

Mockup CUBIST Deliverable D9.1.2

Chris Rafferty Innovantage 2011/06



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Mockup

Abstract: This document is the initial mockup for Innovantage for the FP7 CUBIST project.

Туре	Other					
Document ID:	CUBIST D9.1.2 - Innovantage					
Workpackage:	WP9					
Leading partner:	Innovantage					
Author(s):	Chris Rafferty					
Dissemination level:	CO					
Status:	DraftVersion					
Date:	13 June 2011					
Version:	1.1					



Versioning and contribution history Reviewers



Versioning and contribution history

Version	1. Description	Contributors
1.0	First draft with mockup slides	Chris Rafferty (Innovantage)
1.1	Extended draft with descriptions	Chris Rafferty (Innovantage)
1.2	Updated address comments from reviewers	Chris Rafferty (Innovantage)

Reviewers

Name	Affiliation					
Constantinos Orphanides	Sheffield Hallam University					
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Introduction



This is the Innovantage use-case-dependent mockup for FP7 CUBIST. Delivered to satisfy requirement D9.1.2 part of Work Package 9:

Γ	D 9.1.2	In close collaboration with the creation of the overall CUBIST mockup in D1.1.3, this report							
		contains a set of initial mockup screens for the expected user interfaces and a description of							
L		their functionalities							

Innovantage collects vacancy data from internet based sources to empower recruitment consultancies, job board, media owners and employers find and better understand the online recruitment activity of UK companies.





Every day Innovantage gathers all the new jobs posted on 84 UK job boards as well as over half million corporate sites, this data is then used to generate reports detailing:

- Market penetration. The monthly accumulated total of new vacancies advertised on individual Job Boards.
- Gap Analysis. Comparison of advertiser postings per Job board used to distinguish which job board advertisers are initially choosing to post their new advertisement. This information can be used by the Job Boards to target new advertisers using competitors.

These reports are used by Recruitment agencies to improve their performance in placing job applicants and therefore to increase their revenue.



Mockup Example Setting



Example screenshot of the existing Market Penetration report







The Market penetration analysis breaks down further of the performance of individual job boards using the following categories:

- Discipline. Job advertisements are grouped into various categories or disciplines, e.g.
 IT/Telecomms, Legal, Energy/Utilities
- Geographic area. Job advertisements are grouped by geographic location, e.g. South east, North West, etc...
- Salary. Job advertisements by salary range for individual job boards

										1	1			1			
		fish4	jobser	,	monster	reed	totaljobs	Other			ine	Ju			gust		Total
IT / Telecoms		3,466		42,556	16,102	14,340	26,162	292,200		#jobs	% Share	#jobs	% Share	#jobs	% Share	#jobs	% Share
Sales / Fund-Raising		12,158		23,670	17,225	27,376	34,905	105,255	London	235,052	27.58%	249,988	27.50%	240,375	27.48%	725,415	27.52%
Engineering / Manufa		6,398		27,518	8,928	9,389	21,540	97,640	South East	150,766	17.69%	165,292	18.18%	158,491	18.12%	474,549	18.00%
Director / Manageme	nt	4,811		15,925	7,251	11,170	18,299	92,770	Unknown	80,555	9.45%	77,699	8.55%	77,362	8.85%	235,616	8.94%
Health / Social Care		24,196		13,213	2,262	11,098	13,365	77,030	North West	60,620	7.11%	63,633	7.00%	61,330	7.01%	185,583	7.04%
Accounting / Finance		5,079	3,925	9,399	8,174	26,519	25,404	89,576	South West	53,259	6.25%	58,671	6.45%	55,807	6.38%	167,737	6.36%
Marketing / Advert / I	R	3,475		11,783	10,002	14,757	20,442	69,213									
Customer Service		7,119		12,840	7,432	19,025	21,136	45,066	West Midlands	45,898	5.39%	49,773	5.47%	47,460	5.43%	143,131	5.439
Admin / Secretarial /	PA	6,802	2,999	12,436	5,635	19,907	20,711	56,949	Scotland	43,191	5.07%	45,936	5.05%	49,400	5.65%	138,527	5.26%
Banking / Insurance		2,760	7,511	9,382	5,059	16,288	10,748	53,017	East Midlands	40,913	4.80%	45,149	4.97%	42,073	4.81%	128,135	4.86%
Consultant / Analyst		1,794	16,909	8,778	4,103	5,129	7,487	55,997	Yorks & Humber	40,484	4.75%	44,528	4.90%	41,625	4.76%	126,637	4.80%
Catering / Hospitality		2,843	1,003	4,409	1,672	6,000	8,819	54,125	East Anglia	39,775	4.67%	43.493	4.78%	41,308	4.72%	124,576	4.73%
HR		3,145	2,464	8,536	5,502	13,894	19,311	28,846	Bre	32,564	3.82%	32,360	3.56%	28,513	3.26%	93,437	3.54%
Education / Training		4,215	917	5,836	1,275	8,760	8,011	31,957	North East	12,691	1.49%	14.683	1.62%	13,170	1.51%	40,544	1.54%
Retail		2,563	801	5,627	2,890	6,226	8,752	34,169	Wales		1.50%		1.56%		1.57%		
Legal		884	484	4,076	1,359	3,492	4,658	43,529		12,759		14,151		13,747		40,657	1.54%
Supply Chain / Logistics		3,758	1,448	10,291	3,322	7,666	9,453	24,181	Ulster	2,808	0.33%	2,796	0.31%	3,031	0.35%	8,635	0.33%
Property / Construction		2,052	943	5,289	1,925	4,431	9,039	27,133	Channel Islands	733	0.09%	730	0.08%	676	0.08%	2,139	0.06%
Arts / Media / Heritag	e	999	3,608	3,974	2,398	3,025	4,747	26,068	Isle of Man	157	0.02%	269	0.03%	213	0.02%	639	0.02%
Unable to Classify		2,398	3,567	3,602	1,124	2,876	3,373	17,839	MN/A					4	0.00%	4	0.00%
Ancilliary		2,741	671	6,304	1,763	2,963	6,071	20,162	Grand Total	852,225	100.00%	909,151	100.00%	874,585	100.00%	2,635,961	100.00%
Science		915	897	2,577	1,388	1,912	3,582	14,410									
Energy / Utilities		793	1,211	2,952	1,231	1,616	2,834	13,796	Job Volume by Re	gion/Source							
Environment / Plannir		627	1,073	2,343	1,044	1,887	3,435	12,179	100%								
Military / Policing / Se		519	2,335	1,691	710	700	1,268	9,006									
Leisure / Sport / Ente	rtainment	512	349	841	279	629	1,200	4,901	60 anau								
		2	13	11	14	96	6	78	g 80% –								
Salarv by Source									je je								
carary by course									aq 60%								
	fish4	jobserve	jobsite	monste			taljobs	Other	2								
£0 - £10,000	7,235	17,797	21,584	3,6		2,037	29,825	117,578	평 40%								
£10,001 - £20,000 £20,001 - £30,000	11,608 10,850	7,701 26,995	48,045 51,054	27,1 29,7		4,532	75,869	167,137	5								
£30.001 - £30,000	3,644	20,995	30,744	15.9		2,524 5.751	37,360	172,526	2								
£40,001 - £50,000	1,320	13,875	15,201	7,4		2,549	18,761	97,759	20%				ŤŤ				
£50,001 - £60,000	566	8,905	7,658	3.4		5.056	8,681	53,950									
£60,001- £70,000	277	6,187	4,511	1.8		2,366	5,435	31,690	0%								
£70,001 - £80,000	190	6,576	4,170	1,4	77	1,797	3,397	27,211	upu ∉∌	Act in the	West West West	fidan. cotta	Midan. Yorks & Humber	Ere data	Net East	Uster Channel Islands	Men #N/A
£80,001 - £90,000	71	2,209	1,459		86	448	1,112	9,761	5 0	" 올 ?	S 88 S S	9 8 °	'를 흔두 '	D€ - :	2 2	의 분용	출수 및
£90,001 - £100,000	97	4,075	2,106			1,058	1,716	14,179	_	_		,				0	
£100,001+	111	15,207	5,029	1,2		2,263	3,697	34,126	Other	iobser	ve	monster		totaliobs			
Not Available	71,048	67,916	64,072	27,1		0,790	56,590	412,120	fish4	iobsite		reed					
Salary Not Availab	7	1.822	226		1		238	3,047									

