

FUTURE SKILLS ISSUES AFFECTING INDUSTRY SECTORS IN WALES



Management and IT Skills Issues



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INDUSTRY SECTORS IN WALES

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Executive Summary

Introduction

The Future Skills Wales report highlights the importance of management and IT skills to Wales. They are of importance across all sectors, but needs will vary depending on the nature and size of businesses.

In order to extend the original Future Skills Wales findings, York Consulting Limited conducted a series of studies of vocational and other skills issues in nine Welsh sectors, using desk research and qualitative techniques including employer case studies.

This document collects findings on management and IT skills from the individual sector reports, to provide an account of these skills issues across the sectors studied, and to draw out common themes and implications.

Businesses and employees in each of the sectors studied have achieved great successes; that is why these sectors have become important for Wales. Our focus on current skills issues should not obscure these achievements or the determination of all concerned to meet current and future challenges.

Management Skills

There is little hard empirical evidence relating to management skills. However, questions have been raised over the quality of management in Welsh businesses, due to relatively low levels of qualification and overall business performance.

Management involves a highly complex set of activities and roles. Whilst it is difficult to generalise in defining management skills, generic management roles include leadership, resource allocation and negotiation.

Managers require a combination of specific competences and softer skills and attributes to manage and motivate employees.

The range of skills and attributes needed by managers varies between businesses. However, the importance of management development cuts across sectoral issues, reflecting the need to be able to improve the capability or capacity of managers who are already in post.

Changes in technology and organisational changes create a need for managers to continually develop and enhance their competences and their personal attributes as part of an on-going development process.

The dominance of small firms in Wales has a significant impact on the nature of management and the issues surrounding management skills. There are clear links between SME characteristics and management roles and skills.

Lack of management skills in SMEs is one of the most common explanations for their high failure rates. However, there is no clear external labour market for SME managers. This emphasises the importance of existing managers either possessing appropriate management skills or being able to develop them.

Sector Issues

The nine sectors covered by this study exhibit a broad range of management development issues. Common themes have also emerged. In particular, needs include strategic management and planning, sales and marketing and the development of management needs among supervisory staff.

Whilst broadly common needs can be identified, specific requirements will vary. It is therefore likely that different approaches will be required to address them.

A wide range of courses and programmes covering management topics is currently available. The sheer number of programmes can create problems in identifying the right option and their quality and benefits also need to be considered.

Information Technology

IT skills can be divided into practitioner skills (systems development, programming and implementation) and user skills (using existing packages and systems), both of which are found across the majority of business sectors. In any discussion of IT skills, it is, of course, important to reflect on the effect of rapid technological change and its impact on skills needs.

Research has found relatively low levels of IT use in Wales. It has been found that traditional companies are experiencing difficulties in implementing IT. Many wish to improve their use of IT but are concerned about the IT skills of their workforce.

As the demand for multimedia services increases, it is expected that the gap between the supply and demand of IT skills will also increase. There is a need to increase the level of IT skills in the existing workforce and in young people entering the labour market.

There are too few people in the UK with advanced IT practitioner skills. This is leading to high levels of staff turnover and upward pressure on wages which is having an impact on Welsh employers, especially smaller firms.

IT-related education and training provision needs to be continually updated to reflect the changes in technology and its use. Providers need to consider how they can develop the most appropriate provision in the face of rapid technological change.

Several initiatives are currently being undertaken in Wales to improve the use of IT to assist in business growth. It will be important to reflect on their success and assess how they can be built upon in the future.

IT skill needs can be identified across all of the focus sectors. User skills are consistently seen as a need, reflecting the generally low levels of IT use.

Higher level user skills are in short supply in some of the key manufacturing sectors, with recruitment difficulties and increasing wage rates. Failure to access these skills can have a potentially fundamental impact on the future success of these businesses.

Action on Skills

Effective management impacts directly on business performance. It is therefore hugely important to address the need to improve management skills in Wales. The most appropriate approaches need to be identified.

It is important to consider how a strategic response can be developed in Wales to address management development issues. Similarly, it is important that a strategic approach can be developed to address the IT skills issues, at both user and practitioner levels.

Recommended Actions

We have identified a range of actions in relation to management and IT skills, falling into six broad themes:

- a Wales-wide **strategic approach** needs to be developed;
- **further research** is needed to enable a better understanding of the issues;
- **promotion and awareness raising** are required;
- **capacity building** is needed among public sector bodies and support organisations;
- management and IT training and development **provision needs to be reviewed**;
- the development and coverage of **ICT infrastructure** needs to be reviewed and influenced to ensure that businesses can take advantage of emerging opportunities.

