Labour Pool Analysis for Whalen ICT Project

January 14, 2009

THUNDER BAY
CEDC
COMMUNITY ECONOMIC
DEVELOPMENT COMMISSION

TABLE OF CONTENTS

EXECUTIVE SUMMARY 1

Introduction 1

Employee Forecast #1 1

Employee Forecast #2 1

Conclusion 2

Table 1 Lakehead University Labour Pool Analysis for Whalen ICT Project
Degrees Awarded By Year/By Program (2003-2007) 3

Table 2 Lakehead University Labour Pool Analysis for Whalen ICT Project
Forecasted Degrees Awarded By Year/By Program Projected at 0% Growth 4

Table 3 Lakehead University Labour Pool Analysis for Whalen ICT Project
Forecasted Capture Rates for Whalen ICT Tenants 5

Table 4 Confederation College Labour Pool Analysis for Whalen ICT Project
Degrees Awarded By Year/By Program (2003-2007) 6

Table 5 Confederation College Labour Pool Analysis for Whalen ICT Project
Forecasted Degrees Awarded By Year/By Program Projected at 0% Growth 7

Table 6 Confederation College Labour Pool Analysis for Whalen ICT Project
Forecasted Capture Rates for Whalen ICT Tenants 8

Table 7 Labour Pool Analysis for Whalen ICT Project
Graduate Projection Based on Programs With ICT Specific Skill Sets 9

Table 8 Labour Pool Analysis for Whalen ICT Project
Whalen Building Forecasted Vacancy 11

Table 9 Labour Pool Analysis for Whalen ICT Project
Overall Capture Rates – Forecast #1 12

Table 10 Labour Pool Analysis for Whalen ICT Project
Overall Capture Rates – Forecast #2 12

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EXECUTIVE SUMMARY

Introduction

The following labour analysis of graduates from Lakehead University and Confederation College has been undertaken to evaluate the potential of staffing the Whalen Building with Information Communication Technology (ICT) related tenants from 2010 to 2014, in keeping with a 5 year lease up strategy.

Upcoming vacancy of leasable space in January 2010 will result in 19,200 square feet of contiguous space (Floors 3, 4, and 5). There will be 30,228.56 square feet of total potential vacancy at the end of 2009. (Table 8)

Using an Industry ratio of 1 Full-Time Equivalent (FTE) employee and 125 square feet per work station, this will allow employment of 153 FTE's for the upcoming contiguous vacant space and 241 FTE's for the total vacancy. (Table 8)

Employee Forecast #1

This analysis is based on the assumption that employees for the Whalen ICT project could be targeted from all faculties of Lakehead University and Confederation College. This assumption utilizes "very conservative capture rates", ranging from 2% to 5% because of the more broadly based skill sets, and the lack of specialized training specific to the requirements of ICT users.

Based on growth projections of 0%, this would yield 4,162 potential graduates per year from 2008 to 2014. Using the conservative capture rates of 2%, 3%, 4%, and 5%, it is estimated that a potential employer could attract from 83 to 208 potential employees per year using these projections. (Table 9)

Employee Forecast #2

This analysis is based on the assumption that employees for the Whalen ICT project would be targeted **only from those faculties in both Confederation College and Lakehead University that produce students with some proficiency in an ICT related skill set**. Under this assumption, it is estimated that the capture rates would potentially be much higher.

Based on growth projections of 5% per year, this would yield on average 199 potential graduates per year from 2008-2014. Using more aggressive capture rates of 10%, 20%, 30%, 40%, and 50% per year, it can be estimated that a potential employer could attract from 19-99 potential employees per year using these projections. (Table 10)

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Conclusion

The Thunder Bay Community Economic Development Commission (CEDC) believes that under the above assumptions, Thunder Bay can offer substantial potential labour for staffing the Whalen ICT project over a five year period. In Summary, under Forecast #1, 83 to 108 potential employees per year could be available for ICT users. Using more conservative analysis as outlined under Forecast #2, between 19-99 potential employees per year could be available to fill the Whalen ICT projects' opportunity for 153 to 241 jobs. These statistics are very encouraging because they forecast only future potential labour pools that may be available to Whalen ICT users via Confederation College and Lakehead University graduates.

These projections do not take into consideration the opportunity to employ existing graduates or individuals already in the workplace or those who may be encouraged to relocate to Thunder Bay if Whalen ICT job opportunities became available.

