



Industry
Canada

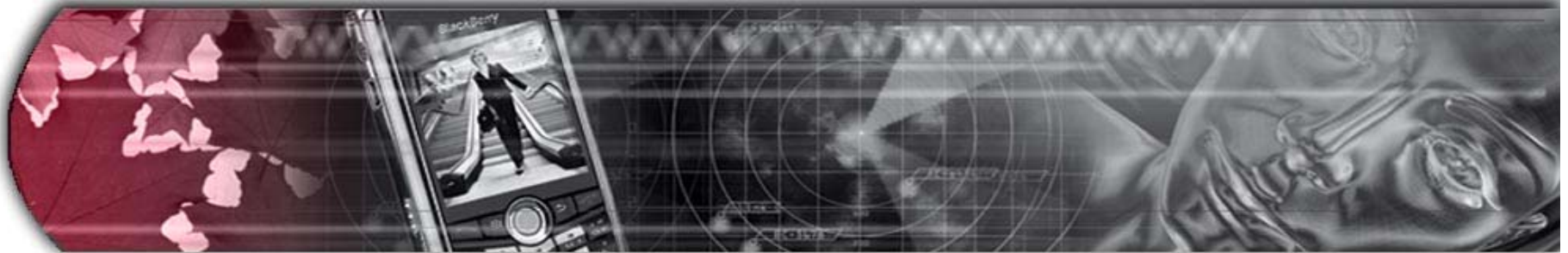
Industrie
Canada

Information and Communications Technologies Branch (ICT)

Networking * Intelligence * Advocacy



e-Health Market Environment for Canadian Firms



John Chesley, Chairman e-Health Watching Brief Team

10 Feb 2009

Canada



The e-Health Marketplace

e-Health defined: *ICT applied to the healthcare system*

- **A VERTICAL MARKET** of high growth potential that utilizes a wide range of ICT technologies and services
- **E-health firms require a combination of ICT skills and knowledge of the health care environment and culture**
- **An interconnected environment comprising health care providers, health care payers, research institutes, government entities, and health care users.**

PRODUCTS

- **Applications:** Primarily clinical systems, financial and administrative systems and services/systems integration/consulting
- **e-Health infrastructure**
- **Other systems:** clinic management (e.g. doctor's offices), home care, long term care applications, dentistry and optometry, pharmacies, emergency preparedness, and corporate health plans and insurance

BUYERS

- **Significant e-health purchases are public procurements that are awarded by tender. They favour firms that can offer complete packages, interoperability and support.**
- **Important buyers in Canada: hospitals, RHAs, provincial Departments of Health, DND, Health Canada, Correctional Services Canada, and DVA.**
- **The US has similar buyers but their importance varies with private insurers having a much greater influence and hospitals structured as private corporations.**

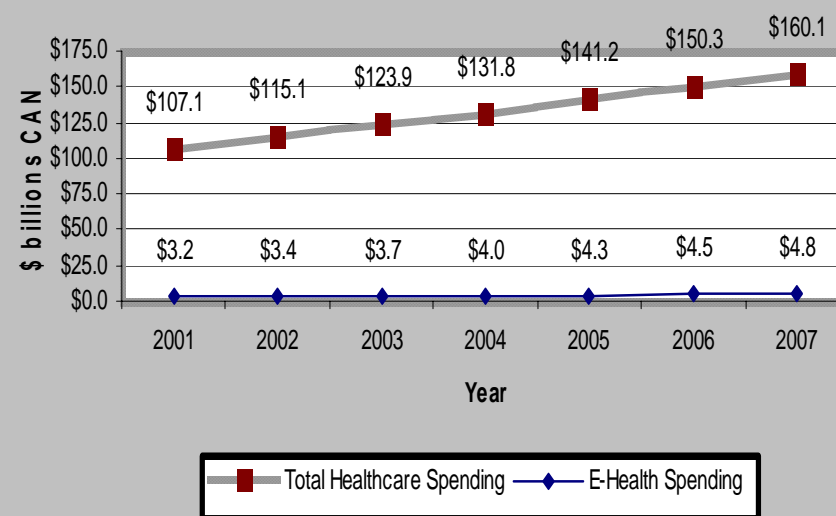




e-Health Spending:

