A STRATEGIC ANALYSIS FOR COMPETING IN THE CANADIAN CONSUMER WIRELESS TELECOMMUNICATIONS MARKET

by

Josef Alexander Pach
M.Sc. (Earth Sciences), University of Waterloo, 1994
B.Sc. Eng. (Geological), University of New Brunswick, 1989

PROJECT SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF BUSINESS ADMINISTRATION

In the
Faculty
of
Business Administration

Executive MBA

© Josef A. Pach 2006

SIMON FRASER UNIVERSITY

Summer 2006

All rights reserved. This work may not be reproduced in whole or in part,
by photocopy or other means, without permission of the author.

APPROVAL

Name: **Josef A. Pach**

Degree: **Master of Business Administration**

Title of Project: **A STRATEGIC ANALYSIS FOR COMPETING IN THE CANADIAN CONSUMER WIRELESS TELECOMMUNICATIONS MARKET**

Supervisory Committee:

Dr. Neil Abramson
Senior Supervisor
Associate Professor of Strategy

Dr. Ed Bukszar
Second Reader
Associate Professor

Date Approved: August 11, 2006

SIMON FRASER UNIVERSITY library

DECLARATION OF PARTIAL COPYRIGHT LICENCE

The author, whose copyright is declared on the title page of this work, has granted to Simon Fraser University the right to lend this thesis, project or extended essay to users of the Simon Fraser University Library, and to make partial or single copies only for such users or in response to a request from the library of any other university, or other educational institution, on its own behalf or for one of its users.

The author has further granted permission to Simon Fraser University to keep or make a digital copy for use in its circulating collection, and, without changing the content, to translate the thesis/project or extended essays, if technically possible, to any medium or format for the purpose of preservation of the digital work.

The author has further agreed that permission for multiple copying of this work for scholarly purposes may be granted by either the author or the Dean of Graduate Studies.

It is understood that copying or publication of this work for financial gain shall not be allowed without the author's written permission.

Permission for public performance, or limited permission for private scholarly use, of any multimedia materials forming part of this work, may have been granted by the author. This information may be found on the separately catalogued multimedia material and in the signed Partial Copyright Licence.

The original Partial Copyright Licence attesting to these terms, and signed by this author, may be found in the original bound copy of this work, retained in the Simon Fraser University Archive.

Simon Fraser University Library
Burnaby, BC, Canada

Summer 2006

DISCLAIMER

The statements, analyses and opinions made in the following document are solely those of the author and do not represent those of TELUS Communications Company, its employees, shareholders, customers or suppliers.

This document contains statements about expected future events and financial operating results of TELUS that are forward-looking. By their nature, forward-looking statements require the writer to make assumptions and are subject to inherent risks and uncertainties. There is significant risk that forward-looking statements will not prove to be accurate. Readers are cautioned not to place undue reliance on forward-looking statements as a number of factors could cause actual future results and events to differ materially from that expressed in the forward-looking statements. Accordingly, this document is subject to the disclaimer and qualified in its entirety by the assumptions, qualifications and risk factors referred to in the discussion and analysis herein. All financial information is reported in Canadian dollars unless otherwise specified.

ABSTRACT

The purpose of this study is to analyze competition in the Canadian wireless consumer market and suggest strategies for TELUS Communications Company (TELUS) to compete against its main rivals, Bell Mobility and Rogers Wireless. While TELUS outperforms its rivals in a number of areas, it lags behind them in terms of total subscribers and revenue, particularly in ON and QC.

Low wireless penetration rates in Canada suggest that there is still room for significant subscriber and revenue growth. Furthermore, technological change has resulted in convergence of wireless data, voice and IP capabilities. Each of the three rivals offers converged, high-speed wireless applications, and there is little to differentiate one from the other.

This study recommends that TELUS consider significantly increasing its sales presence in ON and QC over a three-year period, with a marketing focus on its Spark entertainment bundle, to build its customer base and increase revenue generation.

Keywords: TELUS; wireless; telecommunications; consumer

DEDICATION

To my most patient and loving wife Erin and our new son Jamie Alexander. You are the apples of my eye.

ACKNOWLEDGEMENTS

I would like to gratefully acknowledge the financial support of TELUS Communications Company and specifically Mr. Kasey Reese (VP Risk Management and Chief Internal Auditor) and Mr. Bob McFarlane (EVP Finance and CFO). I would also like to thank Dr. Neil Abramson and Dr. Ed Bukszar for their review and insightful comments. In addition, I would like to thank the SFU EMBA administration and staff, my fellow cohort members from EMBA 2004 and, last, but by no means least, my cherished team mates Saf, Cheryl and Jonathan. You were a constant source of inspiration, good humour and support throughout this program and I look forward to life-long friendships with each of you.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

GLOSSARY

TERM	DEFINITION
1G, 2G, 3G	First, second or third generation wireless telecommunications technology. 2.75G implies not quite 3G.
ARPU	Average wireless revenue per user (as measured monthly).
CAGR	Cumulative annual growth rate.
CDMA	Code Division Multiple Access, the cellular standard utilized by TELUS and Bell.
CHRA	Canadian Hot-spot Roaming Alliance – allows members to use each other's hot-spots to access their own networks.
Churn	Percentage of customer base that switches to the competition.
COA	Cost of acquisition of customers. This includes the total of handset subsidies, commissions and advertising and promotion expenses related to the initial acquisition of a customer during a given period, excluding the cost of retaining existing customers.
CRTC	Canadian Radio-television and Telecommunications Commission.
CSR	Corporate social responsibility.
EBITDA	Earnings before interest, tax, depreciation and amortization.
EDGE	Enhanced data GSM environment. 2.75G GSM high speed wireless data technology used by Rogers.
ELT	Executive leadership team.
EVDO	Evolution Data Optimized. 2.75G CDMA2000 technology used by Bell and TELUS.
GSM	Global Systems Mobile. European/world cellular standard utilized by Rogers.
HSDPA	High-speed down-link packet access. 3G wireless high speed technology to be used in the future.
IP	Internet Protocol.
IRR	Internal rate of return. This is the discount rate at which the NPV of a series of cash flows equals 0.
ISV	Independent Software Vendor.
KSF	Key success factor as identified in Porter's Five Forces and value chain analyses.

TERM	DEFINITION
MVNO	Mobile virtual network operator. A firm who uses others' network equipment to operate a virtual wireless network (e.g. Virgin Mobile).
NGN	Next generation network. Refers to the network switching equipment to which data, voice and IP technologies will converge.
NPV	Net present value of a series of cash flows based on a discount rate (usually the opportunity cost of capital).
PCS	Personal communications service. It represents digital wireless voice, data and text messaging services, allocated at the 1.9 GHz frequency range in Canada and the US.
PPO	Personal performance objective. The tool used by TELUS to measure individual performance.
Push-to-Talk (PTT)	Cellular phone with person to person walkie-talkie capability.
SAP	European software enterprise SAP AG – the largest business application and enterprise resource planning solution software provider in terms of revenue.
VoIP	Voice over internet protocol telephony.
Wi-Fi	Wireless Fidelity – high bandwidth data standard, generally used for wireless local area networks utilizing unlicensed spectrum.
WiMAX	Worldwide interoperability for microwave access – an emerging high bandwidth wireless standard expected to be used for wider scale deployment than Wi-Fi, also expected to utilize licensed spectrum.
WNP	Wireless number portability. Due in Canada sometime in 2007, it will allow users to switch between carriers and keep their unique cell number.

1 OVERVIEW

The following is a strategic analysis of competition in the Canadian consumer wireless telecommunications market. Nationally, the market is dominated by Rogers Wireless Inc. (Rogers), Bell Mobility Inc. (Bell) and TELUS Communications Company (TELUS). The market has shown significant growth over the last 5 years, both in terms of revenue and subscribers. However, Canada lags behind the rest of the developed world in terms of subscriber penetration, despite the fact that service is available to almost the entire population. The three firms are locked in a battle to win new customers while, at the same time, protecting their existing ones from the competition. The impending advent of wireless number portability (WNP) and continuous technological change serve to complicate competition further. This paper will analyze the competitive dynamics of the wireless consumer market, identify key success factors for competing, suggest strategic alternative(s) for increasing market share and evaluate them in the context of TELUS' internal capabilities.

1.1 TELUS Communications Company

1.1.1 Background

Headquartered in Vancouver, British Columbia, TELUS is the culmination of the late 2005 merger of TELUS Communications Inc. (TCI) and TELUS Mobility, which had historically represented the traditional wire-line and wireless communications segments, respectively. TELUS' origins stem from a series of mergers and acquisitions starting with the combination of Edmonton Telephone and Alberta General Telephone in 1997 to form TCI. This was followed by the 1999 merger of TCI and BC Tel under the names TCI and TELUS Mobility. Subsequent to

the merger of AB and BC telephone firms, TELUS Mobility acquired Clearnet Communications Inc. in 2000 to become a national provider of wireless telecommunications. Shortly thereafter, TCI acquired controlling interest in Quebec Tel and later changed the name to TELUS Quebec. U.S. firm Verizon Communications held a roughly 20 percent stake in TCI (which it inherited as part of the merger between GTE and Bell Atlantic) until 2004 when it sold its equity holdings back into the open market.

Currently, TELUS is Canada's second largest telecommunications firm. Comprising over 29,000 employees, in 2005 TELUS generated over $8 Billion (B) in revenue from its wire-line and wireless operations combined. As a national provider of wireless communications, TELUS also offers voice, data and Internet protocol (IP) services in British Columbia, Alberta, Ontario and Quebec in both the residential consumer and business enterprise markets. Of the $8.1B of revenue generated by TELUS in 2005, $3.3B (or 41 percent) was generated from its wireless operations. The wireless revenues were split roughly 55 percent to 45 percent between the consumer and business markets in 2005. It is TELUS' wireless capabilities, and its ability to use them to compete in the Canadian consumer wireless telecommunications market, that are the focus of this paper.

1.1.2 Services Offered by TELUS

TELUS owns and operates a wireless telecommunication network with sufficient cellular coverage to reach over 93 percent of all Canadians.[1] This is comparable to Rogers and Bell. The network was developed over a number of years through capital expenditure, construction and the acquisition of Clearnet Communications and QuebecTel. Gaps in TELUS' network are

[1] Gartner Research, "Mobile and Wireless Services and Service Providers in Canada, 2006 Update" (2006): 6.

supplemented by a reciprocating roaming agreement with Bell that allows the use of both networks.

TELUS operates a Personal Communications Services (PCS) digital cellular network that works with code division multiple access (CDMA) technology. Essentially, signals emanating either from a cell base station antenna or a PCS handset are digitized and then sent out in small packets over a number of discrete frequencies in the available spectrum. Global positioning satellite (GPS) signals are attached to each packet of information to allow them to be re-assembled at the receiving antenna or handset. CDMA networks send signals over frequencies ranging from about 1850 MHz to 1990 MHz. This is considered second generation (2G) technology (analogue phones were considered first generation (1G); TELUS also supports this technology). PCS signals are linked to wire-line telecommunication networks via antennae affixed to locations connected directly to the wire-line grid. Two-way text messaging is also enabled by this technology.

TELUS operates a parallel wireless data transmission network (known as "1X" – also considered to be 2G) that allows subscribers with an "air card" installed in their laptop personal computer (PC) or a handheld email/IP device (such as a Blackberry™) to access the internet anywhere that a cellular signal is available. Data transfer rates are equivalent to those of dial-up wire line IP access. TELUS also owns and operates wireless data networks (i.e. wireless internet such as Wi-Fi "hot spots") at over 200 locations across Canada (airport terminals, business districts, etc.). This expands to over 500 if one considers TELUS' membership in the Canadian Hotspot Roaming Alliance (CHRA) which provides access to Bell and Rogers owned hotspots.[2] These have limited coverage and allow subscribers to access the internet with a PC equipped with a wireless card at speeds equivalent to high speed internet access in the home using a wireless router.

[2] NBI Michael Sones Associates Inc., "Canadian Wi-Fi/WiMAX Market Report, 2005 Edition" (2005): 1.

Within the last year or so, TELUS has begun to upgrade its 1X network to 2.75G. This is referred to as Evolution Data Optimized or EVDO technology. It allows data transfer rates approximately five times greater than the 1X network, or equivalent to wire line high speed internet access in the home. The development of this technology has allowed the convergence of wireless PCS and significant IP data transfer into one handheld device such as the RIM Blackberry™ or the Palm Treo™, allowing users to easily view large-sized files sent as attachments to email. In addition, it has resulted in the development of phone handsets capable of downloading and playing music in MP3 format as well as the introduction of wireless television services. Furthermore, laptop users with "air card" functionality will be able to access high speed internet anywhere their cell phone will work. The collection of wireless points, or nodes, of communication is referred to in the industry as a "mesh". Essentially, it is analogous to a wire-line wide area network, but without the wires.

The transfer of data on these wireless networks is dependant upon TELUS' existing wire-line network in its incumbent areas (BC, AB and eastern QC) and on the wire line networks of competitors in non-incumbent areas such as Ontario and most of Quebec. It is these wire line networks that ultimately allow access to the world-wide-web and provide connectivity across the country and across international boundaries. As part of its data and wire line operations, TELUS provides high speed IP services on traditional copper and fibre optic phone lines. IP services are routed through TELUS' central offices on equipment located adjacent to traditional telecommunications gear.

TELUS also participates in some application development as part of its operations activities. This includes the development of wireless applications such as TV for consumers and field service applications for business. TELUS typically partners with small, niche independent software vendors (ISVs) to develop specialized applications for these customers and includes them as a specialized bundle with the hardware necessary to provide the service.

1.1.3 TELUS' Current Wireless Strategy

TELUS operates under a set of strategic imperatives that have been applied across the enterprise. The goal has been to attack the overall Canadian telecommunications market as one unified company, hence the wireless/wire-line merger at the end of 2005. TELUS has sought to differentiate itself from its rivals in the competitive wireless segment rather than competing on the basis of cost. They have sought to attract and keep the high-revenue consumer and TELUS attempts to differentiate by using its existing IP platform (a series of internet data centres across the country connected by a nation-wide and diversified fibre-optic network) to leverage national capabilities across data, IP, voice and wireless segments.

The main focus is TELUS' ability to integrate or "bundle" services from its various operations (e.g. high-speed wireless data transfer such as wireless TV, voice services, text messaging, etc.) in order to develop value-added services for which customers are willing to pay. In addition, TELUS' strategy over the last five or more years has been to focus on growth in the wireless segment by adding customers and keeping them with a high-quality, reliable network on which to offer these previously mentioned integrated solutions.

While TELUS' overall strategy has been one of differentiation in the wireless market, certain product strategies have been more aligned with a cost-based approach in that the firm historically has been a rapid follower with regards to some technologies and services (e.g. wireless video). On the other hand, TELUS has been first to market with other capabilities such as push-to-talk (direct, person to person communication similar to a walkie-talkie) technology (acquired with Clearnet). Further indications of a differentiated strategy include:

- a relatively decentralized organizational structure (even considering the recent merger of wireless and wire-line companies);
- a move towards more economies of scope and flexibility through the integration of capabilities after a period of scale growth to establish a national presence;

- a shift towards more highly-skilled employees who are capable of multi-tasking across technologies;
- a pull marketing strategy aimed at creating customer demand for products; and
- a move towards a more conservative capital structure after incurring significant debt in 2000 with the purchase of Clearnet.

TELUS' differentiated strategic approach includes elements of a cost-based strategy, given that premium prices have proven difficult to sustain in the Canadian consumer wireless telecommunications market. As such it has been critical to maintain cost efficiencies. This strategy has been successful for TELUS in general, as shown in the next section, as they have consistently outperformed their rivals in terms of monthly average revenue per unit (ARPU). However, TELUS currently lags behind its rivals in terms of subscribers, limiting the amount of new revenue that could be generated by the introduction of new services.

1.2 The Canadian Wireless Telecommunications Industry

The wireless segment of the Canadian telecommunications market comprises a concentrated mix of competitors including: Bell (including Aliant), TELUS, Rogers and others including MTS-Allstream and SaskTel. A snapshot of 2005 year-end statistics is provided in Table 1-1. In addition to ARPU, cost of customer acquisition (COA) and the percentage of subscriber base that switches to the competition (known as "churn") are also summarized. Relative percentages of market share based on subscribers (Figure 1-1) and revenue (Figure 1-2) are also provided:

Table 1-1 2005 Canadian Wireless Market Statistics

Carrier	Subscribers (M)[Note1]	Churn (%)[Note 2]	COA ($)[Note 2]	ARPU ($)[Note 2]	Revenue ($M)[Note 3]
Bell	5.44	1.5	400	51	3,329
Rogers	6.17	2.0	395	52	3,612
TELUS	4.52	1.4	375	61	3,309
Others	0.53	1.45	380	55	350
Totals	16.66				$10,600

Notes to Table 1-1:

1) Total Subscribers from Gartner Research, "Mobile and Wireless Services and Service Providers in Canada, 2006 Update", (2006): 4-7.

2) Churn, COA and monthly ARPU from NBI Michael Sones Associates Inc., "Canadian Mobile Wireless Communications Services Market Report, 2005 Edition", (2005): 94-95.

3) TELUS revenue from *TELUS Communications Company 2005 Financial Review*, Rogers revenue from *Rogers Communications Inc. 2005 Annual Report*, Bell and Other revenues estimated based on data from notes 1 and 2.

Figure 1-1 Canadian Wireless Market Share by Subscriber 2005

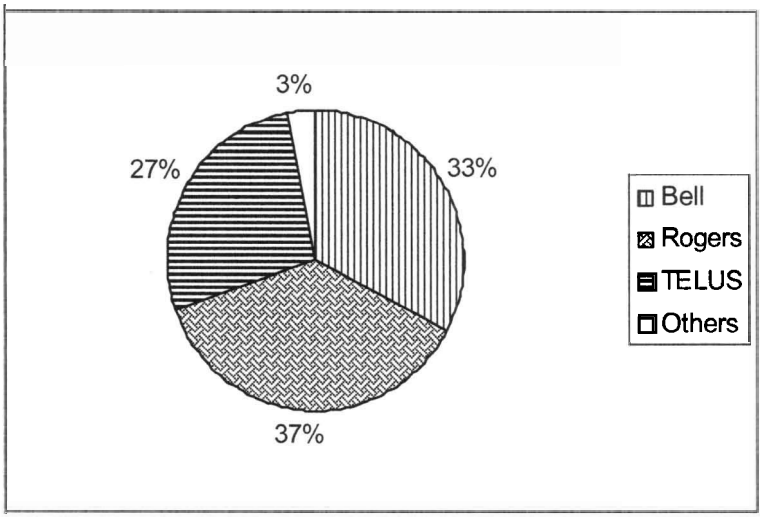
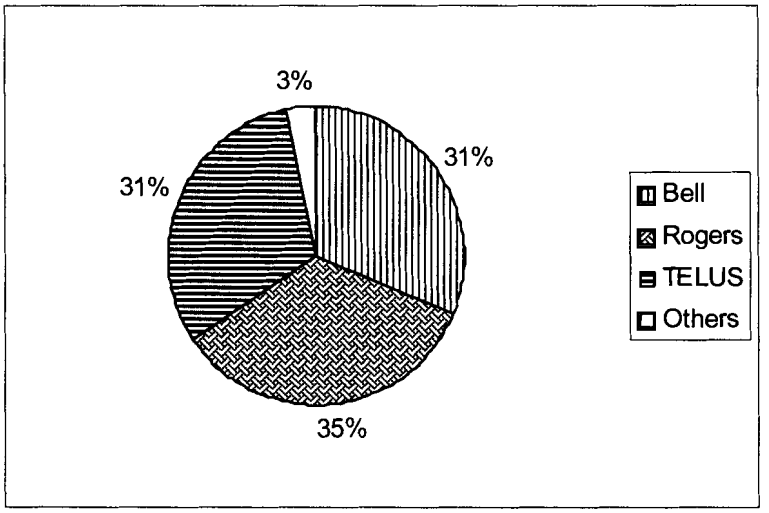


Figure 1-2 Canadian Wireless Market Share by Revenue 2005



The three main wireless firms in Canada service both the consumer and business markets. The breakdown of consumer to business, on the basis of revenue, ranges from 55 percent: 45 percent to 60 percent: 40 percent. There has been steady revenue growth in the Canadian wireless industry over the past few years, fuelled primarily by an increase in subscriber base. Figure 1-3and Figure 1-4show these trends for the three main wireless providers.

