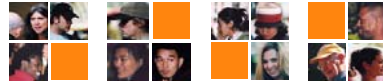


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TFPL e-information roles project

Conference midi - 19 septembre 2007



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TFPL project team

Angela Abell - TFPL
Belinda Blaswick - TFPL
Darron Chapman - TFPL
Hazel Hall - Napier University
Val Skelton - TFPL

Mon stage (secondment)

- ❖ Royal Academy of Engineering
- ❖ 6 mois entre février et juillet 2006
- ❖ Chez TFPL

Aims of the e-information roles project



- ❖ To improve understanding of current and emerging roles in electronic information environments in order to:
 - Reveal the extent of career opportunities for information specialists in the wider information environment (i.e. beyond the boundaries of “traditional” information work)
 - Uncover real evidence that can be used to generate higher interest in IM and KM as an attractive domain(s) of study, and employment
 - Influence University course/programme design and delivery so that graduates who enter the information job market are adequately prepared for employment
 - Build bridges with key stakeholders in the wider electronic information environment

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Broad research questions



What is the nature of the e-information role market place, and e-information roles?

Which sectors offer the greatest potential for e-information employment growth?

To what extent is the e-information market identifiable?

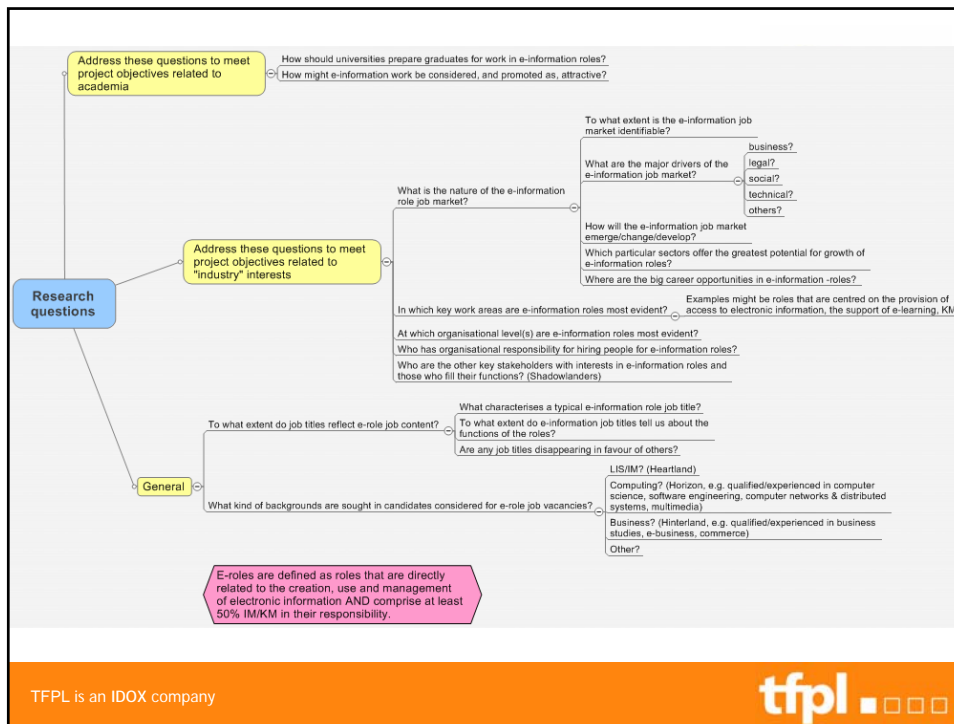
How may e-information roles be filled?


What are the major drivers for the creation of new e-information roles?

How might universities might prepare graduates for employment in e-information roles?

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Scope 1 

❖ **Criteria for roles reviewed**

- Directly related to the development and application of those processes which facilitate the creation, acquisition, capture, organisation, security, flow and sharing of electronic information.

