

Labour market information for career decision-making

A report to Highlands and Islands Enterprise

October 2006

The Centre for Studies in Enterprise, Career Development and Work (*Enterprising Careers*)

Enterprising Careers was formed in 2003 from the merger of two centres: the Centre for Guidance, Careers and Personal and Social Development; and the National Centre: Education for Work and Enterprise. Its 10 staff are employed in research, teaching, development and CPD across all the strands of its work (career development, work related-learning and enterprise) and it has a strong track record in innovative developments that impact on career guidance and enterprise practice, and that link evidence from research and theory to practice.

The Institute for Employment Research

The Institute for Employment Research (IER) is one of Europe's leading centres for labour market research. It was established in 1981 by the University of Warwick and currently has 31 staff, including 18 full-time researchers. Its work is principally concerned with UK labour market issues, broadly defined, at national, regional, sectoral and local levels, although it also undertakes comparative European research. The Institute provides economic consultancy and advice to a large number of mainly public sector institutions and agencies, including labour market information and more specialised economic modelling services.

Contents

Executive summary	1
Section 1	
Introduction	3
Section 2	
2. How do young people make career decisions	4
2.1 How do young people make career decisions? What influences their decision-making?	4
2.2 How do young people conceptualise the opportunities available to them?	6
2.3 What role does information play in career decision-making?	8
2.4 How significant is the role that LMI, and LLMI, plays as part of this process?	9
2.5 What factors help and hinder young people's use of LMI in the career guidance process?	10
2.6 Background reading for Section 1	13
Section 3	
3. Labour market information for career guidance	17
3.1 Labour market information: 'real time' or local?	17
3.2 Difficulties in gathering local labour market information	19
3.3 How are LLMI/LLMI delivered for career development?	22
3.4 Developing, operating & maintaining career websites with LMI/LLMI	25
3.5 Lessons from approaches taken elsewhere	25
Appendix 1: Potential websites for review	
Appendix 2: Websites researched in-depth (10)	
Appendix 3: Email letter sent to all the websites reviewed	
Appendix 4: Record of contacts with websites reviewed	
Appendix 5: Information about resources required for websites researched in-depth.	

Executive summary

- There are a number of different ways of considering career decision-making, but the most common current approach is one which considers individual young people within their personal, social and local context, including that of the labour market. There seems to be little support in the research for the view that young decision-makers usually make career choices through mainly rational processes.
- Young people form perceptions about their futures from a young age, and the process of career-choosing commonly starts early, although an actual decision will be later. Preferences for occupations start to develop during primary stages of education and in early secondary schooling.
- The influence of parents and family is important, and young people receive information from both informal sources (family, friends and the media) and formal sources (careers advisers, teachers and career information websites and literature). The inter-relationship between the two is key to helping young people to take on board the reality of the local labour market.
- Labour market information plays an important part in this, but may need to be interpreted or mediated to many young people. It may need to be presented in different ways depending on the stage of development of the young person, and taking consideration of different learning styles.
- Good quality information is very necessary but generally not sufficient on its own for career decision-making.
- There is a lack of research on the influence of locality (particularly from the perspective of rural and remote areas) on young people's choices.
- A broad range of approaches to providing 'real time' local labour market information (LLMI) and labour market information (LMI) to support career progression in practice is illustrated in this report by an in-depth review of ten websites from an international context (Appendix 2).
- Approximately 120 websites were initially identified for review. These were narrowed down to 27, for which reviews were provided (Appendix 1) and from which the final selection of ten were made. In-depth research was carried out on these ten websites, as they were regarded (by the sponsor) as providing the most appropriate exemplars of the use of LLMI and LMI for career development for the purpose of this report.

- Whilst much data about these ten websites could be gathered from in-depth research into the content, structure and technical facilities, some information required (relating to the costs of set-up and maintenance and role of business) could only be obtained by making a direct contact with the web-managers.
- The process of contacting websites for this specialist information proved, as predicted, to be laborious and time-consuming. Often, the initial point of contact was unable to provide the information required and passed the enquiry on within the organisation. Several approaches were made to each website, some yielding positive responses; others not (Appendix 4).
- Most of the ten sites reviewed do not produce their own LMI/LLMI, but rather link to other, specialist sites. The real cost of providing information is, therefore, often hidden, and/or may be underestimated.
- None of the websites reviewed reported any involvement or support from business in either set-up or maintenance.
- Key players identified were government organisations and/or departments at both national and regional levels.
- LLMI/LMI is generally used for a range of purposes, addressing broad agendas around career development.
- The frequency of updating of LMI/LLMI data sources varies, according to the website under review. Clearly, where information is mainly provided via links to other sources, frequency of updates depends on when these sources update (so different information may be updated at different times on the same site).
- Gaps exist regarding LLMI/LMI at regional and (more particularly) at sub-regional levels.
- Whilst many sources of LLMI exist, it is not feasible to incorporate them all in one on-line facility because of their dynamism, number and range.
- LLMI can be difficult to find.
- There is currently no common formatting or presentation style for LLMI.
- Whilst the type of occupational information from selected sources is similar, the level of detail varies.
- Websites providing LMI/LLMI to support career progression are expensive to establish, but less costly to maintain (depending on the size of the website).
- Key challenges for such websites included ensuring the availability of skilled and experience staff.

Section 1

Introduction

It is recognised that good quality information is essential for young people to make career decisions and plan their futures. Within that a key component is labour market information. The actual provision of career and labour market information has to be designed to be usable by young people and those who help and advise them: how, then, do young people make their career decisions, and what implications does this have for how labour market information might be provided?

The second section of this report discusses what is known about young people's career decision-making, how their perceptions of information are formed and how labour market information might fit into that.

The third section identifies some important issues that need to be considered in designing a website on labour market information from a review of ten UK and international websites which were designed to deliver labour market and career information to young people and adults.

How do young people make career decisions?

2.1 How do young people make career decisions? What influences their decision making?

Those who research and write about young people's career decision-making describe it in different ways, and it is important to note that it is not possible to conclude, *unequivocally*, that one explanation is stronger than another.

One way of thinking about this is to see decision-making as a *rational process* of gathering information and weighing up the costs and benefits of different choices: this would be a process where the young person thinks everything out in detail and plans clearly and carefully. But over recent years there has been little support in the research for the view that young decision-makers usually reach their career decisions through mainly rational strategies and processes.

A second approach is to think of decisions as being largely *outwith the individual young person's control*, and influenced to a great extent by such factors as class, locality, gender, the nature of the opportunities available at a particular time and the influences of others. This approach takes the view that young people experience little 'meaningful choice' over their education, training and entry to the labour market. However, it is clear that young people do make individual choices, sometimes against the advice or wishes of others, and sometimes of opportunities that might be unexpected.

The third approach (the most current one, and the one which seems to be borne out most clearly in the evidence from young people) is a *mixture* of these two approaches. One description of this is to say that while an important element of an individual's decision-making is to weigh up options, this process is based not on careful information searches or on strictly rational processes of deciding but on a mixture of facts, feelings, ideas and images, forming the perceptions of what is available and how 'good' the available options are. To the individual young person, it is his/her own perception of the world that is the objective reality against which the pros and cons of any option are considered... And that view of the world may not be one shared or recognised by adults or those in an advisory or helping role. A young person considering local opportunities will base this on a mixture of three things: what is known to

be available; what is seen to be possible; and what is seen as desirable. As will be noted later on, labour market information can influence each of these three (though particularly the first) but it needs to be presented and mediated in particular ways to have an impact.

Another description of this approach is to say that career choice is affected by three things: the *young person's picture* of possible routes and options, of their ambitions, of the lifestyle they would like, of the person they would like to be; *the influence of the environments* of the home, locality, the community; and *the influence of others* such as family members, teachers, advisers and the media. These things interact together in forming the young person's decision. It is also possible to think of different stages of decision-making: an early 'search' stage when pictures of possible careers emerge, based on preconceptions, and are considered in terms of whether they would be acceptable to family and friends, and would match the young person's own emerging view of themselves. The second stage is when information is more commonly looked for and reviewed more systematically. But at this point information is generally being used to justify and take forward the earlier ideas rather than explore new ideas: it is sought at a point when choice has already narrowed in a significant way.

Another way of looking at this is to talk about what is called 'pragmatic rationality' rather than 'technical rationality', that is to say that young people's decisions are made within what seems to them to be a rational approach, even if it does not look like this to outside observers and advisers. The three elements of this pragmatic rational approach to decision-making are: firstly that young people's career decision-making is one part of a wider set of decisions about *lifestyle*; secondly that it is *part of lifelong* career decision-making, of which the decisions young people make when leaving school are only one stage; and thirdly that decision-making happens as part of relationships, *interactions and negotiation* with others such as parents, employers etc

It is recognised that parents and families are the single most significant influence on young people's career decisions. They influence aspirations and motivation; provide information and advice on educational and occupational opportunities; influence values and priorities about post-school choices; and provide the practical, moral and financial support that allows their children to implement their decisions. Parents and families may, however, be ill-informed,

have only partial understanding and be out of date, particularly with respect to labour market information. Their influence can be *deliberate*, as when trying to motivate or encourage their children or to get job information and contacts for them; it can be *implicit* through young people absorbing the values and perceptions of their family; and it can be *unplanned*, for example, when family members are made redundant. Those seeking to ensure young people are informed about opportunities, therefore, need to work also with those who mediate such information to young people, particularly parents and families.

While most have not addressed the issue, a few studies have considered the influence of the local labour market on decision-making, finding that locality does influence decision-making in terms of influencing a young person's aspirations and expectations, but that how this happens is not clear (and without understanding how this influence actually operates it is difficult to plan an appropriate intervention). This uncertainty is not helped by the fact that most studies which have considered locality have been based in urban areas or the home counties: there is a recognised need for research on the influence of the local labour market on decision-making, especially in more remote rural locations. This is a clear gap in the research, and needs to be addressed.

In summary, the process of deciding about the future is an ongoing process, one that is not necessarily linear in nature. Young people's decision-making strategies lie along a continuum, from those who can be and are long term planners to those who are unwilling or feel unable to think about the long term. And at different times, the same young person may be at different points in this continuum. Decision-making is done by young people within their own family and social context; it is not generally a strictly rational or individual process.

2.2 How do young people conceptualise the opportunities available to them?

Young people's ideas about their future start to be formed from a young age, with primary age pupils already having some picture of what might and what might not seem possible for them to choose. Some of the broad concepts about their choices will already be in place, and may relate to stereotypical views of possible routes or gender choices: for example, 'people like me go [or don't go] to university'; 'boys don't usually do that kind of work'; 'if you want a good job

you have to move away'. While detailed 'information' about the labour market and education and training options are not required at primary stages, 'understanding' of routes and pathways and a broadening of options is needed. Another study noted that it was important to note the difference between when people make a choice about actual routes after school and when they begin to engage in the career decision-making process: many young people had begun this process before the age of 14 and most by that stage had preconceptions about the choices they were willing to consider and had already ruled out some choices by this point in time. So there is increasing evidence that preferences for occupations start to develop during the early secondary school years or even in primary school.

One study suggests that the jobs young people consider can be categorised as: '*lottery*' jobs, which are very high status with a high profile, but with 'chance' a strong element in them, for example jobs in the entertainment industry; *high status* jobs which are generally highly competitive professions needing high academic qualifications; and *customary* jobs which are those generally done by family members and are undertaken by most people. This study found that more than a quarter of the young people studied were aiming for lottery jobs although very few people actually did them. Young people were very much driven by the choice of a job they would enjoy and be interested in, and although aware that some jobs would be easier for them to enter than others, could see no reason to compromise on aiming for an 'enjoyable' job. So although they had some understanding of the realities of the labour market, this information did not generally affect their career plans. This did mean that, inevitably, many young people's first experience of trying to enter education, training and employment post-school brought with it a lack of success, a need to compromise and, for some, the experience of failure. However, it is also clear that some young people will leave decisions to the last minute, largely adopting a 'wait and see' approach: this allows young people to avoid or lessen the risk of failure but also means they are likely to miss information or opportunities.

Another relevant idea is that of 'visibility' and 'invisibility' in opportunities. Some types of jobs are more obvious to young people than others because they encounter them in their daily lives (for example service sector jobs) or they become aware of them through the media. But there are a large number of jobs that are not so visible, perhaps because they are not available in the young

person's locality. Even jobs that appear visible may present only elements of themselves to young people; for example, a nurse is seen to monitor equipment, give injections and pain relief etc, but the management and decision making elements are not necessarily apparent. This also applies to young people's knowledge and understanding of the jobs done by their parents and family members: while young people are generally better informed about an occupation if a family member is employed in it, only some elements are visible, dependent on how the experiences of work are discussed at home. Even when jobs are known about, it can be difficult to understand the tasks and skills done through observation: an architect, a nurse and a warehouse operator can be observed using a computer, but what they are doing is not obvious. The increased use of ICT in occupations makes many elements of jobs invisible. How then are young people to make informed decisions about the suitability of jobs for them, or their suitability for jobs?

2.3 What role does information play in career decision-making?

It can be seen from the above review of decision-making that information plays an important role in career choice. It provides the context within which choices can be understood and helps to provide a framework against which the individual young person can begin to test choices. But there is no one source of information for young people, rather they are often passive recipients of the picture of jobs and the workplace that others hold: this provides what has been called the 'background music' against which the advice and information of teachers, careers advisers and others with a clear guidance role is heard. And it is against this background that structured career and labour market information provided by public websites will be viewed.

The National Framework for Career Education in Scotland provides an educational framework for ages 3-18 for the development of understanding, knowledge and information about the choices open to young people in education, training and work, and shows the possible progression of information acquisition in parallel with the development of decision-making skills in children and young people. Any website developer might wish to consider how it might be structured to support the development of knowledge, skills and understanding in handling information on young people's options in the labour market and education such that it can be easily used by young people and their

teachers as they progress through schooling from primary stages and meet the learning outcomes in the National Framework.