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Table 1
Lakehead University
Labour Pool Analysis for Whalen ICT Project
Degrees Awarded By Year/By Program (2003-2007)

Faculty	2003	2004	2005	2006	2007	Average
Faculty of Science and Environmental Studies (1)	287	287	294	305	345	303.6
Faculty of Social Sciences and Humanities (2)	447	453	482	563	590	507
Faculty of Professional Schools (3)	269	303	288	366	438	332.8
Faculty of Business Administration	96	112	109	124	132	114.6
Faculty of Education	631	638	706	630	623	645.6
Faculty of Engineering	164	213	251	282	281	238.2
Faculty of Forest and the Forest Environment	67	36	34	33	42	42.4
Total	**1,961**	**2,042**	**2,164**	**2,303**	**2,451**	**2,184**

(1) Includes Arts, Science, Biology, Chemistry, Computer Science, Environmental Studies, General Science, Geography, Geology, Mathematics, Natural Science, and Physics

(2) Includes Economics, English, General Arts, History, Indigenous Learning, Languages, Library and Information Studies, Medical Lab Science, Music, Philosophy, Political Science, Psychology, Sociology, Visual Arts, and Women's Studies

(3) Includes Gerontology, Kinesiology, Nursing, Outdoor recreation, Social Work, and Master of Public Health

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Table 2
Lakehead University
Labour Pool Analysis for Whalen ICT Project
Forecasted Degrees Awarded By Year/By Program Projected at 0% Growth

Faculty	2008	2009	2010	2011	2012	2013	Average
Faculty of Science and Environmental Studies (1)	303	303	303	303	303	303	303
Faculty of Social Sciences and Humanities (2)	507	507	507	507	507	507	507
Faculty of Professional Schools (3)	332	332	332	332	332	332	332
Faculty of Business Administration	114	114	114	114	114	114	114
Faculty of Education	645	645	645	645	645	645	645
Faculty of Engineering	238	238	238	238	238	238	238
Faculty of Forest and the Forest Environment	42	42	42	42	42	42	42
Total	**2,181**	**2,181**	**2,181**	**2,181**	**2,181**	**2,181**	**2,181**

(1) Includes Arts, Science, Biology, Chemistry, Computer Science, Environmental Studies, General Science, Geography, Geology, Mathematics, Natural Science, and Physics

(2) Includes Economics, English, General Arts, History, Indigenous Learning, Languages, Library and Information Studies, Medical Lab Science, Music, Philosophy, Political Science, Psychology, Sociology, Visual Arts, and Women's Studies

(3) Includes Gerontology, Kinesiology, Nursing, Outdoor recreation, Social Work, and Master of Public Health

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Table 3
Lakehead University
Labour Pool Analysis for Whalen ICT Project
Forecasted Capture Rates for Whalen ICT Tenants

Faculty	5 Year Graduate Average	Forecasted Potential Employees (2%)	Forecasted Potential Employees (3%)	Forecasted Potential Employees (4%)	Forecasted Potential Employees (5%)
Faculty of Science and Environmental Studies (1)	303	6.06	9.09	12.12	15.15
Faculty of Social Sciences and Humanities (2)	507	10.14	15.21	20.28	25.35
Faculty of Professional Schools (3)	332	6.64	9.96	13.28	16.6
Faculty of Business Administration	114	2.28	3.42	4.56	5.7
Faculty of Education	645	12.9	19.35	25.8	32.25
Faculty of Engineering	238	4.76	7.14	9.52	11.9
Faculty of Forest and the Forest Environment	42	0.84	1.26	1.68	2.1
Total	**2,181**	**43.62**	**65.43**	**87.24**	**109.05**

(1) Includes Arts, Science, Biology, Chemistry, Computer Science, Environmental Studies, General Science, Geography, Geology, Mathematics, Natural Science, and Physics

(2) Includes Economics, English, General Arts, History, Indigenous Learning, Languages, Library and Information Studies, Medical Lab Science, Music, Philosophy, Political Science, Psychology, Sociology, Visual Arts, and Women's Studies

(3) Includes Gerontology, Kinesiology, Nursing, Outdoor recreation, Social Work, and Master of Public Health

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Table 4
Confederation College
Labour Pool Analysis for Whalen ICT Project
Degrees Awarded By Year/By Program (2003-2007)

Faculty	2003	2004	2005	2006	2007	Average
Faculty of Applied Arts (1)	330	288	305	350	353	325
Faculty of Business (2)	248	270	228	227	221	239
Faculty of Health Sciences (3)	213	310	291	269	217	260
Faculty of Indigenous Studies (4)	34	42	22	35	20	31
Faculty of Technology and Skills (5)	1,037	1,153	1,158	1,146	1,150	1,129
Total	**1,862**	**2,063**	**2,004**	**2,027**	**1,961**	**1,983**