❖ *and*

- With a significant element (50%+) of knowledge or information management in their responsibility

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Scope 2



❖ Out of scope

- 'Pure' IT roles
- Business roles which require high information use, but are not primarily concerned with IM/KM
 - Professional work in which e-information is a by-product, e.g. insurance brokers, software engineers
 - Roles occupied by employees who are primarily following set instructions in the tasks that they complete, e.g. call centre operators, data entry clerks.
- Detailed examination of *skills*

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Scope 3



❖ E-information sample job titles

Business analyst Cataloguer Coach Community and network facilitator Competitive intelligence officer Compliance officer Data steward Database designer Digital project manager Digital records preservationist E-learning facilitator Freedom of information officer Informatics officer Information architect Information officer Information scientist Interactive project manager Intranet editor Knowledge harvester Librarian Portal manager Researcher Statistician Taxonomist Technical writer Trainer Usability expert Virtual conference organiser Web content manager Web project manager

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Data collection activities



❖ Desk research

- Literature search and review
- Analysis of TFPL recruitment placements
- Analysis of job advertisements

❖ Internal consultation

- TFPL internal discussions/brainstorming, including Bath Club

❖ External consultation

- Survey of key informants
- Interviews
- Group discussion of preliminary findings

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Data collected March-June 2006



Set	Date	Activity	Data subjects	Scope
1	March	Internal (TFPL) consultations	TFPL advisors, recruitment staff, Bath Club (~28)	Series of 6 meetings held in London
2	March	Analysis of job data	"Internal" & external job ads	Mainly UK
3	May	Web-based survey	Information specialists (42)	Mainly UK
4	May 22	Focus group	Information specialists (12)	Glasgow
5	May	Interviews	Sub-set of survey respondents (16)	14 UK, 1 USA, 1 Germany
6	June 14	Feedback seminar	Information specialists (22)	London

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Sampling - range of industry stakeholders 1



❖ Sample targets

- Qualified, practising information specialists (group 1)
- Experienced, but unqualified information specialists (group 2)
- Other stakeholders whose professional “home” was not IM/KM (group 3)

❖ Representation

- Particularly good representation of groups 2 and 3 in internal consultation phase
- Over a third of survey respondents from groups 2 and 3

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Sampling - range of industry stakeholders 2



❖ Internal job advertisements

- 1937 roles handled by TFPL September 2004-March 2006

❖ External job advertisements

- General recruitment sites, e.g. www.monster.co.uk
- Sector specific sites, e.g. www.jobs.ac.uk
- Application-specific sites, e.g. www.e-consultancy.com/jobs

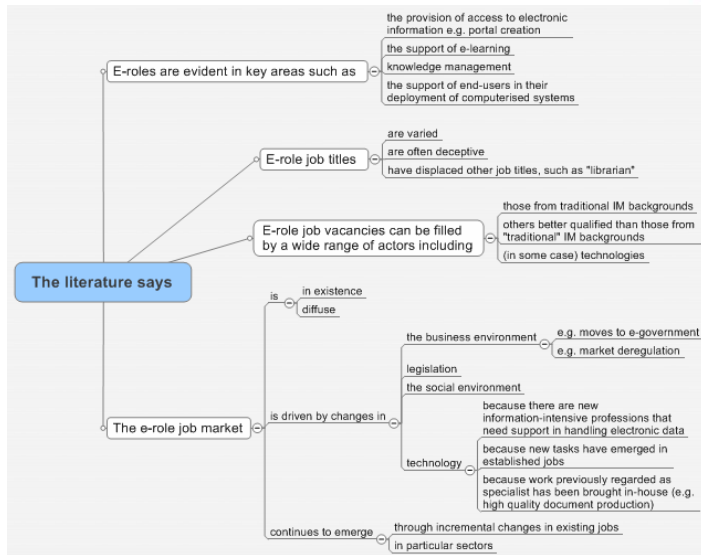
❖ Representation

- Beyond “traditional” information work

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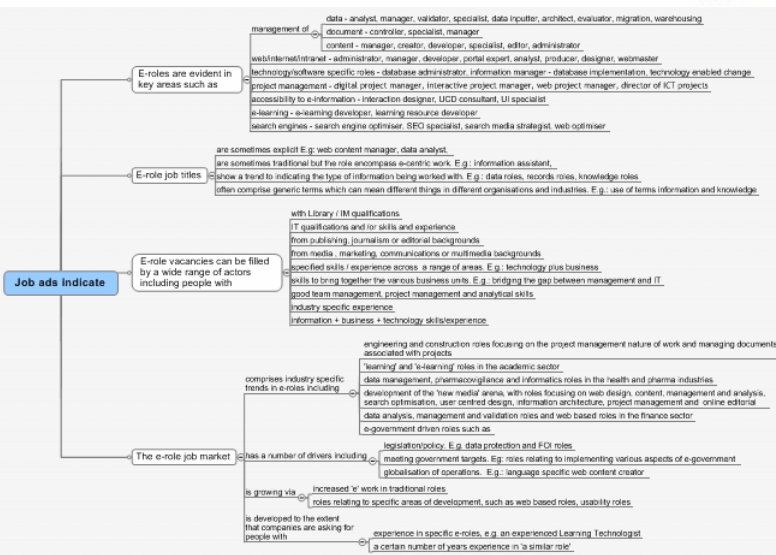
Literature review overview