There is some evidence that those young people who use formal information systems and support, such as careers advisers and careers literature are more likely to have a more accurate picture of job tasks than those who rely only on informal sources of information. This may be because information proactively sought is more likely to be remembered and incorporated into perceptions of jobs than that which is provided in a more haphazard and informal way, but it is also likely to be because it is indeed more accurate. While this is encouraging for career guidance services, it does also seem to be the case that information is incorporated into young people's planning if it fits with the view of the world that they already have. Simply accessing career information does not seem to be enough: some studies suggest that young people are prepared to listen only to information about careers already chosen and may tend to ignore other information that seems irrelevant to that choice. Nor is it easy to change perceptions: one attempt to change young people's perception that engineering was a 'dirty' job resulted in the perception that it was a 'dirty' job which required maths and science at a high level; information had been overlaid on top of an existing preconception rather than replacing it. So simply giving young people labour market information may not be enough to develop more realistic ideas about careers they might enter.

In summary, career information (including labour market information) is very necessary, but not sufficient in itself for career decision-making.

2.4 How significant is the role that LMI, and LLMI, plays as part of this process?

Evidence indicates that LMI is highly valued by career guidance clients. For example, recent research found that 98 per cent of clients rated career guidance interviews as 'useful' where LMI was a key feature. Specifically, 98 per cent of these clients had been given general LMI by career guidance practitioners in their career guidance interviews (e.g. educational routes, useful contacts, job vacancies); 73 per cent of these clients had been given information about various resources (e.g. websites); and 29 per cent of clients were given information about job options.

From the clients' perspective, six broad areas of LMI have been identified which relate to their need to understand: the competition faced; entry routes; the rewards available; the availability of jobs within certain 'travel to work' areas; the prospects of securing employment in particular jobs; and the value of particular qualifications, experience or training. For LMI to be of value to young people, it needs to focus on: the demand for labour; progression routes; geographical availability; trends; transferability of skills and qualifications; and recruitment and selection methods.

2.5 What factors help and hinder young people's use of LMI in the career guidance process?

Some recent work exploring the different ways that young people think about career decision-making suggests that 'different mindsets' seem to require different approaches to the provision of career information. For some, the question would be 'if I make this choice what opportunities does this open up for me?' For others, 'How do I get there?' (and this would need to include evidence that the particular route or pathway works and will produce results). Others might require information provided to them in the format of stories of people in the real world or a side-by-side comparison of options. Others again might need clearly mapped-out steps, hands on experience and pictures. While these different needs are not surprising given that individuals have different styles of learning, it does mean that LMI will need to be provided in a range of formats so that young people can make best use of it.

It also means that LMI and LLMI need to be more than facts and figures as these on their own do not necessarily change perceptions. For example, one study of parents found that the provision of the actual destinations of school leavers from their child's school was unlikely to shift perceptions that unemployment was up to seven times higher than the figures showed. Instead, parents preferred to trust the strong visual images they had of 'young people hanging around the streets' and anecdotal evidence of the unemployment of the children of acquaintances. This is important, given that the information young people have, particularly at early stages of the career choice process, is often filtered through parents' experience. This study also noted a number of key elements that made parents trust or distrust labour market information: the source of information had to be credible, both in terms of being in a position to gather the information and also not to have any 'agenda' behind the way

information was presented; and the approach had to avoid marketing of particular options and instead present a range of possibilities. These factors also apply to young people's views of LMI.

The presentation of facts is also not enough because young people's perspectives are increasingly focusing on lifestyle issues in relation to career choice, and LMI has to incorporate some understanding of this.

To what extent does information need to be mediated to young people? Certainly, there is evidence that young people can become overwhelmed by the amount of information on choices: one study of young people's awareness of key facts about university courses showed that this had *decreased* over a 10 year period when, paradoxically, more structured and clear information had been provided. But the expansion in the number of universities and courses had meant that the information was beyond what some young people could handle, so many restricted their choices to a very narrow range of possibilities in order to reduce the anxiety and stress involved in choice. This is a very real problem for all forms of information provision.

There is also the concept of 'hot' and 'cold' information. 'Hot' knowledge comes from those with direct experience of the option being considered or from the young person's personal experience or if it is mediated to them by someone, ideally with a personal relationship with them. 'Cold' information is provided from official sources and is more abstract. It is the first that young people tend to prefer and are most influenced by. Indeed, some have suggested that information on careers where there is no personal link has little impact on young people's understanding of jobs. Friends can also provide detailed information on the experience of particular jobs and more general information about labour market opportunities, and peer group views could influence the way in which young people filtered and absorbed information and presented and justified their career decisions.

What support is needed in accessing and using labour market information and what is the role of the careers adviser in this? It could be suggested that the careers adviser is a 'warm' source of labour market and career information. While being able to access and advise using 'cold' information (which, it is important to note, can have real credibility as noted above), the careers adviser

also has some form of a personal relationship with the young person, which can make the information 'hotter'. It does seem that, for young people to genuinely take on board labour market information, something more than signposting to information sources is likely to be needed for many. However, different clients need different approaches and some are able to access, interpret and evaluate information with minimal help: the key is to identify the individual needs of each.

2.6 Background reading for Section 1

Archer, L., Halsall, A., Hollingworth, S. and Mendick, H (2005) *'Dropping out and drifting away': an investigation of factors affecting inner-city pupils' identities, aspirations and post-16 routes*. Report to the Esmee Fairbairn Foundation. London: IPSE

Ball, S.J., Maguire, M. and Macrae, S. (2000) *Choice, pathways and transitions post-16*. London: Macmillan

Banks, M. et al. (1992) *Careers and identities*. Milton Keynes, Philadelphia: Open University Press.

Bimrose, J., Barnes, S.A., Hughes, D. & Orton, M. (2004) *What is Effective Guidance? Evidence from Longitudinal Case Studies in England*, Warwick: Institute for Employment Research.

Available[Online]

www2.warwick.ac.uk/fac/soc/ier/publications/bydate/egr2004.pdf

Bimrose, J. & Orton, M. (2005) *Labour Market Information (LMI) for Effective Guidance within Skillset*, Warwick: Warwick Institute for Employment Research

Bimrose, J. (2006) *Labour market and course information: what more might be done to deliver on high quality, up-to date, relevant LMI and course information to the guidance system for adults and young people? IAG Review (2005-6): Phase 2. Position paper for Skillset*. Warwick: Institute for Employment Research.

Blenkinsop, S et al (2006) *How do young people make choices at 14 and 16? NFER report for DfES*. DfES Research Report RR773. Sheffield: DfES

Foskett, N. (2004) *IAG (Information, Advice and Guidance) and young people's participation in decisions 14-19*. Nuffield Review Working Paper WP25 [online]. At www.nuffield14-19review.org.uk

Foskett, N., and Helmsley-Brown, J. *The Career Perceptions and Decision Making Report (CAPDEM)*. Southampton: Heist Publications

Foskett, N., and Helmsley-Brown, J. (2000) *Choosing futures. Young people's decision-making in education, training and careers markets*. London, New York: Routledge/Falmer.

Furlong, A. (1992) *Growing up in a classless society? School to work transitions*. Edinburgh: Edinburgh University Press.

Furlong, A. et al (1996) Neighbourhoods, opportunity structures and occupational aspirations, *Sociology*, 30 (3), 551-65

Furlong, A. and Biggart, A. (1999) Framing 'choices': a longitudinal study of occupational aspirations among 13-16 year-olds, *Journal of Education and Work*, 12 (1), 21-35

Hirsh, W., Kidd, J.M. and Watts, A.G. (1998) *Constructs of work used in career guidance*. NICEC project report. Cambridge: CRAC

Hodkinson, P (2004) *Career decision-making, learning careers and career progression*. Nuffield Review Working Paper WP12 [online].

At: www.nuffield14-19review.org.uk

Hodkinson, P., Sparks, A., and Hodkinson, Heather. (1996) *Triumphs and tears*. London: David Futon Publishers.

Howieson, C., Croxford, L. and Semple, S. (1993) *Choices in a changing world: report to Scottish Enterprise Glasgow*: Scottish Enterprise.

Kennedy, R.; Christian, L. G.; and Bell, D. "Adolescent Identity Development: Views of the Future." Paper presented at the Annual Conference of the Mid-South Educational Research Association, Point Clear, AL, November 17-19, 1999. (ED 436 695)

Kysel, F., West, A., and Scott, G. (1992) Leaving school: attitudes, aspirations and destinations of fifth-year leavers in Tower Hamlets, *Educational Research*, 34 (2), 87-105

Learning and Teaching Scotland (2001) A National Framework for Career Education in Scotland. Dundee: Learning and Teaching Scotland.

MacRae, Maguire and Ball (1996) 'Opportunity knocks: "choice" in the post-16 education and training market' in N. Foskett (ed). *Markets in Education: policy Process and Practice. Vol 2.* Southampton: Centre for Research in Education Marketing, School of Education, University of Southampton.

Marks, G. and Houston, D.M. (2002) The determinants of young women's intentions about education, career development and family life, *Journal of Education and Work*, 15 (3), 321-336.

Maychell, K., Evans, C., Brooks, R., Lee, B. and Pathak, S. (1998) *Leaving at 16: a study of factors affecting young people's decision to leave full-time education.* Slough: NFER.

Mitchell, L. and Budd, J. (1999) The development of occupational sex-role stereotypes, occupational preferences and academic subject preferences in children at ages 8, 12 and 16, *Educational Psychology*, 19 (1), 17-35

Offer, M. (2000) The Discourse of the Labour Market, in B. Gothard, P. Mignot, M. Offer & M.Ruff (eds) *Careers Guidance in Context*, London: Sage

O'Reilly, E. Making Career Sense of Labour Market Information. 2d ed. Ottawa, Ontario: Canadian Career Development Foundation, 2001.

<http://www.makingcareersense.org/>

SHM (2005) Mindset profiles: segmenting decision makers at 14 and 16. Findings from exploratory research. London: SHM

Semple, S., Howieson, C. and Paris, M. (2002) Longitudinal Study of Young People. Glasgow: University of Strathclyde.

Semple, S. and Brownlow, L. (2004) The Role of Parents and Families in Enterprise in Education. Think Tank Paper 2. Glasgow: University of Strathclyde.

Semple, S. (1994) Involving parents in skillseekers and action planning: a good practice guide. Glasgow: Scottish Enterprise.

Taylor, M. (1992) 'Post-16 options: young people's awareness, attitudes, intentions and influences on their choices', *Research Papers in Education*, 7 (3), 301-35

Trusty, J., and Watts, R. E. "Parents' Perceptions of Career Information Resources." *Career Development Quarterly* 44, no. 3 (March 1996): 242-249.

Wright, S. (2005) Young People's decision-making in 14-19 education and training: a review of the literature. Nuffield Review of 14-19 Education and Training Briefing Paper 4. [online] At: www.nuffield14-19review.org.uk

SECTION 3

3. Labour market information for career guidance

Section 2, above, summarised many of the complexities involved in the process of career decision-making. This section presents findings from in-depth research into ten websites, selected from the international context, that use labour market information (LMI) and local labour market information (LLMI) to support career decision-making, career counselling, development and progression.

The objectives of section 3 are to:

- examine the relationship between ‘real time labour market information’ and local labour market information, together with issues related to its availability;
- review findings from examples of interesting examples of career websites that provide LLMI and LMI as part of their offer;
- identify operational challenges in developing and maintaining these websites.

3.1 Labour market information: ‘real time’ or local?

One focus of the research specification was the use of ‘real-time’ labour market information on websites designed to support career progression. Particular questions were posed: What is real-time LMI? Do people require it to make decisions? What information could be provided ‘real-time’? What resources would be required for this?

Searches, however, have revealed little information on ‘real-time LMI’ in the UK. It appears to be a term most commonly employed in the North American context and describes:

information which relates to the labour market such as data on employment, wages, standards and qualifications, job openings, working conditions, which is updated with sufficient regularity such that the data can be considered a genuine representation of the labour market at all times.

One particular website¹ defines real-time LMI as follows:

Labour Surplus and Shortages: information on job openings that exceed the supply of workers by occupational title and workers who exceed the number of job openings by occupational title.

Hiring Trends: information on the twenty-five most frequently listed occupational titles for job orders (on a particular job link) with the number of hires as of the month indicated for each occupational title

Salary Trends: information for job seekers on maximum and minimum hourly salary ranges for the twenty-five most frequently listed occupational titles (on a particular job link) and information for employers on the average preferred hourly salary levels for the twenty-five most frequently listed job seeker resume occupational titles.

Active Jobseeker Characteristics: information for employers on selected characteristics of active job seekers by the twenty-five most frequently listed occupational titles (on a particular job link). For example, educational level, experience level, gender, race and ethnicity and employment status.

Employer Characteristics: information for job seekers on selected employer characteristics for the top twenty-five employers who most frequently list job openings (on a particular job link). For example, occupational titles of vacancies, experience required for specific occupations, education levels required for specific occupations, type of employment (full time/part time) for specific occupational title, and ownership type (private sector, government) for specific occupational titles.

Current Labour Market Availability: information on the number of resumes and job openings available for a specific occupation, including average hourly wage, using a job title.

¹ Oklahoma JobLink Career Information System:
https://servicelink.oesc.state.ok.us/ada/JMI/jmi_rtlmimainmenu_dsp.cfm?rand=297254

Average Wages: information on the vacancies placed by hourly wage range and filled by hourly wage range.

