

EXECUTIVE SUMMARY

The purpose of this report is to present analysis and findings with respect to a cost/benefit analysis of the ECBC E-Commerce Initiative. The E-Commerce Initiative provided non-repayable assistance towards the eligible costs of developing or upgrading a website with E-Commerce capabilities. Consideration was given to sustainable entities operating in the tourism industry. Eligible costs included training, hardware, software, consulting fees, and licensing. ECBC may assist up to 50% of the total eligible costs to a maximum of \$7,500.

Canmac's approach to this project involved, 1) primary data collection, 2) cost/benefit model and 3) cost/benefit analysis. The survey methodology included mail-outs with telephone follow-ups. Canmac attempted contact with the clients at least three (3) times, if a response was not forthcoming on the third try the response was recorded as a non-response.

The cost/benefit analysis was conducted following guidelines established by the Federal Treasury Board. Project costs and benefits were identified and categorized and a spreadsheet model was developed to quantify and assess cost/benefit ratios.

The main findings of this report are:

1. ECBC e-commerce clients were asked to rate their satisfaction with respect to the success of the e-commerce project on a scale of 1 to 5, 1 being very dissatisfied and 5 being very satisfied. The average score for this questions was 4.2.
2. Clients were further asked to rate their satisfaction with ECBC's role in assisting with their e-commerce project on the same scale (1-5) as was used in rating the project. The average score regarding ECBC's assistance was a not surprising 5, as all respondents were very satisfied with ECBC's assistance.

3. Over the 2007 to 2011 period, average total sales per client are expected to grow slowly reaching \$1,028,278 by 2011, growth of 20.1% or 4% per year. However revenue from e-commerce as a percent of total sales is expected to grow from 27.11% in 2006 to 44.0% in 2011, growth of 62.3% or 12.5% per year.
4. Every \$1 spent on e-commerce generates \$50.7 in sales.
5. Over the period 2004 to 2011, we estimate on a present value basis, the program generated benefits as follows:
 - \$26.7 million in sales;
 - \$7.9 million in wages; and
 - \$2.2 million in business profit.

Clients estimate that 44.4% of these benefits would not have occurred without ECBC assistance.

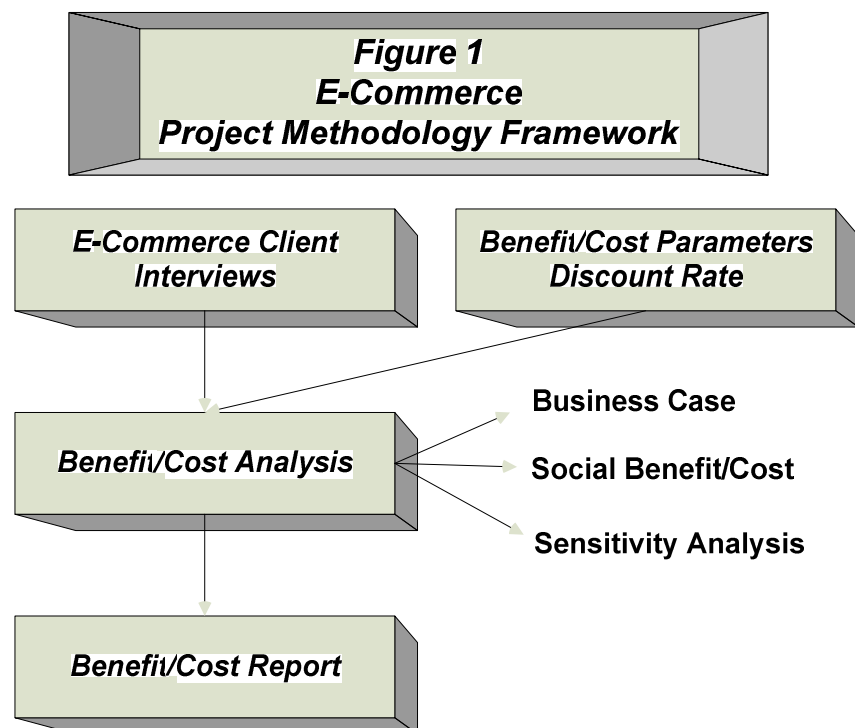
In the new economy, access to the information highway is as important as access to the physical highway is in the old economy. The ECBC e-commerce program has demonstrated that e-commerce is a positive investment for tourism sector participants.