Themes and Recommendations

| Theme No: | Rec. No: | Action | Timescale | Key Partners |
|-----------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------|
| 1 | 1a | Strong strategic fora should be developed to provide overall direction in responding to management and IT skills in Wales. | Late 2000 | Assembly/WDA/CETW/ existing fora |
| | 1b | The actions and priorities set out in the Multimedia Action Plan for North Wales should be reviewed to assess their applicability across Wales. In particular, approaches to extend the level of ICT and multimedia skills should be explored. | Autumn 2000 onwards | Regional bodies/ HE/FE/CETW/ employers |
| | 1c | Review how best to boost the level of IT use and research the development of strategies to address shortages of high level IT skills, especially in programming and software development. | Early 2001 | CETW/WDA/ NTOs |
| | 1d | Review the success of initiatives such as SME Business and Business Advantage as a means of co-ordinating responses to management and IT issues. | End of Initiatives | Initiative Partners |
| 2 | 2a | Investigate whether recommended research into future skill needs of managers in Britain is to take place. If so, seek to influence its focus and ensure Wales-specific outputs. | Autumn 2000 | Assembly |
| | 2b | Carry out research to set clear baselines of management skills and qualifications. Research the impact of management skills on business performance. | Early 2001 onwards | CETW/WDA NTOs |
| | 2c | Research the availability, suitability, quality and impact of management development and IT provision. | Early 2001 onwards | CETW/WDA/ NTOs |
| | 2d | Review the outputs of the ICT Research Centre currently being set up by DfEE. | Timing to be decided based on centre timescales | Assembly/WDA/ CETW/fora |
| 3 | 3a | Identify the best means of influencing management and management development, especially in small firms, including the most appropriate roles for public sector partners and other stakeholders. | On-going | Wales Management Council/NTOs/ CETW/emps |
| | 3b | Raise the profile of the key management and IT issues that SMEs need to be aware of. | On-going | CETW/NTOs/ Business Connect |
| 4 | 4a | Build the capacity of public and private sector business support organisations to assist in the development of indigenous businesses. | Spring 2001 onwards | WDA/CETW/ Business Connect/emps |
| | 4b | Build awareness among businesses of the support available to them. | April 2001 onwards | WDA/CETW/ Business Connect, emps |
| 5 | 5a | Providers of courses should review the nature of IT provision and how it can best be developed to serve its target market and remain relevant in the context of rapid technological change. | On-going | HE/Training Providers |
| | 5b | The range of provision identified as targeting management skills should be reviewed. The classification should be refined to ensure that they truly address management skills issues. Courses should be re-classified, where necessary, to make the target market clearer. | On-going | FE/HE/Training Providers |
| 6 | 6a | Partners should seek to influence providers to ensure that the necessary technology and infrastructure is in place to enable the maximum benefits to be gained from e-commerce and other opportunities. | On-going | Assembly/WDA/ CETW |

1. Introduction

- 1.1 This document is one a series commissioned by the Future Skills Wales Research Forum. The overall project aims to extend and complement the work begun by the original Future Skills Wales project, which forecast future generic skills needs across Wales using forecasting and survey data. The project reviewed the skills issues facing nine Welsh sectors:
- aerospace;
 - agriculture;
 - automotive;
 - electronics;
 - financial and business services;
 - food processing;
 - hospitality and leisure;
 - media and new media;
 - social care.
- 1.2 The aim was not to conduct quantitative primary research, but to consult with sector representatives in order to identify perceived skills issues, the actions being taken in response to these, and the potential for further action or policy development. The published reports should therefore provide a clear introduction to the sector, a 'snapshot' of sector issues, and pointers to current and potential action.
- 1.3 Businesses and employees in each of the sectors studied have achieved great successes; that is why these sectors have become important for Wales. Our focus on current skills issues should not obscure these achievements or the determination of all concerned to meet current challenges.
- 1.4 This report draws together the management and IT skills issues that have been identified in these sectors.
- 1.5 The Future Skills Wales main report highlights the importance of management and IT skills in Wales. Management skills were rated as very important by half of all employers in the Future Skills Wales survey, with almost as many indicating that such skills will be of increasing importance in the future.
- 1.6 IT skills can be divided into basic and advanced skills. Basic IT skills relate to the use of computing packages, such as word processors, spreadsheets and databases. Advanced IT skills relate to computer modelling, support and programming. Basic IT skills were identified as being of increasing importance by 47% of businesses in the FSW survey, but benchmarking of current IT use on behalf of DTI indicated relatively low levels of IT use in Wales compared to the rest of the UK. The IT NTO distinction is similar, but distinguishes between 'user' and 'practitioner' skills (i.e. skills required to construct or maintain IT systems on behalf of the business community).
- 1.7 Management and IT skills are of importance across all sectors. However, specific needs will vary between sectors and with the size of the businesses concerned.

2. Management Skills

Introduction

- 2.1 In this Section, we discuss issues relating to management skills. First of all, we provide an overview of management skills issues in general, drawing on a range of published research. Given the dominance of small businesses in Wales (and Great Britain as a whole), we then focus on issues facing the managers of SMEs, especially in the context of skills issues.
- 2.2 Later in the Section, we highlight the key management skills issues that have been identified in the following sectors in Wales:
- aerospace;
 - agriculture;
 - automotive;
 - electronics;
 - financial and business services;
 - food processing;
 - hospitality and leisure;
 - media and new media;
 - social care.
- 2.3 Questions have been raised over the quality of the management of Welsh businesses due to the level of qualification and the overall performance of businesses. However, most of the research provides largely anecdotal evidence of the issues, rather than providing a hard empirical base of evidence.

Overview

- 2.4 Management involves a highly complex set of activities and roles, making it difficult to generalise in defining the skills of managers. However, it is possible to identify generic management roles such as leadership, resource allocation and negotiation.
- 2.5 The Management Standards published in 1997 provide a comprehensive framework of management competences and identify seven key roles for managers, in the management of:
- activities;
 - resources;
 - people;
 - information;
 - energy;
 - quality;
 - projects.
- 2.6 Managers as an occupational group are employed in all types of organisations, with the potential for mobility between businesses and sectors. It is also important to recognise that managers require a combination of specific competences and softer skills and attributes to manage and motivate employees.
- 2.7 Whilst management roles are spread across sectors, the range of skills and attributes needed by managers will vary between businesses and particularly by size of business. Johnson and Winterton indicated that “the range of skills and competences required to run a SME are qualitatively as well as quantitatively different from

those needed in a larger organisation”.¹ In “Understanding the Small Business Sector”, David Storey noted that “the small firm is not merely a scaled down version of a large firm”.