Within the UK context, these data would normally be referred to as 'local labour market information'. The Careers Scotland website² provides a section on 'real careers', which contains case study examples of individuals' career progression into particular occupational roles. On the same website, this information is distinguished from 'labour market intelligence', which includes data on local industries as well as national trends. For the purposes of this report, therefore, 'real-time LMI' will be regarded as another term for 'local labour market information'.

3.2 Difficulties in gathering local labour market information

When considering the use of either local labour market information or labour market information on career websites, it should be remembered that the expansion of LMI/LLMI services delivered through ICT risks leaving behind the most disadvantaged in society.³

In addition to this more general consideration are the difficulties associated with providing on-line LLMI. A recently published evaluation of the LMI/LLMI provided by the Sector Skills Councils in the UK for the specific purpose of supporting information, advice and guidance found that whilst regional information is collected and interpreted by many different bodies, Sector Skills Councils do not currently provide any type of consistent or formal authoring or editing role for regional LMI⁴. Since the Sector Skills Councils play a significant role in the collection of LMI from employers in the UK, this provides a specific example of the type of difficulty that would be encountered in providing access to LLMI.

² <http://www.careers-scotland.org.uk/careersscotland/web/site/Home/home.asp>

³ Lindsay, C. (2005) Employability, Services for Unemployed Job Seekers and the Digital Divide, in *Urban Studies*, 42, 2, pp325-339.

⁴ Graver, A., Harrison, J. & Letman, C. (2006). Sector Skills Council Information, Advice and Guidance Project: Bringing Industry and IAG Services together. Evaluation Executive Summary and Conclusions (para 16). York: Impact Research. Available online: <http://www.impactresearch.co.uk/ssciag/>

Researching the difficulties that would be encountered when making local labour market information available on-line was beyond the resources of this project. However, findings from previous research provide some indicators of the issues involved⁵: For example:

There is a lack of consistency between regions and sub-regions.

It cannot be assumed that information available in one region/sub-region is necessarily available in other sub-regions. The trend towards greater devolution across the regions and nations of the UK means that a lack of consistency in information availability across regions and sub-regions is likely to persist. The multiplicity of agencies and organisations involved in data collection is a further factor operating in the same direction, despite pressures for partnership working. The reality is one of a complex patchwork of information availability, both quantitatively and qualitatively, across local areas and regions.

Vacancy information and sources represent a major challenge.

There are many different sources of vacancy information. Moreover, the sources of vacancy information are themselves dynamic (change rapidly). They are typically subject to refinement and development. It is clear that considerable development work is ongoing – for example, by the Sector Skills Councils. However, the very dynamism of the information base – encompassing the emergence of new sources, the disappearance of others, and the development and upgrading of existing sources – means that achieving a comprehensive picture is likely to be difficult, at either regional or national level. At any one time, it is not known how many vacancies exist in the economy. Moreover, not all recruitment is conducted formally. Hence, there are likely to be occupations/sectors/geographical areas where available information sources will have more partial coverage than in others.

Local knowledge needs to be placed in a broader context.

It is important to keep in mind that no national/sub-national system of local labour market information can ever be a meaningful substitute for local

⁵ Bimrose, J., Barnes, S-A., Green, A., Orton, M. & Davies, R. (2005) *Local Labour Market Information Feasibility Study*. Sheffield: Ufi learndirect & Coventry: Warwick Institute for Employment Research.

knowledge from the press/media/other sources about impending local openings and closures, and other local initiatives. Such local intelligence should be used to supplement information obtained from other sources (eg. vacancy websites). At the same time it seems important that any career website does not adopt an overly parochial view, concentrating only on opportunities in a particular local area, rather than recognising that opportunities in neighbouring areas (particularly in large metropolitan areas), which may well be within reach of local residents. Indeed, 'looking further a-field' could be an important element in raising aspirations and broadening horizons as part of the career development process.

Weaknesses inherent in vacancy websites.

Good practice in information assessment and usage suggests that it is important to have a clear picture of the provenance of information – ie. where it comes from, its scope and coverage, how it has been collected, when it was collected, etc – in order to assess its validity and fitness for purpose. Yet vacancy websites often do not provide such information on provenance. The fact that some information sources are operated commercially suggests that it may not always be very easy to gather information on provenance. It follows that published LLMI is not necessarily of a high quality so should not be automatically trusted.

Robustness/reliability of LLMI versus datedness.

In the absence of clear information about the provenance of sources, there is a danger that an over-reliance is placed on the 'date' to which information relates to the exclusion of other attributes which may be of crucial importance in judging fitness for purpose. Having access to 'up-to-date' information for career development and progression is important, but it needs to be recognised that not all information sources can be, or are, updated with the same frequency, and that some types of information 'date' more quickly than others.

Scope and content of an on-line LLMI.

It is difficult to arrive at any consensus (apart from a general desire for 'easy to use' and 'accessible' LMI) on the specificities of what local labour market information is required and what would be most useful to clients. In part, this

reflects a diverse range of user abilities in accessing, interpreting and 'feeling comfortable' with statistical information.

Setting limits and constraints.

The lack of consensus about specific requirements of a local labour market information resource in terms of content and presentation indicates that if resources are to be devoted to developing and maintaining a high quality on-line local labour market information resource it is important that the objectives and limitations of such a resource are made clear at the outset. This is important both for 'managing expectations' and for highlighting that such a resource represents a 'supportive tool' and not an end in itself.

3.3 How are LMI and LLMI delivered for career development?

As already indicated, the career decision-making process is likely to take place over a number of years. A range of LLMI/LMI is required as part of this process for:

- different purposes (e.g. to raise awareness or challenge misconceptions or misunderstandings);
- by clients with different needs (e.g. school pupils, new graduates); at
- different stages of their career development (choice of degree subject; initial entry to the labour market).

So, for example, the type of LLMI/LMI that a school pupil may need to help them make a career decision about a subject choice at a particular stage of their school career is likely to be different from the type of LLMI/LMI necessary to support their entry to the labour market as a graduate several years later. A further consideration in presenting LLMI/LLMI as an on-line resource is that clients vary considerably in their ability to understand and interpret the implications of LMI/LLMI for their own particular circumstances.

Varied types of LLMI and LMI, presented in different formats are therefore needed, including: data on employment trends and projections; unemployment trends; skills gaps; earnings or salary levels; occupational profiles; education and training; vacancy information.

The project brief specified the following questions for the research to address:

- What might LMI and LLMI for career guidance look like in practice, considering examples from the rest of the UK, the US, Australia and Canada?
- How might it be delivered?
- What lessons can be learned from the experience of trying to set up such systems?
- What is involved in setting up, and, more importantly, maintaining such systems?
- What role might business play in such systems?

In particular, the research was to address the issues of 'how the provision of LMI and LLMI for career guidance might be, and have been, answered in practice'. Exemplars (not at the level of case studies) from an international review of provision were required.

To address these particular questions, detailed reviews of career and career-related websites that use LMI and LLMI are presented in Appendix 2. Specifically, these reviews address questions posed that relate to the rationale for, and purpose of, the websites; the types of LMI/LLMI used; how this is delivered and lessons that can be learned.

An initial keyword search, using 'labour market information', 'local labour market information', 'real-time labour market information', career development and career guidance yielded approximately 120 hits. The results from this search were refined, leaving thirty three websites. Six of these were eliminated because they either might be well known (eg. Futureskills Scotland) or too specialist in the approach taken (eg. OECD). From the remaining twenty seven (see Appendix 1) ten were selected for in-depth review, in consultation with the commissioning body.

The ten websites were selected from the following four countries: Australia, New Zealand, the United Kingdom and Canada. Each was reviewed against the following criteria:

- its primary purpose and target group (to address the question: 'Why was this website set up?');

- types of LMI and LLMI (to address the question: 'What might LMI and LLMI for career guidance look like in practice, considering examples from the rest of the UK, the US, Australia and Canada?')
- the interfaces through which LMI/LLMI can be accessed (to address the question: 'How might it be delivered?');
- the suitability of the LMI/LLMI (to address the question: 'What lessons can be learned?');
- the registration process (to address the question: 'What lessons can be learned?'); and
- any additional noteworthy aspects of the site (again, to address the question: 'What lessons can be learned?').

In addition, an email was sent to the ten websites, probing additional information about the operation of the website (Appendix 3). From this review, examples of the broad career topics offered across the ten websites were identified. These include:

- Personal profiling/career portfolio
- Trends and patterns of work
- Occupations
- Education and training
- Choosing subjects
- Getting a job
- Becoming self-employed
- Working overseas
- Getting back to work after long absence
- How to perform in the labour market
- Self-assessment/career match
- CV builder
- Course search
- Work search
- Student life

In addition to an investigation of operational issues, the exact nature of the resources required to develop and maintain the websites were probed. This is discussed in the next section.

3.4 Developing, operating and maintaining career websites with LMI

The previous section (3.2) addressed developmental and operational issues related to setting up careers websites that provide LLMI/LMI for career development. In addition, questions about the resources required to set up the websites and maintain their operation were asked of the ten websites selected for research.

Collecting this data proved to be challenging. Websites often provide only a general email address for user correspondence. The request for detailed information on finance typically was referred on to someone else. Most were actually reluctant to divulge this information. A record of the contacts made with the ten websites can be found in Appendix 4, together with an indication of the responses.

Specifically, the questions asked were:

- What is involved in setting up and maintaining career websites with LMI/LLMI?
- Who are the key players in such systems?
- What, if any, has been the particular role of business?
- What would be your advice to anyone setting up a similar system?
- Is there anything we have missed?
- What were the set-up costs of your website?
- What are the annual maintenance costs for the website, including the number of full-time people employed?

Details of actual responses received from the websites can be found in Appendix 5.

3.5 Lessons from approaches taken elsewhere

In-depth research into the ten websites providing LMI/LLMI as part of the services provided by career counselling, career development or progression websites has provided insights into the process of setting up and maintaining this type of website, together with the start-up and operational costs. Specifically:

- With one exception (that is, a commercial website that offered a job placement service by matching individuals to jobs from a large database) the websites

researched were owned and managed by government departments at either the national or regional level.

- LMI/LLMI was used on the websites researched as part of a much broader menu of career development activities and/or information.
- The websites researched used other sources of LMI/LLMI.
- Various methods were used to provide access to LMI/LLMI: direct links to databases and reports; navigational headings like 'Frequently Asked Questions'; 'needs based' categorisation systems (e.g. adult zone, school zone, learning zone); and through a range of different types of search facilities (like job searches).
- Most websites were designed to meet the needs of both young people and adults, with particular sections targeted at specialist target groups (like school leavers).
- Most websites researched were still evolving in the sense that they were continuing to improve the structure and content for users. In some cases (e.g. New Zealand) this was in response to two career organisations merging, with the consequence that two websites had to be merged. In others, the process of continuous quality improvement was informed by user feedback.
- Registration requirements were kept to a minimum. Only where users might wish to store personal information (like in a CV builder) were they required to complete a registration procedure.
- Only one website offered a section that particularly addressed the needs of disadvantaged groups.
- Three websites provided information relating to costs. From this, it was evident that investment in the start-up costs of this type of website is considerable, with maintenance costs relatively moderate. The number of dedicated team-members working on maintaining and updating websites depended on the size and purpose of the website. This ranged from 14.5 FTEs to 2.7 FTEs.
- Key challenges identified in setting up and maintaining systems to deliver LMI/LLMI for career guidance were: bringing together a team of people with the necessary skillsets; being prepared to start off modestly, then building on experience; setting a timescale that is realistic and can be achieved; and the choice, structure and basic design of the website content.
- None of the websites reported any involvement or support from business.
- Key players were identified as government organisations that were able to provide much of the LMI/LLMI.

- Advice to consider when setting up a similar system included: start off small and expand; keep control of the data upload (rather than contract this out to ICT specialists); and arrange to go and visit at least one website firsthand and talk to those involved in its operation.

Appendix 1: Potential websites for review

Presented below are examples of 27 career websites, each of which has a particular focus on labour market information. The brief descriptors, which appear under each of the urls, provide an indication about what each website aims to achieve.

United Kingdom:

1. <http://www.prospects.ac.uk> Prospects has been working in partnership with the most prominent official bodies in the field of Higher education, Graduate Prospects has been bringing students, graduates and recruiters together in for over 30 years. Its website is the UK's official graduate careers website containing essential information on graduate careers, postgraduate study and graduate jobs in the UK. Here is a list of services they provide http://www.prospects.ac.uk/cms/ShowPage/Home_page/About_us/Products_and_services/pl1elkmXj
2. <https://www.careerswales.com/> Careers Wales was launched in April 2001; bringing the seven (six at present) Welsh careers companies under a national brand name and forming the first all age careers guidance service in the UK. Funded by the Welsh Assembly Government, Careers Wales has responsibility for delivering: careers information, advice and guidance to young people and adults across Wales; the Work Force Development initiative; Education Business Partnerships and Youth Gateway.
3. <http://www.careersserviceni.com/Cultures/en-GB/FindAJob/LabourMarket/> Careers Service Northern Ireland aims to assist economic and social development in Northern Ireland by enabling clients to make informed, realistic and sound decisions about their futures. They also aspire to ensure equality of service to young people and adults within an open and responsive, progressive and innovative culture. In terms of LMI in particular, they try to provide answers to the following questions; what are current and future skill needs for employment?; What are your chances of finding a job in a particular field?; What kinds of jobs are on the increase?; What jobs are disappearing?
4. <http://www.westernscotlandlmi.org.uk/wslmi/> This website has been developed to provide better access to labour market information and advice for European

Structural Funds applicants in Western Scotland. It is one of the services provided by SLIMS (Labour market intelligence services, <http://www.slims.org.uk/>) as part of the contract with Strathclyde European Partnership and the Scottish ESF Objective 3 Team for the Regional LMI Service from 2004-06. There are three main elements to the site: [Information Gateway](#) - this section provides a host of links to useful sources of data and intelligence, including Key Indicators, the official source of labour market statistics for all Structural Funds applicants in Scotland; [Service Outputs](#) - this section contains all the materials produced by SLIMS as part of the Regional LMI Service 2004-06 and; [Need more help with LMI?](#) for applicants requiring more advice and assistance, this section contains useful information on sources of labour market statistics, tips on analysis and presentation, and links to some useful guides on the use of statistics.

