Overall CSI Before you reserved your new home	20%	78.1	15.6
Overall CSI After reserving but before moving in	25%	70.8	17.7
Overall CSI After moving in	55%	56.8	31.2
			64.6

Before you reserved your new home

Importance Performance Imp*Perf

Westbury sales staff:

Politeness of staff	28%	83.7	23.4
Willingness to provide information	26%	76.8	20.0
Knowledge about new homes	25%	75.5	18.9
Appearance of staff	11%	85.4	9.4
Knowledge about the local area	10%	64.1	6.4
			78.1

After reserving & on moving in

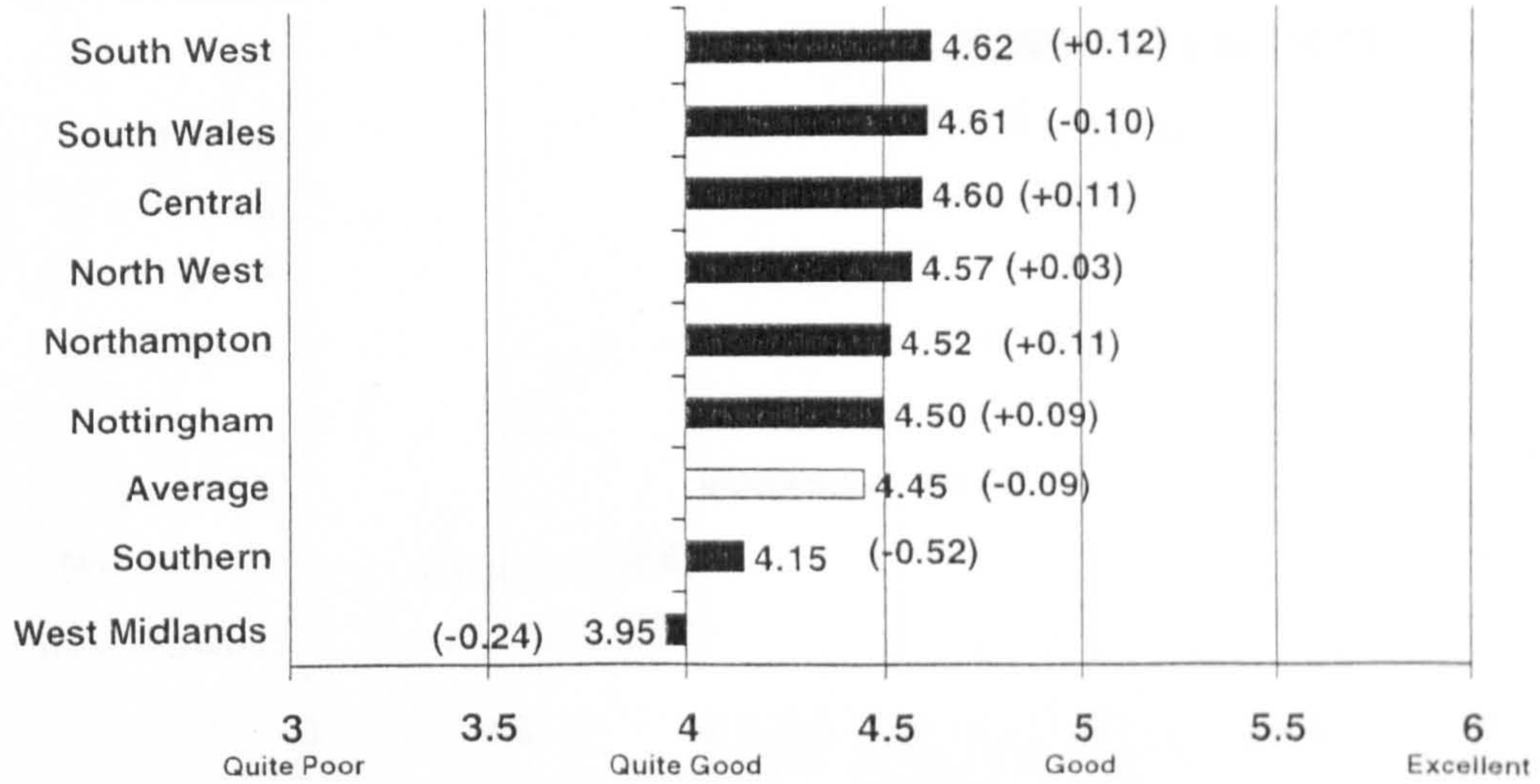
Sales office staff	26%	70.3	18.3
Home clean & tidy	24%	74.1	17.8
Site Manager	21%	66.1	13.9
Garden satisfactory condition	14%	59.9	8.4
Smooth handover	15%	83.3	12.5
			70.8