CHAPTER ONE - INTRODUCTION

1.1 PURPOSE

The purpose of this report is to present analysis and findings with respect to a cost/benefit analysis of the ECBC E-Commerce Initiative. The E-Commerce Initiative provided non-repayable assistance towards the eligible costs of developing or upgrading a website with E-Commerce capabilities. Consideration was given to sustainable entities operating in the tourism industry. Eligible costs included training, hardware, software, consulting fees, and licensing. ECBC may assist up to 50% of the total eligible costs to a maximum of \$7,500.

Canmac proposed to conduct a multiple regression analysis of the client data to isolate the distinguishing features of the client base that predicts the size of the cost/benefit ratios (size, market, etc.). The output from this activity is a set of tables that presents the evidence of the cost/benefit analysis.



1.2 METHODOLOGY OVERVIEW

Canmac's approach to this project involved, 1) primary data collection, 2) cost/benefit model and 3) cost/benefit analysis. Figure 1 provides a methodology schematic. Data collection was undertaken on the total population of clients thirty-six (36). The survey methodology included mail-outs with telephone follow-ups. Canmac attempted contact with the clients at least three (3) times, if a response was not forthcoming on the third try the response was recorded as a non-response.

The cost/benefit analysis was conducted following guidelines established by the Federal Treasury Board. Project costs and benefits were identified and categorized and a spreadsheet model was developed to quantify and assess cost/benefit ratios.

CHAPTER TWO - ANALYSIS

2.1 INTRODUCTION

This chapter sets out our cost/benefit analysis. We first provide a statistical overview of the client base. This is followed by the cost/benefit analysis.

2.2 CLIENT OVERVIEW

The ECBC E-Commerce Initiative began in 2004 and as of October, 2006 had a client base of thirty-six (36) applicants. The client base is primarily focussed in the accommodation sector:

- 70% of all clients were categorized as in the accommodation sector.
- 30% of all clients were in other tourism related activities.

Of the thirty-six (36) clients, thirty-four (34) were considered commercial clients for which a total of eleven (11) surveys were collected representing over thirty-two percent (32.4%) of all commercial clients. Of these surveys two (2) lacked actual sales data required for the benefit-cost analysis resulting in a useable survey sample of nine (9) or over twenty-six percent (26.5%) of all commercial clients. Where available data for the two (2) surveys excluded from the benefit-cost analysis was included in survey sample statistics.

The average sales per client was \$856,022 in 2006. Over the 2007 to 2011 period, average total sales per client are expected to grow slowly reaching \$1,028,278 by 2011, growth of 20.1% or 4% per year. However revenue from e-commerce as a percent of total sales is expected to grow from 27.11% in 2006 to 44.0% in 2011, growth of 62.3% or 12.5% per year.

E-commerce activity is characterized by website hits and website transactions. In 2006, there were 45,000 website hits on average per client and 10,013 transactions per client. By 2011, clients project that website hits will average 131,758 and transactions will average 17,947. This represents growth of 192.8% or 38.6% annual growth in website hits and 79.2% or 15.8% annual growth in web transactions.

Of those firms surveyed over forty-two percent (42.9%) maintained the site using in-house staff, the remaining fifty-seven percent (57.1%) maintained their site using a combination of in-house staff and a third party provider for which a fee is paid for each transaction.

ECBC e-commerce clients were asked to rate their satisfaction with respect to the success of the e-commerce project on a scale of 1 to 5, 1 being very dissatisfied and 5 being very satisfied. The average score for this question was 4.2. Table 2.1 details the responses to client satisfaction.

Table 2.1: Client Satisfaction ECBC E-Commerce Program	
Satisfaction Level	Response %
Very dissatisfied	0.0%
Dissatisfied	11.1%
Neither dissatisfied or satisfied	0.0%
Satisfied	44.4%
Very satisfied	44.1%
Total	100.0%
<i>Source: Canmac/D. White Associates, ECBC E-Commerce Client Survey</i>	

Clients were further asked to rate their satisfaction with ECBC's role in assisting with their e-commerce project on the same scale (1-5) as was used in rating the project. The average score regarding ECBC's assistance was a not surprising 5, as all respondents were very satisfied with ECBC's assistance.