Total revenue for the Canadian wireless industry is estimated at just over $10.5 B for 2005. In addition, the Canadian wireless industry is characterized by relatively low user penetration in comparison to other countries. At the end of 2004, wireless penetration in Canada was 47 percent. This is compared to 64 percent penetration in the U.S., 84 percent in the U.K. and 91 percent in Italy (all numbers year end 2004).[3] The current wireless penetration rate is at or about 50 percent in Canada and penetration is expected to exceed 60percent by the end of 2009.[4] Clearly, this indicates that there is room for revenue growth in the Canadian market as there is an untapped customer base. Based on historic trends in the number of users, it is estimated that the

[3] Lawrence Surtees, Barbara Hall and Tom Olvet, "IDC Market Analysis, Wireless Wars 2: Canadian Wireless Forecast and Analysis, 2005 – 2009", (2005): 3.
[4] Ibid: 3.

number of wireless customers will meet or exceed that of the wire-line segment of the Canadian market by the beginning of 2007.[5]

Figure 1-3 Wireless Revenues 2001-2005[6]

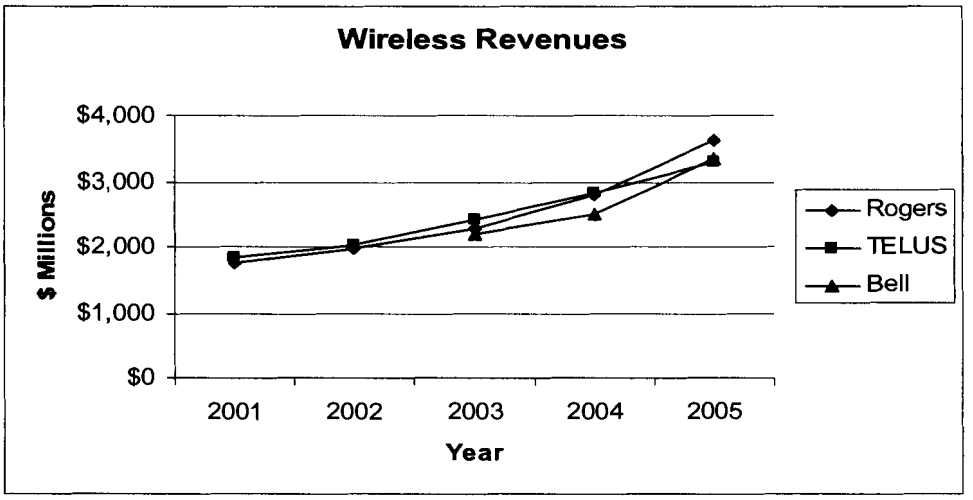
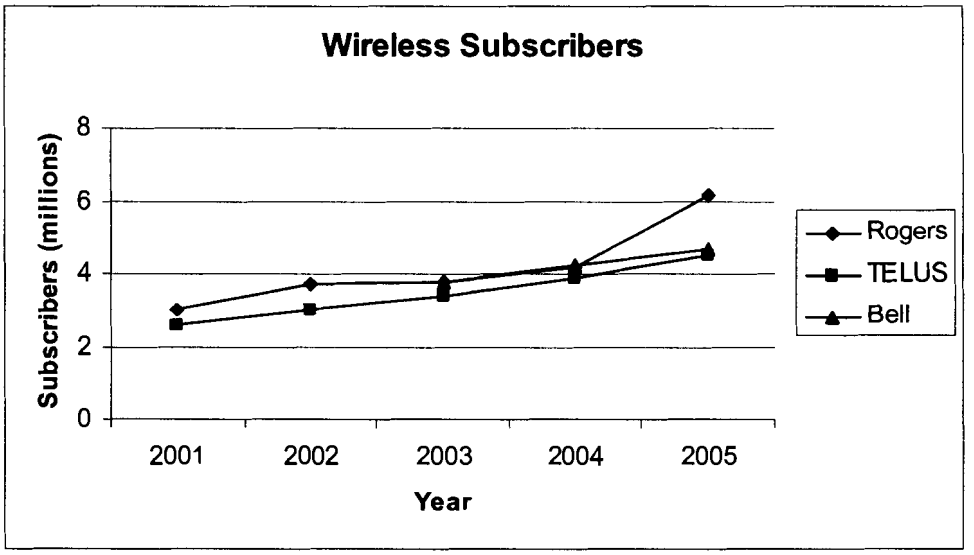


Figure 1-4 Wireless Subscribers 2001-2005[7]



[5] TELUS Communications Company, Internal Document, "Market Model", (2005): 30.
[6] NBI Michael Sones Associates Inc., "Canadian Mobile Wireless Communications Services Market Report, 2005 Edition" (2005): 94.
[7] Ibid: 93.

This growth is fuelled by the increased national coverage offered by providers, improved functionality and bundling (e.g., high speed broad band access, portable e.mail devices, etc.) and the convenience associated with having access to communications almost anywhere and anytime. In addition, a certain degree of cannibalization of the wire-line market is occurring as more subscribers abandon their traditional phones and opt for wireless communication devices only.

The current generation of wireless hardware includes Code Division Multiple Access phones (CDMA - the cellular standard utilized by TELUS and Bell) and Global Systems Mobile phones (GSM - World cellular standard utilized by Rogers). Major technological changes expected or occurring in the wireless industry include third generation technologies that will enable increased rates of wireless data transmission, NGN (or the Next Generation Network) that will allow the convergence of multiple communication channels onto one network and, in the future, internet protocol (IP) cell phones that communicate through Wi-Fi or WiMAX. All of these will significantly enhance the capability of wireless communications going forward. IP cell phones are seen as a potential future substitute for GSM and CDMA technology.

1.3 Problem Definition

1.3.1 The Problem

Consistent with its differentiation strategy, TELUS has managed to generate higher ARPU than either of its two main competitors. In addition, in 2005 TELUS maintained an industry leading churn rate of 1.4 percent as well as the lowest COA per customer. This suggests that TELUS is efficient at acquiring customers and at keeping them. As a result, while TELUS ranks third in overall subscribers (and this gap has widened in the last year with Rogers' acquisition of Microcell at the end of 2004 and Bell's complete acquisition of Aliant in 2005), its ability to generate more income from these subscribers places it in a dead heat with Bell for

second place in terms of revenue. Rogers has maintained its leading position in both subscriber base and revenue since at least 2003.

As noted above, penetration in the Canadian wireless market lags significantly behind the U.S. and most other developed countries. This has been attributed, by some, to the relatively cheap (thanks to government regulation) and reliable wire-line communications technology historically available in Canada.[8] However, given the potential for growth in this area, the challenge for TELUS will be to obtain and keep new customers without significantly sacrificing ARPU. The challenge takes on more significance when one considers the impacts that changing technology, threat of new entrants and regulatory changes will have on the Canadian wireless industry dynamics in the short to medium term. As will be discussed in Chapter Two, each of these factors is likely to have the effect of increasing competition in the industry, making it harder to generate revenue and keep customers. If TELUS is to continue to differentiate itself from its competitors in the face of potentially reduced margins, it will need a strategy for attracting and keeping new customers that leverages its industry leadership in the areas of ARPU, COA and churn. Alternatively, TELUS will need to identify additional sources of differentiation to set it apart from its competitors. Given the fact that most of Canada's population resides in ON and QC, and the current status of TELUS' market share in these two provinces (17 percent and 14 percent, respectively[9]), the focus will be on building market share here.

1.3.2 TELUS' Decision Criteria

TELUS operates under six strategic imperatives including:

1. Building national capabilities across data, IP, voice and wireless

[8] Neil Quigley and Margaret Sanderson, "Going Mobile – Slowly, How Wire line Telephone Regulation Slows Cellular Network Development", C.D. Howe Institute Commentary, No. 222 (2005): 10.
[9] NBI Michael Sones Associates Inc., "Canadian Mobile Wireless Communications Services Market Report, 2005 Edition" (2005): 91.

2. Providing Integrated Solutions that differentiate TELUS from its competition

3. Partnering, acquiring and divesting to accelerate the implementation of strategy and to focus resources on core business

4. Focusing relentlessly on growth areas of data, IP, voice and wireless

5. Going to market as one team under a common brand, executing a single strategy

6. Investing in internal capabilities to build a high performance culture and efficient operation

Therefore, any proposed strategic alternative for escalating market-share growth in terms of subscriber base and revenue must align with each of the imperatives that are applicable in order for senior management to consider implementation. In addition, at a more detailed level, financial analysis of the alternative must clearly demonstrate viability in terms of capital expenditure, return on investment (relative to corporately stated hurdle rates) and a pay-back period in accordance with guidelines established by senior management at the company. TELUS financial criteria include:

1. Discount Rate (opportunity cost of capital): 11.5 percent;

2. Net present value (NPV) of future cash flows: >0;

3. Internal rate of return (IRR): >11.5 percent; and

4. Payback period: ≤ 5 years.

Chapter Two of this paper will deal with an analysis of the Canadian consumer wireless telecommunications market, the key success factors (KSFs) that affect rivalry between the competitors and how each of the competitors compares to the others in terms of managing the KSFs. At the end of Chapter Two, strategic alternatives will be developed for TELUS to leverage

their strengths and manage their weaknesses identified in the competitive analysis. In Chapter Three, each of the recommended strategic alternatives will be evaluated in the context of TELUS' internal capabilities, management preferences and strategy. Finally, Chapter Four will present a series of recommendations, for consideration by senior management, intended to help TELUS implement the strategic alternative(s) identified to improve its market share.

2 EXTERNAL ANALYSIS

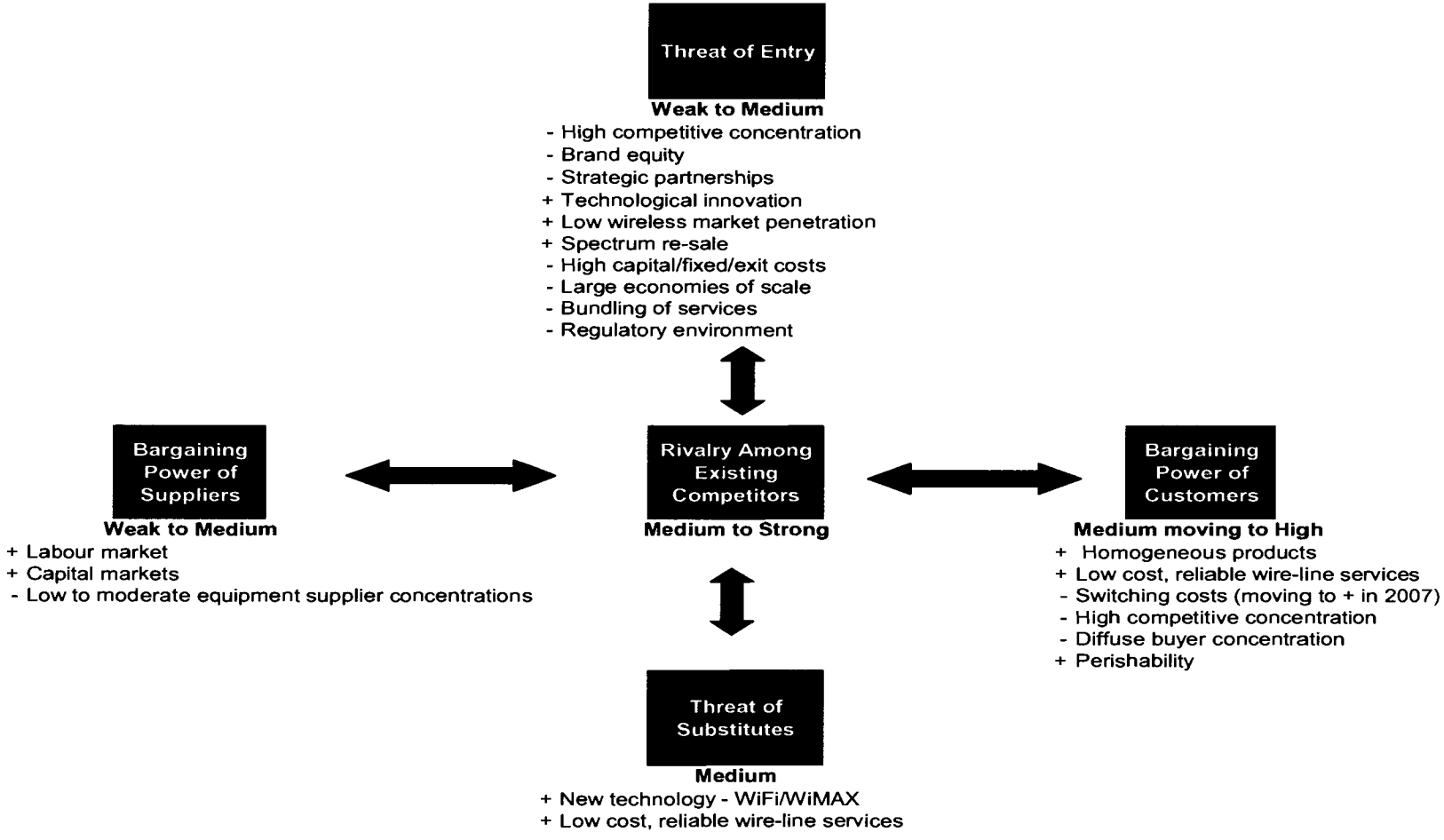
This chapter will explore the major elements of the Canadian consumer wireless market. It will include an analysis of the key success factors (KSFs) affecting rivalry in the industry based on four major elements: threat of entry, bargaining power of consumers, threat of substitutes and bargaining power of suppliers. In addition, the wireless industry value chain will be analyzed to identify KSFs that lead to competitive advantage. Rivalry in the industry will then be discussed based on how each of the firms – TELUS and its main competitors - manages the KSFs identified above. Finally, strategic alternatives will be developed to allow TELUS to take advantage of its threats and opportunities that become apparent as a result of this analysis.

2.1 Five-Forces Industry Analysis

The following analysis is based on Michael E. Porter's "Five Forces" model, developed to analyze the state of competition in a given industry.[10] Porter recognized that competition was defined by much more than just the nature and strategy of its incumbents and their rivalry. It was critical to also consider four other forces including threat of new entry, bargaining power of customers, threat of substitution and the bargaining power of suppliers. The combined strength of these four forces, and the degree to which they affect rivalry among the competitors, can directly impact upon the ability to generate profits.[11] The reader is referred to Figure 2-1 for the accompanying Canadian consumer wireless market Four Forces schematic diagram.

[10] Michael Porter, "How Competitive Forces Shape Strategy", Harvard Business Review, Reprint 79208 (1979): 3.
[11] Ibid: 3.

Figure 2-1 Five-Forces Analysis Canadian Consumer Wireless Services



2.1.1 Threat of New Entrants – weak to medium

The following section provides an analysis of market characteristics that, combined, contribute to barriers to entry. Market characteristics from considerations including competition, branding, technology, marketing, partnerships, costs, government regulation and customers are discussed.

2.1.1.1 High Competitive Concentration

The industry is characterized by a very high competitive concentration. Significant consolidation has occurred since wireless communications gained momentum in Canada in the early 1990s. The industry started out with over 15 regional providers in the early part of the 90s, but by the beginning of the next century, the industry had shrunk to five national providers. Further consolidation occurred in 2004 with the purchase of Microcell Communications by Rogers, making it the single largest wireless carrier in the country (37 percent by subscriber). Bell and TELUS have lower percentages of the remaining market share (33 percent and 27 percent, respectively) (see Table 1-1).

This consolidation and associated high competitive concentration has had the effect of decreasing rivalry in the Canadian wireless industry and creating a small number of large competitors. With fewer competitors and a roughly equal distribution of market share, there is less incentive to compete for the same customers. In addition, this allows prices and profit margins to remain high. This is evidenced by Microcell's unsuccessful attempt to position itself as a discount brand, resulting in its bankruptcy and subsequent take over by Rogers. Consolidation has the effect of decreasing the threat of entry into the market. New entrants, if

they are successful at gaining market share, are more likely to be absorbed by one of the three major firms given their superior size and strength.

2.1.1.2 Brand Equity

Brand equity has been defined as the "...positive differential effect that knowing the brand name has on customer response to the product or service".[12] Given that there are only three national providers of wireless services in Canada, one would think that brand equity would be of little importance given the negative impact on rivalry in low competitor concentration situations. However, both Bell and TELUS have benefited greatly from brand equity in their incumbent territories when selling wireless services. This is evidenced by each of these two firm's leading market shares in their home provinces.[13] Rogers, on the other hand, seems to have developed consistent brand equity across the country. Their market share seems to be in the range of 40 percent, regardless of location and likely stems from their previous efforts in cable television throughout the country.

Brand equity becomes all the more important when the products are essentially homogeneous in nature, with little to differentiate them when they sit side-by-side. In addition to brand equity, corporate reputation and social responsibility are of growing importance. Firms must be seen as contributors to their communities, doing the right things and where they aren't, affecting positive change in their business practices. The established brand equity of each of the three major wireless firms in Canada is seen as reducing the threat of entry.

---

[12] Philip Kotler, *Marketing Management*, 11th rev. ed. (Upper Saddle River, New Jersey, U.S.A.: Prentice Hall, 2003), 422.

[13] NBI Michael Sones Associates Inc., "Canadian Mobile Wireless Communications Services Market Report, 2005 Edition" (2005): 91.

2.1.1.3 Strategic Partnerships

The ability to find and engage in successful strategic partnerships allows the firm to quickly fill gaps in core competency and get products and services to market faster since less time is spent on the learning curve and less capital is spent developing in-house capabilities. In addition, the right partnerships can allow firms access to new customers they may not have had the ability to reach in the past.

Furthermore, it may be possible to leverage the brand equity of the strategic partner into still more customers. In the wireless industry, these strategic partnerships may occur between the wireless companies and software application developers, equipment manufacturers, or each other. Examples include the Inukshuk WiMAX partnership between Bell and Rogers, the Canadian Hotspot Roaming Alliance and the joint venture recently launched by the three major firms to develop a standardized wireless payment service allowing users to pay for goods and services using their cell phones. The presence of these strategic partnerships has the effect of reducing threat of entry since they allow each of the incumbents to take advantage of the size and capabilities of the other partners. New entrants, unless they are granted membership into these existing partnerships or have the capability to immediately develop their own, will not have this advantage.

2.1.1.4 Technological Innovation

Technological innovation is occurring all the time in the wireless industry. Most recently, the development of EVDO technology (Rogers employs the comparable enhanced data rates for global evolution (EDGE)) means that significant amounts of data can now be delivered to wireless handsets. This has opened the door for features such as wireless television. However, it needs to be considered that technological innovation is occurring at a point in the wireless

industry value chain that precedes the value added by the wireless service providers (i.e. technological innovation comes from the equipment manufactures rather than from the service providers). As such, since new technology is available to existing competitors it would not represent an advantage to a new market entrant. Incumbents merely need to decide whether or not to adopt the new technology and spend the money to upgrade.

Technological innovation may affect entry, however, in the event that IP cell phones operating on Wi-Fi or worldwide interoperability microwave access (WiMAX) [14] networks gain industry-wide acceptance. The presence of Wi-Fi and/or WiMAX networks will significantly reduce the cost of establishing wireless communications coverage. In addition, the switching network would be run off of IP hardware that currently exists and that is widely considered to be the platform of choice for convergence (for phone, data, television, etc.). This would make it easier for new entrants to establish communications networks.

This could be tempered by the fact that WiMAX networks are subject to the same kind of auction process that currently governs cellular spectrum in Canada. In that case, large established wireless providers with access to significant capital will be able to out-bid any potentially new market entrants in the event of significant competition. To date, the most significant purchaser of WiMAX spectrum has been the Inukshuk Wireless Inc. partnership between Rogers and Bell. They have established a WiMAX network in 20 cities across Canada and expect to reach 100 rural communities by 2008. Rogers and Bell each currently market the service under their own brand names. However, enough spectrum was purchased to allow wholesaling to anyone with the desire and cash to offer the service.

As far as Wi-Fi is concerned, Toronto Hydro recently announced a plan to create a city-wide wireless mesh by interconnecting Wi-Fi hotspots from their utility poles. Similar city-wide

[14] For a description of WiMax refer to: Lawrence Surtees , "IDC Industry Developments and Models, Wireless Telepocalypse (1): Canadian WiMax Developments & the Power Connection" (2005): 1.

Wi-Fi strategies have cropped up in Fredericton and Ottawa. While Wi-Fi does offer a mobile IP solution, the technology required to operate VoIP telephones within a Wi-Fi network has not been widely adopted. Other potential competing technology includes pricey satellite IP services that have not made any significant inroads due to cost.

The potential for Wi-Fi and later WiMAX IP phone technology is seen as increasing the threat of entry from new competition. However, there are technological limitations to Wi-Fi (mostly related to signal strength and security) and WiMAX (very limited mobility, cumbersome hardware) that currently limit their potential to challenge the existing functionality of the current wireless networks. The importance of these technologies, in terms of their ability to lower barriers to entry, will depend upon overcoming their limitations and then the subsequent degree of adoption in the industry.

2.1.1.5 Low Wireless Market Penetration

The low wireless market penetration, discussed in Chapter 1, is a signal that there is growth potential for the wireless market. This growth opportunity, and the associated revenue generation potential, would serve to increase the threat of entry. This would be analogous to an industry with few competitors generating significant rents sending a signal to new competitors that opportunity awaits them.

The degree to which this low penetration impacts upon the threat of entry, however, is directly dependant upon why Canada lags behind the rest of the developed world in terms of user adoption. If it were simply a function of timing, then one could speculate that market growth would eventually reach saturation, similar to the degree observed in most of Europe. However, as already noted, the low degree of penetration may be a reflection of the fact that mobility is not as important as price to some people. As such, the existing, low-cost and reliable wire-line

communications available in Canada have likely impacted upon the observed degree of wireless penetration. It is currently estimated that the number of Canadian wireless subscribers will increase at a cumulative annual growth rate (CAGR) of 6.7 percent between 2004 and the end of 2009.[15] This equates to wireless penetration rates modestly increasing by about 3 percentage points each year, suggesting the Canadian market will look more like the current U.S. market by the end of 2009 (a market currently undergoing consolidation of service providers). The CAGR of revenue over the same period is estimated at 11.4 percent.[16] While this is a healthy forecasted growth rate, it is not likely significant enough to signal massive profit potential for new entrants. This is especially true if the costs to operate networks are significant in comparison to the revenue generation potential. Low market penetration is considered to have a weak to moderate effect on lowering barriers to entry.