After moving in

Responsiveness	18%	54.2	9.8
Customer relations staff	17%	52.4	8.9
Making & keeping appointments	14%	56.1	7.9
Problems dealt with in enough time	13%	49.2	6.4
Maintenance workmanship	13%	61.0	7.9
Site manager	12%	60.0	7.2
Politeness & respect of maintenance workmen	8%	73.0	5.8
Written communication	5%	58.1	2.9
			56.8

Regional comparison	Pre booking	Booking to move in	After move in	CSI
Central	80.6	79.1	62.7	70.4
North West	79.6	71.1	59.6	66.5
Northampton	77.2	75.8	59.2	66.9
Nottingham	77.9	70.2	56.7	64.3
Southern	73.9	65.9	56.1	62.1
South Wales	81.1	71.9	53.7	63.7
South West	80.3	77.3	59.7	68.2
West Midlands	71.5	59.1	49.5	56.3

Sales staff - effectiveness of meeting your requirements

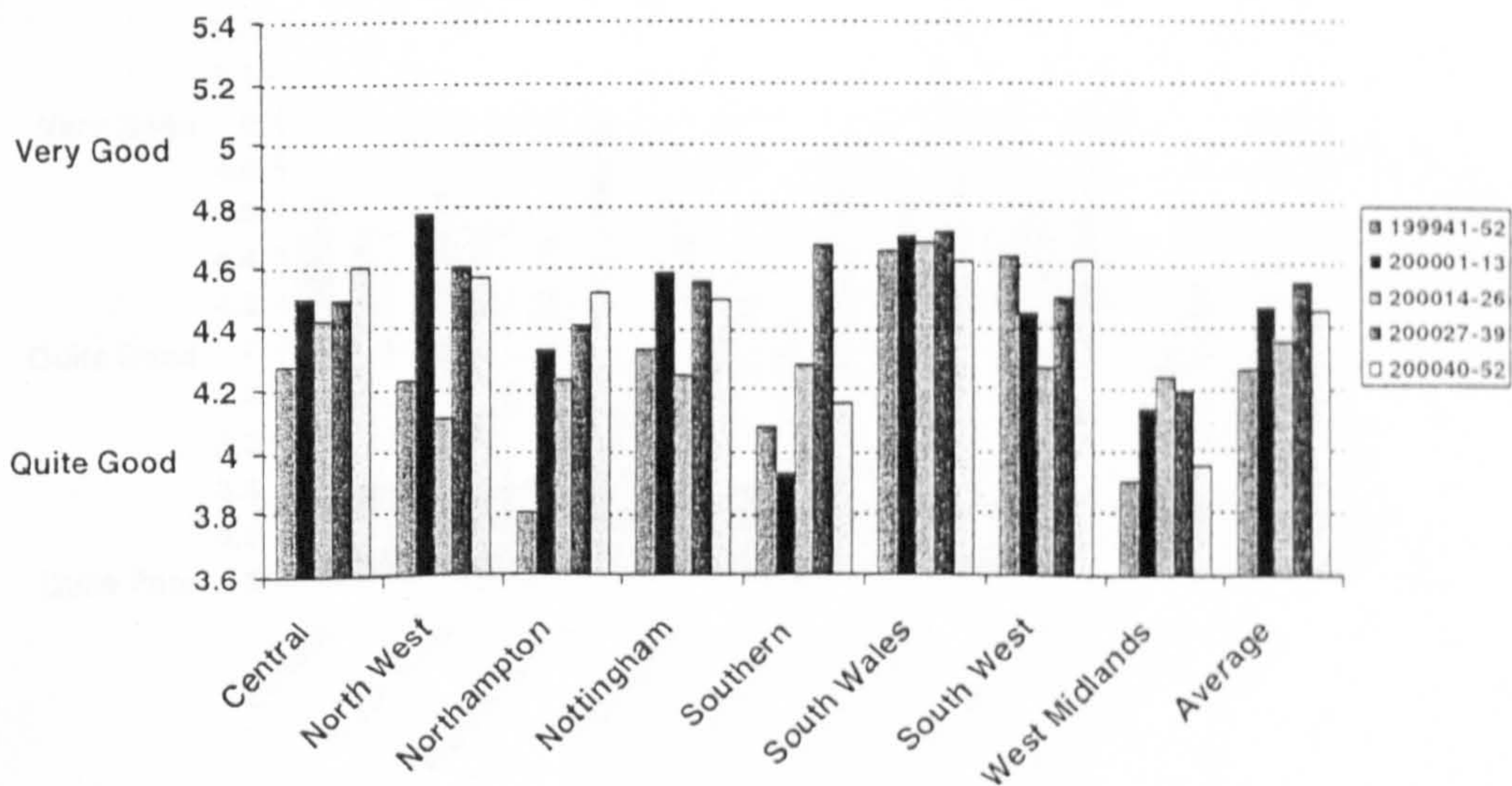


Base: All respondents in contact with Sales Staff after reserving but before moving in 200027-39 Movers (291), 200040-52 Movers (420)