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Data set 2 analysis overview



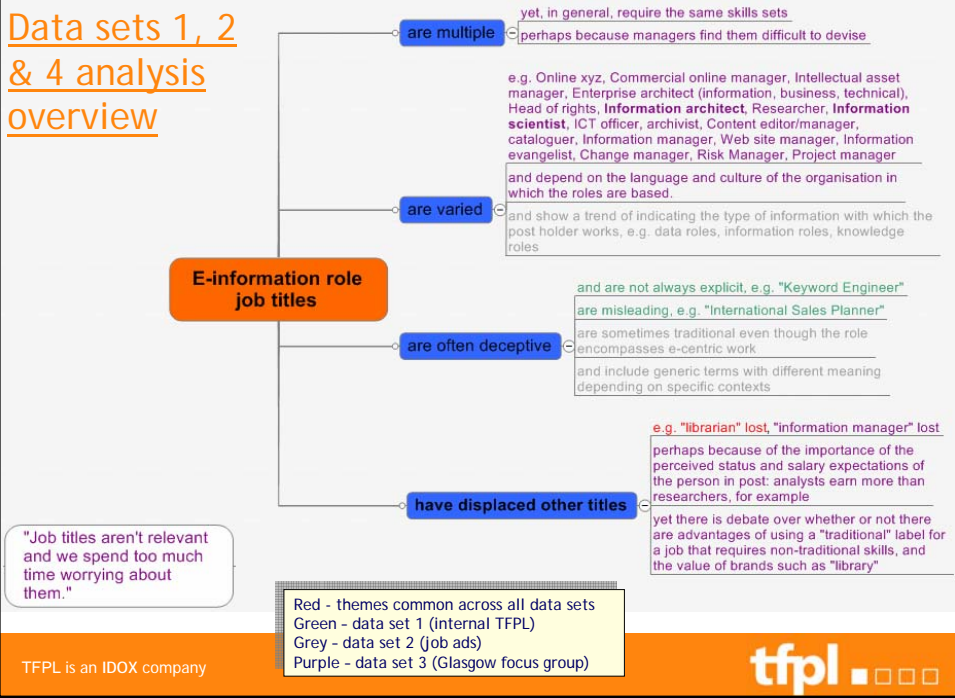
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Data sets 1, 2 & 4 analysis overview