Example screenshot of existing detailed Market Penetration analysis:

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Formal concept analysis (FCA) applied to Market Share data.

Goals:

- Provide alternative view point of the data
- Expose hidden relationships and facts in the data that may not obvious in the conventional chart based report. Aiding recruitment agencies in identifying market changes that potentially could lead to a competitive advantage.





Shown on the next slides:

- On mockup slide 1, shows how a tabbed framework is incorporated to allowed access to a new perspective: FCA
- On mockup slide 2, shows initial user work space containing the Hasse diagram. This perspective will allow recruitment agencies to explore.



Starting the analysis: Visualisations







Starting the analysis: Visualisations









A series of buttons are displayed down the left hand side of the perspective shown on the previous slide Mock up 2. These will permit the user to:

- Select the attributes that is displayed in the Hasse diagram, such as:
 - Market % Location Salary Market Sector (Disciline)
- Select alternative view styles or features
- Show a Hasse diagram per month's data, allowing trend comparisons to be performed.

Selecting or deselecting an attribute will dynamically cause the Hasse diagram to update to either add or remove node respectively.





Shown on the next slide:

- The user exploring, by selecting, individual nodes within the Hasse Diagram.
- Values of other attributes, currently not incorporated Hasse diagram, are display in a series of pop-up menu items when a Node is selected.

Access to the attribute details, via this process, aids the users insight, determining what other attributes to incorporate.

As the Hasse diagram rapidly increasing in size and complexity as additional attributes are shown it would desirable to have zoom and pan features to navigate the graph.



Visualisations: Exploring nodes









Shown on the next slide:

In addition to selecting node to see the values of other attributes the user can also select to modify the style of the displayed nodes to display a pie chart representing another attribute.

The particular attribute selected is display on all nodes of the graph. Comparison can then be made against this attributed across all nodes.











Shown on the next slide:

Users are allow to add a timeline to display to show multiple Hasse-diagrams.

This allows the user to view changes on the relationships over time. This feature is extremely powerful for trend identification. Recruitment agencies can significant improve performance by:

- Targeting Applicants with skills sets that are increasingly in demand while reducing efforts for skills in decline.
- Finding location hotspots where particular skills are in high demand.



Starting the analysis: Visualisations







Summary



- The Mock-up has shown how data from the recruitment domain may be presented to users interested in analysing performance of the recruitment market. Business intelligence tools based on the capabilities presented offer recruitment agencies significant competitive advantage.
- Mock-up only explores one particular report type it could equally be applied to the other report types generated by Innovantage.