- 2.8 The importance of management development cuts across sectoral issues and reflects the need to influence the capability and capacity of managers who are already in post, in order to influence the performance of their businesses, as well as providing a supply of suitably qualified new managers.
- 2.9 With increasing technological changes, changing organisational structures and markets for products and services, managers are operating in constantly evolving organisations. This requires a higher degree of flexibility and creates a need for managers to learn continuously, rather than developing through participation in periodic training.
- 2.10 Research into the future skill needs of managers by the Employment Research Institute of Napier University and York Consulting, on behalf of DfEE² indicated the following issues with relation to management skills:
- rapid organisational change means that learning, innovation, managing change and flexibility are essential skills for managers in the future;
 - external environmental changes and internal organisational changes place an increasing emphasis on group-oriented leadership;
 - managers must be able to inspire, energise and polarise individuals and teams in line with the vision for the business;
 - managers need to be able to respond to paradox, uncertainty and contradictions;
 - cultural variety will be increasingly important in the future, with managers needing to rely on instinct and judgement;
 - the competencies which will be required by managers to cope with and implement changes in the future relate to learning, as individuals and organisations must adapt and learn faster in order to compete.
- 2.11 These general issues around management skills impact on the need to develop skills in existing managers and the approaches that will be successful in different contexts.
- 2.12 Technological changes and rapidly changing organisations create a need for managers to develop additional competences, including:
- the ability to place the business in an international context;
 - different types of leadership, including the strategic development of the organisation and leadership of teams;
 - managing the use of new technologies;
 - managing change.
- 2.13 Managers also need to develop personal attributes, including the development of teams, influencing others and communication. Whilst job related, the development of these attributes is part of an on-going personal development process. Whilst these attributes can be developed and nurtured, they are difficult to impart through teaching.

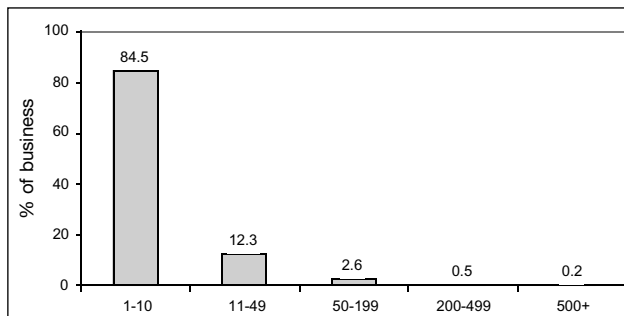
¹Management Skills, Skills Task Force Research Paper 3.

²Future Skills Needs of Managers, DfEE Research Report RR 182.

Management of the SME

2.14 It is important to consider the issues of the skills of managers of small and medium-sized businesses, given their dominance of the Welsh business community, as they do across Great Britain as a whole.

Figure 2.1: Welsh Businesses by Number of Employees in 1998



Source: NOMIS

2.15 Out of a total of almost 96,000 businesses in Wales, almost 81,000 are very small, with ten or fewer employees, with a further 12,000 employing between 11 and 49 people. In contrast, only 600 businesses in Wales employ over 200 people. The Welsh breakdown is very similar to that for Great Britain and highlights the numerical dominance of very small businesses in the economy as a whole. In employment terms, of course, the larger businesses will account for a much more significant proportion of the workforce, and hence will have a greater influence on workforce issues than this analysis implies.

2.16 Nevertheless this numerical dominance of small firms has a significant impact on the nature of management and the issues surrounding management skills. It is therefore appropriate to focus on SMEs and to explore the linkages between SME characteristics and management skills and development issues. These were outlined in the Skills Task Force Research Paper on Management Skills as follows:

- the vast majority of SMEs are owned and managed by one person, or two people working in partnership;
- very few SMEs are team managed, with little scope for specialisation in management teams. Owner-managers have to deal with the whole range of management issues and are not specialist managers;
- in addition to overall managerial responsibilities, owner-managers are heavily involved in the day-to-day operation of the business;
- failure rates among SMEs are high, with many operating in highly competitive markets;
- SMEs are not generally able to offer progression routes for supervisory or junior management staff into senior management roles;
- there is no clear external labour market for SME managers, which can make it difficult for SMEs to recruit managerial staff.

2.17 The difficulty for SMEs in recruiting managerial staff emphasises the importance of identifying whether owner-managers already possess the skills to

manage an SME effectively, or whether appropriate support can be provided to assist in their development.

2.18 The Skills Task Force Research Paper on Management Skills refers to the fact that lack of management skills in SMEs is one of the most common explanations for their high failure rate in the first three years of operation. The paper also makes reference to the relative lack of small businesses growing into medium-sized firms in the UK, compared to Germany, for example.

2.19 Whilst commentators have suggested that lack of management skills is impacting on the performance of SMEs, empirical evidence on this remains limited.

2.20 It is sometimes suggested that qualifications can be used as a proxy measure for skills. However, a review of management standards and SME development by Durham University Business School has found little evidence of owner-managers being interested in qualifications specifically, although most do see the value of the competences which underpin the qualifications.

2.21 Research carried out on behalf of DfEE has shown that less than 10% of owner-managers who participate in management development activities achieve qualifications as a result. Therefore, it is possible that managers have a competence without holding a qualification.

2.22 A range of studies have examined management training and development in SMEs, the findings of which are particularly significant in the context of this work. Conclusions from these show:

- few SME owner-managers holding formal management qualifications or having undergone management training prior to starting their business;
- a recognition among owner-managers of the potential value of management development for the performance of their businesses;
- difficulties for owner-managers in identifying their specific needs or potential ways in which these can be met.

2.23 In considering the management of SMEs, it is important to recognise that the development of management skills is inextricably linked with the performance of the business. However, research by Westhead and Storey in 1996³ found little evidence that increased management training in SMEs results in improved business performance.

Sector Specific Issues

2.24 The work with the target sectors has identified a range of management issues, both sector specific and more general. These are discussed below.

³P Westhead and D Storey, "Management Training and Small Firm Performance: Why Is The Link So Weak?" *International Small Business Journal*.

Aerospace

- 2.25 Management skills have been identified as a need across engineering industries. One third of companies consider that their management skills are insufficient to meet the future needs of the business.
- 2.26 In the Welsh aerospace sector specifically, the introduction of lean manufacturing techniques is reducing the number of middle managers, but increasing the need for technical staff to take on team leadership and supervisory roles. This is creating an increasing need for these employees to be aware of managerial and strategic issues. In this context, employees are needing to develop a broader skills base.
- 2.27 The importance of management training is recognised by aerospace employers, 87% of them regarding it as being critical to the success of the business. However, this is not reflected in management training activity, with less than half of Welsh aerospace companies indicating that they invest heavily in management skills.
- 2.28 Management training is significant as aerospace companies focus on developing managers rather than recruiting experienced managers from elsewhere. The particular management skills identified by aerospace companies include:
- developing leadership skills (75% of businesses see this as either very important or vital);
 - change management skills (vital or very important to 60% of companies).