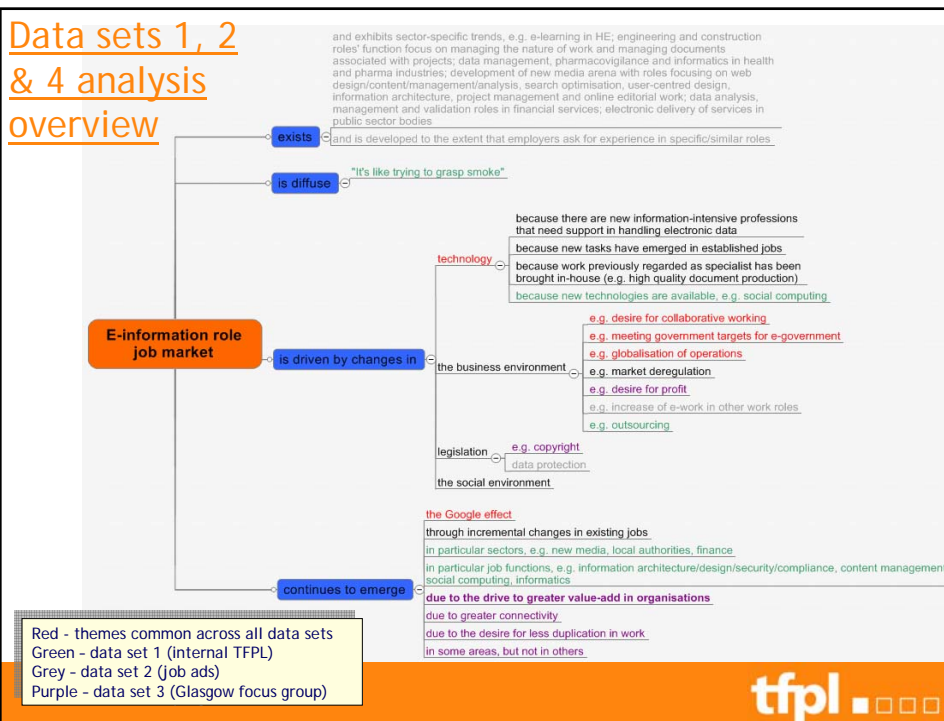
Data sets 1, 2 & 4 analysis overview



Data sets 1, 2 & 4 analysis overview



Data sets 1, 2 & 4 analysis overview



Data collection



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E-information roles: an exploration of current and future opportunities - Microsoft Internet Explorer provided by TFPL Ltd

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites

Address <http://www.tfpl.com/questionnaire/eroles/er1.cfm> Go

tfpl ■ ■ ■ ■ E-information roles: an exploration of current and future opportunities

TFPL is undertaking a research project that considers the nature of job roles associated with managing electronic information in environments where digital information flow is significant to the operation of business, and the associated supply of graduates for such work.

We are seeking to identify roles throughout the organisation, including those in 'traditional' information and knowledge departments, business units and support functions.

We would be most grateful if you would contribute to this project by completing this e-questionnaire by Monday 22nd May. It should take you no longer than 30 minutes to complete. (Please note, however, that it is not possible to complete the survey partially, save responses and return to it later, so you need to complete the survey in one go.)

With many thanks from the project team:
Angela Abell
Belinda Blaswick
Hazel Hall
Val Skelton

Section 1: Your organisation

1.1 What is your organisation's name?

1.2 To which sector does your organisation belong?
If 'Other', please specify:

1.3 Is the geographic coverage of your organisation:
Global National Local

1.4 How many employees are there in your organisation?

Section 2: E-information roles in your organisation

For the purposes of this questionnaire e-information roles are those whose **main function** (i.e. at least 50% of their time) is

Demographic data

Internet


E-information roles: an exploration of current and future opportunities - Microsoft Internet Explorer provided by TFPL Ltd

Address: http://www.tfpl.com/questionnaire/eroles/er1.cfm

1.4 How many employees are there in your organisation?

Section 2: E-information roles in your organisation
 For the purposes of this questionnaire e-information roles are those whose **main function** (i.e. at least 50% of their time) is concerned with some aspect of information or knowledge management, i.e. the development and application of those processes which facilitate the creation, acquisition, capture, organisation, security, flow and sharing of electronic information.

Our desk research to date (based on an analysis of job advertisements) has identified a **range of titles for jobs that represent e-information roles**.

You can view this e-information role definition by clicking the  button next to each question.

2.1 The proportion of roles that could be classified as e-information roles in my organisation:

0-10% 11-24% 25-49% 50-74% 75-100%

2.2 In the past 18 months the number of people employed in e-information roles in my organisation has:

increased decreased remained the same

2.3 Please note any job titles related to information and knowledge management that have recently changed within your organisation:

Old job title	New job title	Reason for change (for example, to reflect change in job role from X to Y; at the insistence of a new incumbent, even though the job functions have remained the same; to reflect the development of a new unit in the organisation; because the old title was regarded as out-moded)
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>

Data on the nature of the e-information job market

E-information roles: an exploration of current and future opportunities - Microsoft Internet Explorer provided by TFPL Ltd

Address: http://www.tfpl.com/questionnaire/eroles/er1.cfm

2.4 Please note any IM/IKM-related job titles that have disappeared from your organisation:

1. 4.
 2. 5.
 3. 6.

2.5 Within your organisation, who are the other stakeholders with interests in e-information their function? For example human resources, marketing, business development staff.

1. 4.
 2. 5.
 3. 6.

2.6 Please rate the importance of the following as external drivers for new e-information roles in your organisation:

Driver	Level of importance			
	Important	Neither important nor unimportant	Unimportant	Don't know
Globalisation of business operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Meeting of government targets, move to e-government	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Market deregulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New legislation, e.g. Freedom of Information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Effects of technological developments, e.g. information overload, increased information-intensity in the workplace	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Others (please name below):				
<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Data on the nature of the e-information job market

E-information roles: an exploration of current and future opportunities - Microsoft Internet Explorer provided by TFPL Ltd

Address: http://www.tfpl.com/questionnaire/eroles/er1.cfm

2.7 Please select below the primary job functions within your organisation with which you are familiar. For each function selected, please provide a maximum of three e-information roles in the table provided.