- **Canada (by hospitals) - \$2.4 B (Branham)**
- **2008 Projections: IT services - \$442.5 M ; IT hardware - \$422.7 M; IT software \$283.8 M (IDC Canada)**
- **Canada (all users) - \$4.8 B (Frost & Sullivan)**
- **Canada growth rate: 15% for the next 5 years (Frost & Sullivan)**
- **US e-Health market: \$16.4 B growing at 13.4% per year (BCC Research)**
- **Top 100 e-health Firms e-health revenue 2007: \$20 B (Health Informatics Magazine)**
- **European e-Health spending: \$5.0 B growing at 10% per year (European e-Health Estimates 2007, Frost & Sullivan); 2009 Forecast \$12.1 B (IDC)**
- **Worldwide e-Health spending: \$53.2 B (IDC)**

Health & E-Health Spending - Canada



Total Health Spending:

- **USA: 16% of GDP – \$2.3 T (National Coalition on Healthcare)**
- **Canada: 10.4% of GDP - \$160.1 B (Canada Health Spending 2007, Canadian Institute for Health Information)**
- **Worldwide: \$4.1 T (World Health Organization)**





Business & Market Drivers

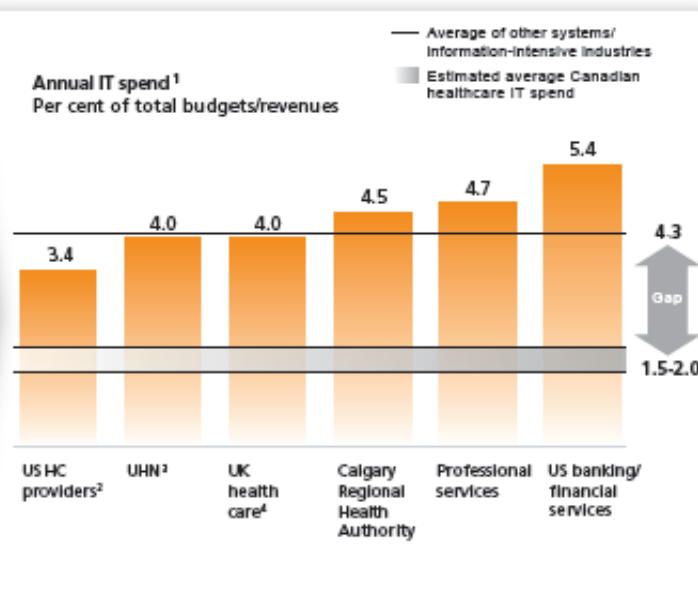
- Aging population with increased health needs
- Cost reduction & increased productivity
- Improved quality, safety, and error reduction
- Demands for performance measurement and other regulatory demands
- Regionalization (i.e. Regional Health Authorities)
- Electronic health record (EHR) expansion
- Digitization of healthcare processes
- An increased patient orientation
- Province-wide health communications networks

IT INVESTMENT LEVELS

Canada Health Infoway (10)

- The EHR is not consistently viewed as a political priority
- Canada is underinvesting in IT relative to other healthcare providers and information management industries
- Canada's healthcare system would rank No. 10 in the *Fortune 500*, is 3 times the size of the Royal Bank, and yet has limited ability to manage its information
- Additionally, IT investments have often been fragmented and one-off leading to duplicated efforts and the need for reinvestments

Annual IT spend¹
Per cent of total budgets/revenues



1 Operating and capital
2 Gartner estimate as percent of revenues; assume providers working on a non-profit basis
3 The University Health Network in Toronto, ON; spend is between 3.75 and 4.2%; on average; UHN operates slightly below 4%
4 Predicted to rise to 4% from 1.5% in 2004
Source: Information Technology Association of Canada, 2004; Gartner; Interviews

e-Health is replacing manual and paper based systems and providing the impetus for re-engineering health care systems. It is seen as the only enabler of health system improvements and cost control.





Firms design their business strategies around meeting the needs of the healthcare sector

Competitive strategies:

- Multi-site capability and interoperability
- Solutions integration across many levels of care
- High service levels, implementation and training support
- Focus on legacy systems modernization and making them interoperable with other systems
- Certification is an asset but not essential at this point. Conformance with existing or evolving standards is important in the long run
- Software as a service (SaaS) increasingly popular
- Prepare for longer sales cycles and market entry barriers (bias toward established and large players)

New market strategies:

- Value Added Resellers (VARs) which specialize in the health marketplace
- Listing on government and company procurement databases
- Especially in the US, “one-off” procurements by individual hospitals, other health organizations, or private companies
- Niche solutions to pressing cost and functional issues
- Have a solid solution, credibility and a convincing case (buyers will forgive other shortcomings)
- US special “set asides” of portions for government contracts. Partnerships.
- Local content is valued and local service is essential
- Develop relationships with MNE’s to add value to their products. Many MNE’s have business development offices open to dealing with smaller companies.