When asked to specify the degree of incrementality associated with ECBC's contribution to the project, over forty-four percent (44.4%) stated the project would not have proceeded without ECBC assistance. The remaining over fifty-five percent (55.6%) stated that the project would have proceeded but not as quickly or would the project be of a similar scope.

The final survey questions not dealing with sales, costs, website hits and transactions queried clients as to 1) what other sectors (other than Tourism related) would find this program useful, and 2) general comments?

In general, survey respondents felt that 'any business' that would like to use the internet for marketing and sales would benefit from a similar program. Responses to this and the general comment question can be found in the survey database in Appendix A.

2.3 BENEFIT-COST ASSESSMENT

The benefit-cost model examines the e-commerce program over the 2004 to 2011 period. The 2004 to 2006 period used actual data as supplied by the client. The 2007 to 2011 period used projected data as supplied by the client.

Benefits of the e-commerce program are defined as the additional sales revenue generated by the e-commerce program. Costs are defined as the total costs (public and private) required to set-up and maintain the program. Table 2.2 provides the total estimated sales and costs associated with the e-commerce program over the 2004 to 2006 period.

Year	Estimated Setup Costs	Estimated Maintain Costs	Estimated E-Commerce Sales
2004	\$53,000	\$0.00	\$0.00
2005	\$6,200	\$14,500	\$614,633
2006	\$24,000	\$15,325	\$1,026,922
Total	\$83,200	\$28,825	\$1,641,555

Source: Canmac/D. White Associates, ECBC E-Commerce Client Survey

ECBC clients were asked to project five (5) years of sales growth and the percentage of those sales that would originate from e-commerce transactions. This data, when combined with the actual data provided for the years 2004-2005 (Table 2.2) provided an eight (8) year time period on which to perform the benefit-cost assessment. The complete eight (8) year costs and sales benefits are provided in Table 2.3.

Year	Estimated Setup Cost	Estimated Maintenance Cost	Estimated Total Cost	Estimated E-commerce Sales
2004	\$53,000	\$0.00	\$53,000	\$0.00
2005	\$6,200	\$14,500	\$20,700	\$614,633
2006	\$24,000	\$15,325	\$39,325	\$1,026,922
2007	\$0.00	\$15,625	\$15,625	\$1,136,040
2008	\$0.00	\$15,625	\$15,625	\$1,594,330
2009	\$0.00	\$15,625	\$15,625	\$2,075,970
2010	\$0.00	\$15,625	\$15,625	\$2,692,796
2011	\$0.00	\$15,625	\$15,625	\$3,131,450
Total	\$83,200	\$107,950	\$191,150	\$12,272,141

Source: Canmac/D. White Associates, ECBC E-Commerce Client Survey

In total setup costs equals \$83,200 with maintenance costs totalling \$107,950 for a total cost of \$191,150 over the 2004 to 2011 period. Sales benefits are projected to reach over \$3.1 million by 2011 with total sales benefits equalling \$12.3 million over the 2004 to 2011 period.

2.4 PRESENT VALUE – SURVEYED CLIENTS

To put the surveyed cost and sales benefits in today's dollars we applied a discount rate of ten percent (10.0%) to the cost and sales benefits streams. This exercise resulted in a net present value benefit to cost ratio of 50.7:1 as is shown in Table 2.4.

Table 2.4			
Present Value Costs and Benefits			
Survey ECBC E-Commerce Clients			
Year	Costs	Sales Benefits	Discount %
			10%
2004	\$53,000.00	\$0.00	
2005	\$20,700.00	\$614,633.00	
2006	\$39,325.00	\$1,026,922.00	
2007	\$15,625.00	\$1,136,040.00	
2008	\$15,625.00	\$1,594,330.00	
2009	\$15,625.00	\$2,075,970.00	
2010	\$15,625.00	\$2,692,796.00	
2011	\$15,625.00	\$3,131,450.00	
Total	\$191,150.00	\$12,272,141.00	
			Ratio
NPV	\$139,335.87	\$7,059,892.56	50.67 : 1
<i>Source: Canmac Economics Ltd.</i>			

Using data from Financial and Taxation Statistics for Enterprises (Statistics Canada, 2006) we estimate profits as well as wages, salaries and benefits (WSS) using the average profit margin (8.27%) and average WSS (29.5%) as a percent of sales for Canadian accommodation services between 2000 and 2004.