Acquisition and collection management of electronic information sources published externally, e.g. contract management and procurement of online services, librarian

For this job function, please give examples of e-information roles in the table below:

Job title	Department	Job created in last 18 months?	Comments (optional)
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes	<input type="text"/>

Please select the next job function below as appropriate.

- Analysis of electronic information, e.g. business analyst, statistician, competitive intelligence officer, informatics officer
- Creation or origination of electronic information content, e.g. technical writer
- Curation of electronic information, e.g. digital records preservationist
- Editing of electronic information content, e.g. intranet editor
- Facilitation of access to electronic information, e.g. portal manager, database designer, e-learning manager
- Governance of e-information, e.g. compliance officer, Freedom of Information officer, data steward
- Identification and management of internally generated electronic information, e.g. information officer
- Management of electronic information systems, e.g. web content manager
- Management of staff who collaborate in electronic information environments, e.g. community and network facilitator, virtual conference organiser
- Organisation of electronic information, e.g. information architects, taxonomists, cataloguers
- Project management roles related to electronic information, e.g. digital project manager, interactive project manager, web project manager
- Promoting and exploiting the value of electronic information, e.g. knowledge harvesters

Data on the function of e-information roles

E-information roles: an exploration of current and future opportunities - Microsoft Internet Explorer provided by TFPL Ltd

Address: http://www.tfpl.com/questionnaire/eroles/er1.cfm

Section 3: Future of e-information roles

We are particularly interested in your expert opinion on the quality of the e-information workforce, and the candidates wishing to join it. Your responses to these questions will help influence this research project's recommendations to the universities. (Please supply as many answers as possible, as appropriate to your knowledge and opinion.)

The definition of e-information roles is available to you by clicking the button next to each question below.

3.1 Which skills would you consider to be most important in the recruitment of individuals to e-information roles in the future?

1. <input type="text"/>	4. <input type="text"/>
2. <input type="text"/>	5. <input type="text"/>
3. <input type="text"/>	6. <input type="text"/>

3.2 Please identify any skills gaps for e-information roles in the current new graduate workforce.

1. <input type="text"/>	4. <input type="text"/>
2. <input type="text"/>	5. <input type="text"/>
3. <input type="text"/>	6. <input type="text"/>

3.3 Please identify where there are the greatest career opportunities for those working in e-information roles (for example, by sector, by job role, by location).

1. <input type="text"/>	4. <input type="text"/>
2. <input type="text"/>	5. <input type="text"/>
3. <input type="text"/>	6. <input type="text"/>

3.4 Please rank the relative importance of the following backgrounds for candidates who would work in e-information roles:

- Computing, e.g. degree in computer science, software engineering, multimedia systems, computer networking
- Business, e.g. degree in business studies, e-commerce, e-business
- Library and information management, e.g. degree in librarianship, information management

Please add any further comments on the backgrounds of candidates who would hope to work in e-information roles:

Data on the future for e-information roles

E-information roles: an exploration of current and future opportunities - Microsoft Internet Explorer provided by TFPL Ltd

Address: http://www.tfpl.com/questionnaire/roles/er1.cfm

Section 4: Your details
Fields marked * are compulsory.

4.1 *What is your name?

4.2 What is your job title?

4.3 In which department do you work?

4.4 What is main purpose of your work role?

4.5 May we ring you to explore some of your responses some time between 15th and 31st May 2006?
If so please tell us:

4.5.1 Your phone number:

4.5.2 Your preferred time for a follow-up conversation:

Monday, 15th May:	<input type="text"/>	Wednesday, 24th May:	<input type="text"/>
Tuesday, 16th May:	<input type="text"/>	Thursday, 25th May:	<input type="text"/>
Wednesday, 17th May:	<input type="text"/>	Friday, 26th May:	<input type="text"/>
Thursday, 18th May:	<input type="text"/>	Monday, 29th May:	<input type="text"/>
Friday, 19th May:	<input type="text"/>	Tuesday, 30th May:	<input type="text"/>
Monday, 22nd May:	<input type="text"/>	Wednesday, 31st May:	<input type="text"/>
Tuesday, 23rd May:	<input type="text"/>		