E-Health Market Trends (1/4)

- **The demand for solutions is high. No slackening in growth is foreseen. More countries are investing in e-Health (Growth Forecasts: Frost & Sullivan – 15% Canada, 10% Europe; BCC – 13.4% USA; Health Informatics Magazine – 20% Top 20 firms; Industry Canada – 21% Top 20 Canadian firms)**
- **2009 Canadian Budget \$500 m for Canada Health Infoway; US Stimulus package has about \$30 B in health IT stimulus over 10 years**
- **Business case for e-Health investments is now well known but still must compete with other health spending demands**
- **Canadian technology is considered good but US is perceived as more comprehensive and sophisticated. Many Canadian solutions are not well known in domestic and foreign markets**
- **Canadian firms are opening US sales offices and making acquisitions to develop US markets**
- **Some Canadian companies bypass the Canadian market in favour of selling to the US**
- **Mergers and acquisitions by MNE's are used to acquire new skills and revenue streams, market entry and share. Firms may want to position themselves for buyouts or alliances**
- **Direct selling opportunities exist in university medical facilities, clinics and research centres**
- **Strategic alliances are common but market share is defended**
- **Many health institutions (approx 50%) have or are looking to outsource some of their functions to allow them to focus on core activities**
- **The range of ICT products and services being used in the e-Health marketplace is expanding. One development (e.g. digitization or EHR) makes others possible (e.g. decision support)**
- **Consumer e-health just developing with Microsoft (Healthvault), Google Health; ATT-Walmart-Intel consortia (Dossia) and others positioning themselves**

While uniformity is growing, there is still a high degree of market variation across Canada, the US and other jurisdictions



E-Health Market Trends (2/4)

- **Health Industry Insights (IDC) : 2008 Important Trend Predictions \Results:**
 - Importance of business intelligence grows
 - Growth of outsourcing
 - EMR spending grows more than 10%
 - Retail clinics advancing but slowed by regs & payment issues
 - Health providers replacing revenue and admin systems
 - Payer IT investment costs rise
 - Market fragmentation increases
 - Higher spend on consumer health, self care
 - Payers provide incentives for IT adoption

IDC felt they were fairly accurate in these predictions



E-Health Market Trends (3/4)

- **Health Industry Insights (IDC) – “Top 10 2009 Predictions” (Jan 7, 2009)**
2009 Important Trend Predictions for e-Health:
 - US healthcare spending will not fall despite recession
 - Healthcare providers will keep projects that drive efficiency & quality of care
 - Payers will invest in cost cutting technologies
 - New US admin will make fundamental changes in US healthcare delivery, reimbursement and infrastructure (proposed \$30 B/ over 10 years for IT)
 - European market grows to \$12.1 B/year (est)
 - E-prescribing a key investment focus since payoffs are clear
 - More physicians onboard with IT and office systems
 - Consumers will look more to heal themselves and to low cost health solutions (recession: more uninsured patients, delay in costly procedures)
 - Online health, “medical home” concept & personal health records emerging
 - Growth in remote patient monitoring & telehealth pilots pushed by payers. Refinement of business models needed
 - Business intelligence allowing management of outcomes and costs one of the biggest growth areas
 - Outsourcing of IT still strong growth but IT consulting may be flat in 2009





E-Health Market Trends (4/4)

- **Wireless in Healthcare : “Top 10 Healthcare Mobility Trends”**
 - **Barcoded medication and specimen administration**
 - **Remote Patient Monitoring**
 - **Mobile Physician**
 - **Hospital and nurse communications**
 - **Mobile Asset Management / Monitoring**
 - **Blood transfusion verification**
 - **Salesforce automation for pharmaceutical sales**
 - **RFID tracking for pharmaceuticals**

Source; Motorola, Healthcare Informatics Webinar Dec 15, 2008]



Canadian technology firms that specialize in meeting the needs of the health sector can be grouped as

1. Larger firms selling to the health sector plus other verticals (e.g. CGI, xWave, Telus-Emergis, Nortel, Sierra Systems, Cognos)
2. Pure play e-Health companies:
 - Multi-application companies focused on provincial markets or specific parts of the US (e.g. Logibec, Momentum Healthware, Clinicare, MediSolution, Deltaware, Nightingale, MediSolution)
 - Niche product players (e.g. Med2020, Eyelogic, Medusa Medical, Crescendo, Bycast, SXC, Interfaceware, Courtyard Group, PointClickCare, Healthtech)