5. <http://www.yorkshirefutures.com/index.aspx> Yorkshire Futures is the Regional Intelligence Network for Yorkshire and Humber, providing information and intelligence about the region, for the region, to improve decision making and better prepare it for the future.
6. <http://www.regionalobservatories.org.uk/> This is the website of The Association of Regional Observatories (ARO) which has been set up by the Regional Observatories and Regional Intelligence Groups in England. ARO aims to promote the provision and use of the best intelligence and data for England's regions. For example, Regional Development Agencies and other regional partners are heavily involved in the production, and use, of labour market intelligence. Regional Observatories, therefore, do much work in the area of LMI, including mapping data needs; supplying research; and disseminating intelligence about skills, learning, and employment. Yet, arrangements for providing Labour Market Intelligence differ across the English Regions. So, usefully, details on LMI arrangements in each region (particularly within RDAs) are provided on the website. These details include contact details, and a brief explanation of general LMI work and work to support the FRESA in each region. Also, Labour Market analysts from a number of regions represent the regions on a number of bodies; thus, details of these groups are provided.
7. <http://www.ssda.org.uk/ssda/about-ssda> The Skills for Business network is made up of 25 [Sector Skills Councils \(SSCs\)](#) – each one is an employer-led,

independent organisation. The [Sector Skills Development Agency \(SSDA\)](#) underpins the network and is responsible for funding, supporting and monitoring the SSCs. The Skills for Business network aims to boost the productivity and profitability of the UK. They're doing this by identifying and tackling skills gaps and shortages on a sector by sector basis. To this end, they provide a good deal of LMI in the form of a series of factsheets covering the 23 Sector Skills Councils in each of the English regions (there are 207 sheets in total). The factsheets give policy-makers in the regions an overview of key headline figures, presented in a consistent manner from common data sources. Each region also has a summary sheet bringing together key figures for each sector for comparison. They provide two ways in which information can be searched: by region or by Sector Skills Council (SSC).

8. <http://www.healthcareworkforce.org.uk/> This website provides an authoritative guide on LMI with the intention of helping workforce planners in the National Health Service understand where labour market information and intelligence can support them in their role. It is not an academic guide to creating LMI but is intended to be a practical guide. (The exact link for the guide is <http://www.healthcareworkforce.org.uk/C6/LMIGuide/Project%20Documentation/LMI-Guide.pdf>).

9. <http://www.gowales.co.uk/> Graduate Opportunities Wales is an employability and business development programme that encourages businesses and graduates in Wales to get the most out of working together. GO Wales better prepares students and graduates for work and their future career. In so doing, the programme contributes significantly to the economic development of Wales: business can access the skills they need to grow and succeed. It dedicates a whole section of the site to LMI covering 'what is LMI', 'who uses LMI', 'reports', 'news articles' and 'links' concerning LMI. Within this section they also provide a comprehensive guide to 'Working in Wales'; 'Working in Wales' has been compiled to provide students and graduates with an overview of the Job Market in Wales and to indicate good practice in the process of decision-making and job applications for this market. It notes that whilst every effort has been made to ensure that the information in the booklet is accurate, it should be noted that contact details, especially web addresses and telephone numbers frequently change. The whole website is managed by Higher Education Funding Council for Wales (HEFCW) and delivered in partnership by University Careers

Services. GO Wales strives to deliver a quality service to all its client groups. The programme is partly funded by the Welsh Assembly Government and partly by the European Unions' Social Fund.

10. <http://hosting.tribalctad.net/lmimatters/index.html> LMI Matters! has been created by the Cambridge Training and Development Ltd (CTAD) who have been a pioneer for over 20 years in the development of tools for learning by combining a powerful mix of multidisciplinary skills in learning design, graphics, software engineering. The website is an online version of a highly successful printed resource which they had developed for the DfEE, to help careers professionals make best use of labour market information. The website has similar aims; LMI Matters! is a resource to help develop awareness of LMI and how it can be used to best effect. It is intended to be used by career advisers and teachers as a source of ideas, or by those responsible for staff development as a basis for LMI awareness-raising sessions. It contains four main sections: 1. The LMI Toolkit is a resource to help develop awareness of LMI and how it can be used to best effect. It can be used by careers advisers and teachers as a source for ideas, or in staff development as a basis for LMI awareness-raising sessions; 2. The Worksheet generator is a computer program which enables the user to create and maintain a bank of worksheets for the purposes of keeping up to date on LMI. The worksheets can be created using a combination of text, graphs, charts, tables, illustrations and diagrams; 3. The Slideshow builder is a computer program which enables the user to create a bank of slides. The slides are a sequence of still pictures with a sound track, which can be used to present LMI; 4. The Conference facility enables you to communicate over the World Wide Web either by reading or contributing to messages on any issues concerning LMI which are already posted, or by initiating messages of your own. The website supports the Requirements and Guidance for Providers, Department for Education and Employment, 1998.
11. <http://www.nomisweb.co.uk/> Nomis is a web-based database of labour market statistics based in Durham. Nomis is run by the University of Durham on behalf of the Office for National Statistics. First launched in 1981, Nomis houses an extensive range of government statistical information on the UK labour market including Employment, Unemployment, Earnings, Labour Force Survey and Jobcentre Plus vacancies.

12. <http://www.jrf.org.uk/> The Joseph Rowntree Foundation is one of the largest social policy research and development charities in the UK, spending about £7 million a year on a [research and development programme](#) that seeks to better understand the causes of social difficulties and explore ways of overcoming them. Consequently, it has a great of LMI in an easily searchable format (their search function is powered by google).
13. <http://www.futureskillswales.com/> In 1998, the Future Skills Wales (FSW) research project was undertaken in order to establish the current and future generic skills needs throughout Wales. The findings were widely disseminated throughout Wales and very well received by policy and decision-makers in the public sector. As a result it was agreed to continue this work and a dedicated Future Skills Wales Unit was set up in June 2000 to maintain and develop the research and dissemination programme. The Future Skills Wales Project is now an ongoing Programme of Research, which currently includes the following: Future Skills Wales 2005 Sector Skills Survey; Future Skills Wales 2003 Generic Skills Survey; Job Outlooks; Wales Pay Survey and; Generic Skills Forecasting
14. <http://www.vtplc.com/careersmanagement/> VT Careers Management (VTCM) is the UK's leading provider of high quality, comprehensive information, advice and guidance services. The Company employs 1200 staff, over 70% of whom are qualified to degree level, and has an annual turnover of approximately £45 million, operating in the UK and overseas. Providing services to the DfES, LSCs, Connexions partnerships, schools and colleges in Yorkshire, Wakefield and the South East of England, VTCM serves over 64,000 16 year olds and around 20% of the UK's young people and adults. They are committed to long term relationships and believe in working in partnership with its customers to make a real difference to people's lives and the communities in which we work. They list their areas of expertise as: development of the whole person; career guidance and information; careers education and software resources; NVQ Assessment Centre; psychometric assessment; **labour market information**; market research and evaluation; outplacement and personal development; nationwide resources distributor. Consequently, they provide a range of LMI which can be searched, and either viewed or purchased, on the website.
15. <http://www.guidance-research.org>

The National Guidance Research Forum website has been funded by the Department for Education and Skills, in England. Its target audience is the broad community of guidance practice. One major section is dedicated to presenting labour market information from a wide range of sources, interpreted in a form required by career guidance practitioners. Work on this section has been undertaken in close collaboration with the Sector Skills Councils, who are committed to making their LMI available through this portal. In addition to presenting LMI, the website will, in the near future, contain materials to support the interpretation of LMI by users.

United States

16. <http://www.geosolinc.com/> - Established in 1992, Geographic Solutions, Inc., has become the nation's leading provider of software solutions for workforce development, employment, and training. The company has developed state-of-the-art systems for employment and workforce development agencies in more than thirty states. Their software is available to over seventy-five percent of the job seekers and employers in the U.S.

Australia

17. <http://www.jobsearch.gov.au> Australian JobSearch (JobSearch) provides one way for job seekers to search for a job; they aim to help people find jobs and help employers find people. Their vacancy database contains: every job listed with every Job Network Service around the country; jobs advertised in some national newspapers; jobs listed in the Commonwealth Public Service gazette; jobs lodged directly by employers, and; jobs from RCSA (Recruitment and Consulting Services Association) members who are Job Placement Organisations. Also Australian JobSearch has information and links to services that can help you in your search for employment, for example: Job Networks, Apprenticeships, Work for the Dole projects, Harvest Trail - seasonal work available around the country, Careers, Training.
18. <http://www.jobjuice.gov.au> JobJuice is run by the Australian Government Department of Employment and Workplace Relations. It helps young Australians who are looking for work and thinking about their future. It's all about making the complex process of deciding on a career and finding a job a

little easier. So that the user doesn't feel lost in a maze of options and advice, they have tried to ensure that the site provides you with only the most relevant and useful information available. Therefore, the site is broken into three core sections: At school, Choosing a direction, and Get that job. So whatever stage the user is at, they are easily able to find information to help.

Canada

19. http://www.labourmarketinformation.ca/standard.asp?pcode=lmiv_main&lcode=E
A team of professionals from all parts of Canada provide the information available in this site. The majority of who work in local Service Canada / Human Resources and Skills Development Canada (HRSDC) offices in all parts of Canada, to answer questions the user might have about the labour markets in Canadian communities. More specifically, the Labour Market Information Service: provides detailed labour market information at the local or community level; analyses data and local events in order to identify community specific labour market trends and opportunities; works with other labour market players, including businesses, educational institutions and local and provincial governments and; ensures people have access to quality labour market information.
20. <http://www.sdc.gc.ca/en/home.shtml> This website aims to strengthen Canada's social foundations by supporting the well-being of individuals, families and communities and their participation through citizen-focused policies, programs and service. In terms of LMI, it points people to the above website, www.labourmarketinformation.ca. NB – The governmental department which created this website, Social Development Canada, has just been merged with the HRSDC department which is instrumental in running the website to which it points, www.labourmarketinformation.ca.
21. <http://www.jobsetc.ca/> Materials on the JobsEtc.ca Web site were produced and/or compiled by the Government of Canada (GOC) for the purpose of providing Canadians with direct access to information about the programs and services offered by the Government of Canada. In terms of LMI, the website is of the belief that no person can exist in isolation from social, economic and technological trends. That career/life choices and decisions are shaped by what is happening around you. Therefore they provide a section which is designed to

help the user find out more about the trends that will affect them. This includes sub-sections of LMI on 'Globalization', 'Computers Everywhere!', 'Growth of the Internet/Intranet', 'Small Business Grows Big', 'Service-Based Industries on the Rise', 'The Just-In-Time Work Force' and 'Lifelong Learning'.

22. <http://www.makingcareersense.org/> Making Career Sense of Labour Market Information introduces career practitioners to key socio-economic and labour market concepts, trends and issues. It also provides practical examples of researching labour market information and using it in the career development process. This publication has been made available on-line through the support of the contributing partners - Human Resources Development Canada and the BC Ministry of Advanced Education, Training and Technology (in particular BC WorkInfoNet, www.WorkInfoNet.bc.ca) - and with the permission of the copyright owner, the Canadian Career Development Foundation.

23. <http://workinfontet.bc.ca/> BC WorkInfoNet aims to provide unemployed and other individuals who are making career, learning and work transitions throughout British Columbia, and those who work with them, with relevant, accessible and up-to-date electronic labour market information and related services. BC Workinfontet achieves its mission through the development and maintenance of a virtual information centre that provides access to career, learning and employment information resources and services such as labour market information website indexes, job listings, work search tutorials, career event calendars and practitioner listservs that British Columbians can use in order to prepare for, obtain and keep employment. Services are provided in English and French and targeted to both adults and youth in the Province. BC Workinfontet is a not-for-profit society registered under the Societies Act governed by an Executive Committee reporting to the Board of Directors of the Society. Management, administrative and bookkeeping services are provided by the Manager, BC Workinfontet; a paid staff member reporting to the President of BC Workinfontet. BC Workinfontet utilizes a 'partnership' model in the development and maintenance of the virtual information centre. Organisations with subject matter expertise and experience are contracted to produce, deliver and update information and service offerings from BC Workinfontet.

24. http://www.gov.on.ca/ont/portal!/ut/p/.cmd/cs/.ce/7_0_A/s/7_0_252/ s.7_0_A/7_0_252/ /en?docid=012347

The Ontario Government provides labour market information to help individuals and businesses make informed decisions about careers, education, employment, and business plans. Labour market information provides valuable insights into labour market conditions and trends in Ontario, as well as in specific regions or communities in the province. Labour market information helps individuals determine which occupations suit their aptitudes and interests, where the jobs are, and which occupations have the best prospects. It also helps people locate the most appropriate training and educational resources. Employers benefit from a range of labour market information such as salary surveys, demographic trends, industry statistics and information on workplace innovation for developing business plans and human resource strategies, and for making investment and location decisions. It is just one of the many services offered by this website; it has a comprehensive list of online resources.