Agriculture and Farm Enterprises

- 2.29 The management skills issues faced in agriculture and farm enterprises reflect some of the overarching trends in farming and agriculture. In particular, as farmers approach retirement age, this creates issues of succession planning, whilst downward pressure on farming incomes is increasing the need for farmers to consider diversification opportunities.
- 2.30 Pressures on agricultural businesses emphasise the importance of proprietors running farms as businesses and recognising the need to develop business skills alongside specific agricultural capabilities.
- 2.31 Customer-facing skills have been identified as a particularly significant need. These include the development of effective sales and marketing skills and capabilities in customer management, especially where farms are changing their product range or diversifying into alternative areas of activity.
- 2.32 Farms are required to produce significant amounts of information for official returns. This information, together with accounting data, can be of considerable value in the management of the business and maximising its performance. This in itself is a management skill that needs to be developed.
- 2.33 In addition to the development of general business management skills, the maintenance of technical farm management skills is clearly critical in

maximising the returns from farming activities, including aspects such as continuous improvement and maximisation of yields.

Automotive

- 2.34 The management skills needs identified in the automotive sector include some which are common with other engineering and manufacturing sectors and some sector-specific factors.
- 2.35 In common with aerospace, the automotive suppliers are introducing lean manufacturing approaches, which are having an impact on management and professional skills. Team leadership and the development of management skills by supervisory staff are also issues being faced by automotive employers.
- 2.36 There is a need for automotive businesses to develop high level marketing and strategy skills. For example, e-commerce provides a potential strategic opportunity to gain competitive advantage. This requires effective management in terms of identifying the opportunities and in ensuring that the businesses are able to capitalise on them.
- 2.37 Supply chain management is clearly of importance to automotive employers in Wales and requires managers to be able to take a strategic decision on where they wish to be positioned in the future. In particular, component manufacturers need to be able to develop strategies to respond to difficulties created by the high value of sterling and moves to sourcing components from suppliers in countries that have adopted the Euro.

Electronics

- 2.38 The key management issues identified in the electronics sector include:
- time management;
 - first line supervisory skills;
 - production planning skills;
 - supply chain management;
 - problem solving;
 - communication.
- 2.39 Electronics employers are implementing activities to drive costs down, which are having a direct impact on supervisors and team leaders who are having to develop management skills, following de-layering and a reduction in the number of middle managers.

Financial and Business Services

- 2.40 The restructuring of the banking and insurance sectors is having a significant impact on management needs in these industries. In banking, branch closure programmes, combined with the increasing delivery of services through call centres and on-line are creating more complex operating structures, with reduced demand for branch managers, but an increasing need for strategic and systems managers. However, the extent to which the more senior managers will be required in Wales may be limited.
- 2.41 In banking and insurance, there has been an on-going trend towards larger regional structures. This means that much activity is now managed from outside Wales, either from South West or North

West England. This has implications for the nature of financial and business services management skills required in Wales, but also creates a potential situation of leakage of higher level management skills from the Principality.

- 2.42 The majority of financial and business services firms are small and therefore face similar management issues to many small businesses. These include the need to develop the appropriate management skills to identify future strategies and to manage their achievement. Where growth strategies are pursued, this can include the need to manage the transition from a firm in which one or two individuals take all the management responsibilities, to the development of effective team management structures.
- 2.43 Business services companies are facing the need to be able to compete with firms in neighbouring English regions and therefore need to be able to develop effective strategies to identify their strengths, identify market opportunities and market their services, building strong customer relationships. This is an important part of the development of a capacity in business services in Wales in order to support the growth of indigenous businesses and attract inward investment.

Food Processing

- 2.44 In Food Processing, needs have been identified at all levels of management from line leaders and supervisors through to senior and corporate management.
- 2.45 With line leaders and supervisors, an increasing need has been identified to focus on basic management skills, communication and motivation. Food processing companies are facing difficulties in recruiting people with management and supervisory skills, with the need to be able to identify more clearly the specific skills required. This in itself is a management skills issue.
- 2.46 Companies are identifying shortages of high level staff that are restricting the growth of these businesses. Given the difficulties of recruiting people with the skills to manage business growth, this places the emphasis on being able to maximise the development of the management employees already in place. To be able to achieve this, it is essential that firms are able to identify these needs and source appropriate support for this development to take place.

Leisure, Tourism and Hospitality

- 2.47 Due to the variety of types of businesses in the sector, the management skills issues identified are very varied. Some sub-sectors face acute shortages of management skills in areas such as:
- decision making;
 - problem solving;
 - management from a distance;
 - the ability to innovate.
- 2.48 Businesses in the conference and events sector have specific needs in areas such as negotiation skills, client management and problem solving.

- 2.49 The lack of a structured route into management in the sector can create problems of the loss of the better qualified and most capable staff to other sectors. In this context, it becomes increasingly important for businesses to be able to identify their future management needs and those staff who have the potential to be developed to fill these needs. Businesses need to be able to make opportunities clear to those individuals who have this potential and to seek to enable this potential to be fulfilled.
- 2.50 The sector includes micro businesses and “lifestyle” businesses where there are specific management issues. For example, some of the proprietors of lifestyle businesses have a lack of specific tourism expertise, which impacts on the extent to which they are able to maximise the benefits they gain from the existing tourism infrastructure.
- 2.51 With a high proportion of owner-managed businesses, there are specific management skills issues. In particular, the motivation for being in business will shape plans and future developments. Whilst growing the business may not be a goal, it is important that it is managed as effectively as possible. To achieve this there may be skills needs, but there is an issue over the willingness to participate in training among many owner-managers in the tourism sector (and others).