15

Westbury

Sales staff - effectiveness of meeting your requirements – Trend over last 15 months

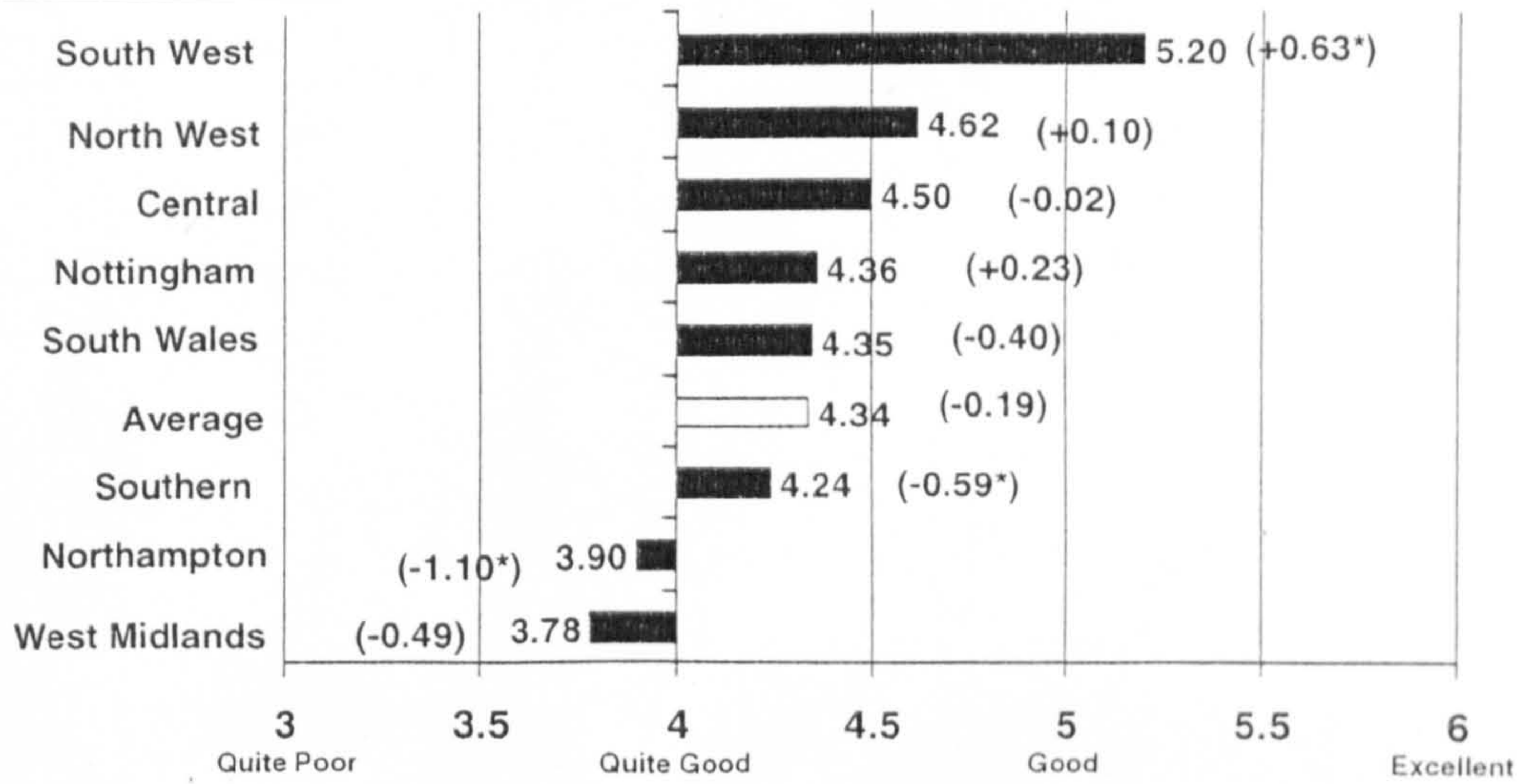


Base: All respondents in contact with Sales Staff after reserving but before moving in 6-8 week monitor