25. <http://www.mazemaster.on.ca/> The goal of the website is to: maintain a high level of outreach to the community via presentations delivered to youth (in school and at risk), school boards, community agencies, career fairs, conference attendees and also through the distribution of its employment magazine, the Youth@bilities. The information on the website has been developed with a definite focus on the City of Toronto. Nevertheless, the far-reaching nature of the internet has ensured that its appeal is not limited to any one group or region. The Mazemaster® provides access to up-to-date employment, training and educational information. Youth, especially, will benefit from using the Mazemaster® by getting answers to many of their career/job related questions in one location. Any youth serving organization that has Internet access will have a tool that youth can use independently, allowing them to research career/job and educational possibilities. Companies can use the Mazemaster® to post jobs and promote careers for youth within their industry, while advertising their services and products. Youth want to be kept informed of training and employment opportunities that will assist them to make better-informed decisions while gaining entry into the workforce. The numbers show that Mazemaster® has been adopted by the youth as a tool that is successfully helping them to achieve their goals. In terms of LMI specifically, it has a section dedicated to it that covers: 'What is LMI?'; 'Types of information found in LMI'; 'How can this information help you?' and; 'Helpful links'.

New Zealand

26. <http://www.seek.co.nz/> SEEK strives to help users achieve their career goals. They are New Zealand's most popular choice for advertisers searching for the right candidate, and job seekers looking for the right job. It has more jobs online than any other New Zealand website, and also offers online training and certification tools, and career development advice.

International (therefore relevant to UK, US, Canada, Aus, NZ if not produced by, or for, them *specifically*):

27. <http://www2.ilo.org/public/english/index.htm> The International Labour Organization is the UN specialized agency which seeks the promotion of social justice and internationally recognized human and labour rights. It was founded in 1919 and is the only surviving major creation of the Treaty of Versailles which brought the League of Nations into being and it became the first specialized agency of the UN in 1946. Of particular interest seems to be the section run by the Skills and Employability Department; they provide a tool kit of career guidance resources on the internet (<http://www2.ilo.org/public/english/employment/skills/career/index.htm>). This can be searched according to region or the economic classification of high-, middle- or low-income.

Appendix 2: Websites researched in-depth (10)

Exemplars from Australia

1. <http://www.myfuture.edu.au/>

Why was this website set up?

Myfuture is an Australian career website that was designed to help users to 'make career decisions, plan career pathways and manage work transitions.' This website is targeted at 'all people, both from inside and outside of Australia, needing information to support their own career planning or that of others'.

What might LMI and LLMI for career guidance look like in practice?

On the Myfuture's site there are two main sections:

My Guide: a personalised career exploration tool which helps to determine a career direction and plan for the future. It consists of articles and activities and assists the user to explore a career direction and plan for the future. A personal profile can be built by completing questionnaires on interests, skills, education and work conditions. My Guide then uses this personal profile to generate a range of career ideas. The Introduction page provides links to further information to assist the user in using My Guide.

The Facts: a range of information, including a host of LMI and related resources including:

- detailed career information (including trends and patterns of work) about occupations, industries, education and training providers, courses and programs;
- a range of information about career development, choosing school subjects, getting a job, starting a self-run business, working overseas, getting back to work after a long absence and many other topics;
- links to other useful websites.

'The Facts' does not contain job vacancies but does link to online vacancy sites.

The site argues that the information supplied is optimally beneficial if 'My Guide' and 'The Facts' are used together. The user can go straight to 'The Facts' to research or browse career related information. However, there are some important benefits to using 'My Guide' as well as 'The Facts'. One is that once the user has finished the 'identifying' and 'exploring' sections, 'career favourites' will be generated, which are then linked to the relevant occupation pages in 'The Facts'. Another is that when logged into 'My Guide' the user can add to their personal 'career favourites' from any occupation page in 'The Facts'.

How might LMI/LLMI be delivered?

There are many ways to find information on Myfuture. The user is advised to start with 'My Guide' if they need to:

- find out about themselves and their skills, interests, values and aspirations;
- discover what occupations or career fields to which they are suited;
- compare career ideas; or
- define a career direction, set goals and plan action steps.

It consists of articles and activities (including questionnaires on interests, skills, education and work conditions) that assists the user to explore a career direction and plan for the future. By browsing and completing these articles and activities respectively a personal profile can be built. 'My Guide' then uses this personal profile to generate a range of career ideas.

The Introduction page provides links to further information to assist the user in getting the most out of using 'My Guide'.

Users are advised to start with 'The Facts' or 'Search' if they need to:

- research the world of work; or
- look up specific information about careers; getting, keeping or changing jobs; occupations; courses; industries; funding and grants; support services; and employment trends.

There is an 'Assist Others' for users who need to find resources to assist others.

All the articles and information provided in 'The Facts' are categorised under the following five headings: careers; education and training; work and employment; funding; and contacts. The majority of the site's LMI and LLMI is supplied under the heading 'Work and Employment' and is accessed through the following sub-sections:

- Trends of Work;
- Labour Market Information;
- Patterns of Work; Industries;
- Occupations; Enterprise For Young People;
- Enterprise and Small Business;
- Get that Job; Work Opportunities; and
- Work Rights and Responsibilities.

Additionally, some LMI can be found in the other sections of 'The Facts'. In the most part, the LMI and LLMI offered is in the form of site text, articles and links to other websites which is accessed by site browsing and navigation. There are, however, two large databases through which LMI is provided: Occupation Information and Training Courses.

Occupation information: here the user will find the occupations database containing hundreds of job descriptions. To perform a search, the user must choose a 'basic search', type the occupation title in the search box and press Enter. This leads to one or more results which can be browsed in more detail. By selecting any result, a page of useful facts about the occupation is displayed including duties and tasks, specialisations, work conditions and personal requirements.

Quick Facts provides the user with key information such as related learning areas (or school subjects). The user can also see links to information about earnings, job outlook, vacancies and related occupations.

Under State-Specific information, the user will see details about the occupation that are specific to the state/territory, LLMI; the user will also be able to link to information about courses of study offered there. The user is advised to read and follow some of the articles and links to gather more information about qualifications, vocational opportunities and study options. There are also links to professional and industry organisations that the user may wish to contact.

An 'advanced search' function is also available in occupations, where the user can refine their search in various ways. The occupations database can also be browsed alphabetically or by industry or occupational group. The user is advised to experiment with some of these options to get the best results to suit their needs.

Training courses: contains an extensive database of thousands of courses offered right across Australia. First the user must choose a basic search and enter a key term in the search box for the course about which they want to know more. The results set will show the user all Australian courses matching that keyword or topic. Select any course to view details about the course content, entry requirements, sites where it is offered and contact details for the course provider.

The database will also allow 'advanced searching'. The user must choose an 'advanced search' and can limit the search by various criteria, including Study Field, Entry Requirements, Education Level, Industry Group, Attendance Mode and Region. The control key can be used to select multiple options from any advanced search option.

The Courses and Programs database can also be browsed alphabetically, or by Industry, Learning Area or Provider. Again, the user is instructed to experiment with some of these options to get the best results for their needs.

'The Facts' does not contain job vacancies itself but does link to online vacancy sites in the following three ways:

- through 'The Facts' page and under the heading Work and Employment click on the Work Opportunities link to find a range of online vacancy sites;

- Through the occupation profiles, under Labour Market, there is a link to the Australian Job Search website and, under some occupations, a link to the Australian Volunteer Search website; and
- Through the articles 'Get a Job' and 'Work Overseas', which both contain links to online vacancy sites.

What lessons can be learned?

Some of the information offered within the site's two databases, detailing information about occupations and training courses, could be considered to be 'real-time' LMI (e.g. changing details of courses and jobs). The rest of the LMI offered on the site, provided as it is as articles, site text and links, can be deemed comparatively static. Updating seems to occur somewhat infrequently (some articles' and site texts' most recent data underpinning the LMI which they offer is from 2001).

Creating an account to use My Guide is free and the only feature which requires registration. By creating an account, the user will be able to save information so that they can return to review, change or add to it at any time. The site assures that information is private and is not used for any other purpose.

2. <http://www.jobsearch.gov.au>

Why was this website set up?

Australian JobSearch (JobSearch) is for job seekers to search for a job. Its aim is 'to help people find jobs and help employers find people', so strives to provide a single point of access for both job seekers and employers. The LMI provided is relevant for job seekers looking to change careers, to re-train, to start up businesses, to find volunteering or harvest labour opportunities, or for support to find paid employment.'

What might LMI and LLMI for career guidance look like in practice?

JobSearch provides a good deal of LMI; which includes details about jobs and working conditions, careers and training, unemployment programmes and details of actual job and volunteering opportunities. Its vacancy database contains a variety of LMI:

- every job listed with every Job Network Service around the country;
- jobs advertised in some national newspapers;
- jobs listed in the Commonwealth Public Service gazette;
- jobs lodged directly by employers,
- jobs from RCSA (Recruitment and Consulting Services Association) members who are Job Placement Organisations;
- jobs supplied directly by Government – Federal and State;
- jobs supplied directly by Defence; and
- jobs advertised on CareerOne and My Careerjobboard (a selection only).

How might it be delivered?

Location maps are used to enable users to select a location by clicking on a State or Territory, then a Region, followed by an Area. Alternatively, the text alongside the maps can be clicked on.

Using the 'Quick Search'; a suburb or town, or a postcode can be entered into the Location/Postcode field. Alternatively, an occupation can be entered into the Occupation field. Or information can be inputted into both fields.

A Job ID field is available where a particular job can simply be entered into the Job ID field.

'Today's New Jobs' displays the most current LMI. It contains the details of jobs that have been activated within the past 24 hours (Monday to Thursday) or 72 hours (Friday to Sunday). JobSearch is updated with thousands of new jobs each day.

A JobSearch matching process is available where relevant LMI can be sent to the user based on the skills and experience in the user's resume/vocational

profile. The site will inform the user via various methods, for example, by email or by notification on the user's JobSearch personal page. This notification process occurs on a daily basis.

The Employment Service Provider Search provides LMI tailored to a job seeker with particular needs (e.g. disability, older workers).

The Advanced search option offers the user the opportunity to search using different, and more detailed, criteria.

?

The website is updated with thousands of new jobs each day, so the site's LMI is kept up to date.

Most features of JobSearch are available 24 hours, 7 days a week. Users are advised, via an online billboard, of any changes to access hours as a result of scheduled upgrades to the web site.

The registration process is quick, easy and free.

Job matches: if a user's permission is given, an online resume will be sent to prospective employers where skills and job profile match the LMI.

Assistance using JobSearch: there are a variety of help links that the user can follow depending on the difficulties they encounter whilst using the service. These include; 'Help for new users'; 'Forgotten your PIN'; 'Having trouble logging in?'; 'Job seeker resources'; or 'FAQs'. This helps to ensure that the LMI the site provides can be utilized optimally.

3. <http://www.jobjuice.gov.au>

Why was this website set up?

JobJuice is run by the Australian Government Department of Employment and Workplace Relations. It is designed to help young Australians who are looking for work and thinking about their future to learn more about the labour market

and to get help to achieve success in the workforce. Its aim is 'to make the complex process of deciding on a career and finding a job a little easier'.

What might LMI and LLMI for career guidance look like in practice?

The website aims to ensure that only the most relevant and useful information is made available. However, the majority of information provided is not LMI. Instead, it comprises advice and information about 'how to perform in the labour market and how best to find and use LMI'. This information is broken down into three core sections: 'At school', 'Choosing a direction', and 'Get that job'. This needs-based approach has been adopted with the purpose of making searches easier for the user.

At school: The site provides information about:

- why subjects taken are important;
- what should be considered when trying to choose a suitable career;
- information and advice about who can help to make difficult career decisions; and
- how a career can be 'jump-started' while still at school.

Choose a direction: this area of the site provides information needed to help make a career choice. A career quiz provides help in deciding upon a desired career. It is also informative about who can help navigate the options in choosing a career and on how to secure 'work experience'. The resources offered for 'choosing a direction' extend right across a wide variety of different career pathways, from finding a job straight out of school as an apprentice or trainee, through to making it alone by starting a small business.

Get that job!: This section has a host of useful tips on how to 'get that job!' including:

- Who can help to get a job and the best places to search for job opportunities;
- Practical tips for finding a job, like how to prepare an excellent application and then perform well in an interview; and

- Insights into what to can be expected when starting a new job and ways to help settle into the world of work.

How might LMI/LLMI be delivered?

Links to some LMI is provided on this site. In the section 'tools and resources', there are some reports (PDF files), like, for example 'Australian jobs 2005' that contain 'hard' LMI. The introduction to this report indicates that:

Australian Jobs 2005 provides information about the Australian labour market, including past employment trends, projected employment growth by industry and occupation, and information on job prospects. This information is useful when making career choices. The labour market for certain occupations can change quickly. Accordingly, it is important that, in addition to considering labour market conditions and employment prospects, people making career decisions build a balanced assessment of all relevant issues, including their own interests and skills, salary and employment condition expectations, and the requirements of the occupation.

The report provides links to a number of websites which provide useful information for job seekers, with a particular focus on services available to help people find work.

Further information about characteristics of individual occupations, including age profile, hours of work, State distribution, earnings and prospects, is available in Job Outlook at www.jobsearch.gov.au/joboutlook. Users can choose an occupation using the alphabetical listing or by category, and view detailed information through tables, graphs and text for individual occupations.

Job Outlook links directly to Australian Training www.jobsearch.gov.au/training, which provides information about training courses for individual occupations, and to Australian JobSearch www.jobsearch.gov.au for current vacancies.

Useful career resources are also available at www.myfuture.edu.au."

The LMI that is provided within the site's reports can be accessed by clicking on the 'Tools and Resources' link under the main heading 'What's new' on the

site's navigation bar. Alternatively, LMI can be entered into the site's search engine, and a list of reports containing the term is provided. Once the applicable reports have been accessed, relevant LMI can be obtained by reading and reports and its indexes; a basic search engine reveals whether a particular term is used within a report but it will not take the user to exactly where it is.

Lessons that can be learned?