With many thanks from the project team:

Details for follow-up

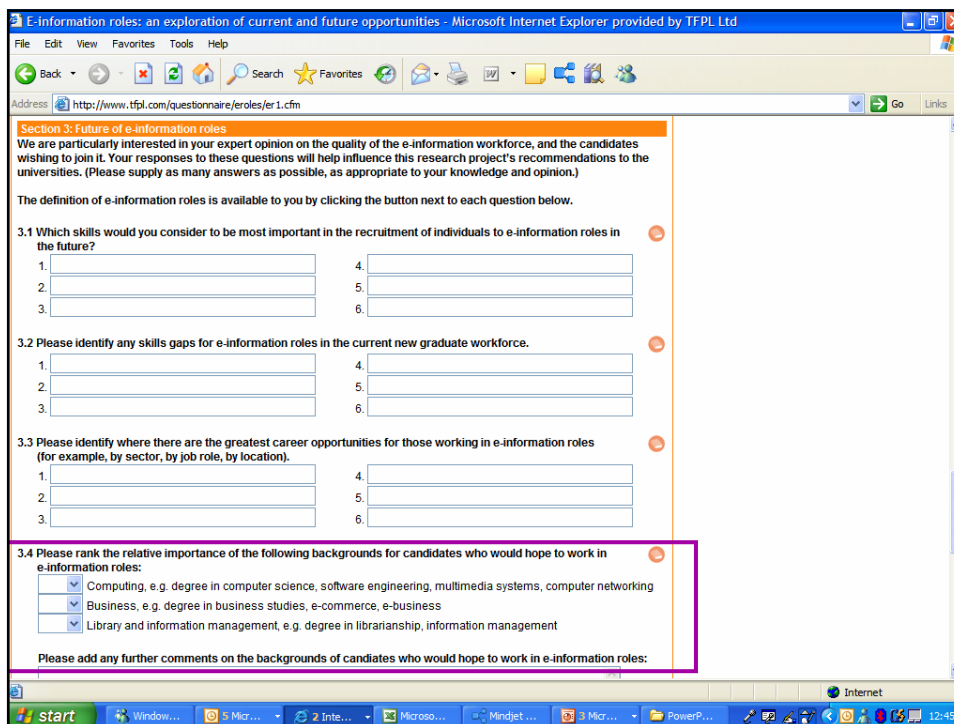
Microsoft Excel - backgrounds preferred


	A1	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1																			
2	ID	Sector	1	2	3	1	2	3	1	2	3								
3	85	Public & vol				1			1										
4	74	Public & vol				1			1										
5	101	Private				1			1										
6	87	Public & vol				1			1										
7	81	Public & vol				1			1										
8	104	Public & vol				1			1										
9	76	Public & vol				1			1										
10	83	Public & vol				1			1										
11	72	Public & vol				1			1										
12	0	Private				0			0										
13	78	Public & vol				1			1										
14	79	Private				1			1										
15	80	Private				1			1										
16	88	Private				1			1										
17	75	Private				1			1										
18	91	Private				1			1										
19	95	Public & vol				1			1										
20	100	Private				1			1										
21	82	Public & vol				1			1										
22	83	Public & vol				1			1										
23	84	Private				0			0										
24	70	Public & vol				1			1										
25	52	Private				1			1										
26	89	Public & vol				1			1										
27	102	Private				1			1										
28	77	Private				1			1										
29	73	Public & vol				1			1										
30	106	Private				1			1										
31	86	Private				1			1										
32	103	Public & vol				1			1										

Relative ranking of the importance of employee backgrounds: computing, business, librarianship

Use of Excel to analyse survey & interview data. Example here is for question 3.4.

Column M to record comments, which were coded up later.