2.1.1.6 Spectrum Re-sale

The ability of existing wireless providers to enter into agreements with new entrants by offering them wholesale priced spectrum for re-sale has the effect of increasing the threat of entry into the market. Mobile virtual network operators (MVNOs) include firms like Virgin Mobile who have purchased spectrum from Bell and then sell air-time, along with branded hardware, and thus appear as a "virtual" network operator. In addition, this ability might make it easier for competitors in other markets (such as cabelcos for example) to enter the wireless market, in an attempt to steal revenue from their local telecommunications competitors. To date, this has had very little effect on the threat of entry in the Canadian wireless market.

---

[15] Lawrence Surtees, Barbara Hall and Tom Olvet, "IDC Market Analysis, Wireless Wars 2: Canadian Wireless Forecast and Analysis, 2005 – 2009", (2005): 40.
[16] Ibid: 40.

2.1.1.7 High Capital Costs

Given the current nature of wireless technology, as noted above a significant capital outlay is required in order to get into the business as a service provider. The MVNO phenomenon offers a pathway around the intensive capital expenditure related to network construction. However, as the spectrum is owned by others, they have the power to control the virtual operator's growth rates and presumably would never allow enough wholesale to compete with their own network. The significant amount of capital required to build a competing network significantly reduces the threat of entry.

A new entrant would have to capture enough market-share to generate the revenues required to support the construction of an entirely new network. Considering the homogeneous nature of the products in the industry, it is unlikely that a new entrant could capture enough market-share to be successful with the current technology. It would have to compete on price resulting in reduced profits, making the industry even less attractive to new entrants. This is likely to change in the future once convergence to a single, next generation network, platform occurs, that could reduce capital costs of establishing a network.

2.1.1.8 High Fixed Costs

The Canadian wireless industry is characterized by high fixed costs. These primarily include the cost to operate and maintain an extensive wireless network (energy, administration, monitoring, equipment maintenance, sales, etc.). On the other hand, variable costs are quite low and do not extend much beyond the cost to acquire a new customer, billing and customer service. Therefore, since firms must attract customers to cover their high fixed costs, and the cost to obtain new customers is relatively low when compared to fixed costs, they will be more likely to

compete for customers. This will increase competitive rivalry in the industry and decrease the threat of entry.

2.1.1.9 High Exit Costs

Costs to exit the wireless industry in Canada are likely to be quite high. In order to be a wireless provider (other than an MVNO) it is necessary to invest a significant amount of capital in expensive and highly specialized equipment (asset specificity). In the event that the wireless market in Canada were to suffer a significant downturn, and a competitor wanted to exit, it would be extremely difficult to sell the equipment to buyers in other industries. Typically, the only alternative would be consolidation (such as in the case of Microcell). However, this is not always possible if there is no willing take-over partner with sufficient financing. Therefore, these high exit costs will cause a firm to remain in an industry and continue to compete even when doing so is not profitable. This has the net effect of decreasing the threat of entry.

2.1.1.10 Large Economies of Scale

Significant economies of scale currently exist in the Canadian wireless communications industry. Each of the three main national providers has established a nation-wide network, in conjunction with roaming agreements, providing access to just about every potential customer in Canada within an area of cell phone coverage (approximately 93 percent of the Canadian population[17]). Given these economies of scale, the cost to add a customer is incremental to the overall capital investment (COAs range from $375 to $400 per customer - see Table 1-1). In addition, each of the three competitors has built a significant workforce to operate and maintain these networks and to attract new customers. These economies of scale significantly minimize the threat of entry from new competitors.

[17] Gartner Research, "Mobile and Wireless Services and Service Providers in Canada, 2006 Update" (2006): 6.

2.1.1.11 Bundling of Services

Each of the wireless service providers in Canada offers service bundles to varying degrees. These bundles usually include voice and data services (e.g. Blackberry), music, text messaging and now video with the advent of EVDO/EDGE technology. This has the effect of reducing the threat of entry by new competitors since they would have to be able to offer similar product bundles in order to compete or attempt to gain market share by competing on price. They would have to have developed technological competency in a number of different areas or purchase the complimentary services from others to form their bundles. This disadvantage will be decreased in the future due to the migration of wireless communications to the next generation network (NGN). New entrants will have less of a learning curve associated with bundled technologies given that they will all be running off of the same platform.

2.1.1.12 Regulatory Environment

The CRTC does not currently regulate quality or the prices that wireless providers charge their customers. Prices are determined in the market place. However the CRTC, and Industry Canada, maintain control over how spectrum is allocated to the service providers. As noted above, spectrum is allocated through an auctioning process. As new spectrum is made available, it is auctioned off to the highest bidder. In the absence of the auction process, access to spectrum would be rivalrous and non-excludable. This would inevitably lead to congestion and over-consumption since the spectrum users would be responding to their own marginal cost and not the marginal social cost. The removal of spectrum caps by the CRTC in 2004 further decreased the threat of entry since there is no limit to how much spectrum incumbent competitors can hold. This would allow them to easily out-bid new entrants for newly allocated spectrum in the future.

By virtue of the control exercised over spectrum allocation, the threat of entry is reduced since it would be relatively easy for incumbents to out bid new entrants. In addition, new spectrum allocation only happens when the currently allocated spectrum is used up. Thus, new competitors would have to time their entry appropriately. This also minimizes threat of entry.

Further regulation, in the form of wireless number portability (WNP), will take effect in 2007. The CRTC has mandated that the wireless carriers must adopt technology that will allow customers to keep their phone numbers with them when they switch service providers. This may have the effect of increasing threat of entry as the reduced switching costs may make consumers more willing to switch to an alternative service. Finally, recent events chronicled in the media have brought attention back to the issue of motor vehicle operation while talking on the phone. If regulations are enacted to limit talking and driving, the threat of entry could be reduced given that less air-time could potentially mean less revenue, making the industry less attractive.

2.1.1.13 Summary

Based on this analysis, the threat of entry into the Canadian wireless market is considered to be weak to medium. Despite the growth potential signalled by low subscriber penetration, available re-sale agreements and the possibilities represented by technological innovation such as Wi-Fi and/or WiMAX IP cell phones in the future, a significant number of other factors serve to decrease the threat of entry. These include: high competitor concentration, significant incumbent brand equity, strategic partnerships, high costs, considerable economies of scale enjoyed by incumbents, bundling of services and regulatory control over spectrum allocation. This being said, a significant technological shift may change this perspective in the future, particularly if capital costs and scale requirements can be reduced.

Given that the threat of entry is low to moderate, there is little likelihood of decreasing competitive concentration in the market. As such, the low threat of entry will not increase the degree of rivalry among competitors in the industry. In fact, consolidation (e.g. the purchase of Microcell by Rogers, Clearnet by TELUS, etc.) has dominated the market in recent years, rather than the emergence of new entrants, keeping a lid on rivalry.

There are a number of key success factors (KSFs), related to barriers to entry, that are identified as affecting rivalry in the Canadian consumer wireless market. These include:

1. **Size**: In order to be successful as a national competitor, significant scale is required to reach customers. In addition to network hardware, firms must have sufficient personnel to maintain the network and access to customers.

2. **Access to capital**: Given the elevated costs related to building and maintaining a national wireless network, and the need to keep up with competitors in terms of technological deployment, firms must have access to financial resources. This is related to size in that larger firms will have the necessary collateral against which to borrow. Reinvestment can come from cash-flow, but investors are also looking for dividends so an appropriate degree of leverage is important.

3. **Technology adoption**: Innovation occurs in the Canadian consumer wireless service market through the development of new services (technological innovation is done by the equipment manufacturers). This means firms must adopt new technology in order to offer new services. In order to be successful, firms must bundle these services in a way that adds value to the consumer. Wi-Fi and WiMAX technologies have the potential to reduce the cost of entry if they gain acceptance. Firms also need to be positioned to capitalize on this if it occurs.

4. **Bundling**: Wireless firms must offer more than just phone service in order to be competitive. Bundling of multiple services into one package provides a means for firms to differentiate themselves from the competition. Furthermore, bundling offers the opportunity for increased revenue per subscriber as more services will be used.

5. **Brand equity**: In a market where there is little to differentiate the services of one provider from another, brand equity becomes an important differentiator. The degree to which a brand is recognized, and the reputation it carries, can directly affect a firm's ability to attract customers.

6. **Strategic Partnerships**: Given the importance of size noted above, firms can leverage the abilities of others by entering into strategic partnerships. This provides a way to achieve size rapidly without having to assume the same level of risk as would be associated with building size and capability from scratch.

7. **Margin**: The ability to compete on price may become significant if new technology reduces capital cost requirements and increases the threat of entry. Firms will have to be capable of competing on price and will need to eliminate operational cost inefficiencies.

2.1.2 Bargaining Power of Customers – medium moving to high

This section discusses how the bargaining power of consumers in this market is affected by the nature of the products and services being offered, the competitors in the industry, the way in which customers are distributed in the market place and the degree to which they are able to switch from one competitor to the next.

2.1.2.1 Homogeneous Products

The homogeneous nature of the wireless products offerings serves to increase the bargaining power of customers, suggesting that services may become commoditized in the future. This is particularly true for new consumers who have yet to enter the wireless market. With very little to differentiate one product from another, the educated consumer could attempt to lure the providers into price competition by playing one off of the other while seeking the best deal. This is made easier if the products under consideration are comparable. This becomes complicated for the consumer, however, if any information asymmetry exists or if competitors attempt to obfuscate by bundling services or developing complex service/rate plans that do not compare directly with their competitors.

The homogeneous nature of products may also contribute to the very low churn rates that are characteristic of the Canadian wireless market (in the range of 1.4 percent to 2 percent - see Table 1-1). However, as discussed below, this may be hard to differentiate from the effect of high switching costs on churn rates. It should also be considered that as new technology is implemented consumer choice will significantly increase, leading to an increase in bargaining power. This could be impacted by the rate at which the new technology is adopted. If

competitors adopt the new technology at about the same time (which is characteristic of the current Canadian consumer wireless market), the bargaining power of consumers is increased. However, if one firm has a significant first mover advantage on the others, this would serve to decrease selection and, subsequently, consumer bargaining power.

2.1.2.2 Low-cost, Reliable Wire-line Services

The fact that cheap (as facilitated by government regulation) and reliable wire-line services are available to more people than more expensive wireless services, increases customer bargaining power. This is particularly true if customers do not value the convenience of mobility over that of low cost. As noted above, this may be directly responsible for Canada's low rate of subscriber penetration when compared to other countries.

2.1.2.3 High Switching Costs

Currently, the costs to customers to switch from one provider to the next are quite high. Switching costs are related to the inconvenience of having to change contact information since, currently, cell phone numbers are not portable. Furthermore, GSM and CDMA handsets are not compatible. Therefore, switching between Bell/TELUS and Rogers requires the purchase of a new handset. This is offset, somewhat, by incentives in the form of handset subsidies in exchange for long-term contracts. Long-term contracts usually contain early exit penalties, of several hundred dollars, to allow the service provider to recover the cost of the subsidized handset. Therefore, significant switching costs have the effect of reducing the bargaining power of the consumer, particularly for those already purchasing service from a provider. The effects of high switching costs are most noticeable in the low industry churn rates typical of the Canadian wireless market.

This will change with the advent of wireless number portability (WNP) in Canada. WNP will increase the bargaining power of customers in the future. Regulatory changes in 2007 will mean that a customer will be able to take their number with them, if and when they move to another provider. This will significantly decrease switching costs and considerably increase the bargaining power of the consumer. However, this will not address the issue of exit penalties associated with long-term contracts or the requirements (offset to a certain degree by subsidization) to purchase new handsets when switching between GSM and CDMA technologies.

2.1.2.4 High Competitive Concentration

The current selection of national Canadian wireless providers is limited, with each of the three major competitors having at least 30 percent of the market (by revenue). This high competitive concentration significantly limits the bargaining power of the consumer. With few competitors, consumers have limited choice. Furthermore, the limited number of competitors allows the firms to be price setters rather than price takers, keeping in mind that the CRTC has not regulated rates billed to customers as they have in the wire-line industry. This leaves consumers at a disadvantage.

2.1.2.5 Diffuse Buyer Concentration

Diffuse buyer concentration further limits the bargaining power of consumers. Customers to the Canadian wireless market are represented by either private residential users or business. They are not organized or geographically centralized. Instead, consumers are spread out across the country as well as across different industries and demographics. This very diffuse nature of the customer base makes it difficult for them to advocate change or exert pressure on competitors to lower prices/improve service. As a result, consumer bargaining power is

minimized. Furthermore, as the degree of wireless subscriber penetration increases, buyer concentration is further diluted, resulting in even less bargaining power.

Industry Canada has provided a centralized mechanism and guidance on how to register complaints.[18] However, this will have little effect on the industry since the complaints still come from diffuse sources and there is no noticeable wireless consumer advocate presence.

2.1.2.6 Perishability

The wireless industry in Canada (and worldwide, for that matter) is characterized by a highly perishable commodity, i.e., air time. Spectrum in Canada is allocated to service providers via an auction process. Therefore, the cost per unit of spectrum is variable. However, not unlike a hotel room that sits empty, unused airtime costs service providers money since it represents a portion of the wireless communications spectrum that has already been paid for. If it is not sold, it cannot generate revenue. Furthermore, once it is gone, it cannot be recovered.

Therefore, consumer bargaining power is increased since each of the competitors has perishable product that they must sell or loose any opportunity to generate revenue on already purchased spectrum. This is commonly referred to as "sell it or smell it".[19] Firms have incentive to use as much of their available spectrum as possible. Techniques for doing this include the sale of pre-paid airtime, and wholesale agreements with MVNOs (e.g. Virgin Mobile). Both of these increase choice for consumers, and hence consumer bargaining power.

2.1.2.7 Summary

Significant switching costs, high competitive concentration and a diffuse buyer concentration serve to limit the overall bargaining power of consumers. An increasing degree of

[18] Industry Canada, Canada's Office of Consumer Affairs: How to Complain Effectively [online], 2006.
[19] Ed Bukszar, "EMBA Strategy Seminar Notes", Simon Fraser University (2006): 17

penetration will also limit consumers' bargaining power as they become more diffuse. Furthermore, given the untapped market potential, competitors don't necessarily have the incentive to bargain with potential customers since another one could be just around the corner tomorrow.

However, the homogeneous nature of the product offerings, perishability of spectrum and the presence of cheap and reliable wire-line services have the combined effect of increasing consumer bargaining power. Furthermore, the imminent advent of WNP in 2007 will significantly alter the distribution of power between the service provider and the consumer. Once consumers are able to take their number with them, the switching costs will dramatically decrease. Considering this in the context of the homogeneous nature of products, suggests that bargaining power will move from medium to high in the near future.

With consumers having moderate bargaining power at the current time, competitors have not been forced to lower prices in any significant way. This has the effect of keeping rivalry amongst competitors low. However, once switching costs are reduced, rivalry will likely start to escalate, as competitors work harder to keep their customers and try to take existing customers away from their rivals.

Therefore, KSFs related to the bargaining power of consumers, that are identified as affecting rivalry in the Canadian consumer wireless market include:

1. **Ability to Attract New Customers**: As switching costs decrease, customers will gain bargaining power. In order to succeed, firms will need to have well developed skills, and the necessary scale, to attract new customers.
2. **Ability to Keep Existing Customers**: Increasing customer bargaining power will also make it more difficult to keep them satisfied. Firms will need to develop the ability to keep their existing customers happy or risk loosing them to rivals.
3. **Margin**: In the future, the ability to compete on price may take on greater importance as customer bargaining power increases. In addition, price is likely to directly affect each of the

other KSFs identified in this section. Therefore, in order to continue to generate profits in the face of downward pressure on price, firms must maximize their margins.

4. **Spectrum Utilization**: The perishability of unused spectrum represents lost revenue opportunity. Firms need to maximize their use of spectrum (without impacting upon level of service) to maximize revenue generation potential.

2.1.3 Threat of Substitutes – medium

This section looks at technological innovation, the nature of existing traditional services and how they may act as substitutes for wireless telecommunication services in Canada.

2.1.3.1 Technological Innovation

Current substitutes for wireless communications are limited. However, technological innovation may provide a substitute for wireless communications as we currently understand them. The previously mentioned advent of Wi-Fi and, in the future, WiMAX IP wireless phones could be a substitute for the current generation of cellular technology. In fact, this may represent a significantly disruptive technology that will ultimately change the nature of wireless communications. In the near-term, the advent of such technologies as Skype and Wi-Fi availability could be seen as a limited substitute to conventional wireless communications. Despite the significant cost advantage enjoyed by IP technologies such as Skype, however, the lack of ubiquitous Wi-Fi (i.e. coverage is not continuous and is often limited to downtown business areas) and the currently limited selection of communications hardware make this less of a substitute and more of a novelty at the current time. That being said, the rapid pace of change in the industry may enable these alternatives to enter the mainstream more rapidly than previous technologies.

2.1.3.2 Low Cost, Reliable Wire-line Service

One could consider older technologies (such as wire-line for example) as substitutes. However, they are not ideal considering the geographically ubiquitous nature of cellular communication in service areas. That being said, wire-line communications are still the only choice in many rural and/or mountainous regions of Canada due to limitations associated with wireless technology. In addition, some see the lack of wireless penetration in Canada as a direct result of the high-quality, low-cost nature of wire-line communications.[20]

2.1.4 Summary

The threat of substitutes is considered medium. This is a result of the low cost, reliable nature of wire-line communications and their ability to substitute for wireless communications. Their threat as a substitute is limited by their lack of mobility and unproven technology. The threat of substitutes will be increased in the future given the potential represented by Wi-Fi and WiMAX IP wireless technologies, depending on their success and rates of adoption.

Were there currently viable substitutes of consequence for wireless communications that provided the same combined degree of mobility, connectivity and capacity to transfer data, then it would be likely that rivalry in the industry would increase, given that customers would have more choice for their communications. However, the fact is that there are limited currently viable substitutes. As such this force has little, if any effect, on rivalry.

Looking forward, however, Bell and Rogers, by virtue of their Inukshuk alliance seem to have positioned themselves to take advantage of WiMAX technology in the event that it gains a foot-hold in the market. However, the service is in its infancy at the present time and reviews of

[20] Neil Quigley and Margaret Sanderson, "Going Mobile – Slowly, How Wire line Telephone Regulation Slows Cellular Network Development", C.D. Howe Institute Commentary, No. 222 (2005): 10.

convenience and data transfer rates have not been favourable in comparison to wireless data transfer rates achieved over Wi-Fi and EVDO/EDGE technologies.[21]

One KSF related to effects on rivalry from the threat of substitutes was identified:

1. **Technological Adoption**: In order to manage the threat of substitutes, firms need to position themselves to act quickly in the event that Wi-Fi and/or WiMAX technologies gain a foothold in the industry. This means either adopting the same technology or other comparable technologies with which to compete.

2.1.5 Bargaining Power of Suppliers – weak to medium

This section considers the nature of labour, equipment and financial suppliers and how their characteristics combine to collectively influence the power of suppliers in the wireless telecommunications industry in Canada.

2.1.5.1 Labour Environment

The degree of unionization in the Canadian wireless industry serves to increase the bargaining power of suppliers. Unions provide a strong voice for labour supply and give them the power to bargain for better wages, benefits and working conditions. In addition, organized labour provides power in that services can be withheld from employers by taking strike action (e.g. TELUS in 2005, Aliant in 2004). However, if union leadership is disorganized and/or management is well prepared, the effects of labour action can be minimized. The recent TELUS dispute demonstrated this. Despite significant impacts to costs related to strike operations, management of the company was able to maintain business for four months while unionized workers walked picket lines. In the end, the agreement signed by the two parties contained all of the elements (mostly related to flexibility) that the company had identified as necessary in order

[21] Tyler Hamilton, "Wi-MAX wireless broadband full of promise, Mobile wireless Internet elusive", Toronto Star, May 15 (2006): C1.

to compete at the national level. In return, labour received wage increases and job security equivalent to, or better than that offered by the competition.

However, it is questionable whether or not these gains were enough to off-set the lost wages and increased stress associated with protracted job action. This would suggest that organized labour is in possession of a decreasing degree of power, particularly as the old guard of employees retires and is replaced with younger workers. In addition, it is widely recognized in the industry that the fast pace of change in Canadian telecommunications requires that companies have enough flexibility to be able to meet challenges in a timely fashion.

This suggests a greater reliance on contract workers with specific skill sets for short-term assignments (including the use of cheap, off-shore resources), as well as a need for full-time employees with diversified skill sets reflective of technological convergence. These serve to further limit the bargaining power of the current workforce. However, new, highly skilled employees may be able to exercise a certain amount of supplier power in the future if there is demand for their abilities.

2.1.5.2 Capital Markets

The bargaining power of suppliers is increased by the ability of capital markets to dictate terms to service providers. In particular, bond rating agencies such as Moody's and Standard and Poor's are particularly powerful. This was exemplified by the downgrading of TELUS bonds to "junk" status by Moody's in July of 2002. The downgrade was a direct result of weaker than expected financial performance leading to doubts over the firm's ability to pay down it's almost $9 B in debt at the time.

The resulting decrease in the TELUS share price (below $5 at one point) was a very clear indication of the power held by the capital markets. Bell and Rogers have both suffered similar

downgrades in the recent past. However, the share price effects were much less pronounced, likely as a result of the timing of TELUS' assumption of debt (during the telecom sector bubble burst in 2001-2002) and the relative degree of leverage.