The LMI provided via links in this and other reports is not 'real time', and is only updated when updates are released/added to the site, which appears to be fairly infrequent. However, the LMI which is provided is comprehensive.

Registration is not required; all the sites resources are available without registration.

The site provides a 'resume builder', regularly updated news and events relevant to job seeking and a section dedicated to 'indigenous people's needs'.

Exemplars from New Zealand

4. <http://www.kiwicareers.govt.nz/>

Why was this website set up?

In July 2006, all New Zealand careers' services were brought together under the single name 'Career Services'. Consequently, their website is in the process of undergoing a major overhaul. Now, when the user logs on to www.kiwicareers.govt.nz or www.careers.govt.nz, they see the Career Services new homepage, which directs them to information currently held on the two websites. (Users are advised that when venturing beyond the new homepage, the other pages do not have the same look and feel as the new homepage, because work is ongoing to bring the two sites together. The information and services, however, have not changed). These changes are part of the development of a comprehensive, one-stop website that offers information and advice on job, training and career options for all New Zealanders.

The site aims to help the user 'decide on the job, training or career path that's right for them, with relevant information, including LMI, and support at any age or stage of their life'. It was developed by the 'Career Services', which claims to be New Zealand's leading provider of career information, advice and guidance. It is 'dedicated to creating a climate where all people living in New Zealand can access the best careers information, advice and guidance to achieve their life goals'. This means 'promoting the importance of both career planning and the utilization of LMI throughout each person's lifetime'.

What might LMI/LLMI look like in practice?

As indicated above, the website is currently split into two parts. The first provides:

- LMI and resources in the form of: 'Advice' (advice on choosing, planning and developing a career);
- 'Job Info', a database of job summaries which contain information about what type of skills, knowledge and entry requirements you might need for a job. Here, information about working conditions, salary ranges, job prospects, and stories of people working in each job can be accessed;
- 'Industries', a database of industry profiles which contain information about New Zealand industries, including trends, facts and statistics, training information, and the sorts of jobs people do;
- 'Work Trends', a collection of articles and information about the labour market situation and trends of work in New Zealand, including information on living and working in the regions, and a list of immediate skill shortages;
- 'Course and Training Information', a database for course and training options available throughout New Zealand, information about training providers at the level of the region and the availability of funding options to facilitate entry into training; and
- 'Online Tools', a collection of tools to find jobs that match a user's skills, the subjects they enjoy, and their interests. For example, 'Pathfinder' is an advanced tool which incorporates several other matching engines to give users more in-depth results.

The second section of the website provides information as follows:

- 'Careers Industry Information & Research';
- 'Resources, Products & Services';
- 'Self Help';
- 'Specialist Help';
- 'Helping You Help Others';
- 'Frequently Asked Questions', and
- 'Mahi Maori'.

The second section of the site appears to offer very little LMI. So whilst there is extensive help for planning and implementing job searches, there is no means for progressing this, beyond links to other sites.

How might LMI/LLMI it be delivered?

In the first section, the majority of LMI is accessed by site browsing and navigation to the relevant information or tool. This is achieved by first choosing one of six areas: 'Advice', 'Job Info', 'Industries', 'Work Trends', 'Courses and Training' and 'Online Tools'. Once navigated within a section, there is a list of, and links to, all the topics covered within that section on the left of the page and an introduction to the section together with a selection of the topics covered, and links to them, is offered in the centre of the page. A list of all the sections available always remains at the top of the page. There is also a search facility for the whole site that limits a search by keyword. Within the three sections 'Job Info', 'Industries' and 'Courses and Training' there are also large databases. The 'Job Info' and 'Industries' database can be searched by alphabet, industry or interest group, or a basic search can be used, this limits only by keyword. Within the section 'Courses and Training', the Training Providers database can be searched by regional location or the type of provider, and the Course database can be explored alphabetically or by subject area.

In the second section, the limited amount of LMI is accessed by site browsing and navigation one of the headings: 'Careers Industry Information & Research', 'Resources, Products & Services', 'Self Help', 'Specialist Help', 'Helping You Help Others', 'Frequently Asked Questions', or 'Mahi Maori'. Within each section, a list of all the sub-topics covered is provided and beneath each of

those all the articles pertaining to that sub-topic, and links to them, are provided.

At the top of the page in a 'Jump' menu, the user can navigate back to anywhere else on the site, or perform a basic keyword search of the entire site's content. A more advanced search, listed as power search, can also be performed. This allows the way in which the keyword is matched to be changed, the file types, languages and sections of the site to be limited, and the order, style and number of results to be varied. The entire site's content is also listed alphabetically under the heading site map. (NB: this is unusual as a site map is usually a web page that lists all the pages offered by a web site, organized in hierarchical fashion).

Lessons that can be learned

There does not appear to be any real-time LMI offered on the site. It all seems to be in the form of site text, articles and links; new content may be added or old content updated or amended occasionally but certainly not in real-time (for example the Labour Market Situation site text was updated in February 2006). The only aspect of the information offered by the site that approaches real time is that about course and training providers. This is kept moderately up-to-date, approximately in line with changes to courses and providers.

For the first section of the site, the registration process is quick, easy, and free. The site assures it also comes with no obligations. However, it is only necessary if the user wishes to use the 'Online Tool' 'Pathfinder'. This tool allows the user to complete online questionnaires about themselves, and subsequently explore career suggestions from Pathfinder based on the information they supplied. Finally, it helps to plan the user's next steps. Additionally, the user can read articles on topics relevant to each stage of the career planning process. Pathfinder saves the user's progress so that they can come back anytime to continue. All information collected by Pathfinder can be stored in personal profiles for future use.

Registration is not offered by the second site; all the information and resources it offers requires no form of registration.

The site has recently undergone a major overhaul and the intention in the longer term is to introduce more information on 'tertiary and trade training options'. However, the development work means that the site is currently not especially user-friendly. The two very separate sections makes browsing repetitive and frustrating. Also, aspects of the site do not seem to be functioning properly: the basic search facility of the 'second section' does not work and the link to the site's privacy statement within the 'Pathfinder' area of the 'first section' was broken.

5. <http://www.seek.co.nz/>

Why was this website set up?

SEEK strives to help users 'achieve their career goals'. It claims to have more jobs online than any other New Zealand website. In their online LMI provision, SEEK allows jobseekers to search for jobs.

What might LMI and LLMI for career guidance look like in practice?

This website specialises in job vacancies, so offers mainly 'real time' LMI. Approximately 10,000 customers per month use the site, with about 80,000 job advertisements at any one time. Customers advertising vacancies include recruitment agencies, large corporations, government departments and small and medium enterprises (SMEs).

How might LMI/LLMI be delivered?

A number of search options are available for website users. Specifically:

Quick Job Search: used to find a job fast using general criteria.

Advanced Job Search: used to specify more information and make multiple selections (e.g. classification, sub-classification, location, area, job-type, age of vacancy etc.).

My Last Search: remembers the very last search performed, regardless of whether it was from Quick Search, Advanced Job Search or from one of the Browse pages.

Search by company: short profiles of some of New Zealand's leading organisations and links to their current job vacancies.

Keyword search tips: to narrow search results by searching a specific type of role, or job location, or company. The site provides a comprehensive guide on how to use this function most efficiently, including an explanation of basic Boolean logic.

Also, the website provides several sub-sites to enable searches for a specific occupational category or country. These are:

SEEK Executive: for more experienced job seekers who are looking for executive positions.

SEEK IT: a specialised zone for IT professionals, which meets the unique needs of the IT industry, offering over 15,000 of a wide range of IT related jobs.

SEEK AUSTRALIA: featuring jobs in Australia with all the features found on the New Zealand site but geared to the Australian Labour Market.

SEEK UK: featuring jobs in England and Ireland with all the usual job search facilities plus direct links to UK recruitment consultants.

SEEK Healthcare: meeting the unique needs of the Healthcare industry and offering on over 4,000 jobs.

SEEK Volunteer: bringing volunteers and the not-for profit organisations together free of charge.

SEEK Learning: assisting job seekers with career development by providing distance-based education through partnerships with leading training providers, such as IT vendors and major universities.

Searches can also be made by specific industries, for example accounting, engineering, government & defence and education & training. The number of job advertisements currently available for each classification is shown in brackets after the Classification hyperlink. There is a dedicated industry page where graduate and entry level jobs are posted.

All results can be viewed according to relevance or date.

Lessons that can be learned

Since 1000s of jobs are published online each day from employers and recruiting agencies both in New Zealand and overseas, this website does provide real-time LMI. Moreover, this real-time LMI is highly accessible.

Each day 'Job Mail' searches through SEEK's job database to find new positions matching specified criteria. These job adverts are then automatically emailed to users. All that is required is the creation of a Job Mail profile by selecting the types of jobs demanding notification and the provision of an email address. Consequently, emails containing the titles, descriptions and locations of matching jobs will be received. The frequency of the emails relates to how often new jobs (that match criteria) are posted on the SEEK site. The emails can be easily changed or cancelled at any time.

RSS feeds can be created from a specified SEEK search. Each feed captures one search's criteria. The frequency with which the feed is then received can be varied.

The registration process is quick, easy and free for job seekers.

A comprehensive help guide is provided. As a consequence, the user is well-informed as to what the site offers and how to get the best out of that content.

This website also offers online training, certification tools and career development advice.

Exemplars from the United Kingdom

6. www.planitplus.net

Why was this website set up?

PlanIT Plus has been developed 'to help people of all ages to find out about career and learning opportunities in Scotland'. Its aim is 'to provide the most accurate and up-to-date career resources available online'.

What might LMI and LLMI for career guidance look like in practice?

PlanIT Plus has five Zones, each containing different types of information:

- Career Zone;
- Learning Zone;
- School Zone;
- Adults Zone; and
- Advisers Zone.

Career Zone: holds LMI with over 600 job profiles. It offers details of all full time and part time courses at Scottish colleges and universities; a new Career Planning section with career-related multimedia games and activities; a new career interest guide (Careerometer); and an online Career Support section for those who want further information or advice.

Learning Zone: holds information on courses at colleges and universities in Scotland, course vacancies during Clearing, Open Days details, information for Students from Abroad and the 'Courseometer' (a new guide matching career interests and courses).

School Zone: holds specific information to help them with subject, course and career choices. As well as resources to help with subject choice, this zone has detailed information on National Qualifications, information on Scottish secondary schools and a new Life Links section (which includes links to all sorts of specialist organisations dealing with personal or social issues, from bullying to equal opportunities).

Adult Zone: aimed at adults thinking of returning to learning or work, or considering a career change. It also includes 'Encore', a new interest guide for adults.

Advisers Zone: a password protected area that holds a bank of career education resources for career advisers and guidance or pastoral care teachers, which can be used to support students in the career planning process. It also provides advisers' news about updates to PlanIT Plus, together with additions to the career resources they can download from the site.

In addition to these five zones, the website has a Portfolio section. It is claimed that this is the first secure online career portfolio in Scotland. Users can quickly create their own Portfolio by registering on PlanIT Plus. Using their own unique username and password they can access Portfolio and build up their own personal career profile, a CV that can be saved and edited, and develop a store of careers and course information for their use in school, college or at home.

PlanIT Plus also has a large collection of useful information articles on a range of topics, including LMI and links to the best sources for further LMI. It also links to 'career useful' websites.

The Search facility lets you search courses, job profiles, general articles or websites.

How might LMI/LLMI be delivered?

The two main interfaces through which the site provides LMI are job profiles and articles. Both are listed alphabetically. Alternatively, the Search facility lets you explore the available profiles and articles. In addition, beside each Job Profile is the career sector to which it belongs. Job Profiles can therefore be searched according to their career sector. Some Job Profiles may be listed more than once if they belong to multiple career sectors.

Lessons that can be learned

It is not clear how often the LMI this website provides is updated but the information does not seem to be 'real time'. However, LMI provided on the site is comprehensive in range, 'to help people of all ages'.

The majority of the site is accessible without registration; only, the Portfolio feature and the Adviser's Zone require registration. The process is quick, easy and free, but the Adviser's Zone is only available to career advisers and guidance or pastoral care teachers.

PlanIT Plus guide to the website can be viewed or downloaded and is a comprehensive resource for getting the most out of the site.

The site had been recently 'revamped' – in response to comments of people who were using PlanIT Plus. Feedback is strongly encouraged to 'make the site even better'. This indicates the site is sensitive to the demands of users.

7. <https://www.careerswales.com/>

Why was this website set up?

Careerswales.com was launched in November 2004 in response to a challenge set by the Minister for Education and Lifelong Learning in Wales for Careers Wales to 'develop a flexible, accessible and highly innovative service that will reach people of all ages and situations'.

What might LMI and LLMI for career guidance look like in practice?

The website provides dedicated sections for young people and adults with a host of interactive tools and information, some of which qualifies as LMI, to help with career plans at any stage of life. Specifically, there are sections:

- dedicated to information, including LMI, for employers.
- for users aged 16 to 19, who want to find out about local job and training vacancies. They are advised to use the Job search facility provided within

the 'Jobs' section or to click on the links to their local Careers Wales company provided within that section.

- for users aged 19 and over, to search for vacancies throughout Wales and the rest of the UK, or if the user is over 19. The user follows a links to Worktrain (<http://www.worktrain.gov.uk/>); the national jobs and learning site; or Jobcentre Plus (<http://www.jobcentreplus.gov.uk/>).

Links are also provided to the following websites:

- www.futureskillswales.com (The Future Skills Wales Job Outlooks show the trends in over 100 occupations for North, Mid, South West and South East Wales.)
- www.jobcymru.com
- www.llwybro-routes.co.uk
- www.contractshop.co.uk

How might LMI/LLMI be delivered?