Ability to align work activities to business strategy	Enthusiasm	Management	 <p>Training Understanding of technical tools Validation of information sources Web authoring Web development Web usability testing Working under pressure Writing</p>
Ability to connect with developments	Evaluation of information sources	Management of individuals	
Ability to cope with change	Facilitation	Management of teams	
Ability to see the big picture	Flexibility	Marketing	
Ability to translate the needs of the business at all levels	Grammar	Multi-tasking	
Abstracting	Imagination	Negotiation	
Adaptability	Indexing	Networking	
Analytic mind	Influencing	Numeracy	
Business acumen	Information analysis	Organisation	
Business awareness	Information delivery	Outgoing personality	
Business development	Information governance	Political awareness	
Business focus	Information literacy	Presentation skills	
Cataloguing	Information retrieval	Prince 2	
Change management	Innovation	Problem solving	
Classification	Integrity	Professionalism	
Collaboration – non-technical	Intellectual property knowledge	Project management	
Collaboration – technical	Intelligence	Records management	
Commercial awareness	Interviewing	Relationship building	
Communication	IT savvy	Relationship management	
Computer literacy	Knowledge harvesting	Repackaging information	
Confidence	Knowledge of e-information arena, new technologies	Research	
Contract/supplier management	Knowledge of government policy	Self-management	
Creativity	Knowledge of information sources	Small business knowledge	
Diplomacy	Knowledge of law	Social computing	
E-learning facilitation	Knowledge of public sector vocabulary	Spelling	
Empathy	Languages	Stakeholder management	
Engaging audiences	Leadership	Strategic thinking	
Enterprise content management	Literacy	Synthesising information	
		Taxonomy development	
		Technical ability	
		Time management	

Coding up the responses to question 3.4 was a tricky job!

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Nature of the e-information job market



- ❖ Diffuse: “like trying to grasp smoke”
- ❖ Developed
 - Employer requests for experience
 - Survey respondents - 41% roles stable, 46% - roles increased in past 18 months
- ❖ Flavours - examples
 - Engineering and construction - management of electronic documents associated with projects
 - Higher education - support of e-learning
- ❖ Recent growth areas
 - Information analysis
 - Project management
 - Information architecture
 - Most opportunity in public and voluntary sector organisations?

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Functions of current e-information roles



- ❖ Acquisition and collection management of electronic resources (62%)
- ❖ Editing electronic content (50%)
- ❖ Information governance (48%)
- ❖ Provision of access to electronic information content, e.g. portal development (38%)
- ❖ Information analysis (31%)
- ❖ Creation/origination of electronic content (31%)
- ❖ End-user support in the use of electronic resources (21%)

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Function focus across sectors - examples



- ❖ Information governance (48%)
 - Public and voluntary sector 73%
 - Private sector 20%

- ❖ Creating and originating electronic content
 - 40% of private sector respondents identified “creative” roles
 - 23% of public and voluntary sector respondents identified “creative” roles
 - Private sector responses - lower proportions of roles that encompass
 - Editing
 - Organising
 - Publishing

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Technology drives the e-information job market



❖ Drivers acknowledged as important (ranked)

1. Technological developments
2. Government targets
3. New legislation
4. Globalisation

Also:

- Need to support/measure efficiency/profitability (data set 4)
- Move to online collaborative work (data sets 1 & 4)

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Drivers of the future e-information job market



❖ Public & voluntary sector drivers

1. Government targets
 - Efficiency agenda
 - Relocation from London
 - Transformational government
2. New legislation
3. Technological developments

❖ Private sector drivers

1. Technological developments
2. Globalisation
 - Majority of private sector respondents from organisations that operate globally
3. New legislation

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Opportunities in the future e-information job market



❖ Information architecture

- Also prominent as recent growth area
- Also prominent as current job function

❖ Content management (web, enterprise)

- Also prominent as current job function

❖ Teaching, training and support of learning activities

- Prominent in data sets 1, 2 & 4
- Identified by survey respondents, despite lack of returns from education

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Skills requirements for e-information work - all sectors



❖ A range of skills is required

- Core information management skills - especially those relevant to building information architectures & managing content
- General IT literacy
- Core personal attributes
- Certain skills combinations in demand, e.g. project management plus awareness of electronic publishing/IM

“While skills in e-information specific areas can be important - especially for specialised roles such as web development - more general management, **team-working** and **interpersonal skills** - which are common to many jobs - are vital in e-information roles. Especially important are **skills in engaging with stakeholders** effectively to understand e-information problems fully. E-information roles may involve playing a role in facilitating an IT-enabled business change where **skills in facilitation, persuasion, influencing and problem solving** are vital.”