2.1.5.3 Low to Moderate Equipment Supplier Concentration

Equipment suppliers to the Canadian wireless industry are relatively numerous (e.g., LG, Kyocera, Motorola, RIM, Samsung, Audiovox, etc.) when compared to the number of service providers. A low to moderate equipment supplier concentration limits supplier bargaining power as numerous suppliers will lead to competition on price since the products are relatively homogeneous (with the exception of the RIM products, but they command a price premium). As such, the service providers have a number of product suppliers to choose from and can switch from one to the other relatively easily. This further limits supplier bargaining power. Additional evidence of the lack of supplier power in this market is provided by the fact that service providers are able to re-brand the equipment with their logos and/or names, even though they have not manufactured the equipment. It is clear that the provider brand name is more important in the Canadian market than the manufacturer's name.

2.1.5.4 Summary

Based on the moderate power of bond markets, the decreasing power of labour and the low to moderate equipment supplier concentration, it is considered that supplier power is weak to medium. However, certain factors may alter this in the future. Each of the three major wireless communications companies is generally viewed favourably in the investment market, with TELUS and Rogers currently gaining more of the investor interest due to their higher revenue percentages related to their wireless businesses (40 percent and 50 percent, respectively).[22] Bell

[22] TELUS Communications Company, Internal Document, "Market Model", (2005): 17.

is currently at about 20 percent.[23] In the event that analyst sentiment were to change regarding management of these companies, there is the potential for the bond market to react unfavourably making it difficult to raise capital through the issuance of debt, leading to an increase in suppliers' bargaining power.

Labour may also start to gain more power as younger people with high-tech educational backgrounds enter the workforce. They may be able to demand higher salaries as their skills will be in greater demand to keep pace with changing technology. Supplier power may also be enhanced by changing technology and increasing demands on the part of more educated consumers who know what they want. Providers such as Bell, TELUS and Rogers may become more dependent on suppliers' abilities to quickly meet the demands of consumers as technology platforms converge and more sophisticated devices are needed to compete.

In the event that the bargaining power of suppliers increases, more economic pressure could be brought to bear on the competitors in the industry. This would have the effect of increasing rivalry as it would become more difficult to maintain the existing margins in the industry. The cost of debt, material and labour could all increase if certain forces affect change in the future. Competitors would have to learn to run their operations more efficiently to protect existing profits that might be consumed by increased bargaining power among suppliers. Currently, the weak to medium power of suppliers has the effect of moderately increasing rivalry amongst competitors.

One KSF, related to the bargaining power of suppliers and the effect on rivalry, was identified:

1. **Access to Capital**: In order to remain competitive, firms must have access to cash for investment. If the cost of debt becomes excessive, firms will be at a disadvantage, particularly if margins in the industry decrease leaving less money to pay interest.

[23] TELUS Communications Company, Internal Document, "Market Model", (2005): 17.

2.1.6 Industry Attractiveness

On the surface, the Canadian wireless industry seems attractive given the weak to medium threat of new entrants, the currently medium (but shortly moving to high) bargaining power of consumers, the moderate threat of substitutes and the weak to medium power of suppliers. There is a concern, however, that in the future commoditization will empower buyers and technology may offer more viable substitutes. These could have the effect of making an already moderate to strong degree of rivalry amongst competitors that much stronger, especially. when one considers the high competitive concentration and the room for growth given that only half of the nation's population has a cell phone. Penetration rates in other developed countries far exceed that of Canada's, suggesting significant room for growth. However, it should be considered that the apparent room for growth may be overestimated. Given the low cost of wire-line services (thanks to CRTC regulations), the value added by mobility does not seem to entirely make up for the price differential between wire-line and wireless services. Sustainable growth in terms of wireless penetration may come only if wireless prices decrease, making the service a more attractive substitute to traditional wire-line services.

More price competition in the wireless market will decrease margins, making the industry less attractive. This is particularly true in the case of new entrants who would rely on the existing healthy margins to pay off the debt they would incur to build a competing wireless network. This significant capital cost, in conjunction with economies of scale currently enjoyed by existing competitors, is probably the single greatest factor keeping new entrants out of the market. Furthermore, the incumbent firms would have the capital resources and size to withstand decreasing margins, enabling them to hold out longer than a new entrant.

Further margin reduction and increased rivalry amongst firms is likely to result from the impending advent of WNP in Canada. The removal of this significant switching cost will allow

consumers to move more freely from one firm to the next in search of better deals, better service, or both. Competitors will become more protective of their existing customers, but may also more aggressively seek to lure competitors' customers away. This is likely to reduce wireless prices in the future as the bargaining power of customers increases significantly. This phenomenon may also make the industry more attractive to MVNOs given the limited capital costs required to set-up as a virtual network operator. Margins may increase as the cost of acquiring new customers declines in parallel with switching costs.

The attractiveness of the current wireless industry for existing competitors is further reduced by the potential for disruptive technology in the future. The migration of voice services to an IP platform, in conjunction with the presence of Wi-Fi and/or WiMAX networks, has the potential to compete with conventional cellular technology if ubiquitous wireless IP networks expand in North America and the technology evolves to allow the same degree of mobility. Current technological limitations, including poor coverage and cumbersome equipment, minimize the short-term disruptive potential of this technological shift. However, the recent attempts at establishing city-wide Wi-Fi meshes in Toronto, Ottawa and Fredericton, in addition to the National WiMAX coverage claimed by the Bell – Rogers Inukshuk partnership, suggests that it is only a matter of time before these represent a viable alternative to the current suite of wireless technologies. If they develop momentum, Wi-Fi and WiMAX technologies may make the Canadian wireless market much more attractive to new entrants, since start-up costs are likely to be significantly lower, and bundling of services will be easier on a converged IP communications platform.

From the incumbent competitors' perspectives, the short-term attractiveness of the Canadian wireless industry still looks pretty good. Each has invested significant capital in the development of nation-wide networks providing them with the capability of delivering wireless services to the vast majority of the Canadian population. Given the relatively low cost of adding

new customers and the apparent room for revenue growth associated with new potential wireless users, the next three to five years should see continued profitability in the wireless market.

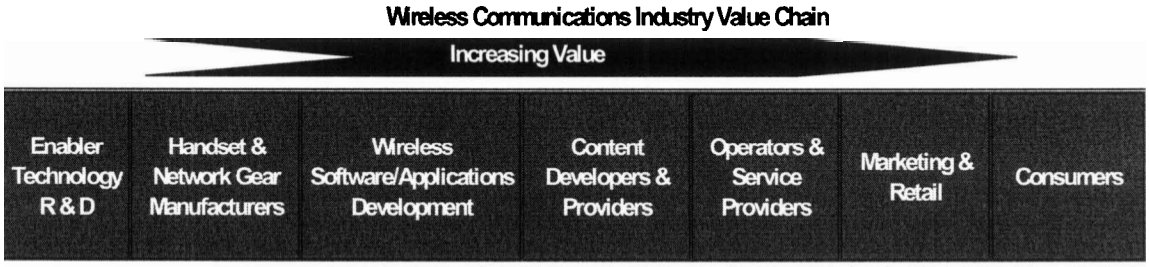
Beyond the three to five year time horizon, the advent of new technology may force the existing competitors to go in a new direction and invest in new equipment, cannibalizing their current customer base. In addition, new technological developments may open up the industry to new entrants, placing further downward pressure on margins and subsequently decreasing the attractiveness of the Canadian wireless market which has been very attractive to existing firms over the last four years.

2.2 The Wireless Industry Value Chain

What follows is an assessment of the wireless industry value chain and an analysis of the competitive forces in the industry based on competitive advantage and the addition of value. This tool is intended to assist in validating those forces identified as part of the five forces analysis completed in Section 2.1 and potentially identify new market forces as may be evident from a new perspective.

The industry value chain for the Canadian wireless telecommunications market is shown below in Figure 2-2. The value chain comprises seven components ranging from technology research and development (R&D) all the way to the consumer. It should be noted that the Canadian wireless service providers participate very little, if at all, in the first two links in the value chain. Most of the technological innovation occurs here. Innovation, and subsequently added value, from the service providers occurs in the last five links of the industry value chain. As such, discussion will be focussed on these latter elements.

Figure 2-2 Candian Wireless Industry Value Chain



2.2.1 Software and Applications Development

Most wireless software and applications development is done for TELUS by the handset manufacturers (or their subcontractors) prior to being offered for sale. However, TELUS has developed some of its own wireless applications, particularly in the business market. Examples include a dispatch and delivery application and a vehicle location/asset tracking application that works with GPS technology.

Considering the homogeneous nature of the current products offered by competitors in this market, the best way to develop a competitive advantage over rivals is to come up with new and innovative ways of using the same equipment. To date, most of this development has been in the business market. Consumer market applications have been limited to relatively simple ideas like Push-to-Talk (tested first in the business market), combination of voice and web-browser functions, and now wireless television. Other developments have come in partnership with competitors (i.e. wireless payment services). The competitive advantage, if any, is likely to arise from how each of the rivals uses the applications and how successful they are in marketing to their customers. Competitive advantage, in the area of applications could be further enhanced through R&D expenditure. Currently, most of the R&D expenditure related to the wireless industry is done by the equipment manufacturers and not the wireless service providers.

Therefore, KSFs related to the portion of the software and applications development chain occupied by wireless service providers include:

1. **Bundling** : Refer to Section 2.1.1.13
2. **Strategic Partnerships**: Refer to Section 2.1.1.13

2.2.2 Content Developers and Providers

Content providers represent the next link in the value chain. Content is provided by game manufacturers, music entertainment companies, television programmers and ring-tone developers. Wireless firms typically provide very little, if any, of their own content. The service they provide (and consequently the value provided) is the facilitation of access to content developed by others. An area for differentiation, however, could be the development of relationships with content providers that involve some element of exclusivity. A KSF for wireless service providers in this element of the value chain would be strategic partnerships as identified above.

2.2.3 Operators and Service Providers

Operators and service providers represent the first truly domestic portion of the Canadian wireless telecommunications value chain, as most equipment development and manufacturing and applications development are done in the US, Asia, Europe and elsewhere. TELUS, similar to its competitors, is fully engaged in the building, operation and maintenance of its own national wireless telecommunication network. This includes design and location of new microwave tower and Wi-Fi transmitter locations, construction, operation and maintenance of major network locations and cellular sites across the country. This portion of the wireless value chain intersects that of the IP and wire line value chains in that the wireless network is connected to the internet through fibre optic and copper cable installed and supported by the wire-line portion of the

telecommunications industry. Competitive advantage arises from having the physical scale to reach customers with reliable service.

It is important to be at least on par with, or ahead of, the other service providers where technology is concerned. Furthermore, firms must be actively looking for new and innovative applications (see above) to add value to the consumer. This is likely to require significant capital investment as new technology is adopted and replaces incumbent technology. As none of the Canadian wireless firms manufacturers its own equipment, each works with many of the same equipment suppliers. This has lead to a great deal of homogeneity within the Canadian market in terms of equipment (keeping in mind the fundamental difference in technology standards employed by Bell & TELUS vs. Rogers). As such, the real competitive advantage here is not as much related to the type of equipment as it is related to the services offered with the equipment, and the ability of the associated network to provide connectivity in order to employ the service.

Related to this is the phenomenon of bundling or the combination of services. This has become much more prevalent now that technology has begun to converge onto one platform. It is now possible to talk, send text messages, read and send email and surf the internet all on one hand-held device. This has made it more convenient for phone companies to sell more than one service to customers. Bundling usually includes some form of discount pricing. The reduced margins made on each bundled service are off-set by the fact that more services are being utilized. With a converged platform, the marginal cost of adding a new service is relatively low since it does not require the addition of new equipment. Bundling is one way of differentiating one wireless competitor's offering from another's. Firms must develop innovative bundling strategies in order to capitalize on this as a competitive advantage.

KSFs leading to competitive advantage in the operator and service provider portion of the wireless value chain include:

1. **Size**: Refer to Section 2.1.1.13

2. **Access to capital**: Refer to Section 2.1.1.13.

3. **Innovation**: Following on the heels of adopting new technology, firms must find ways to innovate by offering unique, value-added services in order to compete. This is all the more important considering the relatively homogeneous nature of products in the industry.

4. **Bundling**: Refer to Section 2.1.1.13

2.2.4 Marketing and Retail

Marketing and retail typically consist of developing marketing strategy, branding and product mix development, and the operation of sales channels including phone-based sales agents, on-line stores, licensed dealers and owned as well as third party brick and mortar locations (such as Future Shop or Best Buy). Other elements to marketing strategy can include community investment, organized sports sponsorship and other types of patronage (such as the arts).

Competitive advantage in this part of the value chain is derived from a number of sources including the development of a recognizable and trusted brand (i.e., brand equity), advertising campaigns that attract attention and differentiate one brand from the next, and sufficiently large sales channels to reach the most customers. In addition, competitive advantage can be derived from partnerships or other associations with related products, services or organizations.

In addition to catchy advertising, companies need to be seen as responsible, contributing members of the communities in which they operate. Today, firms are expected to give back to communities, provide economic support wherever they can and act as stewards for the environment. In the last five years the concept of corporate social responsibility (CSR) has grown significantly. As of the end of 2004, 114 Canadian companies published sustainability,

CSR or integrated economic, social and environmental reports.[24] Canadian firms have begun to recognize the value to brand that can accrue from public disclosure of their CSR efforts. However, as the industry has evolved, firms have also recognized that the value of CSR lies less in its reporting and more in its application to the firm's operations and interactions with its stakeholders. Once firms have learned how to integrate CSR into their business practices, they can begin to realize competitive advantage over those firms that have not.

KSFs related to competitive advantage in the marketing and retail segment of the value chain include:

1. **Brand equity**: Refer to Section 2.1.1.13
2. **Reputation**: Competitive advantage in marketing and retail can also be enhanced by developing an image as a socially responsible firm. Today's customers can be more discerning and are conscious of the choices they make regarding the nature of firms with whom they spend money.
3. **Size**: Scale economies with respect to sales, marketing and advertising are necessary to develop competitive advantage. Given the geographical distribution of the subscriber base in Canada, successful firms must have the ability to interact with potential customers. This requires size in terms of points of sale and sales force.
4. **Strategic Partnerships**: Competitive advantage can also be developed if the right associations and partnerships are struck to access more potential customers.

2.2.5 Consumers

Consumers represent the last link in the wireless value chain. Consumers provide on-going feedback into the value chain by becoming more educated and demanding (leading to more technological innovation), paying their bills and filing customer complaints (feeding back into the operations portion of the value chain) as well as by participating in consumer surveys that assist applications developers in identifying new areas of customer demand.

---

[24] Stratos Inc., *Gaining Momentum, Corporate Sustainability Reporting in Canada* (Ottawa: Stratos Inc., 2005), 4.

Customer service, both pre- and post-sale is an important source of competitive advantage at this point in the Canadian consumer wireless value chain. A high level of customer service can create a competitive advantage by virtue of keeping existing customers happy (and thus keeping them from defecting to another provider). This will become increasingly important when WNP becomes a reality. The relatively homogeneous nature of products and services in this industry suggests that a high level of customer service could be an important differentiator.

KSFs related to the customer portion of the value chain include:

1. **Ability to keep existing customers**: Refer to Section 2.1.1.13.
2. **Reputation**: Firms that treat their customers well will cultivate a reputation as being a responsible and well run organization. This type of reputation can lead to a competitive advantage.

2.2.6 Summary

A series of KSFs have been identified as contributing to the competitive advantage of wireless service providers at various points along the value chain. It is apparent, however, that virtually all of the KSFs arising from competitive advantage along the wireless value chain have been previously identified, in similar contexts, as part of the Five Forces analysis conducted in Section 2.1. As such, a full set of KSFs has now been developed with which to assess the degree of rivalry amongst the competitors in the Canadian consumer wireless market.

2.3 Rivalry Among Existing Competitors

The following section constitutes a comparison of rivalry amongst existing competitors by evaluating each on the degree to which they satisfy the KSFs developed through the Five Forces and Value Chain analyses performed above. Furthermore, an emphasis will be placed on identifying strengths and opportunities with which TELUS might be able to improve its

competitive positioning relative to Bell and Rogers. The focus of this assessment will be the eastern Canadian markets of ON and QC, given the potential number of customers available in this region.

2.3.1 TELUS vs. Bell and Rogers based on KSFs

Table 2-1contains a listing of each of the 11 KSFs identified in 2.1and 2.2 as affecting rivalry and generating sources of competitive advantage. Each KSF has been weighted in terms of importance as either: low (1), medium (2) or high (3). The weightings are subjective in nature and were developed based on the opinion of the writer and his knowledge of the industry. Each firm was then ranked as scoring either: low (1), medium (2) or high (3) in the context of each KSF and relative to the industry's competitors. Scores for each competitor were calculated by multiplying the weighting by the rank for each firm. As is apparent in Table 2-1, the firms appear to match up very well against each other, with Bell holding a slight competitive advantage over TELUS and Rogers. This further strengthens the argument that there is a fairly strong degree of rivalry between the competitors, considering how closely they scored on the basis of KSFs. A discussion of the rational for each scoring decision is provided below.

2.3.1.1 Size

Given that each of the firms has developed the necessary network to service the vast majority of Canadian subscribers, none has developed a competitive advantage over the others where their network is concerned. However, scale can be a competitive advantage in terms of sales and interaction with new customers. Bell currently leads in both the ON and QC markets with respect to market share (although Rogers has recently closed the gap after the acquisition of Microcell). This could be related to the fact that nearly 56,000 or 93 percent of Bell's 60,000

employees are located in ON and QC.[25] It should be noted that this includes wireless and all other Bell employees.

Table 2-1 KSF Comparison of Canadian Wireless Firms

Key Success Factor (KSF)	Weight	TELUS	Bell	Rogers
Size	3	3	9	9
Access to Capital	2	4	4	2
Technological Adoption	3	6	6	6
Bundling	3	6	6	9
Brand Equity	3	6	9	9
Reputation	1	3	2	1
Strategic Partnerships	3	9	9	9
Margin	2	6	4	2
Attracting New Customers	3	9	6	6
Keeping Customers	3	9	9	6
Spectrum Utilization	1	1	3	3
	Total	**62/81**	**65/81**	**62/81**

However, the sheer size of Bell's presence in its incumbent territory gives it an advantage where resources are concerned. Rogers' size advantage (they are currently almost equal to Bell in terms of customer share in ON and QC[26]), is more a function of time in the market place than number of employees. Rogers currently has 4,500 of their 25,000 employees in the wireless business (it is unclear how many of these are in ON and QC).[27] However, Rogers has been a presence in the wireless business in the ON and QC market since 1985 (similar to Bell). Thus they have had the time to build scale in terms of customers and sales channels despite the lower number of wireless employees. In addition to this, Rogers' GSM technology (the global

[25] Bell Canada Enterprises, 2005 Corporate Social Responsibility Report [online], 2006,
[26] NBI Michael Sones Associates Inc., "Canadian Mobile Wireless Communications Services Market Report, 2005 Edition" (2005): 91.
[27] Rogers Communications Inc., *2005 Annual Report* (Toronto: Rogers Communications Inc., 2005),10.

standard) allows their phones to work in 175 countries around the world, giving them a certain network/connectivity size advantage in a multicultural city like Toronto.

TELUS employs a little over 5,000 personnel in the wireless market in ON and QC.[28] However, TELUS has only been a presence in the ON and QC markets since the 2001 purchase of Clearnet. As such, TELUS has not had the opportunity to build scale in terms of market share in ON and QC (currently at 17 percent and 14 percent, respectively[29]). Therefore, TELUS is scored as 1 out of 3 on size in ON/QC. Bell and Rogers are both scored as 3 out of 3.

2.3.1.2 Access to Capital

Access to capital is considered to be a moderately significant factor in the success of the firm. Without adequate funding, firms will not be able to upgrade their networks or keep pace with their competitors as they employ new technology. Table 2-2 provides a summary of the most recent Standard & Poor's bond rating information available from the Canadian Bond Rating Service.

Credit ratings are developed by analysts and are intended as an assessment of the risk of default on the bond. Other considerations include the natures and provisions of the obligation and the protection provided in the event of bankruptcy. Investment grade is usually defined as BBB- and above.[30]

---

[28] TELUS Communications Company, *2005 Corporate Social Responsibility Report* (Vancouver: TELUS Communications Company, 2006), 32.
[29] NBI Michael Sones Associates Inc., "Canadian Mobile Wireless Communications Services Market Report, 2005 Edition", (2005): 91.
[30] Robert Higgins, *Analysis for Financial Management* (New York, NY: McGraw Hill/Irwin, 2004), 151.

Table 2-2 Standard & Poor's Credit Rating Summary[31]

Carrier	Credit Rating	Outlook	Date
Bell	A-	Negative	February 2006
Rogers	BB	Positive	September 2005
TELUS	BBB+	Stable	November 2004

According to Standard and Poor's, both Bell and TELUS credit ratings would be considered investment grade whereas Rogers would not. However, it should be noted that the positive outlook on Rogers' credit rating may move it into investment grade territory. Having a credit rating below investment grade does not necessarily preclude Rogers from accessing capital. However, it does mean that it will likely have to pay more in interest in order to borrow money. Given their investment grade credit ratings, both Bell and TELUS are scored as 2 out of 3. While Bell's rating is one level higher than TELUS, its current outlook is negative while TELUS' is stable, leading to the same KSF score. Rogers is scored at 1 out of 3.

2.3.1.3 Technological Adoption

Each of the three wireless firms has taken the important and necessary steps to invest in new technology in order to stay competitive. Bell and Rogers, by virtue of their Inukshuk WiMAX partnership may have the advantage over TELUS currently, given the nation-wide wireless broadband access this could represent if the technology were to gain momentum. However, senior management of TELUS is of the opinion that future 3G technology, known as wideband high-speed downlink packet access (HDPA), will outperform WiMAX, making it more of a complimentary technology rather than a substitute for 3G. In the future, TELUS' strategy

[31] Standard and Poor's, Credit Ratings: Find a rating [online], 2006

will likely be based on a convergence of Wi-Fi, WiMAX and 3G technology to offer a wireless mesh. The success of this strategy will hinge on equipment suppliers developing hardware capable of operating with the various technologies.