Over the 2004 to 2011 period profits are estimated at \$1.0 million with wages, salaries and benefits estimated to be \$3.6 million for surveyed firms. These wages and benefits support an estimated 119.4 person years of employment with a two percent (2%) escalating average annual wage and benefit rate of \$27,500. In present value terms using the same ten percent (10%) discount rate, profits are estimated to be \$0.58 million with wages and benefits estimated to be \$2.1 million.

Table 2.5 presents the profit, wages and benefits with associated employment estimates for surveyed ECBC e-commerce clients.

Year	Estimated Wage Salaries & Benefits	Estimated Profit Benefit	Estimated Employment
2004	\$0.00	\$0.00	0.0
2005	\$181,316.74	\$50,830.15	6.5
2006	\$302,941.99	\$84,926.45	10.6
2007	\$335,131.80	\$93,950.51	11.5
2008	\$470,327.35	\$131,851.09	15.8
2009	\$612,411.15	\$171,682.72	20.2
2010	\$794,374.82	\$222,694.23	25.7
2011	\$923,777.75	\$258,970.92	29.2
Total	\$3,620,281.60	\$1,014,906.06	119.4
NPV	\$2,082,668.31	\$583,853.11	

Source: Canmac Economics Ltd.

2.5 PRESENT VALUE – ALL COMMERCIAL CLIENTS

The survey sample represents 26.5% of all tourism related commercial clients. When we expand the sample to represent all clients we see that total estimated costs, (setup plus maintenance) are \$722,122 and estimates sales benefits are \$46,361,422 over the 2004 to 2011 period.

Using the same ten percent (10%) discount rate we estimate net present value of costs at \$526,380 and sales benefits of \$26,670,705, maintaining the sales benefit to cost ratio of 51 to 1.

When these total estimated costs and sales are used to estimate profit benefits, wages, salaries and benefits and associated employment we estimate total profits at \$3,834,090, wages, salaries and benefits at \$13,676,619 supporting 451.1 person years of employment over the 2004 to 2011 period.

From a net present value perspective using the same ten percent (10%) discount rate, estimated profits have a present value of \$2,205,667 while estimated wages, salaries and benefits have a present value of \$7,867,858. Table 2.6 presents the estimated total client costs, sales benefits, profits, wages, salaries and benefits and associated employment.

Table 2.6					
Total Estimated Benefits and Costs					
ECBC Tourism Related E-Commerce Program					
2004 to 2006					
	Estimated Cost	Estimated Sales	Estimated Profit	Estimated Wages, Salaries & Benefits	Estimated Employment
Total	\$722,122.22	\$43,361,421.56	\$3,834,089.56	\$13,676,619.36	451.1
NPV@10%	\$526,379.95	\$26,670,705.24	\$2,205,667.32	\$7,867,858.04	
<i>Source: Canmac Economics Ltd.</i>					

CHAPTER THREE - CONCLUSIONS

3.1 SUMMARY AND CONCLUSIONS

The ECBC E-Commerce Initiative represents a proven success story in demonstrating the economic benefits of tourism facilities adopting e-commerce. We have found that every \$1 spent on e-commerce generates \$50.7 in sales.

Over the period 2004 – 2011, we estimate on a present value basis, the program generated benefits as follows:

- \$26.7 million in sales,
- \$7.9 million in wages, and
- \$2.2 million in business profit.

Clients estimate that 44.4% of these benefits would not have occurred without ECBC assistance.

In the new economy, access to the information highway is as important as access to the physical highway is in the old economy. The ECBC e-commerce program has demonstrated that e-commerce is a positive investment for tourism sector participants.

APPENDIX A

E-COMMERCE DATABASE

(CONFIDENTIAL – NOT TO BE RELEASED TO PUBLIC)

APPENDIX B

SURVEY INSTRUMENT

SURVEY # _____

EC. PROJECT #: _____

ADMIN PROJECT #: _____

**SURVEY OF CLIENTS
ENTERPRISE CAPE BRETON CORPORATION
E-COMMERCE INITIATIVE**

NAME OF ORGANIZATION:
_____ADDRESS:

CITY: _____

PROVINCE: _____ POSTAL CODE: _____

RESPONDENT: _____

PHONE # _____

(902) _____

THE PURPOSE OF THIS SURVEY:

CANMAC ECONOMICS LTD. IS CONDUCTING THIS SURVEY ON BEHALF OF ENTERPRISE CAPE BRETON CORPORATION (ECBC) TO GATHER INFORMATION ON THE IMPACT OF THE TOURISM INDUSTRY E-COMMERCE INITIATIVE.