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Skills classification



❖ Core IM skills

- e.g. retrieval, evaluation of, provision of access to sources

❖ Basic skills for the work place

- e.g. literacy, numeracy, problem solving

❖ Business skills

- e.g. training, marketing, facilitating

❖ Personal attributes

- e.g. flexibility, confidence, enthusiasm

❖ Business attributes

- e.g. business awareness, understanding of politics

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Skills requirements for e-information work - survey results by sector



❖ Public & voluntary sector: skills required

- Ranked 1st
 - Core IM skills
- Ranked 2nd and 3rd
 - Business skills
 - Personal attributes
- Equal ranking
 - Business attributes
 - Basic skills for the work place

❖ Private sector: skills required

- Ranked 1st
 - Core IM skills
- Equal ranking
 - Business skills
 - Personal attributes
 - Basic skills for the work place

Greater need for all-rounders in private sector

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New graduate skills gaps



❖ Survey data rankings

1. Business skills
2. Core IM skills
3. Basic skills for the work place
4. Core personal attributes

❖ Data set 6 rankings

1. Core IM skills
2. Basic skills for the work place, notably IT literacy
3. Core personal attributes

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New graduate skills gaps



- ❖ Survey data rankings
 1. Business skills
 2. Core IM skills
 3. Basic skills for the work place
 4. Core personal attributes

Level of expectation? Can new graduates really be expected to offer skills such as customer relationship management, interviewing, training etc?

- ❖ Data set 6 rankings
 1. Core IM skills
 2. Basic skills for the work place, notably IT literacy
 3. Core personal attributes

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Skills requirements for e-information work - all sectors



- ❖ A range of skills is required

Core information management skills - especially those relevant to building information architectures & managing content
General IT literacy
Core personal attributes

- Certain skills combinations in demand, e.g. project management plus awareness of electronic publishing/IM

“While skills in e-information specific areas can be important - especially for specialised roles such as web development - more general management, **team-working** and **interpersonal skills** - which are common to many jobs - are vital in e-information roles. Especially important are **skills in engaging with stakeholders** effectively to understand e-information problems fully. E-information roles may involve playing a role in facilitating an IT-enabled business change where **skills in facilitation, persuasion, influencing and problem solving** are vital.”

Cause for concern: the skills *gaps* in new graduates map on to the skills *requirements* for e-information work

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Supplying the job market



- ❖ Range of professional backgrounds suitable
 - IM, IT, Publishing, Communications
 - Not “owned” by any professional group

- ❖ Examples from interviews
 - RM & policy staff appointed to e-information roles where library staff showed no interest
 - E-information roles filled by employees whose careers have taken them through a web development route
 - Low profile of “traditional” information workers, and their failure to demonstrate role in adding value in meeting organisational objectives, seen as barriers to their filling e-information role vacancies

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“Traditional” information workers and the job market



- ❖ Qualifications in IM valued
 - IM qualification ranked as most desirable overall by survey respondents (especially those from non-IM backgrounds)
 1. IM
 2. Business
 3. Computing
 - “Librarians” unlikely to be in post, or sought

- ❖ Private sector priorities
 - Business qualification ranked as most desirable overall by private sector respondents
 - “To get the confidence of senior management”
 - Ease of training an industry specialist in IM in contrast to training an IM specialist in an industry specialism

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Key messages for individuals 1



❖ Career opportunities

- Variety in roles, especially in private sector where all-rounders are sought for roles that extend beyond traditional information delivery
- Particular areas of expertise in demand
 - Information architecture
 - Content management
 - Teaching/training and support of learning
- More work currently available in public & voluntary sector?

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Key messages for individuals 2



❖ E-information role candidates

- Seek out opportunities advertised across a range of media
- Look beyond job titles to identify e-information role opportunity
- Recognise competition for jobs from others with “non-traditional” information backgrounds

- Keep up to date with “hot topics” of concern to target employers
- Develop desirable skills sets
- Provide clear demonstrations of suitability in applications for posts

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Key messages for bodies



- ❖ Need for training provision in particular applications of e-information work
 - Content management
 - Information architecture
 - Teaching/training and support of learning

- ❖ Need for development of skills, especially in new graduate population
 - Core IM skills
 - Basic skills for the work place, especially IT literacy
 - Core personal attributes

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Related publications



- ❖ Hall, H. & Abell, A. (2006). New role realities: avenues for extending the reach of information specialists. *American Society of Information Science and Technology Annual Conference*, November 3-8, Austin, Texas.

- ❖ Hall, H. & Abell, A. (2006). Who is managing information? Opportunities in the e-information market place. In H. Jezzard (Ed.), *Proceedings of the 30th International Online Meeting*, London, November 28-30 2006 (pp. 39-44). London: VNU.

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