According to the Telecommunications Policy Review Panel's (TPRP's) final report for 2006, Canadian firms have lagged behind much of the rest of the western world in terms of technological adoption. The TPRP points out that European countries have had access to 2G and 3G technology for a number of years now. This is seen as a major contributing factor to the much higher degree of wireless penetration observed in Europe when compared to Canada and the U.S.[32] Since each of the Canadian firms is only now achieving scale in terms of advanced wireless technology, they are all scored at 2 out of 3 for this KSF.

2.3.1.4 Bundling

Each of the three firms offers various bundled packages of services to consumers. Bundling is considered to be of high importance as it provides a mechanism by which firms can generate significantly more ARPU and it affords an opportunity for differentiation. However, it is considered that Rogers has the advantage in that they represent the only true quadruple play provider since they can bundle wireless, video, internet and telephony services into one offering. TELUS and Bell are currently only able to bundle wireless, internet and telephony (i.e., a triple play).[33] This quadruple play ability may also have resulted in the size advantage that Rogers enjoys over TELUS, given Rogers' presence as a cable TV provider in the ON market for the last few decades. Therefore, Bell and TELUS are scored as 2 out of 3 on this KSF. Rogers is scored at 3 out of 3 given its ability to bundle a non-wireless application (i.e. cable television) with its wireless services.

---

[32] Industry Canada, *Telecommunications Policy Review Panel, Final Report* (Ottawa: Public Works and Government Services Canada, 2006), 1-17.
[33] Gartner Research, "Mobile and Wireless Services and Service Providers in Canada, 2006 Update", (2006): 11.

2.3.1.5 Brand Equity

Brand equity is considered to be of relatively high importance. Given the homogeneous nature of the offerings from the competitors in the industry, the value of the brand is considered as one tool for differentiation. Bell and TELUS each lead the wireless markets in their incumbent territories by capturing the most customers in ON/QC and BC/AB respectively. This suggests that each of the companies had developed equity in their brand in their home markets prior to launching wireless services and have been able to maintain this equity. TELUS was also able to leverage some of the previous ON brand equity from the acquisition of Clearnet by maintaining the relationship with the incumbent marketing firm. Rogers consistently captures roughly 40 percent of market share regardless of which province is considered and is currently just behind Bell for market share in ON and QC.[34] Considering brand equity from the ON and QC perspective, Bell and Rogers are scored at 3 out of 3 given their history in these provinces (particularly ON). TELUS is scored at 2 out of 3 given its lower presence in eastern Canada.

2.3.1.6 Reputation

This attribute is considered to be of moderate importance since it is felt that fewer customers will identify with a company's corporate reputation than it will with its branding (at least for now). Both TELUS and Bell have been publishing CSR reports for the last 5 years or more. In a recent benchmarking evaluation of CSR reports, TELUS and Bell were ranked No. 2 and No. 5, respectively.[35] Rogers does not publicly report on any integrated approach to economic, social and environmental performance. Therefore, scores of 3, 2 and 1 have been awarded to TELUS, Bell and Rogers, respectively.

---

[34] NBI Michael Sones Associates Inc., "Canadian Mobile Wireless Communications Services Market Report, 2005 Edition" (2005): 91.
[35] Stratos Inc., *Gaining Momentum, Corporate Sustainability Reporting in Canada* (Ottawa: Stratos Inc., 2005), 11.

2.3.1.7 Strategic Partnerships

All three firms have entered into strategic partnerships of various types. These are considered to be of medium importance given the ability to leverage other firm's core competencies in these situations. Recently, TELUS has focussed its strategic partnerships on content providers like Microsoft and ISVs, as well as entertainment companies (i.e. music, for example) to bring new wireless applications and products to the market place. In addition to doing this, and as noted above, both Bell and Rogers have entered into the Inukshuk alliance to offer WiMAX service across the country. Securing WiMAX spectrum and establishing this network could be of strategic importance in the Canadian wireless industry if the convergence of IP technology and wireless telecommunications evolves as some speculate it will. Bell and Rogers will have first mover advantage over TELUS in this case. However, TELUS also has a strategic partnership with Bell by virtue of their reciprocal roaming agreement that allows them to use each others' wireless networks. Once 3G technology is deployed, this partnership will allow both firms an advantage in scale of deployment. Strategic partnerships of the most importance are likely to be with content providers (i.e., music, video, gaming, etc.) given the role of content as a differentiator in the future.[36] However, it is not possible to compare the three service providers on this metric at the current time. Given these circumstances, Bell, TELUS and Rogers are all scored as 3 out of 3.

2.3.1.8 Margin

Given recent consolidation, and the removal of Microcell communications, there has been less of an emphasis on price in the Canadian wireless market.[37] However, as growth rates slow (see Section 2.3.1.9), margin may become more of a factor as firms have to compete harder

[36] Gartner Research, "Mobile and Wireless Services and Service Providers in Canada, 2006 Update", (2006): 11.
[37] Gartner Research, "Mobile and Wireless Services and Service Providers in Canada, 2006 Update" (2006): 11.

for their customers. This may be further enhanced by the reduced switching costs associated with WNP due in 2007. The key to success and generating profit in the face of reducing margins will be either the ability to offer services at a low cost, or the ability to differentiate. Table 2-3 provides a summary of earnings before interest, tax, depreciation and amortization (EBITDA) margin. This is calculated by dividing EBITDA by total revenues.

Table 2-3 Summary of EBITDA Margin (percent) for Canadian Wireless Firms

Carrier	2005 EBITDA Margin (%)
Bell	40.2[38]
Rogers	35.9[39]
TELUS	43.5[40]

While each of the three firms has healthy EBITDA margins, Rogers' lower value suggests that its combination of price and cost is somewhat less effective than Bell or TELUS. KSF scores of 3, 2 and 1 are assigned to Bell, TELUS and Rogers, respectively.

2.3.1.9 Attracting New Customers

The ability to attract new customers is considered to be a key element to success in the Canadian wireless industry. Without them, sources of new revenue would be limited. The ability to attract new customers for each of the three rivals has been estimated based on the ratio of net activations to total subscriber base over the three year period from 2003 to 2005, inclusive.

---

[38] Bell Canada Enterprises, Supplementary Financial Information, First Quarter 2006 (Montreal: Bell Canada Enterprises, 2006), 2.
[39] Rogers Communications Inc., *2005 Annual Report* (Toronto: Rogers Communications Inc., 2006), 18.
[40] TELUS Communications Company, *2005 Financial Review* (Vancouver: TELUS Communications Company, 2006), 33.

Table 2-4 Subscriber Additions[41]

Carrier	2003	2004	2005
Bell	12.9%	11.8%	10.5%
Rogers	11.2%	9.9%	46.9%
TELUS	14.3%	15.0%	14.0%

The percentages in Table 2-4 represent annual subscriber growth rates and were calculated by dividing the net additions in the given year by the year-end subscriber totals less the net additions. Both Bell and Rogers were demonstrating declining growth rates in subscriber additions until Rogers purchased Microcell in 2004, leading to the nearly 50 percent increase in 2005 over 2004 (this is expected to be anomalous). TELUS demonstrated an increasing growth rate through 2003 and 2004, however growth declined in 2005.

As a result of these observed growth rates Bell and Rogers are both rated at 2 out of 3 given that they are still attracting new customers, albeit at decreasing rates (it is not possible to determine how many non-Microcell customers Rogers added in 2005, based on the data provided and, as such the actual subscriber growth rate cannot be estimated). TELUS is scored at 3 out of 3 considering that its growth rates are higher than both Bell and Rogers (less the Microcell acquisition) and erosion of growth appears to be occurring at a slower rate than that of its competitors.

2.3.1.10 Keeping Customers

The ability to keep existing customers is also considered to be of significant importance to success in the Canadian wireless industry. Due to the lack of WNP at the present time, switching costs are sufficiently high to preclude significant churn from occurring in the industry.

[41] NBI Michael Sones Associates Inc., "Canadian Mobile Wireless Communications Services Market Report, 2005 Edition" (2005): 93.

This is likely to change once subscribers have the ability to take their wireless numbers with them. Therefore, currently the best indicator of a firm's ability to keep customers is churn. As noted in Table 1-1, industry churn rates of 1.4 percent for TELUS, 1.5 percent for Bell and 2.0 percent for Rogers have been noted in the last year. Given their relative positioning on this KSF, TELUS and Bell are scored at 3 out of 3 while Rogers is scored at 2 out of 3.

2.3.1.11 Spectrum Utilization

Spectrum utilization is considered to be of relatively low importance when compared to the other KSFs in this analysis. Despite the perishable nature of spectrum, it is constant in that once paid for at auction, the carrier perpetually owns that spectrum. Despite the fact that unused spectrum does not generate revenue, it will be available to the carrier in the future, should it be required (i.e., it has residual value as an asset). That being said, as noted above there are relatively low-risk tactics for generating revenue from unused spectrum including pre-paid options and wholesale agreements with MVNOs to re-sell air-time. Bell (at 27 percent) and Rogers (at 23 percent) have much greater percentages of pre-paid subscribers than TELUS (at 17 percent).[42] Considering this, and Bell's MVNO arrangement with Virgin Mobile, results in scores of 3, 2 and 1 for Bell, Rogers and TELUS, respectively.

2.3.1.12 Summary

As shown in Table 2-1, the KSF analysis performed on TELUS, Bell and Rogers generated scores of 62, 65 and 62, respectively, out of a possible 81 points. This is generally reflective of the relative distribution of market share in the ON and QC wireless markets, and serves to validate the analysis. Furthermore, the results suggest that rivalry is strong, particularly between Bell and Rogers in the eastern markets. Considering their incumbency there and the

[42] NBI Michael Sones Associates Inc., "Canadian Mobile Wireless Communications Services Market Report, 2005 Edition" (2005): 93.

length of time they have been offering services in this market, a certain degree of rivalry should be expected. The analysis has also identified certain threats and opportunities for TELUS to address in order to improve its competitive position. These are discussed in the next section.

2.3.2 Threats and Opportunities

Based on this analysis of KSFs and competitive advantage producing activities, a number of threats to, and opportunities for TELUS' success have been identified, ordered with those of greatest potential importance at the top. These include:

Table 2-5 TELUS Threats and Opportunities

Threats	Opportunities
Size	Attracting New Customers
Bundling	Access to Capital
Brand Equity	Margin
Spectrum Utilization	Reputation

TELUS' employee base significantly lags behind that of the market leader (Bell). Rogers has been able to compensate for its smaller workforce by having been in existence in the market for an equivalent period of time to Bell. As such, it appears that TELUS has not been a presence in this market long enough to be able to build sales channels to match its rivals, and, therefore, lacks the scale to attract customers despite having the physical scale in terms of network. In addition, bundling is considered a threat since Rogers currently represents the only pure quadruple play in Canada. This serves to differentiate them from the competition.

TELUS' brand equity in non-traditional markets, such as ON and QC, lags behind that of Bell and Rogers. Considering that most of the Canadian population lives in these two provinces,

the majority of growth in the consumer market resides here. If TELUS is to close the gap with its competitors in the consumer market, this is where the new customers will come from. Finally, TELUS is lagging behind its competitors in terms of spectrum utilization given its relatively low pre-paid subscriber base and lack of any current MVNO relationships. However, the importance of this is of much less significance when compared to the other threats.

On the other hand, opportunities to leverage competencies were also identified as part of this analysis. TELUS has opportunities in the areas of customer acquisition (including low COA and relatively high customer base growth rates) and retention (industry leading churn rates) that it should be able to use to its advantage to increase market share. This is a tool that could be used to build brand equity in non-traditional market locations such as ON and QC. TELUS may also be able to leverage access to capital in the event that significant expansion in the east requires it. While TELUS doesn't necessarily have an advantage over Bell in this regard, it does where Rogers is concerned. Lower cost debt may allow TELUS to expand capabilities more quickly and still maintain a healthy balance sheet.

In addition, TELUS appears to have an opportunity in that it maintains the highest EBITDA margin. This may give TELUS the opportunity to compete on price in the future without incurring the same degree of impact on margins as its competitors. Finally, although this is rated relatively low compared to the other opportunities, TELUS could leverage its reputation as a leader in the field of Corporate Social Responsibility into a competitive advantage in eastern markets.

2.4 Recommended Strategic Alternatives

In order to address threats and capitalize on some of the opportunities identified for TELUS in this analysis, the following strategic alternatives are recommended for consideration

by management. The intent of these alternatives is to address the current imbalance of market share in ON and QC.

1. Consider committing resources to significantly increasing sales channels in the ON and QC consumer wireless market. The strategy would be to focus resources on TELUS' new wireless entertainment bundle called "Spark" (including TV, music, games, videos, text messaging and voice). This could be done by: expanding branded brick and mortar locations, strategically partnering with other entities (e.g. to provide content) and/or significantly growing the physical sales force currently residing in these two provinces. This would address TELUS' shortcoming in terms of size in the eastern Canadian markets. In addition, the ability to offer wireless TV content can address, to some extent, the threat related to bundling.

   This should be able to leverage capabilities identified in terms of access to capital (if required to build out the network to expand the reach of EVDO in the future), the apparent ability to attract new customers and TELUS' low cost of acquisition in comparison to its competitors. In conjunction with this growth would be a related effort to increase brand equity, including some leveraging of corporate reputation. Ultimately, if successful, this alternative would also impact favourably upon spectrum utilization if a larger customer based were developed.

2. Consider the acquisition of an ON based wireless communications services provider to increase presence and access new customers. An example might be Look Communications Inc. of Milton, ON. Look is a small (87,000 subscribers) communications company offering wireless high-speed internet and digital television services. This alternative would take advantage of TELUS' opportunities related to access to capital and attracting new customers (i.e., converting Look customers to TELUS customers).

   This alternative would also address, to some extent, the threat related to size (an increase to customer base as well as ON based employees), but would more directly address the threat related to bundling. It would allow TELUS to become a quadruple play by being able to bundle digital television with its other offerings (this differs from the limited wireless TV offering associated with the "Spark" bundle noted above). Furthermore, it may result in an increase in spectrum utilization in the event that the new customers can be sold other wireless communications services.

The two proposed alternatives are evaluated in terms of their abilities to address threats and leverage opportunities identified through the Five Forces and Value Chain analyses. Table 2-6 provides a summary of the comparison. The score for each alternative was determined by adding the KSF value for each of the relevant threats and opportunities as shown in Table 2-1:

Table 2-6 Proposed Strategic Alternative Comparison

Strategic Alternative	Threats Addressed	Opportunities Leveraged
1	Size	Attracting New Customers
	Bundling (somewhat)	Access to Capital
	Brand Equity	Reputation
	Spectrum Utilization	
Score	**14.5**	
2	Size (somewhat)	Attracting New Customers
	Bundling	Access to Capital
	Spectrum Utilization	
Score	**10.5**	

Therefore, on the basis of this comparison, strategic alternative (SA) 1 is recommended for further analysis. Chapter Three will evaluate this strategic alternative in the context of TELUS' management preferences, available resources and organizational capabilities.

3 INTERNAL ANALYSIS

The following internal analysis is based on Crossan, Fry and Killing's "Diamond-E Framework".[43] This framework uses strategy as a linking variable between a firm's management preferences, resources, organizational structure and the surrounding competitive environment. The "Diamond-E Framework" is a tool that provides a road map for analyzing the gaps between the requirements of a strategic alternative (designed to address threats and leverage opportunities) and the existing strategy, resources and structure of the organization considering the change. This tool will be used to evaluate the strategy identified at the end of Chapter Two (i.e., dedication of increased sales and marketing resources into the ON and QC market to sell the TELUS "Spark" wireless entertainment bundle) against TELUS' internal management preferences, organizational capabilities and resources.

3.1 Management Preference Analysis

TELUS' management preferences will be analyzed by first identifying the management preferences required to implement the proposed strategy. These will then be compared against the existing internal corporate management preferences. Finally, recommended changes, either to the proposed strategy or to the internal management preferences inventory, will be suggested.

3.1.1 Required Management Preferences

Five required management preferences have been identified as being associated with the recommended strategic alternative. These include:

[43] Mark Crossan, Joseph Fry and J.Peter Killing, *Strategic Analysis and Action* (Toronto: Pearson/Prentice Hall, 2004), 42.

1. A willingness to compete against the wireless competition (i.e., Bell and Rogers) on their home turf;
2. A willingness to invest significantly in sales forces, sales channels and marketing (including both human and financial resources) in the ON and QC markets;
3. A willingness to focus on innovative wireless entertainment bundling in the consumer market;
4. A willingness to build brand equity and recognition in ON and QC; and
5. A geographical senior management presence in sales and marketing.

In order for this recommended strategy to be successful, it will be necessary for TELUS senior management to be committed to competing against Bell and Rogers in ON and QC. As stated above, considering the population concentration in these two provinces and the current wireless penetration rate of just over 50 percent, the greatest potential for new customers lies in these two provinces. If TELUS is successful in luring customers away from Bell and Rogers (something that is likely to become of greater importance once WNP becomes a reality in 2007), it will happen here. However, it is very important for TELUS to maintain its ability to compete in its home provinces of BC and AB, given the presence of Bell and Rogers in these areas. As such, the commitment to resources in ON and QC must not come at the expense of TELUS' traditional areas. This is a key element of being a national provider of these services. They should be of an equal quality no matter where the customer is located.

To compete against Bell and Rogers in their incumbent areas, TELUS senior management will have to commit the necessary human and financial resources to expand direct sales forces, sales channels and marketing efforts. In order to achieve appreciable changes to scale in the ON and QC markets, an increased sales force will likely be necessary to interact with potential customers. Additional scale will come from an increased physical presence or points of sale. This could include partnering with complimentary firms or organizations (as is already being done with retail outlets such as Future Shop or Best Buy) or the establishment of new brick

and mortar sales locations to compliment existing flagship stores in Toronto, Montreal and Quebec City. A flagship store may also be considered in Ottawa. In conjunction with this increased scale, TELUS senior management will need to be committed to increasing marketing efforts as well.

In order to successfully compete with Bell and Rogers, it is a requirement to offer more than just voice services in the ON and QC market. The ability to win new customers has been shown to rely upon a firm's ability to offer a variety of services in combination to add value (i.e., bundling). As such, senior management must have willingness to focus on innovative wireless bundling and, in particular, entertainment based applications that include TV, video, music, games, etc. Furthermore, a commitment to upgrading the technology, as required to support new and more data-intensive applications, is a necessity.

As discussed above, innovation on the part of wireless communications providers does not come from the equipment itself, but rather originates in the firms' abilities to bundle new services. This is also a source of differentiation, providing a means for potential customers to compare potential suppliers.

Senior management must have a willingness to focus on building brand equity in ON and QC. A recognizable and well thought of brand can be a key source of differentiation between firms, particularly if the products being offered are homogeneous. Corporate reputation is a key element of brand equity. There are a number of different elements to corporate reputation, including corporate citizenship, human resource relations, business partnerships/relationships, industry representation, customer relations and government/regulatory interaction. The way in which a company effectively manages these elements can have a significant impact on brand equity.

In order to be able to make timely and informed material decisions regarding the direction of sales and marketing in the ON and QC markets, it will be necessary to have senior management, at the VP level, on the ground in both locations. Local, senior level leadership is likely to be very important in successfully executing any strategy in ON and QC, particularly when the strategy originates from a company still seen by many as being primarily a western Canadian firm. Furthermore, it may also be necessary to have Director level leadership, at a minimum, with sales and marketing responsibilities in each of provinces, particularly considering the differences in culture and language between ON and QC.

3.1.2 Strategy-Preference Linkage

In order to compare required management preferences to those that already exist within the TELUS organization, one must first consider the six strategic imperatives that guide TELUS' decision making processes. Restated, these include:

1. Building national capabilities across data, IP, voice and wireless.
2. Providing Integrated Solutions that differentiate TELUS from its competition.
3. Partnering, acquiring and divesting to accelerate the implementation of strategy and to focus resources on core business.
4. Focusing relentlessly on growth areas of data, IP, voice and wireless.
5. Going to market as one team under a common brand, executing a single strategy.
6. Investing in internal capabilities to build a high performance culture and efficient operation.

In order for a strategy to be implemented at TELUS, it must satisfy at least one, and preferably more, of the six strategic imperatives. In addition, in order to be acceptable, any

potential strategic alternative must not contradict any of these strategic imperatives. Table 3-1 summarizes the degree to which each of the required management preferences identified above meets these criteria:

Table 3-1 Required Management Preferences vs. TELUS Strategic Imperatives

Required Preference	TELUS Strategic Imperatives					
	1	2	3	4	5	6
1 (willingness to compete)	✓	-	-	✓	-	✓
2 (willingness to invest)	✓	-	✓	✓	✓	✓
3 (focus on bundled wireless entertainment)	✓	✓	-	✓	-	-
4(building brand equity)	✓	-	✓	-	✓	-
5 (eastern senior management presence)	✓	-	-	✓	-	✓

Key: ✓ = satisfies; ✗ = does not satisfy; - = not applicable

The required willingness to compete in Bell's and Rogers' home turf clearly satisfies the first strategic imperative since it requires national capabilities of a western Canadian based firm. Secondly, it satisfies the fourth strategic imperative in that the market of focus is that of Canadian consumer wireless telecommunications. Finally, it satisfies the sixth imperative in that the willingness to compete comes with an associated requirement to invest in internal capabilities and, in order to succeed in a very competitive market, an efficiently run operation will be necessary.