THE DATA YOU REPORT IS CONFIDENTIAL:

CANMAC ECONOMICS LTD. WILL NOT PUBLISH OR RELEASE ANY STATISTICS THAT REVEAL INFORMATION OBTAINED FROM THIS SURVEY RELATING TO ANY IDENTIFIABLE ORGANIZATION. THE DATA REPORTED ON THE QUESTIONNAIRE WILL BE TREATED IN STRICT CONFIDENCE, USED FOR STATISTICAL PURPOSES AND RELEASED IN AGGREGATE FORM ONLY.

YOU PARTICIPATION IS IMPORTANT:

PARTICIPATION IN THIS SURVEY IS VOLUNTARY. HOWEVER, YOUR COOPERATION IS ESSENTIAL TO THE ACCURACY OF THE INFORMATION COLLECTED. THE INFORMATION YOU PROVIDE WILL HELP SHAPE CURRENT AND FUTURE PROGRAMS.

IF YOU REQUIRE ASSISTANCE IN THE COMPLETION OF THE QUESTIONNAIRE OR HAVE ANY QUESTIONS REGARDING THE SURVEY, PLEASE CONTACT:

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E-mail: danwhite@syd.eastlink.ca

1. Business Activity

1.1 Please state the level of your sales revenues over the last three (3) years:

Year	Sales
2006(estimated)	\$
2005	\$
2004	\$

1.2 Please state the percent of your sales revenues that came strictly from the e-commerce activity over the last three (3) years.

Year	Sales
2006 (estimated)	%
2005	%
2004	%

2. Project Activity

2.1 Please specify the following activity performance for your e-commerce activity.

<u>Activity</u>	<u>2006</u> (estimated)	<u>2005</u>
Number of transactions completed on-line.	_____	_____
Number of web site hits.	_____	_____

2.2 Please check the E-Commerce web service that most accurately describes your web-site:

1. ? Our website has an on-line reservation system and E-commerce capability maintained by in-house staff.
2. ? Our web-site uses an on-line reservation system maintained by in-house staff and a third party provider for E-commerce capability for which we pay a fee for each transaction.
3. ? Other (please explain) _____

Please specify the expected performance for your e-commerce activity over the next five (5) years.

Year	Web Site Hits	Transactions
------	---------------	--------------

		Completed
2007		
2008		
2009		
2010		
2011		

2.4 Please specify the total set-up costs in developing your e-commerce activity. \$ _____

2.5 Please specify your annual on-going costs to maintain the e-commerce activity. \$ _____

3. Future Projections

Please state your expected total sales growth over the next five (5) years and the expected percent total sales that will be derived from e-commerce activity.

Year	Total Sales	% of Sales from E-Commerce
2007	\$ _____	_____ %
2008	\$ _____	_____ %
2009	\$ _____	_____ %
2010	\$ _____	_____ %
2011	\$ _____	_____ %

4. Client Satisfaction

4.1 Please state the level of satisfaction you have with the success of the E-Commerce project by ranking your satisfaction on a scale of 1 to 5 as follows.

Very Dissatisfied	Dissatisfied	Neither Dissatisfied or Satisfied	Satisfied	Very Satisfied
1	2	3	4	5

4.2 Please state your level of satisfaction with ECBC's role in assisting with your e-commerce project.

Very Dissatisfied	Dissatisfied	Neither Dissatisfied or Satisfied	Satisfied	Very Satisfied
1	2	3	4	5

4.3 Please state the degree of incrementality associated with ECBC's contribution by selecting one of the following:

- 9 Project would not have proceeded without ECBC assistance.
- 9 Project would have proceeded but not as quickly nor of the same scope.
- 9 Project would have proceeded without ECBC during the same time frame and of the same scope.

4.4 In your opinion, what other sectors would find this type of program useful?

4.5 Do you have any final comments?

THANK YOU FOR YOUR COOPERATION

REFERENCES

- Statistics Canada (2006). **Financial and Taxation Statistics for Enterprises.** Catalogue no. 61-219-XIE, Tables 69-1 to 69-3 .