International Dominance of the Canadian Market

Subsidiaries: McKesson, Siemens, Microsoft, IBA/iSoft, IBM, GE, Cardinal Health, CSC, Cerner, Agfa, Ajilon, HP/EDS, 3M, Oracle, Kronos, Philips, Clinidata, Purkinje, Sierra Systems

Foreign Selling to Canada: Meditech, Allscripts, EMC, Epic, MedicomSoft, Misys, Eclipsys





Company Structure – Canadian Marketplace

<i>Ownership</i>	<i># of Vendors</i>	<i>% Public Ownership</i>	<i>% Private Ownership</i>	<i>% of Total</i>
<i>Canadian owned</i>	286	12.90%	87.10%	60.98%
<i>Canadian subsidiary</i>	85	70.59%	29.41%	18.12%
<i>Foreign owned</i>	98	31.63%	68.37%	20.90%
TOTAL	469	27.29%	72.71%	100%

Table 1 - Vendors Selling into Canada by Ownership

Business Focus: predominately applications; significant numbers in infrastructure.

Canadian firms: more emphasis on services, systems integration and consulting.

Clusters: Ontario (47%) and Quebec (22%). Most subsidiaries in Ontario (86%).

US vendor presence increasing: Up 12.6% (2006 to 2007).





Canadian firms & International

TOP CAN E-HEALTH COMPANIES 2007	Sales 2007 (\$ million)	Employ	Δ -Rev % (06-07)	Prov
Telus-Emergis	149.6 (2)	1130 (2)	11	PQ
CGI	90.0 (3)	400	7	PQ
SXC	93.1	429	15	ON
IgeaCare	72.5 (4)	100	NA	ON
xWave	59.4 (1)	300	13	NS
MediSolution	45.6	282	7	PQ
Logibec	45.2	430	11	PQ
Practice Solutions	42.0 (4)	93	NA	ON
Sierra Systems	30.1 (5)	200	NA	BC
Intelerad Medical	29.8 (4)	79	NA	PQ
Momentum Healthware	20.0 (4)	50	NA	MB
Courtyard Group	16.6 (4)	90	NA	ON
Nightingale	14.1	81	234	ON
PointClickCare(8)	12.9	114	33	ON
ORTHOSOFT(Zimmer)	11.2 (4)	64	NA	PQ
Clinicare	7.9	63	21	AB
QHR	5.8	60	22	BC
LMS Medical	5.0 (4)	56	NA	PQ
AbelSoft	4.6	60	10	ON
Healthscreen Solutions	2.9 (4)	50	82	ON

International Competitors (2007 Sales \$million US)

McKesson - \$1,905 (USA)
Cerner - \$1,520 (USA)
Siemens - \$1,500 (Germany)
CSC - \$1,366 (USA)
Perot Systems - \$1,342 (USA)
Ingenix - \$1,304 (USA)
GE - \$1,000 (UK)
Emdeon - \$808 (USA)
Agfa - \$649 (Belgium)
Misys - \$572 (USA)
IBA\iSoft - \$472 (Australia)

Source: Health Informatics, June 2008

Order of magnitude size difference, Canada vs. US firms



Opportunities for Canadian ICT firms selling to the Healthcare Sector

- **International:** US market, large and expanding. Great opportunities in Europe and Rest of World (all parts). All are in expansion mode
- **Domestic:** This year over \$2.35 billion market in all parts of Canada
- **Alternate Verticals/Markets:** Many e-Health firms apply their products and services to other markets especially health finance and admin systems (e.g. Emergis) but also a broader range of ICT application companies applying ICT solutions to healthcare (e.g. RIM, Bycast).
- **Consumer health care systems** are in early stages but large players are positioning themselves (e.g. Google, Microsoft)





Threats for Canadian ICT success in selling to the health care market

- Demand for more comprehensive service offerings and multi-facility interoperability
- Lessening domestic demand with Canada Health Infoway project funding reduced starting 2009 (89% of its funding is already spent or committed).
- HQP for product development and delivery in a demanding marketplace
- Well capitalized companies capturing market share from SME's (includes new MNE entrants)
- M&A's, SaaS and hosted solutions favour MNE's



Canada 