The required willingness to invest in necessary resources satisfies all but one of the six strategic imperatives. Investment of resources (both human and financial) in expanding the scale of TELUS' ON and QC sales and marketing capabilities is a direct investment in national capabilities as it extends the reach of TELUS' organization beyond its western Canada roots and provides a greater overall national presence for the firm. The effort to increase sales channels is

likely to include partnership with other complimentary or associated organizations. This satisfies the third strategic imperative. Furthermore, investment in this scale improvement focuses directly on growth in the wireless market segment, thus satisfying the fourth strategic imperative. In addition, this required management preference will require going to market as one team as the TELUS brand will continue to be built by increased marketing efforts. Lastly, by investing human and financial capital in expanding the sales and marketing effort in ON and QC, TELUS would be investing directly in internal capabilities.

The required focus on bundled wireless entertainment services satisfies three of the six strategic imperatives. Firstly, it leverages TELUS' national capabilities that include voice, data, IP and wireless technologies. Similarly, this bundled approach satisfies the second strategic imperative in that this bundle can serve to differentiate TELUS from its competitors. Finally, this bundled approach clearly focuses on the growth areas of data, IP and wireless, satisfying the fourth strategic imperative.

The next requirement, a willingness to focus on building brand equity, satisfies the first strategic imperative since building brand equity in ON and QC requires building upon existing capabilities, already present in western Canada and expanding them to the east. The increase in brand equity will be dependent upon TELUS' ability to leverage bundled data, voice, IP and wireless solutions to an expanded customer base. It also satisfies the third strategic imperative in that efforts to leverage CSR reputation can include strategic partnerships with charities or institutions (such as science or education centers) that can provide opportunities for giving back to communities while showcasing new products and services at the same time.

In addition, this requirement satisfies the fifth strategic imperative as a strengthened brand position will come from attacking the market as one team. Having a stable of services offered under one brand can also help build scale. For example, enterprise business customers in

ON and QC to whom TELUS provides IP based business consulting services, may not have considered TELUS as a consumer wireless provider given existing relationships at home with Bell or Rogers. An exceptional experience through business dealings with TELUS may lead them to reconsider their private wireless carrier of choice, particularly if they are unhappy with their current service.

Finally, the necessity for a senior sales and marketing management presence in eastern Canada satisfies the first strategic imperative in that it represents increased national senior capabilities. The senior presence will also allow increased focus on the growth areas of the business already identified (strategic imperative four). Furthermore, the presence of talented, local senior management will contribute to effective operation and support the high performance culture present within the organization (strategic imperative six).

Currently all of the Senior VPs with responsibility for sales and marketing in TELUS are physically located in Toronto. The Senior VP with customer loyalty/retention responsibilities is located in Montreal. Each of these Senior VPs reports to the Executive VP in charge of Consumer Solutions – the TELUS business unit into which responsibility for wireless communications falls. As such, given the location of these senior VPs, it is considered that TELUS has the necessary senior leadership representation in central Canada to effectively implement the strategic alternative and evaluate its success.

The TELUS sales organization has the following management levels beneath the Senior VP:

- VP Retail Stores
    - Director of Sales and Service
        - Regional Store Manager
            - Area Store Manager

- Store Manager
    - Sales Associate

However, it is noted that the most senior member of the sales organization in Quebec exists at the Regional Store Manager level. Given the potential size of the QC market and the cultural and language differences between ON and QC, it is suggested that a senior leadership gap may exist in the sales organization in QC.

Gap: Lack of senior management leadership in sales located in Quebec.

In order to close this gap, it is recommended that TELUS recruit and hire a French speaking senior manager, at the Director level, for wireless consumer sales in Quebec. The individual would need to have the experience and regional familiarity in order to provide effective oversight of sales activities. In addition, they must be given the authority to make material decisions regarding the direction of sales in QC.

The marketing organization has the following management levels beneath the Senior VP:

- VP of marketing
    - Director of Marketing
        - Marketing manager
            - Product specialist

It is apparent that there are fewer layers of management within the marketing organization in TELUS. Given that the marketing team works closely with an external advertising firm (TAXI), it is considered that any additional human resources required related to the strategic alternative could be outsourced from this existing relationship. In addition, TELUS maintains a strong marketing senior leadership presence in Montreal. As such, there is no identified gap from this perspective.

3.1.3 Management Preferences Summary

In summary, each of the six strategic imperatives was satisfied at least once by the five required management preferences. A review of Table 3-1 indicates a reasonable fit between the required management preferences and TELUS' internal strategic imperatives against which management is expected to evaluate all strategic alternatives. In particular, the second required management preference (willingness to invest in sales and marketing scale) achieves an excellent fit to the general management preferences of TELUS by satisfying five of the six strategic imperatives. Furthermore, none of the required preferences appears to contradict any of the strategic imperatives.

In review of the TELUS organizational structure there is significant senior management presence in eastern Canada to oversee the initiative. However, one gap was identified in that a senior sales management presence was absent in Quebec. As such, it is recommended that this gap be filled by recruiting and hiring an appropriately experienced individual. With this gap addressed, it is considered that the recommended strategic alternative can be carried forward to the next step of the "Diamond-E Framework" tool: Organization Analysis.

3.2 Organization Analysis

The next step of the Diamond-E framework analysis is to examine those organizational capabilities required by the strategic alternative and determine whether or not TELUS has the requisite capabilities. Typically, the most important organizational capabilities are related to one of either: leadership, organizational structure, management processes or organizational culture.[44] Once the required capabilities are identified, the linkage between them and the incumbent

[44] Mark Crossan, Joseph Fry and J.Peter Killing, *Strategic Analysis and Action* (Toronto: Pearson/Prentice Hall, 2004), 49.

abilities within the TELUS organization will be explored. Where gaps are identified, recommendations for addressing them will be offered.

3.2.1 Required Organizational Capabilities

As noted above the critical variables related to this discussion include leadership, structure, management processes and culture. Each of these requirements will be discussed in detail below.

3.2.1.1 Leadership

In order to successfully execute upon the recommended strategic alternative, it will be necessary to have strong and knowledgeable leadership in a number of different areas of the organization. Strong strategic leadership at the top of the organization will be essential in executing successfully in eastern Canadian markets. Any strategy to be implemented must be conceived and well thought through within the context of the capabilities of the firm. Furthermore, strong leadership is required to evaluate strategies in the context of strategic fit to ensure that whatever path is taken correlates with the overarching strategy of the firm. In general, it is felt that if management at the top is willing to expand the business aggressively in ON and QC, elements of an "entrepreneurial worldview" (which according to Wexler subscribes to the "money talks story") will be necessary since this represents a move towards increased competition.[45] This requires what Wexler refers to as elements of "buccaneer" leadership or one who can motivate wealth generation through increased competition.[46]

Beyond overall strategic leadership, the areas of marketing and sales require the leadership and knowledge necessary to make appropriate decisions in the context of regional, as

[45] Mark Wexler, *Leadership in Context, the Four Faces of Capitalism* (Northampton, MA, USA: Edward Elgar, 2005), 22.
[46] Ibid, 35.

well as national, market forces. If significant in-roads into wireless market share are to be made in ON and QC, senior TELUS management must have a clear understanding of the market dynamics in these regions.

Leadership must also be present in terms of financial management. In order to be successful with the recommended strategic alternative (or, if unsuccessful, pull the plug on the recommended strategic alternative), TELUS must posses the kind of financial leadership capable of evaluating the results of the initiative and choosing the appropriate course of action depending on the observed outcomes.

Finally, leadership must be present in terms of human resource relations. In order to execute upon any strategy, TELUS team members must have sufficient faith in senior management and their judgement. The relationship between senior management and "on the ground" resources must be strong enough to implement the strategic alternative as conceived without deviation from the plan. However, communications channels must permit a two-way flow of information so that leadership can be made aware if elements of the strategy are not working as anticipated. This will facilitate rapid change and, more importantly, give ownership of the strategic alternative to all levels of the organization and not just senior management.

3.2.1.2 Organizational Structure

For the recommended strategic alternative to be successfully implemented, the firm will have to have different business units that are capable of working together, despite having unique functions and capabilities.[47] It is this integrated performance, and the management processes to facilitate it to be discussed below, that will determine the success or failure of the initiative since

[47] Please refer to Section 3.3 for a detailed discussion of the resource requirements of the recommended strategic alternative.

no one area of the business can posses enough knowledge on its own to proceed with implementation.

Therefore, it is suggested that a decentralized approach to organizational structure is required to implement the strategic alternative. Each of the required contributing business units of the organization must have considerable knowledge (or the ability to obtain it) in its area of responsibility in order to succeed against the competition in ON and QC. As such, it is important for each business unit to focus on its core tasks and allow the other business units to address their own. As a result, it would be expected that the sales and marketing, logistics, technology and business enabler activities would be performed in separate parts of the company but be linked by a common set of management processes to facilitate communication on an organizational scale.

3.2.1.3 Management Processes

The strategic alternative will require that a set of management processes be in place to allow the synchronized operation of the different business units. The marketing and sales teams must have a clear understanding of technological capabilities in order to put forth the best offering to consumers. In addition, the technology team must have a clear understanding of what customers want so that the necessary capability can be developed and maintained. Beyond these requirements, the marketing and sales teams must be able to clearly communicate personnel recruitment needs to HR and space requirements to Real Estate in order to secure the resources necessary to successfully implement the strategic alternative. In addition, appropriate financial tools and processes must be available in order to evaluate the viability of the strategic alternative and its degree of success, or failure, upon implementation. Furthermore, procurement and logistics processes must exist so that the points of sale can have access to the merchandise required to meet demand in their regions.

Therefore, the right set of management processes is crucial to the successful implementation of any strategic alternative. Given the complexity and scale required to have any meaningful impact on the Canadian wireless telecommunications market, the various elements of the organization must be able to work in concert to achieve established goals, while leveraging the business-specific expertise available in each business unit. It is likely that the different business units, working independently, will not achieve desirable results.

In addition to processes that facilitate coordination across silos, management processes that facilitate processes within business unit silos are also important. These enable the sharing of information between different levels of management (such as between store managers and regional managers, as discussed above) to allow the most efficient functioning of business units and to facilitate timely decision making.

The strategic alternative requires an organizational culture focused on growth of business in terms of both customers and revenue. The culture will require elements of the entrepreneurial worldview given the increased focus on competition and wealth generation. However, TELUS will also require significant elements of what Wexler refers to as the "built to last story" or the "regulatory worldview".[48] As noted in the preceding section, management processes will be required to facilitate the coordinated operation of the different business units in executing upon the strategic alternative. As such, reliability of these processes will be necessary in order to minimize some of the uncertainty generated when business units work independently of each other. Furthermore, efficiency can be achieved if the reduced uncertainty results in less duplication of effort between business units. This will help to reduce cost and maximize revenue associated with the strategic alternative.

---

[48] Mark Wexler, *Leadership in Context, the Four Faces of Capitalism* (Northampton, MA, USA: Edward Elgar, 2005), 22.

3.2.1.4 Culture

The organizational culture will also have to be results-oriented. Given the competitive nature of the Canadian wireless market, a firm cannot afford to fail on too many initiatives without running the risk of loosing ground to the competition. This will require that all participants retain accountability for the portion of work they do that contributes to the success of the strategic alternative. Without a focus on performance (including the setting of targets and objectives), implementation of the strategic alternative may loose momentum and the desired results may not be achieved. Conversely, in order to determine if the strategic alternative is not achieving expected results, mechanisms must be put in place to evaluate progress quickly so that appropriate decisions can be made as to the future of the alternative.

Beyond measurement of results, the organizational culture will also have to foster ownership at all levels of the organization. All employees should feel as though their contributions are making a difference in terms of succeeding at implementation of the strategic alternative. This can be achieved, in part, through the performance management culture discussed above. However, it is important to foster other types of ownership in results given that performance management can also be seen negatively (or in a punitive way). This could be achieved by some form of profit sharing or share purchase plan that allows each employee the opportunity to have actual ownership in the company and the possibility of direct benefit from organizational success.

3.2.2 Strategy - Organization Linkage

Following is a comparison of the above-stated strategic alternative requirements to the capabilities already existing within the organization. Where gaps are noted, recommended courses of action are identified

3.2.2.1 Leadership

Overall strategic leadership at TELUS is strong and originates at the top of the organization with the CEO and the Executive Leadership Team (ELT), each of whom is responsible for operating their business units in accordance with the six strategic imperatives outlined in Section 1.3.2. The CEO joined the TELUS organization in 2000 and was tasked with taking a former regional telecommunications company operating under near-monopoly conditions and transforming it into a national telecommunications firm competing head-to-head with Bell and Rogers in their incumbent markets. As such, the CEO needed a combination of regulatory and entrepreneurial skills in order to guide TELUS through this transition since it was a large corporate entity with many procedural rules and controls that needed flexibility to compete in a rapidly changing market (thanks to deregulation and technological change). The strategic alternative fits this overall shift in strategy (as discussed in Section 1.3.2) and, as such, it is considered that the CEO has the requisite leadership skills to facilitate its successful implementation.

The ELT reports directly to the CEO. Each member has responsibility for leadership within a single business unit and for ensuring its efficient (and profitable, in the case of customer facing units) operation. In review of the skills sets required of enabler business unit leaders, it is apparent that the HR and Finance ELT members posses the systems-based skills of the built-to-last story. On the other hand, the senior leadership styles of those in the customer facing business units (such as Marketing and Sales, for example) align more closely with that of the entrepreneurial worldview. As such, the combined ELT leadership skills set seems to fit well with that identified as being required by the strategic alternative. No gap is identified between TELUS' leadership capabilities and those required by the strategic alternative.

3.2.2.2 Organizational Structure

TELUS is organized into customer facing and business enabler units, each reporting to an ELT member as noted above. The marketing and sales functions reside in the business unit headed up by the EVP of Consumer Solutions (customer facing). The logistics, real estate and technology functions align beneath the EVP of Technology and Network Operations (TNO). TNO is the single largest business unit within TELUS and is considered a business enabler. All of the secondary activities associated with personnel recruiting and management belong to the EVP of HR. In addition, the financial control and auditing functions required to verify the viability and success of the strategic alternative reside with the Chief Financial Officer's office (also the EVP of Finance). Both HR and Finance are considered TELUS business enabler units.

Decisions required to implement the strategic alternative will occur in each of the business unit silos identified above. Given that the primary goal of the alternative is to increase market share relative to Bell and Rogers by attracting new customers in the ON and QC markets however, the majority of decisions will be made within the Consumer Solutions business unit. This is also where the majority of resource gaps have been identified (see Section 3.3.1). As such, the strategic alternative is likely to have the greatest effect on this business unit.

TELUS announced the merger of wireless and wire-line operations in December of 2005. Broadly, the intent of this merger was to realize operational efficiency as there were a number of secondary activities being duplicated in both the wireless and wire-line companies. Furthermore, the intent was also to solidify the organizational structure to align with the corporate strategic imperative of "going to market as one team" (see Section 1.3.2). As a result, the name "TELUS Mobility" will eventually cease to exist. The integration is currently underway throughout the organization. However, the degree of completion is not known at this time.

The resulting simplification of the overall TELUS organizational structure is expected to better facilitate the implementation of the strategic alternative since it is now possible to leverage functionality from both wireless and wire-line areas into one organizational effort. That being said, this integration, while significantly reducing the degree of decentralization in TELUS' organizational structure, still leaves behind an organization with clearly defined, functional business unit silos. Considering that TELUS has the necessary business units to address each of the requirements of the strategic alternative, no related gaps are identified at this stage of the analysis. However, the ability of the silos to execute the strategic alternative will depend, to a great extent, on the management processes that allow integrated functionality of the silos.

3.2.2.3 Management Processes

As a large company, TELUS uses a staggering number of management processes to run its business. As such, the focus here will be only those management processes that facilitate the successful implementation of the strategic alternative. The majority of HR (e.g., recruiting, payroll, benefits, etc.) and Finance (budget tracking, plan vs. actual and outlook forecasting) processes are managed with SAP and are IP-network based. As such, there is little difficulty in applying these management processes across the organization. Furthermore, HR and Finance have team members who are dedicated to serving management and facilitating processes in each of the other business units. Therefore, TELUS has the capability necessary to provide these secondary activity functions to each of the other business units associated with the strategic alternative.

At the end of the labour stoppage experienced by TELUS in 2005, a new collective bargaining agreement was ratified that allowed the company to outsource a number of functions that, as part of the previous contract, had been considered work normally performed by bargained for employees. As a result, TELUS has entered into national contracts with specialized vendors,

particularly in the areas of merchandise logistics and property maintenance. UPS has been retained to handle the warehousing and distribution of hardware on behalf of TELUS, while BLJC has been retained to undertake property management functions. These arrangements are relatively new and it is not possible to comment on their effectiveness at the current time. However, these processes are used across organizational silos and, therefore, serve to facilitate the inter-operation of business units.

Despite the availability of these resources, a designated project manager (likely from the Consumer Solutions Business unit) will still be required to ensure that all of the business units identified as part of the strategic alternative are aware of their roles and responsibilities. The project manager would be responsible for identifying required resources, timelines, budget and performance indicators. In fact, given the size of the undertaking associated with the strategic alternative, it may be necessary to have a project management team, as opposed to one individual, although a project leader would still need to be identified. TELUS maintains a Project Excellence initiative to which representatives from the various areas of the company contribute project management expertise. They maintain a website with project management tools and a standardized, but not mandatory, approach to project management intended to maximize the chances of success for any given project. It is these tools that would serve to identify and integrate the various functions from each of the required business units as part of the strategic alternative. However, two gaps exist here relative to the strategic alternative, as follows:

> **Gap: Project manager or management team capable of bringing together the various business unit elements required to successfully implement the strategic alternative.**
>
> **Gap: Standardized project management process is not mandatory.**

In order to address these gaps TELUS must look within the organization to identify a project manager or team with the necessary capabilities to successfully execute on the strategic

alternative. The right candidates will have the ability to bring various parts of the organization together to meet a common objective, strictly observe timelines and schedules and have the necessary financial acumen to manage the associated budget. It is recommended that the VP of sales work with the TELUS' Project Excellence office to identify the project manager or team.

Further to filling the first gap, it is also suggested that the VP of sales work closely with the Project Excellence office and the selected project manager to ensure that the standardized project management process is followed. This would give the strategic alternative the best chance of success.

3.2.2.4 Culture

The entire TELUS organization exists within a high-performance culture where "what gets measured, gets done". The overarching intent of TELUS' organizational culture is to achieve results through assigned accountability and to encourage team members' ownership over business processes, and, ultimately business success. This is done through the development of personal performance objectives (PPOs) at the very base level of the organization, all of which roll up into the next level of management (i.e., the PPOs of a manager should be a high-level summation of their direct reports' PPOs). As such, the PPOs must be developed in the context of business unit and organizational strategy in order to effectively drive the business.

Furthermore, compensation at TELUS contains a component of what is termed "variable pay". Essentially, it is a certain percentage of a team member's salary (beyond base pay) that is determined on the basis of individual, business unit and corporate performance. As such, team members are presumably motivated to work harder in order to not only exceed their objectives, but also to facilitate overall corporate success such that the variable component of their salary will be larger. Another incentive designed to foster ownership on the part of employees is a share

purchase plan whereby the company contributes an additional percentage of a team members' share purchase (as done through payroll deduction) up to an established maximum percentage of their salary. These initiatives combine to create a corporate cultural bias towards results and appear to fit nicely into the entrepreneurial worldview.

However, elements of a culture of systems based procedures, where rules prevail and authority takes precedence over a bias for action, are also clearly evident at TELUS. The accountability for results, as part of the high-performance culture, has fostered a high level of engagement on the part of managers, in some instances to the point of micro-management. While the controls are a necessary part of running the business, they must not be allowed to completely curtail the entrepreneurial spirit required to compete against Bell and Rogers on their home turf. Conversely, managers must not charge head-on into competition, committing significant resources, without a well thought-out strategic plan and methodologies for evaluating success. As such, a balanced approach to the two cultures is required to succeed.

Currently, the bias in eastern Canadian TELUS operations appears to be more towards the entrepreneurial approach to corporate culture. This is to be expected given the "frontier" nature of this market from TELUS' perspective and the fact that, since competition and technology serve to limit the time to act, certain processes may get overlooked. On this basis another gap is identified:

> **Gap: Bias towards entrepreneurial approach may lead to an imbalance in corporate culture required to successfully implement the strategic alternative.**

In order to address this gap, a slight cultural shift in the direction of the regulatory worldview is recommended. The shift should not be so significant as to inhibit the entrepreneurial spirit required to successfully compete in the ON and QC markets. However, it

should be significant enough to ensure that project management and corporate governance controls are followed such that the chances of success for the strategic alternative are maximized.

3.2.3 Organization Analysis Summary

In review of the organizational requirements of the strategic alternative in the context of TELUS' existing capabilities, it was determined that the firm possesses the necessary leadership (a balanced mixture of procedural and entrepreneurial skills), organizational structure (decentralized business units) and generally the necessary management processes for success. However, specific to the implementation of the strategic alternative, a project manager and/or team gap was identified. In addition, the need for the mandatory implementation of a standardized project management process was also evident.

Furthermore, while TELUS possesses a culture with elements of both systems-based and entrepreneurial management styles, there is an apparent bias towards acting quickly in eastern Canada, likely in response to the very competitive nature of the market in this part of the country and TELUS' relatively recent arrival there. It was determined that a slight cultural shift towards the more controlled, systems-based approach to the culture would serve to increase the chances of success for the strategic alternative while also enabling a more cohesive national corporate culture.