(1) Includes Broadcasting, Child & Youth Worker, Developmental Services Worker, Early Childhood Education, Educational Assistant, Film Production, General Arts & Science, Law & security Administration, Police Foundations, Recreation & Leisure Services, and Social Services Worker

(2) Includes Accounting, Business Fundamentals, Human resources, Marketing, Computer Programmer Analyst, Corporate Communications, Culinary Management, Hotel Management, Human resource Management, International Business, Multimedia Production, Office Administration, and Tourism & Travel

(3) Includes Diabetes Education, Dental Assisting, Dental Hygiene, Medical Radiation Technology, Paramedic, Personal Support Worker, Practical Nursing, and Pre-Health Sciences

(4) Includes Aboriginal Financial Economic Planning, Aboriginal Law and Advocacy, Aboriginal Transition, and Native Child and Family Worker

(5) Includes Aerospace manufacturing, Architectural Technology, Aviation Manufacturing, Aviation Technician, Civil Engineering technology, Electronics Engineering Technician, Environmental Engineering Technology, Environmental Engineering Technician, Forestry technician, Instrumentation Engineering Technician, Mechanical Engineering Technician, Mechanical Techniques, Power Engineering Technician, Pre-Technology, and Welding Techniques

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Table 5
Confederation College
Labour Pool Analysis for Whalen ICT Project
Forecasted Degrees Awarded By Year/By Program Projected at 0% Growth

Faculty	2008	2009	2010	2011	2012	2013	2014	Average
Faculty of Applied Arts (1)	325	325	325	325	325	325	325	325
Faculty of Business (2)	238	238	238	238	238	238	238	238
Faculty of Health Sciences (3)	260	260	260	260	260	260	260	260
Faculty of Indigenous Studies (4)	30	30	30	30	30	30	30	30
Faculty of Technology and Skills (5)	1,128	1,128	1,128	1,128	1,128	1,128	1,128	1,128
Total	**1,981**	**1,981**	**1,981**	**1,981**	**1,981**	**1,981**	**1,981**	**1,981**

(1) Includes Broadcasting, Child & Youth Worker, Developmental Services Worker, Early Childhood Education, Educational Assistant, Film Production, General Arts & Science, Law & security Administration, Police Foundations, Recreation & Leisure Services, and Social Services Worker

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Table 6
Confederation College
Labour Pool Analysis for Whalen ICT Project
Forecasted Capture Rates for Whalen ICT Tenants

Faculty	Graduate Average	Forecasted Potential Employees (2%)	Forecasted Potential Employees (2%)	Forecasted Potential Employees (4%)	Forecasted Potential Employees (5%)
Faculty of Applied Arts (1)	325	6.50	9.75	13.00	16.25
Faculty of Business (2)	238	4.76	7.14	9.52	11.90
Faculty of Health Sciences (3)	260	5.20	7.80	10.40	13.00
Faculty of Indigenous Studies (4)	30	0.60	0.90	1.20	1.50
Faculty of Technology and Skills (5)	1,128	22.56	33.84	45.12	56.40
Total	**1,981**	**39.62**	**59.43**	**79.24**	**99.05**

(1) Includes Broadcasting, Child & Youth Worker, Developmental Services Worker, Early Childhood Education, Educational Assistant, Film Production, General Arts & Science, Law & security Administration, Police Foundations, Recreation & Leisure Services, and Social Services Worker

(2) Includes Accounting, Business Fundamentals, Human resources, Marketing, Computer Programmer Analyst, Corporate Communications, Culinary Management, Hotel Management, Human resource Management, International Business, Multimedia Production, Office Administration, and Tourism & Travel

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Table 7
Labour Pool Analysis for Whalen ICT Project
Graduate Projection Based on Programs With ICT Specific Skill Sets