16

Westbury

Site manager - effectiveness of meeting your requirements



Caution: Low Bases

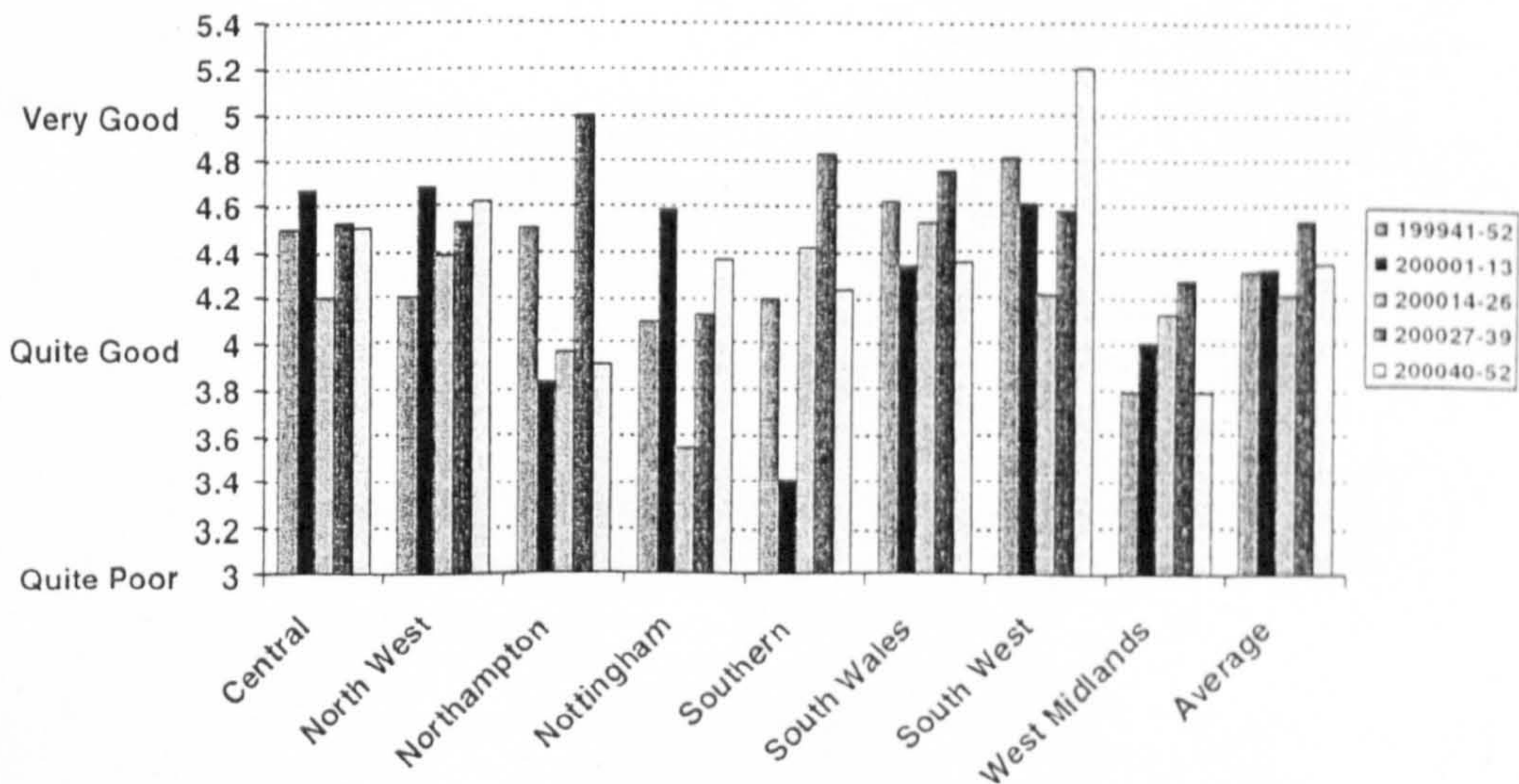
*Very low base this wave

Base: All respondents in contact with Site Manager after reserving but before moving in 6-8 week monitor 200027-39 Movers (193) 200040-52 Movers (273)

23

Westbury

Site manager - effectiveness of meeting your requirements – Trend over last 15 months



Base: All respondents in contact with Site Manager after reserving but before moving in 6-8 week monitor

24

Westbury