Therefore, if the recommended gaps associated with project management and culture are addressed, it is concluded that the strategic alternative could be carried forward to the next stage of the Diamond-E Framework: Resource analysis.

3.3 Resource Analysis

This stage of the analysis concentrates on the degree to which a firm's available resources will facilitate or obstruct the implementation of a given strategic alternative. The first step of this resource analysis will be to identify those resources required to implement the proposed strategic alternative. The next step will be to compare and contrast the required resources against those that currently exist within the organization, leading to the identification of gaps. Finally, steps necessary to close whatever gaps may be identified are recommended.

3.3.1 Required Resources

The resources required to implement the proposed strategic alternative fall into one of three different categories, including: operational, human and financial.

3.3.1.1 Operational Resources

Operational resources include both physical brick and mortar locations (i.e., real estate) as well as technological capabilities (i.e., wireless network). Physical space will be necessary to house administrative offices, points of sale locations, network infrastructure and warehousing (prior to inventory being shipped to point of sale locations). The space can be acquired either through outright purchase or lease or a combination of the two. Local real estate knowledge will be necessary to determine suitable market rates for lease or purchase as well as to identify the best locations for the new points of sale.

Furthermore, some of the space, such as warehousing and network antennae locations, could be collocated with other businesses or suppliers. Since these areas are not available for public view, there will be no disadvantage to being in close proximity to competitors and their

products. In addition, and particular to the location of cellular antennae, the best locations from a network coverage perspective are often occupied by more than one service provider.

In order to determine the retail space requirements of the strategic alternative, it is necessary to assess the current status of TELUS retail space in ON and QC in comparison to its competitors. This will be done by observing the number of branded sales locations currently existing within a 5 Km radius of the centre of Toronto and Montreal for TELUS, Rogers and Bell. This is assumed to be representative of the distribution in both provinces. The following Table 3-2 summarizes the number of branded stores for each of the three competitors in Toronto and Montreal. Only branded stores are considered for the purposes of this comparison as they are considered to be the best representation of scale. In addition, they offer the firms the best opportunity to display the full range of their products with brand-only sales staff, without having their offerings displayed adjacent to their competitors. Given the relatively homogenous nature of the services and hardware provided, firms likely have a better chance of making a sale if theirs is the only product for the consumer to select.

Table 3-2 Corporate Branded Sales Locations Toronto and Montreal[49]

Carrier	Toronto ON	Montreal QC
Bell	13	10
Rogers	12	6
TELUS	4	5

Therefore, it is clear that TELUS lags significantly behind its competitors in terms of branded sales locations in ON and QC. In order to reach a similar scale in terms of branded sales

[49] Number of stores determined using web-based store locaters for each service provider via corporate sales websites; Bell, Store Locator [online], 2006; Shop Rogers, Find a Store [online], 2006; TELUS Mobility, Where to Buy [online], 2006.

locations when compared to the competition, TELUS would have to triple the number of ON stores and double the number of QC stores. While this may not be realistic, particularly in a short time frame, a 50 percent increase in the number of branded sales locations is considered to be necessary to affect any significant scale increase. Increases of 100 percent, or more, may have to be considered in the long term. Currently, TELUS has approximately 72 branded sales locations in ON (numbers for Rogers and Bell are not currently available) and another 34 branded sales locations in QC. Therefore, an additional 36 stores in ON (one of which would be a "flagship" store in Ottawa) and 17 in QC would be required as part of this strategic alternative (total of 53 new branded sales locations).

The second set of operational resources required to implement this strategic alternative is technological in nature. These resources include a wireless network with available bandwidth and sufficient data transmission rates to facilitate the use of an entertainment based wireless bundle. In addition to the network, other required technological resources include applications and content to offer within the entertainment bundle, as well as handsets or other hardware (e.g. air-cards for laptop computers) with the necessary functionality to use the applications (i.e., TV, music, etc.). Other technological resources required to implement this strategic alternative include administrative tools and software to manage the business as well as the hardware and systems required to operate a call centre.

3.3.1.2 Human Resources

There are a number of different types of human resources required to execute on the recommended strategic alternative. The following analysis focuses, for the most part, on the primary activity human resources (i.e., inbound and outbound logistics, operations, marketing and sales and customer service) required for implementation. Where necessary, secondary activity human resources are also considered. Among these are included:

- Senior sales and marketing executives at the VP and/or Director level in ON and QC (already discussed in Section 3.1);
- Regional sales and marketing managers, store managers and sales staff;
- After-sale customer service personnel;
- Network personnel;
- Logistics personnel including property management, merchandise handling, etc.; and
- Other secondary function resources as necessary (e.g. financial management, human resource management, etc.).

Regardless of which area of human resources is considered, it is extremely important to have a motivated and high-performing workforce in order to compete successfully in a very competitive market like consumer wireless services. This motivation and efficiency is all the more important considering that the incumbent service providers in this area enjoy a substantial advantage in terms of scale and market share. Success will depend upon each employee's commitment to the strategic alternative.

Once the necessary senior leadership is in place, the next level of management required will be regional sales and marketing managers to oversee the implementation of the strategy. Regional managers will be necessary to be able to respond to the regional differences in a given geographical area. Furthermore, considering the scale required, it will be important to have a sufficient number of regional managers to successfully handle an increased sales force. The regional managers will also serve as an important information source for senior management, providing regular updates on progress against established targets associated with implementation of the strategy. Beyond regional management, it will be necessary to have local retail location managers as well as sales staff to man any new points of sale.

After-sale service forces will be necessary to provide assistance to customers. This will include addressing technical issues related to service initiation, addressing customer requests for addition or deletion of various services, or simply managing billing inquiries and collection of overdue accounts. A certain portion of this work can be handled by sales personnel in the store locations. However, call centre personnel would provide a centralized and more efficient way of handling most of the after-sales issues. The fact is that the majority of issues can be solved remotely unless they are related to malfunction of equipment, in which case the customer will be forced to come to a point of sale for assistance.

Network personnel will be required to ensure that service is available for new and existing customers. This will include maintenance of network equipment, installation and testing of new or upgraded hardware and facilities maintenance (environmental controls, etc). For the purposes of this analysis, the development and implementation of applications and content, have also been included in the context of network personnel.

The logistics associated with operating sales locations include functions related to property management as well as the movement of merchandise. Human resources will be required to secure and manage lease arrangements, undertake lease-hold improvements and perform general maintenance and upkeep (environmental controls, janitorial, etc.). In addition human resources will be required to oversee and facilitate the movement of products from the manufacturers to centralized distribution locations. From there, the merchandise will then need to be moved to the various points of sale. Finally, similar logistics resources will be required to manage the take-back of products and accessories so that they can be recycled and/or properly disposed of.

The last area of human resources required includes other secondary functions such as human resource management and finance. These secondary functions will be necessary in order

to ensure that other human resources required as part of the strategic alternative have the necessary support in terms of recruitment, employee support, training, benefits, payroll etc. Furthermore, financial human resources will be necessary to retrieve and analyze financial performance information in order to evaluate the success of the strategic alternative from a revenue perspective.

3.3.1.3 Financial Resources

In order to satisfy the requirements of the strategic alternative, financial resources will be required to cover project management expenses, lease-hold improvements, gross rent for new sales locations (including utilities and maintenance) and salaries for new management as well as new store personnel. Furthermore, financial resources will be necessary to cover the cost of advertising and marketing campaigns to engage or increase public interest in the offering (included in the cost of acquisition (COA) per subscriber) and to provide capital to invest in network upkeep and expansion in the future, as may be necessary to support increased traffic and new, more data intensive applications (included in the network operating costs per subscriber). This area of resources is related directly to the human resources associated with financial management at the firm.

A financial analysis of the costs associated with the strategic alternative is provided in Appendix A. It is assumed that new retail space would be leased, rather than purchased, particularly in expensive urban settings. As such, the amount of capital required to fund an expansion of sales locations is relatively small. Fixed costs such as rent, maintenance and salaries, and variable costs such as network operation, administration (including cost of retaining existing customers) and COA should be covered by the increased sales generated by each location (this will be explored in a later section). Increased marketing costs are captured in the COA. A summary of fixed and variable costs related to the strategic alternative is provided in Table 3-3.

A five year period is considered here as this is the maximum payback period allowed by TELUS. The various components included and assumptions used to generate these costs are provided in Appendix A.

Table 3-3 Summary of Fixed and Variable Costs for the Proposed Strategic Alternative

Estimated Cost ON	2007	2008	2009	2010	2011
Total Fixed Costs	$4.6 M	$8.4 M	$12.2 M	$11.4 M	$11.4 M
Total Variable Costs	$4.3 M	$8.6 M	$13.3 M	$15.3 M	$17.8 M
Total Costs ON	$8.9 M	$17.0 M	$25.5 M	$26.7 M	$29.2 M
Estimated Cost QC					
Total Fixed Costs	$2.3 M	$4.2 M	$5.8 M	$5.3 M	$5.3 M
Total Variable Costs	$1.9 M	$3.9 M	$5.8 M	$6.7 M	$7.8 M
Total Costs QC	$4.2 M	$8.1 M	$11.6 M	$12.0 M	$13.1 M

3.3.2 Strategy-Resource Linkage

Following is a comparison of the above-stated strategic alternative requirements to the capabilities already existing within the organization. Where gaps are noted, recommended courses of action are identified.

3.3.2.1 Operational Resources

Given TELUS' strategy of leasing rather than purchasing real estate, TELUS will have to secure new leased space for the increased number of sales locations. As estimated in 3.3.1.1, 53 additional sales locations are proposed as part of the strategic alternative. TELUS does not

currently have the necessary real estate, either owned or leased, for these new locations in ON and QC. As such, the following gap is identified:

Gap: 53 additional brick and mortar sales locations are required, including a new "flagship" store in Ottawa.

TELUS does not have in-house local real-estate knowledge (i.e. in terms of leasing costs or location quality) in the ON and QC markets. However, TELUS does have an established relationship with a commercial real estate brokerage which it will be able to leverage in terms of local real estate market conditions. Therefore, in order to address the gap identified above, TELUS should work with its external real estate specialist to locate and secure leases on retail space for 53 additional branded points of sale. The new stores could be located in malls (either as fixed or as a kiosk) or in commercial retail districts. Thirty-six new locations are recommended for ON, including a "flagship" store located in a strategic location in Ottawa, while 17 new locations are recommended for QC. In order to make the strategic alternative manageable, it is recommended that TELUS consider spreading the expansion out over a three year period, including 18 stores in ON and QC in each of 2007 and 2008, and 17 stores in 2009. At the end of the third year, it is recommended that TELUS re-evaluate the strategy and consider increasing the expansion in the fourth and fifth years, if viable.

As discussed in detail in Chapter One, TELUS currently has the network coverage to offer wireless services to well over 90 percent of Canadians. In 2005 and ongoing in 2006, TELUS has invested heavily in expanding its EVDO network across Canada (including in the most populous regions of ON and QC). This will serve to maximize the number of users capable of subscribing to and using the Spark entertainment bundle. This coverage is at par with or slightly better than its competition, in terms of wireless high-speed, broadband access. Capital investment to expanding the network is committed through the end of 2006 and beyond. In fact,

it can be considered that capital investment for upgrading network equipment will be an ongoing requirement that TELUS will meet as technology changes and subscribers demand more innovative products and services, and in order to achieve maximized network coverage. That being said, there are currently gaps in coverage in both provinces where EVDO service is not yet available. As such, the following gap is identified:

> **Gap: Seamless EVDO coverage is not yet available in ON and QC (although the major urban centres and hence the majority of the population - i.e., Golden Horseshoe, Cottage Country, Montreal and Quebec - have coverage).**

In order to address gaps in EVDO coverage between the major metropolitan areas, TELUS will need to continue its existing capital expenditure program. In 2005, TELUS committed roughly $375 Million, nation wide to wireless capital expenditures. A significant portion of this was spent in Ontario and Quebec to improve network coverage for EVDO. A similar level of expenditure will be necessary over the next 2 to 3 years to achieve continuous network coverage for EVDO services and to maximize the number of users that can take advantage of the Spark entertainment bundle. These costs have not been included in the financial analysis as they have already been committed to by the organization. As such, they are not considered to be directly related to the proposed strategic alternative.

In terms of content, TELUS has established relationships with various content providers as outlined in Sections 2.1.1.3, 2.2.1 and 2.2.2. These relationships are on-going and continually produce refreshed and updated content and applications to sell to consumers. The current offering considered as part of this strategic alternative (i.e. "Spark") is an entertainment focussed bundle of wireless services converged onto one hand-held device. As noted above, this service includes voice, data, video and music functionalities. Furthermore, it is considered that TELUS also has the necessary administrative technological tools (including a vast array of web-based

SAP-related business management tools) in order to implement the strategic alternative. As a result, no operational gaps are identified as far as these capabilities are concerned.

3.3.2.2 Human Resources

The required level of senior management human resources associated with this strategic alternative was already discussed in Section 3.1.1 and a recommended course of action for closing the identified gap was provided. Below the Director level, the sales organization has three regional sales managers supporting 19 area sales managers. Each of the area sales managers has responsibility for an average of six stores. The strategic alternative requires that their store-load increase by one per year over the next three years. Currently, it is considered that this should be manageable with the current level of resources.

TELUS' corporate stores in ON and QC employ anywhere from three to 10 people (full and part-time), including the store manager, sales representatives and a service representative, depending on the size of the store. At the present time, TELUS employs enough sales staff to operate the existing suite of corporate stores. However, the strategic alternative calls for an increase in the number of physical sales locations in both ON and QC in order to increase scale and attract new customers.

Assuming an average of four full time equivalent (FTE) sales, service and manger personnel for each location, an additional 212 employees would be required. Therefore, the following gap is identified

> **Gap: 212 additional sales and service personnel will be required to execute the strategic alternative.**

In order to address this gap, TELUS will have to actively recruit and hire 212 additional sales and service personnel (144 in ON and 68 in QC) for new brick and mortar, branded sales

locations over a three year period from 2007 to 2009. These individuals do not necessarily need experience, but will have to be evaluated to confirm that they have the requisite sales skills. Considering the nature of the Spark entertainment bundle, it is likely to appeal to younger subscribers. As such, the demographics of the sales force should match that expected of the customers.

It is apparent that there are fewer layers of management within the marketing organization in TELUS, as noted above in Section 3.1.2. Including the Senior VP, the marketing organization at TELUS comprises more than 50 individuals. Given this level of resources and the fact that the marketing team works closely with an external advertising firm (TAXI), it is considered that any additional human resources required related to the strategic alternative could be managed by this existing relationship. As such, there is no identified gap from this perspective.

It is not currently considered that any additional network personnel would be required to maintain the functionality of the service at the present time. TELUS currently has scale in terms of its existing network and connectivity. Furthermore, the equipment requires relatively little maintenance when compared to traditional wire-line telecommunications equipment. As such, the current number of network technicians is considered sufficient and capable of systematically expanding the EVDO network in a timely fashion at the current time. However, this may change if additional equipment and network locations are required as a result of a significant increase in the subscriber base or a change in technology. TELUS also maintains enough capacity in terms of customer service agents (i.e. manning call centres) to be able to handle the increased number of subscribers in the short term. This would need to be re-evaluated going forward to determine if more resources were necessary, depending on the success of the strategic alternative and the rate at which new customers are added.

Logistics personnel required to perform facilities maintenance would be outsourced as part of an existing agreement for property maintenance with BLJC. Furthermore, handling and transportation (including shipping and warehousing) of merchandise is currently managed through a contract with UPS. As such, any increased requirements related to these functions as a result of the strategic alternative would be met by leveraging the existing agreements with these firms.

Finally, TELUS has strong HR and Finance departments with the necessary functionality to perform the required secondary activities that will support the strategic alternative. Each of the HR and Finance "business enabler" units has dedicated personnel to service the other primary activity business units (marketing/sales, logistics, operations, etc.). As such, no gap is identified in terms of human resources as far as these processes are concerned.

3.3.2.3 Financial Resources

In order to assess the degree to which TELUS' financial resources meet the needs of the strategic alternative, a financial analysis was performed and is presented in Appendix A. The analysis was used to breakdown the associated fixed costs, variable costs and projected revenue to determine if the resulting cash flows expected from new customers would be sufficient to meet the financial resource requirements set out in Section 3.3.1.3 and summarized in Table 3-3.

In order to determine if TELUS will be able to generate the necessary financial resources required to successfully implement the strategic alternative, the revenue generated from the new stores must exceed the total fixed and variable costs. Furthermore, in order to meet TELUS' financial criteria, the future cash flows must be NPV positive, have an IRR of >12.5 percent and a payback period of ≤ 5 years. Appendix A details the assumptions made in order to determine if TELUS would be able to generate the required level of revenue. Among the most important of

assumptions is an annual net subscriber growth rate of 14 percent. This assumption is considered valid since TELUS' national subscriber growth rate over the last three years has ranged from 14 to 15 percent. In addition, it is assumed that TELUS will be able to maintain its industry-leading ARPU and, in fact, be able to generate modest increases of $1 in monthly ARPU each year (note that in Appendix A, ARPU is expressed on an annual basis). It is also assumed that the average new contract length will be two years.

A summary of expected profit (loss) associated with the strategic alternative over a five year period is provided in Table 3-4:

Table 3-4 Summary of Expected Profit (Loss) from Strategic Alternative

Estimated Profit (Loss) ON	2007	2008	2009	2010	2011
Total Costs	$8.9 M	$17.0 M	$25.5 M	$26.7 M	$29.2 M
Total Revenue (including previous year's subscribers)	$5.5 M	$15.2 M	$25.6 M	$32.8 M	$38.0 M
Total Profit (Loss) ON	**($3.4 M)**	**($1.8 M)**	**$ 100 K**	**$6.1 M**	**$8.8 M**
Estimated Profit (Loss) QC					
Total Costs	$4.2 M	$8.1 M	$11.6 M	$12.0 M	$13.1 M
Total Revenue (including previous year's subscribers)	$2.5 M	$6.0 M	$11.4 M	$14.3 M	$16.6 M
Total Profit (Loss) QC	**($1.7 M)**	**($2.1 M)**	**($200 K)**	**$2.3 M**	**$3.5 M**

On the basis of this analysis, it is clear that TELUS will have to show resolve if it is to successfully implement the strategic alternative. TELUS senior management will have to be comfortable that the losses experienced in the first two years can be recovered by cash flow

generated in the subsequent years. In fact, looking at the resulting cash flows over the full five-year period, the following financial results were calculated:

Table 3-5 Summary of Financial Indicators from the Strategic Alternative

Financial Indicator	TELUS Criterion	Result ON	Result QC
NPV	>0	$4.6 M	$900 K
IRR	>12.5%	39%	22%
Payback Period	≤ 5 yrs.	< 4 yrs.	4 yrs.

Therefore, given the assumptions provided in Appendix A and a sustained projected year over year net subscriber growth rate of 14 percent, the strategic alternative would be considered viable. Given that TELUS generated over $1.0 B in wireless free cash flow in 2005[50], it has the necessary financial resources to absorb the losses incurred in the early stages of implementation of the strategic alternative.

3.3.3 Resource Analysis Summary

Based on a review of resources required by the strategic alternative in the context of TELUS' existing resources, three major gaps were identified. Among these were a need for 53 additional TELUS-only points of sale (36 in ON and 17 in QC), 212 additional sales personnel and a continued commitment on the part of TELUS to investment in its EVDO network to ensure that the Spark entertainment bundle is available to the maximum number of customers.

From a financial perspective, it was concluded that while the estimated losses incurred in the first two years of the strategic alternative were significant, they were small enough to be

[50] TELUS Communications Company, *2005 Financial Review* (Vancouver: TELUS Communications Inc., 2006), 8.

easily absorbed by TELUS' free cash flow generated by its on-going national operations. Furthermore, it was determined that over a five-year period, the resulting cash flows from the new stores (based on a 14 percent year over year increase in net subscriber additions) were such that the medium-run costs associated with the strategic alternative could be covered. Finally, the corporate requirements in terms of NPV of cash flow, IRR and payback period would all be met if TELUS succeeded in achieving the assumed subscriber growth rate.

3.4 Summary

On the basis of the "Diamond-E Framework", it is concluded that the strategic alternative should be carried forward for implementation. While gaps between elements, required by the strategic alternative and capabilities currently resident with TELUS, were identified in each of the areas (i.e., management preferences, organizational capabilities and resources), recommended steps to close these gaps have been identified. It is felt that if these gaps are addressed, the strategic alternative can be successfully implemented. In addition, the analysis provided in Appendix A demonstrates the financial viability of the strategic alternative, on the basis of a number of stated assumptions.

The following chapter summarizes the recommended strategic course of action based on the preceding analysis and in the context of both the external and internal environments. A high-level assessment of risk and expected performance will also be provided. Finally, an overall review of the recommended strategic alternative in the context of TELUS' decision criteria will be provided.

4 RECOMMENDATIONS

This chapter will provide a summary of the recommended strategic alternative, including a contextual discussion regarding the external and internal environments facing TELUS. Consideration will also be given to the degree of risk associated with the recommended strategic alternative and the likelihood of success. Finally, a review of the alternative in the context of TELUS' decision criteria will be provided.