The majority of LMI on the site is most easily accessed by browsing through the relevant pages (by using the toolbar at either the top of the page, at the side of the page, or on the homepage). The information is provided as site text, reports or links to other sites. There is also a search facility for the whole site based on keywords, which can help the user to locate the exact LMI that they want more quickly than browsing. The job search facility it provides for 16 to 19 year olds allows these users to explore the vacancies using two criteria; 'Keyword' and 'Regions of Wales' (limited number).

Lessons that can be learned

The majority of the LMI provided is relatively static, presented as it is in the form of site text, reports or links to other sites (although many of the sites to which it offers links supply real time LMI themselves). Information provided through the site's Job Search facility is 'real-time', but only relevant to users between the ages of 16 and 19.

The registration process is quick, easy and free, and by registering the user is able to see and use every part of the site, therefore making the e-Progress File, the CV Wizard, and the Careers Ideas areas of the site available.

8. <http://www.careersserviceni.com/>

Why was this website set up?

The site's mission is 'to both assist economic and social development in Northern Ireland by improving the effectiveness of client's career planning and decision-making skills (for example through the provision of quality LMI and LLMI) and to ensure equality of service to young people and adults within an open and responsive, progressive and innovative culture'.

The site provides information, advice and guidance to:

- Individuals at all ages and stages of career planning;
- Employers;
- Training organisations; and
- Schools and colleges

What might LMI and LLMI for career guidance look like in practice?

A significant portion of the site's LMI can be found in the 'Job Information' section. There is also a LMI sub-section, which claims to provide access to LMI which can answer the following questions:

- What are current and future skill needs for employment?
- What are your chances of finding a job in a particular field?
- What kinds of jobs are on the increase?
- What jobs are disappearing?

However, this sub-section does not actually contain LMI itself. Rather, it provides a section of links to NI-relevant sites which it believes can answer the questions posed, together with a comprehensive review on each site of exactly what LMI it provides, where it can be found and how it can help. The sites

reviewed belong to the following organisations: Research & Evaluation Branches'; N.I. Skills Task Forces'; Economic Research Institute of NIs' (ERINI)(formerly NIERC); Sector Skills Councils (SSCs); Sector Training Councils (STCs); and DETI Labour Market Statistics.

Real-time LMI and LLMI are provided through their Job Search facility. Additionally, they provide static LMI on a wide range of careers in their 'Explore Careers' section in which careers are profiled. The information provided on each career is structured as follows:

- Overview;
- Work;
- Entry Qualifications;
- Adult Entry;
- Qualifications;
- Annual Income;
- Prospects;
- Case Studies;
- Personal Qualities;
- Further Information;
- FAQs;
- Related Occupations; and
- Employer Profiles.

There is also a virtual tour and some videos of some professions.

A small amount of LMI can also be found spread around other areas of the site such as in the sections: 'Create your CV'; 'Job Application/Interview Skills'; 'Employment Rights & Regulations'; 'Entrepreneurship & Self Employment'; 'General Information'; 'Role Model Case Studies'; 'Work Experience'; 'Plan your Activities'; 'Explore Careers'; 'Qualifications & Training'; 'Student Life'; 'Parents Zone'; and 'Forums'

How might LMI/LLMI be delivered?

Basic site browsing provides good access to the majority of the available information and services (except for that provided in Job Search and Explore

Careers). If faced with problems navigating the site, there is a Help button to the right of the screen

When using their Job Search facility it is only possible to search according to two criteria in the first instance:

- job location (about 40 different places in NI); and
- job category (about 70 different types).

Once the search is returned, the results can be viewed according to Job Title, Company, Location, or Date (that the vacancy was posted). Or the search can be further refined at this point. A refined search allows extra criteria to be added to the search including a free text search, a country search and whether a position is full-time or part-time, permanent or temporary, part of the New Deal initiative, part of the Bridge to Employment program in addition to the Job Location (region) and Category criteria.

The profiled careers can be explored through an index (all careers are listed alphabetically) or a search function. Criteria which can be searched are: 'Job Title', 'Subjects', 'Keywords', 'Salary Scale', 'Job Family', 'Skill Level' (e.g. professional, technical, skilled etc.), and 'Work Type' (e.g. practical, clerical, social etc.).

If there are any difficulties using any aspect of the site, it urges the user to:

- Check out their FAQs section.
- Contact them online
- Contact a local Careers Adviser.

Lessons that can be learned

The LMI provided in the Job Search facility is real-time. The rest of LMI provided appears to be largely static, being updated relatively infrequently.

Registration to the site is free and provides access to a much wider range of services (such as Careers Match and Course Search). Details are guaranteed to be treated confidentially and the process is quick, easy and free.

Exemplars from Canada

9. <http://workinonet.bc.ca/>

Why was this website set up?

The site's mission is 'to provide unemployed and other individuals who are making career, learning and work transitions throughout British Columbia, and those who work with them, with relevant, accessible and up-to-date electronic labour market information and related services'.

BC Workinonet is a not-for-profit society registered under the Societies Act governed by an Executive Committee reporting to the Board of Directors of the Society. Management. Administrative and bookkeeping services are provided by the Manager, BC Workinonet - a paid staff member reporting to the President of BC Workinonet. BC Workinonet utilizes a 'partnership' model in the development and maintenance of the virtual information centre. Organisations with subject matter expertise and experience are contracted to produce, deliver and update information and service offerings from BC Workinonet. (NB. Details of the process of consultation used to identify requirements for the site are provided on the site).

What might LMI and LLMI for career guidance look like in practice?

BC Workinonet achieves its mission through the development and maintenance of a virtual information centre that provides access to career, learning and employment information resources and services such as:

- labour market information website indexes;
- job listings;
- work search tutorials; and
- career event calendars and practitioner list-serve that British Columbians can use in order to prepare for, obtain and keep employment.

How might it be delivered?

BCWIN has various features that assist individuals to access resources and information pertaining to career planning, learning and employment. Features

include annotated website listings, a job search interface and a guided research section.

There are several ways to locate resources and information found in the BCWIN directory:

- Search by topic – The information is categorized into three areas: career planning, learning and employment;
- Search by keyword – Keywords can be typed into the search box and results from the BCWIN directory will appear.

BC Workinonet's 'Surfing for Work Tutorial': provides support for those who may be looking for information about careers and jobs on the Internet.

Navigation Bar: provides tabs, near the top of the home page, that provide customised entry-points to the information on the site. The tab that most closely relates to the information needed can be clicked. Besides the tabs on the main navigation bar, there is a smaller utility bar to help navigate around different parts of the site.

Further Questions: If the user has any further questions about how to get around on the site, they are encouraged to contact the site at contact@workinonet.bc.ca and the site will endeavour to get back to the user as promptly as possible.

Lessons that can be learned

Organisations with subject matter expertise and experience are contracted to produce, deliver and update LMI and service offerings from BC Workinonet. Therefore, all of the site's LMI is kept relatively up to date, but some is moderately static. The Job Postings they provide through their Job Search facility, however, qualify as real-time LMI.

There does not appear to be any area of the site for which registration is required in order to access it.

There is a BC Workinfontet Listserv:

The BCWIN mailing list was created by the BC Workinfontet Society in order to provide a public forum for exploring and discussing employment and labour market information in British Columbia, Canada. The economic, social, and practical aspects of employment, labour market trends, topics of concern to career and employment professionals, and the challenges experienced by job-hunters and those trying to effectively manage their careers are just a few of the subjects that have been and continue to be explored on the list since 1995.

As a member of the listserv, the user will receive one to ten e-mails per day. The subject can be viewed by subject line to determine interest in the information or if the e-mail is related to a thread of discussion that has been followed. A filter for all e-mails to the 'bcwin@workinfontet.bc.ca' address can be created, allowing the e-mails to be viewed at the user's own pace.

There is a 'Youth Version' of the site (<http://workinfontet.bc.ca/youth/>) which appears to contain exactly the same content and navigation as the main site (<http://workinfontet.bc.ca/>) but is presented in a slightly altered web design/style/format, which is presumably intended to be more attractive to a youth audience.

10. <http://www.gov.on.ca/>

Why was this website set up?

The site is maintained by the Government of Ontario, Canada. It aims to 'make it easier for its citizens to access the information, services and resources they need, when and how they need them'. This covers getting married, starting a business or wishing to learn more about a workplace or industry. Within the wealth of services, information and resources the site offers, it provides LMI in the section 'Looking for a Job'.

What might LMI and LLMI for career guidance look like in practice?

The site argues finding employment is a job in itself. From identifying the appropriate contacts to writing a cover letter, 'there are many challenges to be met and decisions to be made that will become part of career planning'. The collection of sites and information the government has gathered is a focused way of trying to assist the user throughout their job journey. Information is supplied about:

- career options;
- labour market trends;
- career-specific training; and
- job search skills and strategies.

Additionally, practical assistance is supplied, for example, the site helps the user obtain a Social Insurance Number, which is required to work in Canada, by providing a link to the issuers. All this support, including a host of LMI, is offered under a list of nine headings

- Looking for a Job.
- Deciding on a Career.
- Labour Market Information, with links being provided within this section:
 - You and the Job Market - Quick reference to today's job market for career counselling and career planning.
 - Current labour market information.
 - Ontario Job Futures - Provides information on current trends and future outlook for occupations common to Ontario.
 - Information on trends affecting the workplace.
 - Ontario WorkinfoNet - Connects to hundreds of sites with job and career information for Ontario residents.
- Job Search (NB. The site does not run its own online database of vacancies, rather it offers a comprehensive information resource about 'How to Job Search' and of links that do allow searches of vacancy databases.)
- People with Disabilities.
- Starting Your Own Business.
- Career-specific Training.

- Financial Assistance.
- Workplace Issues.

How might LMI/LLMI be delivered?

The majority of the LMI provided is in report form, site text or links to other sites and this can be obtained by browsing the site. The navigation is designed to provide the user with quick access to as much content as possible:

- A horizontal green arrow next to a heading indicates either a link to additional content or will open up more navigation options on the page, both of which will be relevant to that heading. For example, clicking the arrow next to 'Choose a Ministry' will open a list of links to all government ministry websites.
- A vertical green arrow next to a heading indicates all content under that heading is revealed. If users do not wish to view specific content, they may collapse certain sections by clicking on a vertical green arrow.
- News scrollbar: The News section features a scrollbar on the right that the user can use to scroll through additional news items
- 'Search': If the user wishes to navigate their own way through the site, they may use the search function. Simply click in the search box, enter a term and click GO.
- Navigation history: With the navigation history, the user can see where they are within the site at any point and can therefore navigate their way back to any desired parent section.
- Popular Topics: this supplies links to topics that the site deems important information for Ontario residents and visitors. Within these popular topics, the user simply has to find the topic they seek and select the link for an overview of, and for all the resources and information the site offers on, the topic.
- Life Events: this provides access to available government information and services through listing them as important life events; all relevant information to that event can be obtained through a single access point. For example, 'Finding a Job'. For more information on any topic, click its link.

Lessons that can be learned

The site does not have a 'Job Search' facility of its own, or any other LMI resource that could be deemed truly real-time, but a large part of the LMI it provides, through reports, links and site text, is kept relatively up to date. For example, the site supplies a Labour Market report which looks at labour market conditions in Ontario by presenting data from Statistics Canada, such as unemployment rate, participation rate, and employment. The site uploads a new version of this report every month. It also provides several other reports which are up-dated relatively frequently, either monthly, quarterly or annually. However, there is some LMI offered which appears to be relatively static, often in the form of one-off reports or site text articles.

The registration process is quick, easy and free. It allows the user to login and therefore 'Personalize Now' the site. This lets the user customize the site for even faster access to the content that matters to them through one convenient, easy-to-use.

Appendix 3: Email letter sent to websites researched in-depth

To Whom It May Concern,

The Institute for Employment Research, at the University of Warwick (UK) is one of Europe's leading centres for research in the labour market field. It is currently conducting research into the role of labour market information (LMI) and local labour market information (LLMI) in career counselling and guidance - in particular, identifying practical, working examples. Your website appears to be a model of good practice. It would be enormously helpful, therefore, if you could provide us with brief information on the following questions about your website. Specifically:

- What were the key challenges in setting up, and (more importantly) maintaining systems to deliver LMI and LLMI for career counselling and guidance on your website?
- Who were the key players in its development?
- What, if any, has been the role of business support?
- What would be your advice to anyone setting up a similar system?
- It is clear from your website you provide XXXXXXXX. Is there anything we have missed?

Very many thanks, in advance, for your help.