Media and New Media

- 2.52 Trends within the traditional media of film, radio and television, together with the growth of the new media sector lead to a range of management skills needs.
- 2.53 Alliances and mergers are taking place in the sector. Managing these processes and the organisations and relationships that develop as a result of them are critical to ensuring that they can be successfully achieved.
- 2.54 Across both the traditional and the new media sectors, there is an increasing need for business development and commercial skills to complement media capabilities, in particular in developing new markets and new routes to market. The media sector in Wales is facing a need for a much clearer commercial focus, with the public broadcasters dominating less in commissioning work.
- 2.55 Planning and strategic development skills are needed in order to identify and exploit new market opportunities presented by new technologies and media. There is perceived to be a lack of strategy for new media development and convergence of traditional and new media. In particular, there is a question over whether the firms in the traditional media sector have the range of skills to be able to move into the new media areas.
- 2.56 Management development is seen as likely to be central to the healthy development of the sector in Wales. However, the number of applications to a trust fund set up to train managers in the sector has been described as “disappointing”.

Social Care

- 2.57 Managers in the social care sector tend to be experienced nurses or carers. However, many lack

business experience and specific management skills or qualifications. However, there is found to be little demand for management training from the care sector.

- 2.58 The social care sector has no strong culture of continuing professional development. It is possible that this reflects a lack of recognition of the need to develop management skills.

Common Themes

- 2.59 **Table 2.1** shows a matrix of the management skills needs identified in each of the sectors, illustrating the key themes that are emerging.
- 2.60 Table 2.1 highlights the broad range of management development issues identified in the sectors covered by this study. However, what it also shows is the significance of strategic management needs across the majority of the sectors.
- 2.61 Other areas of management in which needs are commonly identified include sales and marketing and the development of management skills among supervisory staff.
- 2.62 Whilst common areas of need are identified across a number of sectors, these will need to be investigated in more detail to identify the most appropriate means of addressing them. At a more general level, it may be that standard packages are appropriate. However, it is likely that more tailored support will be required in many cases.

Table 2.1: Management Skills

| | Aerospace | Agriculture & Farm Enterprises | Automotive | Electronics | Financial & Business Services | Food Processing | Hospitality, Leisure & Tourism | Media & New Media | Team Leadership |
|----------------------------------------|-----------|--------------------------------|------------|-------------|-------------------------------|-----------------|--------------------------------|-------------------|-----------------|
| Team Leadership | • | | • | | | | | | |
| Supervisory Management | • | | • | • | • | • | | | |
| Strategic Development | • | | • | • | • | • | • | • | • |
| Change Management | • | | | | • | | | | |
| Succession Planning | | • | | | • | | | | |
| Sales and Marketing | | • | • | | • | | • | • | |
| Diversification | | • | | | | | | | |
| Supply Chain Management | | • | | • | | | | | |
| Production Planning | | | | • | | | | | |
| Communication | | | | • | • | | | | |
| Systems Management | | | | | • | | | | |
| Recruitment and Management Development | | | | | • | • | | | |
| Decision Making | | | | | | | • | | |
| Mergers and Alliances | | | | | | | | • | |
| Continuing Professional Development | | | | | | | | | • |

Delivery of Management Development

- 2.63 Management skills and capabilities can be gained through a number of routes, including formal education and training and less formal ways of learning, including learning from others and learning by experience. The research into the future skill needs of managers for DfEE indicated that experiential knowledge is often under-valued, but that in the future, experiential learning is likely to be increasingly adopted in order to embed management development within organisations.
- 2.64 There is a wide range of programmes and courses available that cover management development topics, delivered by a range of different types of provider. The “Learndirect” Sample CD-ROM of Management Development Courses includes details of over 3,700 courses in Wales, delivered by over 400 providers, with a range of different formats, including:
 - full-time;
 - short full-time;
 - part-time;
 - self study.
- 2.65 The courses include a range of general management subjects and courses covering specific aspects of management, such as accounting, IT, exporting and regulations. These include courses leading to formal qualifications and non-qualification-related courses. The qualifications offered range from introductory certificates to higher degrees and MBAs.
- 2.66 In reviewing the data on the CD-ROM, it is clear that some of the courses are aimed at existing managers, whilst others are providing a very basic introduction for young people who have newly entered work or are on training programmes.
- 2.67 Figures from the 1997/98 Individualised Student Record (ISR) indicated that business and management was the largest single area of study in FE colleges, based on student numbers. In 1997/98, just over 52,000 people were studying business and management courses, 13% of the total of 398,000 across Wales. Just over a third of these people were aiming to achieve specific business or management qualifications.
- 2.68 Around half of the business and management students were in South Wales, with just over a quarter (27%) in the South West Wales economic forum area. North Wales accounted for 14% of business and management students whilst 8% were from Mid Wales.
- 2.69 The range of management development courses and programmes is in itself an issue, as it can take a significant amount of time to identify the most appropriate type of course, delivery format, provider and so on.
- 2.70 Whilst there is a very wide range of courses available covering management development subjects, their quality and impact also need to be considered. A high level of take-up of courses in management subjects does not appear to be leading to a large number of qualified managers. It is possible that few of these students actually go into management positions when they qualify.

3. Information Technology

Introduction

- 3.1 In this Section, we focus on issues relating to the use of IT and IT skills issues.
- 3.2 In discussing the use of IT, it is important to make the distinction between IT practitioners and IT end-users. IT practitioners are involved in systems development, programming and systems implementation, working either in IT suppliers themselves, or in IT user companies. IT end-users are found across all sectors and require varying degrees of skills and experience in their jobs.
- 3.3 Levels of IT penetration and use are of importance in determining the nature and extent of skill needs. Use of the internet and e-mail is of growing importance when considering the development of e-commerce, especially by businesses in outlying areas.
- 3.4 IT is evolving rapidly, leading to rapid evolution in the skills required to make use of the latest technology. The extent to which businesses need to make use of the latest technology varies. Some will gain their competitive edge through it. With many, it is more likely that making efficient and effective use of current technology should be the priority.