4.1 Summary of Recommended Strategic Alternative

In order to build market share in eastern Canada, and specifically the Provinces of Ontario and Quebec, it is recommended that TELUS significantly expand its branded points-of-sale there by 50 percent over the next three years. This would include an increase of 36 stores in ON and 17 stores in QC. In addition, it is recommended that TELUS increase its marketing efforts related to the Spark wireless entertainment/communications bundle. This should be done in conjunction with an effort to leverage TELUS' CSR reputation though partnerships with local charities, foundations and educational institutions. If TELUS can achieve its goal of becoming Canada's premiere corporate citizen, a significant positive impact on brand equity should accrue.

The first priority for Senior VP level management within the sales and marketing parts of the organization should be to obtain concurrence from the TELUS Executive Leadership Team to proceed with the strategic alternative. With this secured, the process of recruiting and hiring Director level management for wireless consumer sales in QC can begin. In fact, regardless of whether or not TELUS chooses to implement the strategic alternative, it is recommended that this

position be filled. Given the cultural differences between ON and QC, it is important to have local senior expertise and decision-making capabilities from a sales perspective.

The strategic alternative will also require that personnel be recruited to man the new stores as they come on-line. Given the emphasis to be placed on the Spark entertainment bundle, it is recommended that TELUS closely review the targeted customer demographics and gear the advertising and store personnel towards this audience.

In conjunction with this expanded physical sales presence in eastern Canada, it is recommended that TELUS continue its strategy of developing relationships with external content providers. This will enable the company to continue to offer refreshed wireless entertainment content (i.e. music, games, TV channels, etc.) as well as new wireless applications with which it can differentiate itself from its competitors. Furthermore, as technology in this area advances, it is anticipated that subscribers will continue to demand more functionality and versatility from service providers. As such, continued development in this area will be critical to the success of the strategic alternative.

4.2 Strategic Alternative Fit to the External Environment

As discussed in Chapter Two, consolidation of the market over the past few years has lead to a high competitive concentration. Given the diffuse nature of the customer base, the three main Canadian wireless firms have not been forced to compete on price to any significant degree. This has resulted, in part, in the relatively low degree of wireless penetration in Canada when compared to other developed countries, suggesting that there is room for expansion in the market. Given the population concentration in ON and QC, the largest potential gains in subscriber additions are likely to come from here.

The industry analysis conducted as part of this paper developed a series of threats and opportunities facing TELUS in the context of competition from Bell and Rogers. Threats to TELUS include size in eastern Canada (i.e. scale, particularly where branded points of sale are concerned), bundling, brand equity and, to a lesser extent, spectrum utilization. The recommended strategic alternative addresses each of these by physically increasing the scale of sales operations, offering a bundled entertainment package that includes wireless TV content (albeit in a preliminary way), increasing marketing efforts and visibility of the TELUS brand (via the increased sales locations) to help build brand equity and recognition, and to a lesser extent increasing spectrum utilization by gaining more wireless customers.

Opportunities identified as part of the industry analysis included an ability to attract new customers, access to capital for investment or other expenditures, margin and CSR reputation. The recommended strategic alternative leverages TELUS' ability to attract new customers by making it the main focus of the proposal. In order for the strategic alternative to be viable from a financial perspective, it will have to successfully attract new, high-revenue customers to the TELUS brand. At 14 percent, TELUS currently maintains the highest year-over-year national growth rate in the industry, as well as the lowest combined churn rate. The recommended strategic alternative must leverage this, especially considering that WNP, expected in 2007, will reduce switching costs making consumers more powerful and demanding.

While there is not much in the way of capital investment required by the strategic alternative (where the increase in sales locations is concerned), continued expansion of the network and increased capabilities in terms of EVDO and future technologies will require TELUS to maintain its current ability to access capital at reasonable rates. Given that TELUS' bond rating outlook is currently at investment grade and stable, it is recommended that TELUS continue to take advantage of this opportunity. TELUS also maintains the highest wireless EBITDA margin of the three firms, including the highest ARPU. The recommended strategic

alternative will take advantage of this opportunity by adding more high-revenue customers leading to increased revenue. Finally, it is recommended that TELUS leverage its CSR reputation more fully to increase brand awareness. This must be done carefully, however, so that the intent of the CSR process is maintained and does not degrade into a mere marketing exercise.

Therefore, if the recommended strategic alternative is implemented as outlined in this analysis, it should be able to take advantage of TELUS' identified strengths, while addressing the majority of its competitive disadvantages when compared to Bell and Rogers.

4.3 Strategic Alternative Fit to the Internal Environment

Chapter Three provided a comparison of the recommended strategic alternative to the internal environment at TELUS based on the "Diamond-E Framework" for internal analysis. The recommended strategy was assessed against TELUS' internal characteristics including management preferences, organizational capabilities and internal resources. In general, the recommended strategic alternative set up well against TELUS' internal management preferences, capabilities (including leadership, structure, management processes and culture) and resources (including operational, human and financial). However, as a result of this internal analysis, some changes or areas of improvement to the organization were recommended, including:

Table 4-1 Summary of Recommendations from Internal Analysis

Internal Characteristic	Recommendations to Address Identified Gaps
Management Preferences	• Hire Director level management for wireless consumer sales located in Quebec. This will provide local senior management and close any cultural gaps that may exist.
Organizational Capabilities	• Designate a project manager or management team capable of bringing together the various business unit elements required to successfully implement the strategic alternative. • Ensure that a standardized project management process is employed when implementing the strategic alternative. • Ensure a balance between entrepreneurial and systems-based culture is maintained to maximize the chances of successfully implementing the strategic alternative.
Resources	• Secure 53 additional brick and mortar sales locations through leases, including a new "flagship" store in Ottawa. This expansion should be phased in over a three-year period. • Continue committed capital expenditure to expand EVDO coverage throughout ON and QC. • Hire 212 additional sales and service personnel over the next three years to man the new points of sale in ON and QC.

It is concluded that if the above-noted recommendations are implemented, TELUS will have taken the steps necessary to maximize the likelihood of succeeding in implementing the strategic alternative and realizing significant increases in market share and revenue generation in the ON and QC markets.

4.4 Expected Performance and Risk

The financial analysis provided in Appendix A indicated that TELUS could expect to incur losses in each of the first two years of implementation. However, future cash flows from the increased subscriber base were projected to be sufficient to cover these losses and generate profitability within four years of project initiation, such that the estimated NPV of the strategic alternative was expected to be significantly greater than zero. Furthermore, the model projected that the 53 stores would increase the post-paid subscriber base in ON and QC by at least 140,000 by the end of 2011. While this represents less than 10 percent of the current customer base, the increased marketing efforts are expected to have similar impacts to the other 106 existing branded points of sale in ON and QC, as well as licensed dealerships and, to a lesser extent, third party sales locations such as Future Shop and Best Buy.

There are a number of risks associated with successful implementation of this model however. The two most significant ones include the assumption related to subscriber growth rate and TELUS senior management's willingness to be patient during the first two years of implementation of the strategic alternative where losses are incurred. Firstly, it has been assumed that TELUS will be able to sustain a 14 percent, year-over-year increase in subscriber growth in the ON and QC markets. This is in-line with TELUS' rate of wireless subscriber growth experienced across Canada in 2005 and will be necessary if TELUS is to be capable of making any significant gains in market share in eastern Canada compared to its rivals. While Bell and Rogers have lower growth rates (in the 10 to 11 percent range), their larger customer base in ON and QC makes it more difficult for TELUS to close the existing gap.

However, if TELUS is not capable of generating this kind of growth from the 53 new stores, the venture is unlikely to be profitable. In addition, WNP will be implemented in Canada in 2007. As discussed previously, this will have the effect of reducing switching costs and

empowering consumers as they will be able to take their phone numbers with them when they switch providers. As such, churn rates are likely to rise and firms will have to compete harder to keep existing customers and attract new ones. This may make it difficult to achieve the necessary growth rates. However, TELUS is uniquely positioned in that its industry leading wireless EBITDA margin does provide some room to compete on price. This will be off-set, to some extent, by the introduction of new and/or premium services that will generate more ARPU.

The second major risk that may jeopardize the success of the strategic alternative is the willingness of TELUS senior management to incur losses in the first two years of implementation, as the subscriber base grows to the necessary level to off-set the costs of expansion. As the losses accrue in the first two years, it will be tempting for management to negatively evaluate the progress of the alternative and prematurely abandon the recommended strategic alternative. The best way to ameliorate this risk is to ensure that detailed project planning and forecasts are promulgated to senior management so that their expectations can be managed. Furthermore, detailed financial tracking and analysis of progress will be necessary to demonstrate performance. Implementation of the standardized project management process noted in Section 3.2.2.3 will be necessary to manage this risk.

4.5 Strategic Alternative Fit to TELUS Decision Criteria

TELUS decision criteria, as outlined in Section 1.3.2 comprise six strategic imperatives and four measurements of financial performance. The recommended strategic alternative has been compared to both sets of decision criteria and has been found to achieve a reasonable fit.

The recommended strategic alternative satisfies each one of TELUS' six strategic imperatives to a reasonable degree. Furthermore, the proposed strategy does not contradict any of the imperatives. The proposed strategic alternative fits TELUS' strategic imperatives in that:

1. It builds national capabilities across data, IP, voice and wireless by expanding the TELUS sales force and brand in eastern Canada;
2. It makes use of integrated solutions that leverage TELUS' capabilities in the areas of data, voice, IP and wireless to differentiate TELUS from its competition;
3. It includes partnering with content providers to allow TELUS to focus on its core business of offering wireless telecommunications services;
4. It focuses specifically on growth areas of data, IP, voice and wireless;
5. It will target building brand equity by going to market as one team (thanks to the on-going merger of wireless and wire-line businesses) under a common brand; and
6. It invests in internal capabilities by recruiting and hiring individuals and securing necessary resources to build a high performing and efficient operation.

The second set of TELUS' decision criteria includes indicators to assess projected performance of the strategic alternative to determine if the necessary level of profitability can be achieved. The opportunity cost of capital employed by TELUS depends on the nature of the investments being considered. In this instance, a discount rate of 11.5 percent was used. Other financial indicators included as part of this criterion set are NPV of future cash flows greater than zero, an IRR greater than 11.5 percent and a payback period on the initial investment of less than or equal to five years.

As summarized in Table 3-5 the recommended strategic alternative met each of the financial criteria used by TELUS to evaluate the viability of a proposal. While early cash flows looked to be negative in the first two years, projected cash flow in later years appeared to be more than sufficient to make up for these losses. In addition, the IRR looked to be in the range of 35 percent, based on the losses incurred in years 1 and 2 and the resulting positive cash flows generated in years 4 and 5. Furthermore, the cash outlay in the first two years should be recovered in roughly four years, meeting the TELUS conditions for successful project implementation.

In conclusion, if TELUS is capable of sustaining a 14 percent net subscriber growth rate in ON and QC over a five-year period, the addition of 53 sales locations is likely to have a significant positive impact in terms of new customers and increased revenue. Beyond this, increased marketing efforts, if successful, should generate increased subscribers and revenue from other, existing locations leading to significant increases in ON and QC. The recommended strategic alternative fits the differentiated elements of TELUS' wireless strategy by focussing on TELUS-only points of sale and marketing of a bundled, unique wireless entertainment package to further differentiate the firm from its rivals. In the event that implementation of the recommended strategic alternative produces results that exceed expectations, TELUS may wish to consider the expansion beyond the initial 53 locations recommended in the first three years of the proposal.

APPENDICES

Appendix A: Financial Analysis

Table A- 1 Financial Analysis New Ontario Stores

Ontario

		2007	2008	2009	2010	2011
New stores (cumulative)		12	24	36	36	36
Loaded project management (2 FTEs@$200K)		($400,000)	($400,000)	($400,000)	-	-
Lease hold improvements		($450,000)	($450,000)	($450,000)	-	-
Gross Rent		($195,000)	($390,000)	($585,000)	($585,000)	($585,000)
Loaded FTE Salaries (4 FTEs per store @$75K)		($3,600,000)	($7,200,000)	($10,800,000)	($10,800,000)	($10,800,000)
Total Fixed Costs		($4,645,000)	($8,440,000)	($12,235,000)	($11,385,000)	($11,385,000)
Projected net subcriber additions (new stores)	See Note 1	7364	14692	22332	25458	29022
Network operating costs (per subscriber)	See Note 2	($87)	($89)	($91)	($92)	($94)
Administration expense (per subscriber)	See Note 3	($100)	($102)	($104)	($106)	($108)
COA (per subscriber)		($390)	($395)	($400)	($405)	($410)
Total Variable Costs		($4,249,246)	($8,605,653)	($13,277,442)	($15,362,635)	($17,773,703)
ARPU (per year, per subscriber)		$744	$756	$768	$780	$792
Projected New Revenue		$5,479,097	$11,107,101	$17,150,775	$19,857,382	$22,985,683
Profit from Preceeding Year's Subscribers	See Note 4	$0	$4,162,788	$8,425,018	$12,987,114	$15,009,767
Expected Profit (Loss)		($3,415,149)	($1,775,763)	$63,351	$6,096,860	$8,836,747

Results

Discount Rate	**11.50%**
NPV	**$4,626,716**
IRR	**39%**
Payback Period	**<4 years**

2006	2007	2008	2009	2010	2011
Net number of subscribers projected at 14% growth - see Note 5					
1298832	1480668	1687962	1924277	2193676	2500790
Net subscriber additions					
-	181836	207294	236315	269399	307115

14%	Assumed annual net subscriber growth rate
2 Yrs	Assumed contract length
35%	Assumed % of net subscriber additions from branded retail locations
81%	Percent of net additions that are post-paid - source: TELUS 2005 Financial Review
72	Number of existing branded retail locations in ON as of 2006
500 sq.ft.	Assumed average store area
$32.49	Gross rent/sq.ft. in Toronto (includes utilities) - source: Cushman & Wakefield Lepage, 2006
$75,000	Assumed average annual loaded salary for FTE
FTE	Full time equivalent employee
ARPU	Average revenue per unit (expressed on annual basis) increasing at $12/yr
COA	Cost of acquisition includes handset subsidies, commissions and advertising and promotion expenses. Increasing at $5/yr to cover additional marketing expenses.
Note 1	Projected net customer adds for new stores calculated by multiplying annual net subscriber add by % from branded retail, then mulitplying by % post-paid and normalizing by number of branded retail locations.
Note 2	Network operating cost per subscriber calculated as ratio of network operating expenses to total number of customers - source: TELUS 2005 Financial Review. Estimated to increase at 2% per year.
Note 3	Administration expense estimated as a ratio of total general and admin expenses to total number of customers, less allowance for fixed cost for new stores source: TELUS 2005 Financial Review
Note 4	Estimated as previous year's net adds times ARPU (less operating and admin costs)
Note 5	2006 Net Subscribers from NBI Michael Sones Associates Inc., 2005

Table A- 2 Financial Analysis New Quebec Stores

Quebec

		2007	2008	2009	2010	2011
New stores (cumulative)		6	12	17	17	17
Project management (1 FTE @$200K loaded)		($200,000)	($200,000)	($200,000)	-	-
Lease hold improvements		($225,000)	($225,000)	($225,000)	-	-
Gross Rent		($84,000)	($168,000)	($238,000)	($238,000)	($238,000)
Loaded FTE Salaries (4 FTEs per store @$75K)		($1,800,000)	($3,600,000)	($5,100,000)	($5,100,000)	($5,100,000)
Total Fixed Costs		($2,309,000)	($4,193,000)	($5,763,000)	($5,338,000)	($5,338,000)
Projected net subcriber additions (new stores)	See Note 1	3377	6696	9754	11119	12676
Network operating costs (per subscriber)	See Note 2	($87)	($89)	($91)	($92)	($94)
Administration expense (per subscriber)	See Note 3	($100)	($102)	($104)	($106)	($108)
COA (per subscriber)		($390)	($395)	($400)	($405)	($410)
Total Variable Costs		($1,948,734)	($3,922,100)	($5,799,169)	($6,709,916)	($7,762,995)
ARPU (per year, per subscriber)		$744	$756	$768	$780	$792
Projected New Revenue		$2,512,752	$5,062,156	$7,490,919	$8,673,080	$10,039,424
Profit from Preceeding Year's Subscribers	See Note 4	$0	$1,909,084	$3,839,774	$5,672,363	$6,555,794
Expected Profit (Loss)		($1,744,982)	($1,143,860)	($231,476)	$2,297,527	$3,494,223

Results

Discount Rate	**11.50%**
NPV	**$861,992**
IRR	**22%**
Payback Period	**4 yrs**

2006	2007	2008	2009	2010	2011
Net number of subscribers projected at 14% growth - see Note 5					
567289	646709	737249	840464	958129	1092267
Net subscriber additions					
-	79420	90539	103215	117665	134138

14%	Assumed annual Net subscriber growth rate
2 Yrs	Assumed contract length
35%	% of net subscriber additions from branded retail locations
81%	Percent of net additions that are post-paid
34	Number of existing branded retail locations in QC as of 2006
500 sq.ft.	Average store area
$28.00	Gross rent/sq.ft. in Montreal (includes utilities) - source: Cushman & Wakefield Lepage, 2006
$75,000	Average annual loaded salary for FTE
FTE	Full time equivalent employee
ARPU	Average revenue per unit (expressed on annual basis) increasing at $12/yr
COA	Cost of acquisition includes handset subsidies, commissions and advertising and promotion expenses. Increasing at $5/yr to cover additional marketing expenses.
Note 1	Projected net customer adds for new stores calculated by multiplying annual net subscriber add by % from branded retail, then mulitplying by % post-paid and normalizing by number of branded retail locations.
Note 2	Network operating cost per subscriber calculated as ratio of network operating expenses to total number of customers - source: TELUS 2005 Financial Review. Estimated to increase at 2% per year.
Note 3	Administration expense estimated as a ratio of total general and admin expenses to total number of customers, less allowance for fixed cost for new stores source: TELUS 2005 Financial Review
Note 4	Estimated as previous year's net adds times ARPU (less operating and admin costs)
Note 5	2006 Net Subscribers from NBI Michael Sones Associates Inc., 2005

REFERENCE LIST

Bell Canada Enterprises, *Supplementary Financial Information, First Quarter 2006,* Montreal: Bell Canada Enterprises, 2006.

Bell Canada Enterprises: *2005 Corporate Social Responsibility Report: Employees* [online]. Bell Canada, 2006 (cited 15 June 2006]. Available from: http://www.bce.ca/en/responsibility/people/employees/employment/.

Bell Canada Enterprises: *Store Locator* [online]. Bell Canada Enterprises, 2006 [cited 15 June 2006]. Available from: http://www.bell.ca/home/.

Bukszar, Ed, "EMBA Strategy Seminar Notes", Simon Fraser University (2006).

Canada's Office of Consumer Affairs: *How to Complain Effectively* [online]. Industry Canada, 15 May 2006 [cited 10 June 2006]. Available from: http://www.strategis.ic.gc.ca/epic/internet/inoca-bc.nsf/en/ca01474e.html.

Crossan, Mark , Joseph Fry and J.Peter Killing, *Strategic Analysis and Action*, Toronto: Pearson/Prentice Hall, 2004.

Gartner Research, "Mobile and Wireless Services and Service Providers in Canada, 2006 Update" (2006).

Hamilton, Tyler, "Wi-MAX wireless broadband full of promise, Mobile wireless Internet elusive", Toronto Star, May 15 (2006).

Higgins, Robert C., *Analysis for Financial Management*, New York, NY:McGraw Hill/Irwin, 2004.

Industry Canada, *Telecommunications Policy Review Panel, Final Report*, Ottawa: Public Works and Government Services Canada, 2006.

Kotler, Philip, *Marketing Management*, 11th rev. ed. Upper Saddle River, New Jersey, U.S.A: Prentice Hall, 2003.

NBI Michael Sones Associates Inc., "Canadian Mobile Wireless Communications Services Market Report, 2005 Edition" (2005).

NBI Michael Sones Associates Inc., "Canadian Wi-Fi/WiMAX Market Report, 2005 Edition" (2005).

Porter, Michael, "How Competitive Forces Shape Strategy", Harvard Business Review, Reprint 79208 (1979).

Quigley, Neil and Margaret Sanderson, "Going Mobile – Slowly, How Wire line Telephone Regulation Slows Cellular Network Development", C.D. Howe Institute Commentary, No. 222 (2005).

Rogers Communications Inc., *2005 Annual Report*, Toronto: Rogers Communications Inc., 2006.

Rogers Communications Inc. : *Find a Store* [online]. Rogers Communications Inc, 2006 [cited 15 June 2006]. Available from: http://www.shoprogers.com/homeen.asp/.

Standard and Poor's: *Credit Ratings* [online]. Standard & Poor's 2006 [cited 02 June 2006]. Available from: http://WWW2.standardandpoors.com.

Stratos Inc., *Gaining Momentum, Corporate Sustainability Reporting in Canada*, Ottawa: Stratos Inc., 2005.

Surtees, Lawrence, "IDC Industry Developments and Models, Wireless Telepocalypse (1): Canadian WiMax Developments & the Power Connection" (2005).

Surtees, Lawrence, Barbara Hall and Tom Olvet, "IDC Market Analysis, Wireless Wars 2: Canadian Wireless Forecast and Analysis, 2005 – 2009" (2005).

TELUS Communications Company, Internal Document, "Market Model" (2005).

TELUS Communications Company, *2005 Corporate Social Responsibility Report*, Vancouver: TELUS Communications Company, 2006.

TELUS Communications Company, *2005 Financial Review*, Vancouver: TELUS Communications Company, 2006.

TELUS Communications Company: *Where to Buy* [online]. TELUS Communications Company, 2006 [cited 15 June 2006]. Available from: http://telusmobility.com.

Wexler, Mark, N., *Leadership in Context, the Four Faces of Capitalism*, Northampton, MA, USA: Edward Elgar, 2005.