	Graduates by Year in Selected Technology Related Programs				5% Increase Year over Year Projected Graduates							
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	AVG
Confederation College												
Broadcasting - Television Production	21	26	31	15	16	17	17	18	19	20	21	**18**
Film Production	40	22	25	46	48	51	53	56	59	62	65	**56**
Multimedia Production	27	21	28	30	32	33	35	36	38	40	42	**37**
Electronics Engineering Technician - Computers	11	15	12	9	9	10	10	11	11	12	13	**11**
Business Administration - Marketing	0	0	0	3	3	3	3	4	4		4	**3**
Business - Marketing	11	17	14	19	20	21	22	23	24	25	27	**23**
Computer Programmer Analyst	20	6	9	2	2	2	2	2	3	3	3	**2**
Animation (Commencing January 2009)	0	0	0	0	0	9	9	10	10	11	11	**9**
Sub-Total	**130**	**107**	**119**	**124**	**130**	**137**	**144**	**151**	**158**	**166**	**174**	**151**
Lakehead University												
Computer Science (B.Sc., H.BSc., B.Sc. 4 Year)	19	10	11	11	12	12	13	13	14	15	15	**13**
Visual Arts (B.A. & H.B.F.A)	10	10	13	24	25	26	28	29	31	32	34	**29**
Bachelor of Engineering - Software	7	12	15	6	6	7	7	7	8	8	8	**7**
Engineering Tech. - Software	5	5	4	0	0	0	0	0	0	0	0	**0**
Sub-Total	**41**	**37**	**43**	**41**	**43**	**45**	**47**	**50**	**52**	**55**	**58**	**50**
Total Graduates	**151**	**138**	**153**	**163**	**171**	**180**	**189**	**198**	**208**	**218**	**229**	**199**

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Table 7 Continued

Capture Rate	5% Increase Method					
Faculty	**Average Graduates**	**10%**	**20%**	**30%**	**40%**	**50%**
Confederation College	151	15.1	30.2	45.3	60.4	75.5
Lakehead University	50	5	10	15	20	25
Total	**199**	**19.9**	**39.8**	**60**	**79.6**	**99.5**

Assumptions:

Based on the selected programs we have assumed a much higher capture rate based on the skill sets.

Analysis:

Given the breakdown of the numbers we can see that there is enough human capital to staff the Whalen's vacant space over the next 5 years. It has been analyzed using very conservative projections and capture rates. Given that the Whalen would require at most 241 people to fully staff the premises over 5 years, we can see that even under the most modest estimates the local post secondary institutions are producing enough talent.

By breaking it down into relevant programs, it illustrates that both Lakehead University and Confederation College are turning out at least 171 students per year over the next 7 years, and 199 per year on average. These are programs that have been deemed to be the best fit based on technical training and skill set.

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Table 8
Labour Pool Analysis for Whalen ICT Project
Whalen Building Forecasted Vacancy

Floor	2008 SQ/FT	2009 SQ/FT	Total
1	0	887	887
2	0	0	0
3	0	6,400	6,400
4	0	6,400	6,400
5	0	6,400	6,400
6	2,939.44	3,255.28	6,194.72
7	3,946.84	0	3,946.84
8	0	0	0
Total	**6,886.28**	**23,342.28**	**30,228.6**

1 Student Per 125 SQ/FT
7.10
0.00
51.20
51.20
51.20
49.56
31.57
0.00
241.83

Analysis & Assumptions:

Based on Industry review, it can be assumed that the Whalen ICT project will require 125 square feet of leasable space per 1 Full Time Equivalent employee. The above table illustrates that at least 3 floors in the Whalen building will be available for prospective ICT tenants. Using the above numbers 241 FTE's can be employed in the Whalen building over a projected 5 year ramp up starting in 2009.

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Table 9
Labour Pool Analysis for Whalen ICT Project
Overall Capture Rates – Forecast #1

Table 9 Average Across All Programs					
School	**Average Graduates**	**2%**	**3%**	**4%**	**5%**
Confederation College	1,981	39.62	59.43	79.24	99.05
Lakehead University	2,181	43.62	65.43	87.24	109
Total	**4,162**	**83.2**	**124.9**	**166.5**	**208.1**

Table 10
Labour Pool Analysis for Whalen ICT Project
Overall Capture Rates – Forecast #2

Table 9 5% Increase Method for Selected Faculties						
School	**Average Graduates**	**10%**	**20%**	**30%**	**40%**	**50%**
Confederation College	151	15.1	30.2	45.3	60.4	75.5
Lakehead University	50	5	10	15	20	25
Total	**199**	**19.9**	**40**	**59.7**	**79.6**	**99.5**

Analysis:

As the above tables illustrate, under the conservative estimates across the faculties for both institutions it can be assumed that the Whalen ICT project could capture anywhere from 83 to 208 students in a given year. Using selected faculties with ICT related component that would require less on the job training, the Whalen ICT project could potentially attract more students. We have used a capture rate much higher to illustrate the potential of attracting these students. The projections indicate a potential of 18-95 student in a given year.