Appendix 4: Record of contact with websites researched in-depth

WEBSITES	RESPONSES
http://www.myfuture.edu.au	<p>02/08/06 initial email.</p> <p>18/08/06 Follow Up email sent asking for financial information.</p> <p>21/08/06 Request for information passed upwards</p> <p>Deadline suggested by us: 15th Sept</p>
http://www.jobsearch.gov.au	<p>02/08/06 initial email</p> <p>07/08/06 Passed upwards</p> <p>16/08/2006 Received in depth response</p> <p>18/8/06 Follow Up email sent asking for financial information. Indicates that this is 'an interim' response.</p> <p>28/08/06 Reply providing financial information.</p>
http://www.jobjuice.gov.au	<p>02/08/06 initial email</p> <p>18/08/06 Follow-up reply</p> <p>25/08/06 Response, referring us to the publications section of the http://www.dewr.gov.au/ website and indicating information that is not available from this source will not be made available.</p> <p>04/09/06 Despite this, a response provided, but with no financial information.</p>
http://www.kiwicareers.govt.nz	<p>02/08/06 initial email</p> <p>14/08/06 Request for information passed upward to the General Manager.</p> <p>18/08/06 Follow up email sent asking for financial information.</p> <p>30/08/06 Reply providing financial information. He also indicates that he will send additional information about set-up costs when he's had an opportunity to confer with his General Manager.</p>

http://www.seek.co.nz	<p>02/08/06 initial email</p> <p>18/08/06 Follow up email, asking for financial information.</p> <p>21/08/06 Referred to 'about us' section of the website in response to the follow-up request. Commercial company. (Jobseeker Helpdesk)</p>
http://www.planitplus.net	<p>02/08/06.initial email</p> <p>18/8/06 Request for information passed on to colleague after follow-up request sent.</p>
http://www.careerswales.com	<p>02/08/06 initial email</p> <p>18/08/06. Follow-up request sent</p> <p>No response.</p>
http://www.careersserviceni.com	<p>02/08/06 initial email.</p> <p>10/08/06 Replied without much detail10/08/2006.</p> <p>18/08/06 Follow up email sent asking for financial details.</p> <p>21/8/06 Reply indicating that request had been referred on to corporate services.</p> <p>31/08/06. Response, warning of time and cost possible involved in providing the info</p> <p>05/09/06 Financial info received.</p>
http://www.workinfont.bc.ca	<p>2/08/06 initial email</p> <p>18/08/06. Follow-up request</p> <p>No response.</p>
http://www.gov.on.ca	<p>02/08/06 initial email.</p> <p>18/08/06 follow-up email.</p> <p>21/08/06 Reply asking us to send questions again.</p> <p>25/08/2006 Response, providing minimal information (no financial information).</p>

Appendix 5: Information about resources required for websites researched in-depth

1. <http://www.myfuture.edu.au>

No information supplied.

2. <http://www.jobsearch.gov.au>

The establishment of Job Outlook online was a major undertaking within this department and involved many internal 'players' from policy (business) areas to a range of different IT areas with differing responsibilities. In short, the initial establishment of the site entailed a substantial commitment of resources and skills. It also required high level executive support in order to bring the concept to fruition.

Depicting the complex processes necessary to establish and to maintain the site would not be possible to communicate adequately via email. However, some brief responses to your questions are provided below.

What were the key challenges in setting up, and (more importantly) maintaining systems to deliver LMI and LLMI for career counselling and guidance on your website?

Job Outlook is based upon an extensive statistical dataset and managing and checking the data through the various transformation processes to end up with a final product has been a major challenge. It is a process which has been refined over the past six years of updating the site and, while still complex, is now down to a fairly 'fine art'. The resources now used for the annual update of Job Outlook online are a fraction of the resources used in the development phase and the first one or two updates.

Much of the data originates from the quarterly Labour Force Survey (LFS) conducted by the Australian Bureau of Statistics (ABS) (as well as from some other supplementary surveys, data is converted from the occupational

classification system used by the ABS into a separate system used by DEWR. Some of the data is then converted into decile rankings, some used in descriptive text statements (e.g. on the 'prospects' page and the Key Indicators table) and of course in the generation of all of the 5000+ charts.

The main challenge in initially establishing the site was to bring together a core team who possessed all of the necessary skills elements, that is, people with backgrounds in labour market analysis, statistical skills, data manipulation skills (including high level Excel and VBA programming skills), project management and various arms of IT - including web designing and programming. In addition, employment projections for industries and occupations play a pivotal role in Job Outlook. These projections are prepared by an Economist who heads up the Team/Section responsible for Job Outlook online. These forward-looking views for around 160 industries and around 400 occupations are used widely in advising on careers and the future labour market. (a copy of a power point presentation used for a schools career night is available).

The Section/Team at present is three officers, just one of whom (myself) is primarily responsible for managing the annual data update, although others assist in checking and preparing the data (especially the above mentioned employment projections and consultancy based estimates of vacancies and job turnover for occupations).

Who were the key players in its development?

As described above, we have learnt a lot in the past seven years and technology, especially the ability to manage large scale data sets, has improved markedly. It would be much easier to set up Job Outlook online now and we would probably seek more local control of the data upload if we were embarking on a greenfields project. We are currently developing a new Skills Australia website that we will manage ourselves (i.e. within the business section rather than involving dedicated IT areas).

What, if any, has been the role of business support?

The site was developed entirely 'in house' without external contributions. One important feature of Job Outlook online are the links to local information on Vacancies and education and Training courses (from the right side navigation).

What would be your advice to anyone setting up a similar system?

Anyone wishing to set up a similar system would greatly benefit from visiting the Department and talking to those who had primary carriage for its implementation. Allied to this, is the way Job Outlook has become a foundation for wider advice on careers and employment prospects.

Further, the site was first established in late 1999/early 2000 and based on internet technologies available at that time. It would be well worth researching the kinds of technologies which have since evolved as an entirely different approach might well be adopted (e.g. instead of uploading gif images of charts, server software which renders charts dynamically on the page while drawing data from an SQL database could prove a more productive approach).

However, from an effectiveness perspective it is hard to envisage a more efficient way of managing the data. This in part reflects the continuity of (a limited number of) staff who have awareness of data nuances and have continuously sought ways of enhancing the look and efficiency of updating. Job Outlook remains within an Excel environment and this makes it accessible to other officers. The checking spreadsheets have 'revolutionised' (as in made it so much easier!) this part of the project. We are examining potential enhancements as part of the planned shift to a new occupational structure in 2007. We have articulated some ideas for this, but would need corporate support as there are links to other Departmental systems.

Is there anything we have missed?

The list appears to pretty much cover things, although many of the items you mention are part of the broader www.workplace.gov.au website rather than areas of our responsibility. You may be interested in the Labour market Information Portal that has been released recently as part of workplace www.workplace.gov.au/lmip

A final point worth mentioning, noted briefly above - Job Outlook forms part of a broader 'suite' of on line products and is integrated into a loop that allows easy transition to the other product sites. When looking at a particular occupation it is

very easy to then view, for example, local education and training courses or local vacancies for that occupation by using the right hand side navigation bar which allows a seamless 'flow through' into the Australian Training site or DEWR's vacancy board Australian JobSearch or other sites that a part of the 'suite'. In addition, Job Explorer provides links for the occupation to the United States O*Net occupational information system.

These inter-site linkages combine to make a powerful array of products. Obviously this required considerable technical planning and expertise on the part of the department's IT areas."

Financial information

We are currently in the last phase of putting together a new web site to be called 'Skills Australia' and it is taking much of our time to bring it all together. The new web site will be launched towards the end of September and you may like to have a look when it is the public domain. We will be presenting a large range of statistical information on employment, but this time from an industry rather than an occupational perspective. More importantly we have adopted a radically different approach to making the charts available than the approach we use for Job Outlook.

I will reply separately regarding set up costs for Job Outlook as time permits. In relation to maintenance costs I manage almost all of the data from organising the initial purchase of data from our Australian Bureau of Statistics (ABS), conversion into the DEWR occupational structure, seasonally adjusting, trending or preparing annual averages as the case may be, to generating the final charts, deciles and various text statements and text ratings that are ultimately uploaded to the site.

My Director prepares all of the forward employment estimates for occupations and industries, provides over all direction, advice in relation to the treatment of data anomalies etc and assists with checking the final product. The third staff member is involved with the final checking phase.

I conduct the update from early February and usually reach completion by end April/early May. During that period the majority of my time is taken with the updating process.

On the IT side, once we have provided them with all of the data elements it takes a programmer about a day to upload it all. We then do further testing while the updated site is in pre-production. Once the all clear is given, the programmer can launch everything into production within a couple of hours. There may be a couple of hours of further follow up on the programmers part if something comes to light (i.e. some kind of mix up of the data has occurred). That usually concludes the process until the next update round. Although I should add that there is an additional follow on component which relates to marketing the site (e.g. producing promotional material, conducting seminars and fielding enquires about aspects of the Job Outlook data).

3. <http://jobjuice.gov.au>

What were the key challenges in setting up, and (more importantly) maintaining systems to deliver LMI and LLMI for career counselling and guidance on your website?

In late 2004 the Department of Employment and Workplace Relations (DEWR) started to run a series of Better Connections Workshops. The Better Connections Workshops were designed to bring together a number of key stakeholders in a local area and present them with a range of labour market information. The presented information would then stimulate conversation about local labour market issues and from there strategies to address these issues could be established. After running several of these workshops it became very clear that the information being presented was of great value and would be of benefit to all contracted Employment Service Providers. A Labour Market Information Portal (LMIP) was identified as a way in which DEWR could offer this information to all Employment Service Providers. The LMIP was then developed and launched by the then Minister for Workforce Participation, Peter Dutton, at the 2005 NESA conference.

The LMIP was a very basic site when initially launched, with all charts requiring a manual update every quarter. At the time of it's initial launch the LMIP was only available through secure access to contracted Employment Service Providers.

Since it's launch the LMIP has seen several major enhancements, including a back end database which allows for all charts to be automatically and quickly

updated on a monthly/quarterly basis, a public site as well as a range of new charts. The LMIP is constantly expanding with new functionality and charts being released on a regular basis.

The main challenge for us was meeting the tight timeframes given with limited resources. We also came across some interesting technical challenges as a lot of the work we did entered into unknown territory for the department.

Who were the key players in its development?

Data on the Labour Market Information Portal comes from three sources, the Australian Bureau of Statistics (ABS), Centrelink and DEWR. We were fortunate enough to be able to access data from all three sources through our own internal systems. We also worked very closely with our internal systems development area which developed and implemented the website and underlying database.

Now that the site is operational we are working with employment service providers and other key players in the labour market to establish what other data items and site functionality will be of benefit in the future.

What, if any, has been the role of business support?

We are the business area responsible for the Labour Market Information Portal. We have had several key tasks over the entire process, from seeking funding to develop a site to the sourcing of data and liaison with systems to ensure business owner requirements are met. As the business area we are also responsible for ensuring that the monthly and quarterly data updates are done in a timely and accurate manner.

What would be your advice to anyone setting up a similar system?

Start out with a small site and expand on it. Don't try for too much and end up with nothing. We also formed a very good working relationship with our systems area which I think really helped.

Is there anything we have missed?

Have a good look around the workplace.gov.au website as a large amount of the Labour Market Information the department produces is published to this site. A few key area you might want to look at include: www.workplace.gov.au/bcw and www.workplace.gov.au/skillsindemand.

The Australian Jobs publication has also recently been updated to 2006.”

Financial information

None provided.

4. <http://www.kiwicareers.govt.nz>

The author of this response wanted it noted that ‘I am only the Acting Career Information Website manager. I am probably not the right person to answer your questions, as I was not a part of the team who slotted in LMI and LLMI into the site.

I will, however, follow up with our General Manager of IS, and he used to fill my role.’ A response is still pending.

Financial information

‘I’m not able to really add a lot in terms of setup costs etc without a chat with my General Manager. I will, however, pass on what I know now and then follow up.’

Maintenance Costs

The labour market sections of our site are mixed in a lot with the funding we receive from government to conduct job and industry research, and provide courses information. We get approximately \$3million per annum to keep all the information on the site up to date. We also do the Work Trends section out of this same funding stream, although right now there’s no mention of it in the purchase agreement with the Ministry of Education.

The funding for the job and industry regional labour market reports is approximately \$500,000, and this comes out of the Department of Labour. These reports are done by our Career Centre network, either through staff within their branches or by contractors attached to each region. The bulk of the money goes to the Career Centre network, but we retain a portion to reflect the work which goes into editing each report before publication.

I run a team that has 13 full time staff who conduct job and industry research. They do the occupational and industry outlooks. We have contracted out the Work Trends information to an economic research company for the moment, but would look at this becoming an in-house function if we could find enough resource to do this. In terms of how many staff we use on the solely Labour Market related tasks, this is difficult to quantify really. Right now one of my staff is more or less full time on managing the Labour Market reports from the centres. That grows when a deadline is reached, because of the need to pull in more editing staff to get the information onto the web. All Media Developers have a role in producing the national occupational and industry outlook reports.

We supplement this with three part time staff. They have little to do with labour market information though sometimes will be called upon to update outlooks if changes occur within an occupation or industry.

5. <http://www.seek.co.nz>

The response was to refer us to the 'about us' section of the site, which provides, for example, details of the members of the Board, but does not address the particular questions about set up and maintenance

6. <http://www.planitplus.net>

No information provided.

7. <http://www.careerswales.com>

No information provided.

8. <http://www.careersserviceni.com>

A general response was given that did not specifically address the questions asked. This was as follows:

'We have five Information Advisers in the Information Team. We are part of the Northern Ireland Careers Service which is in the Department for Employment and Learning. (DEL). We are the authors/editors of the Careers Website. Information for our LMI section was taken from various sources with in DEL.

We didn't have any direct contact with employers at that time.

We are currently looking at improving/ updating the LMI section through a working party which includes people from our Research and Evaluation Branch and Careers Advisers. As we are not directly involved in providing advice and guidance to young people we feel that Careers Advisers input will be very valuable.'

Financial information

The total set up costs for the Careers NI website in 2003 was: £407,414

The Annual Support Charge for the website in 2003 was: £29,586 (with an annual inflationary uplift).

9. <http://www.workinfontet.bc.ca>

No information provided.

10. <http://www.gov.on.ca>

What were the key challenges in setting up, and (more importantly) maintaining systems to deliver LMI and LLMI for career counselling and guidance on your website?

The key challenges in setting up the site include the choice of contents, the grouping of contents for different website viewers and the design of the website. In terms of website maintenance, system training for staff is most important.

Who were the key players in its development?

Key players in the site development include the manager, labour market information analyst and systems staff.

What, if any, has been the role of business support?

Business support played very little role in our case.

What would be your advice to anyone setting up a similar system?

Set a realistic timeline and start out with a site that is very manageable.

Is there anything we have missed?

We also provide a monthly Ontario Labour Market Report and a quarterly Ontario Regional Labour Market Report on the website. In addition, a "Guide to Using Labour Market Information in Ontario" is posted."

Financial information

None provided.