IT Penetration

- 3.5 The Department of Trade and Industry commissioned Spectrum Strategy Consultants to undertake a benchmarking study of IT use across the United Kingdom regions in 1999⁴. This identified some key issues relating to IT take-up, including:
 - overall take-up of computing hardware is very high in the UK as a whole. The vast majority (89%) of Welsh businesses (in terms of employment) have computing hardware;
 - around half of Welsh businesses have local area networks, compared to almost three quarters in London;
 - Internet access in Wales is relatively low. Only 47% of Welsh businesses have access to the Internet (London = 71%);
 - just over half (54%) of Welsh companies have external e-mail, compared to 83% in London and 73% in the West Midlands. However, whilst e-mail penetration is relatively low, those businesses that do have e-mail access are using it to a considerable extent. Wales is ranked third in the level of e-mail usage, reflecting its importance for companies in remote areas;
 - compared to Wales, twice as many firms in London have a website (65% compared to 34%). Only Northern Ireland has fewer businesses with a website than Wales;
 - Welsh businesses do see IT as being important to their competitiveness. Almost two thirds (64%) see ICT as essential or very important for current competitiveness and 52% envisage ICT being essential or very important for competitiveness over the next two years;
 - ICT skills speed up the initial take-up of ICT and impact on the efficiency with which technology is used. Only 32% of Welsh companies provide ICT training frequently or quite often, ten percentage

points below the situation in London. Only Scotland and Northern Ireland reported lower levels of training.

- 3.6 The Spectrum benchmarking study has therefore provided an indication of the relatively low level of IT use in Wales. The statistics provided are based on the proportion of employees covered by IT. They may, therefore, overstate the true situation, masking even lower levels of penetration in the very small firms that predominate.
- 3.7 Further work by Spectrum⁵ on behalf of North Wales Local Employment Observatory showed that traditional companies are experiencing difficulties in implementing IT, many not knowing what is available or how to make use of it.
- 3.8 The research in North Wales has shown that companies are keen to invest in websites and e-commerce. However, there is a training need, with most companies concerned about the IT skills of their employees in the use of word processors, spreadsheets and databases and in using e-mail and the internet.
- 3.9 In North Wales, companies are experiencing difficulties in recruiting and retaining trained IT specialists. Numbers are limited locally, whilst salaries in the North West of England are much higher and succeed in attracting trained staff from North Wales.
- 3.10 Research by DTZ Pineda in preparing a Multimedia Action Plan for North Wales⁶ has shown IT skills as being of increasing importance to employers. However, young people in North Wales have been found to lack the IT skills required of them. Furthermore, as the demand for multimedia services increases, it is expected that the gap between supply and demand will also increase. There is therefore a need to increase the level of ICT and multimedia skills in the existing workforce and among young people and to ensure that these skills are updated to maintain their relevance.

IT Practitioners

- 3.11 A detailed review of the IT skills market in the UK was carried out by the Alliance for Information Systems Skills (AISS) and the Information Technology NTO in 1998/99. The results of this research were published in the "Skills 99" report⁷. This research focuses on IT practitioners, both within IT suppliers and IT user organisations. In the UK, practitioners account for approximately 800,000 employees, with Wales accounting for around 20,000 (2.5%) of the UK total.
- 3.12 Research by the London School of Economics has shown that business dependence on IT is a key concern for chief executives. All staff are expected to be literate as IT end-users, but there remains a need for IT specialists. Larger organisations often employ IT practitioners, but for most small firms, this is not feasible and can create some difficulties.

⁴"Moving into the Information Age – A Regional Benchmark Study", Spectrum/DTI.

⁵North Wales ICT Survey, Spectrum Strategy Consultants, 2000.

⁶"North Wales Multimedia Action Plan" – DTZ Pineda, March 2000.

⁷"Skills 99 IT Skills Summary" – AISS, IT NTO.

3.13 The Skills 99 report highlights that there are too few people in the UK with the skills necessary to undertake the level of IT work required. This is illustrated by high levels of staff turnover (15-20%) and upward pressure on the wages of a highly mobile workforce. The skills identified as being in the shortest supply included:

- Network/Operating Systems;
- Desktop Applications;
- Database;
- Programming and Software development;
- Technology - internet and intranet skills.

Education and Training

3.14 Providing education and training to meet the growing demand for IT practitioners is problematic. Graduate recruitment into IT roles is relatively high, although not all these graduates have qualifications in IT-related subjects.

3.15 The dynamic nature of IT occupations and activities means that education and training provision must also change, but keeping pace with these changes may be problematic. The development of cutting edge IT skills tends to take place either in-company or in higher education. FE colleges are heavily involved in provision at the technician and in the provision of programmes to develop user skills. It is important for these provider institutions to consider how they can develop the most appropriate provision in the context of rapid technological change and its associated cost and resource implications.

3.16 UK Higher Education Institutions provide around 3,500 courses in IT or which include a significant IT element, with around 59,000 people accepted onto IT-related higher education courses in 1998.

3.17 FE colleges offer a wide range of IT-related courses, most of which focus on end-user rather than practitioner skills. Colleges have been facing particular issues in keeping up to date with equipment and software changes. During 1996/97, approximately 35,000 computing and IT courses were studied at FE colleges in Wales.

IT Support Programmes

3.18 A significant proportion of Welsh businesses recognise IT as being highly important to their current and future competitiveness. However, levels of IT use in Wales are relatively low. It is therefore important to consider the approaches that are currently being adopted to support the use of IT by businesses in Wales.

3.19 Of particular note is the Wales SME-Business programme, which has been launched by the WDA and is supported by EU funding. The programme was developed within the Wales Information Society initiative.

3.20 The SME-Business programme will involve:

- a range of awareness raising activities, including seminars, workshops, demonstrations, roadshows and media coverage;
- one-to-one mentoring, providing;
- business analysis and familiarisation;

- requirements specification;
- independent purchasing advice;
- implementation support;
- impact evaluation.

3.21 The aim of the programme is to support the participating companies in their decisions on investing in technology to ensure that their choices are the right ones to assist in the growth of the companies.

3.22 SME-Business aims to provide information to 10,000 business, with 1,500 benefiting from an average of 13 consultancy days.

3.23 A particular issue for many SMEs is that they are not of sufficient size to justify employing a full-time IT manager, but with the use of networks and increasing internet and e-business potential, they still need to be able to access specialist expertise. This need covers the identification and introduction of appropriate equipment and its on-going management and maintenance.

3.24 Research by Business Advantage, the Welsh public/private sector IT support partnership has revealed that SMEs are reluctant to use professional IT advisors and are often unaware of sources of high quality advice. Cost is a major factor, as is concern over the impartiality of advice given.

Sector-Specific IT Issues

3.25 The work with the target sectors has identified a range of IT skills issues, both sector specific and more general. These are discussed below.

Aerospace

3.26 Aerospace companies are experiencing IT skills needs at a range of different levels:

- there is a need for general computer literacy among operatives;
- there is a shortage of software engineers.

3.27 Just over a third of Welsh engineering establishments have identified IT skill deficiencies in the existing workforce. This raises questions over how these businesses are responding to such deficiencies and the role that public bodies can play in supporting businesses to address such issues.

Agriculture and Farm Enterprises

3.28 The use of ICT is seen as a potential means of overcoming some of the difficulties faced by farms as a result of their rural locations, both in terms of accessing training and communicating with customers and suppliers.

3.29 Computing expertise is seen as being useful in marketing and managing farm accounts, with e-mail regarded as a potentially valuable communication tool.

3.30 IT skills needs include the use of standard software packages and of farm-specific programmes for activities such as livestock management and the generation of key business indicators.

Automotive

- 3.31 In the automotive manufacturing sector in Wales, there is seen to be a need to improve the supply and development of both IT user and practitioner skills.
- 3.32 E-commerce is seen as an increasingly important means of trading. In this context, automotive manufacturers need to ensure that they have the technical capacity to be able to trade effectively through this means.

Electronics

- 3.33 Electronics manufacturers are also facing a need for both IT user and practitioner skills. Electronics companies have identified shortfalls in all areas from the use of standard Microsoft applications to web design and application, through to advanced technical expertise.
- 3.34 The electronics sector is facing a shortage of software engineers, with particular needs for Java and C++ programming skills. Smaller businesses in particular are experiencing difficulties in competing with large multi-nationals to recruit and retain people with these skills. Retention of experienced software engineers is an issue as their skills are marketable world wide.

Financial and Business Services

- 3.35 The restructuring of the banking and insurance industries is having significant implications for the IT skills needed in these sectors. The increasing use of call centres as a means of service delivery means that companies need IT practitioner skills during the set-up phase for the centres and then require on-going access to maintenance and technical support. However, the degree to which these skills are needed at a local level or can be centralised will vary. The increased use of technology in the delivery of financial services also has an impact on the skills needs of clerical staff.
- 3.36 Across business services more broadly, IT user skills are of increasing importance in providing a means of marketing services to clients. E-commerce has the potential to break down geographical barriers between service providers and clients and may therefore open up the Welsh market to competition from a wider geographical area.

Food Processing

- 3.37 In the food processing sector, the main IT skills needs have been identified in office and support functions.
- 3.38 IT skills are not currently seen as a priority for production staff. Whilst production is often computer controlled, the IT skills needed are very basic. However, sector experts see food processing becoming increasingly capital intensive in the future, with fewer operatives but a need for higher level IT skills. This will take time to filter through to some of the smaller businesses. However, it is possible that businesses will need to increase the use of technology to compete in the future, which will have implications for the skills needed by production staff.

Leisure, Tourism and Hospitality

- 3.39 In the Leisure, Tourism and Hospitality sectors, the use of IT is growing, leading to an increasing need for IT skills. For example, IT is increasingly being used in events management and as part of integrated management systems. However, skill levels are currently inadequate to make best use of IT in these functions.
- 3.40 Whilst general skill needs in hospitality and tourism are expected to remain relatively constant, the need for IT skills is expected to increase over the next five years with the use of technology increasing across a range of functions.
- 3.41 IT is an area of need in some of the smaller owner-managed bed and breakfast establishments, especially where these are developing as a diversification from farming, for example.

Media and New Media

- 3.42 With the growth of new media activities, there is increasing inter-dependence between, and convergence of, broadcast and IT/communications systems, with resulting skills implications.
- 3.43 The new media sector relies on the use of technology in developing and delivering its products and services. New media businesses have largely been established as a result of experience with new technologies and are therefore currently strong in this area. However, the rapid changes in technology makes it imperative that the managers and staff of these businesses are able to continually update these skills in order to continue to compete.
- 3.44 It is anticipated that the distinction between the traditional and new media sectors will become less distinct in the future, as traditional media businesses make increasing use of new technologies. However, for this to take place, it will require the traditional media companies to adapt. It is not clear that there is a high degree of confidence in making this change among the more traditional businesses. If these companies are unable to adapt to take on the new media technologies, there is a danger that their ability to compete will be gradually eroded as more technology-oriented businesses enter the market.
- 3.45 The technological changes facing the sector create a significant common need for training in newer digital and communications technologies, particularly in relation to internet use and applications and internet programming.

Social Care

- 3.46 IT skills in the social care sector are currently found to be considerably lower than in other personal service sectors, with relatively limited penetration of IT.
- 3.47 The low level of IT penetration in social care establishments mean that they are unable to make best use of IT in business management, for example for accounting purposes and for maintenance of other business records. For this to take place will require proprietors to be able to identify how they can make best use of IT and the

skills they need in order to achieve this. Support may be required to facilitate this process.

Common Themes

- 3.48 IT skills issues can be identified across all of the focus sectors. IT user skills are consistently seen as a current need or an area where improvements will be needed in the future. This perhaps reflects the generally low level of IT penetration and use in Wales described earlier.
- 3.49 Deficiencies in IT user skills and relatively low levels of IT use reduce the efficiency of business operations and can be a barrier to growth where this is a target. Support may be required to assist businesses in identifying the most appropriate IT solutions and to access the training required in order to make more effective use of IT. Whilst, at a general level, IT needs may appear relatively standard in terms of packages and uses, the specific needs and the level of support required will vary quite widely.
- 3.50 Some of the manufacturing sectors are facing issues of recruitment and retention of staff with high level IT skills. In some cases, failure to access these skills can have a fundamental impact on the future success of the business. Firms are having to compete on a global basis for such staff. The costs of maintaining these skills can be prohibitive, whilst there is upward pressure on wage rates.

4. Action on Skills

- 4.1 The key public and private sector organisations need to consider how best to respond to the skills issues raised in relation to management and IT skills.

Management

- 4.2 It is important to consider how a strategic response can be developed in Wales to address management development issues. With such a plethora of courses covering aspects of management development, co-ordinated promotion becomes critically important. It is important to review levels of take-up and to assess the degree to which provision is currently supply or demand driven.
- 4.3 Effective management impacts directly on business performance. It is therefore hugely important to address the need to improve the management of small firms in Wales. In order to do this, however, the most appropriate approaches need to be identified. This is not likely simply to entail the provision of more courses, or different courses. Lessons must be learnt from many of the management development programmes that have been developed and delivered with European funding to date.
- 4.4 There is a need to review and clarify the role of Business Connect in providing the route for small firms to access appropriate management development opportunities.
- 4.5 There is a lack of hard data on management skills in Wales. It is therefore important for the key partners in Wales to explore the most appropriate means of setting a baseline in order to frame future actions. The research into the future skill needs of managers recommended a large-scale survey of management in Britain, to provide a baseline for historical comparison. If such a study is to take place, it is important that the key partners in Wales are able to capitalise on it and ensure that specific Welsh issues can be identified.
- 4.6 The availability of Objective 1 and other ESF funding presents a clear opportunity to channel resources into addressing management development needs. However, to achieve maximum impact, the use of these resources needs to be co-ordinated and must focus on addressing real needs and demand. The danger is that the availability of significant resources drives a supply-side response that fails to capture the interest of target managers.

IT

- 4.7 It is clear that the importance of IT to the Welsh economy is recognised by the key players and is reflected in the National Economic Development Strategy for Wales.
- 4.8 In broad terms, the approaches to addressing IT-related issues are similar to those for management, in particular regarding the development of a co-ordinated and strategic approach.
- 4.9 The responses to IT skills issues need to address both the practitioner and user levels. This is likely to require work with providers, including colleges,

training providers and private sector organisations, alongside development work with potential client businesses.

Recommended Actions

- 4.10 A range of actions have been identified in relation to management and IT skills. The actions fall into six broad themes, as follows:
- it is essential that a Wales-wide strategic approach can be developed to address management and IT skills needs;
 - there is a need for a range of further research to enable the development of a better understanding of management and IT skills issues;
 - promotion and awareness raising are required to address limited awareness, especially among SMEs, of the need to improve management and IT skills and possible means of achieving this;
 - capacity building is required among public sector bodies and other support organisations in order to maximise progress in skills development. This includes raising their ability to market more effectively the support they provide.
 - provision of management and IT training and development programmes needs to be reviewed;
 - the development and coverage of ICT infrastructure needs to be reviewed, in order to ensure that businesses, especially in remote areas, are able to take best advantage of the opportunities provided by e-commerce.

Table 4.1: Themes and Recommendations

| Theme No: | Rec. No: | Action | Timescale | Key Partners |
|-----------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------|
| 1 | 1a | Strong strategic fora should be developed to provide overall direction in responding to management and IT skills in Wales. | Late 2000 | Assembly/WDA/CETW/ existing fora |
| | 1b | The actions and priorities set out in the Multimedia Action Plan for North Wales should be reviewed to assess their applicability across Wales. In particular, approaches to extend the level of ICT and multimedia skills should be explored. | Autumn 2000 onwards | Regional bodies/ HE/FE/CETW/ employers |
| | 1c | Review how best to boost the level of IT use and research the development of strategies to address shortages of high level IT skills, especially in programming and software development. | Early 2001 | CETW/WDA/ NTOs |
| | 1d | Review the success of initiatives such as SME Business and Business Advantage as a means of co-ordinating responses to management and IT issues. | End of Initiatives | Initiative Partners |
| 2 | 2a | Investigate whether recommended research into future skill needs of managers in Britain is to take place. If so, seek to influence its focus and ensure Wales-specific outputs. | Autumn 2000 | Assembly |
| | 2b | Carry out research to set clear baselines of management skills and qualifications. Research the impact of management skills on business performance. | Early 2001 onwards | CETW/WDA NTOs |
| | 2c | Research the availability, suitability, quality and impact of management development and IT provision. | Early 2001 onwards | CETW/WDA/ NTOs |
| | 2d | Review the outputs of the ICT Research Centre currently being set up by DfEE. | Timing to be decided based on centre timescales | Assembly/WDA/ CETW/fora |
| 3 | 3a | Identify the best means of influencing management and management development, especially in small firms, including the most appropriate roles for public sector partners and other stakeholders. | On-going | Wales Management Council/NTOs/ CETW/emps |
| | 3b | Raise the profile of the key management and IT issues that SMEs need to be aware of. | On-going | CETW/NTOs/ Business Connect |
| 4 | 4a | Build the capacity of public and private sector business support organisations to assist in the development of indigenous businesses. | Spring 2001 onwards | WDA/CETW/ Business Connect/emps |
| | 4b | Build awareness among businesses of the support available to them. | April 2001 onwards | WDA/CETW/ Business Connect, emps |
| 5 | 5a | Providers of courses should review the nature of IT provision and how it can best be developed to serve its target market and remain relevant in the context of rapid technological change. | On-going | HE/Training Providers |
| | 5b | The range of provision identified as targeting management skills should be reviewed. The classification should be refined to ensure that they truly address management skills issues. Courses should be re-classified, where necessary, to make the target market clearer. | On-going | FE/HE/Training Providers |
| 6 | 6a | Partners should seek to influence providers to ensure that the necessary technology and infrastructure is in place to enable the maximum benefits to be gained from e-commerce and other opportunities. | On-going | Assembly/WDA/ CETW |

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