

Information Technology Development in New Brunswick

By: *The Honourable Frank McKenna*
Premier of New Brunswick



Frank McKenna was first elected MLA for Chatham in 1982 and re-elected in 1987 and 1991. In 1985 he was chosen leader of the Liberal Party of New Brunswick. He and his party were elected to

form the government of New Brunswick in 1985 and again in 1991.

Frank McKenna holds a Bachelor of Arts degree from St. Francis Xavier University, Bachelor of Laws from the University of New Brunswick and carried out postgraduate studies in political science at Queen's University.

At the Economic Developers Association of Canada annual conference in Edmonton, September 1993, Mr. McKenna was honoured with the title of "Developer of the Year."

New Brunswick has been involved in a transformation to the Information Culture in the last few years right from the kindergarten level on.

We know that the new economy is driven by technology. Resources built New Brunswick — indeed, all of Canada — the products of land and sea blessed us.

But the world has changed. The most important resource we have today is knowledge. Knowledge industries are the engines of growth — knowledge industries that can compete anywhere, that can market their expertise anywhere. We have been managing a transition — a provincial "re-tooling".

Self-sufficiency

Self-sufficiency is the heart and soul of everything we are doing. New Brunswick does not want to rely on hand-outs and transfer payments. New Brunswickers want the dignity that comes from having a good job. Self-sufficiency has demanded fundamental changes to our education and training systems and our economic agenda.

We know we are in a period of transformation from the industrial age to the information age. You do not have to be a guru to see that, you just have to be awake. It is equally evident that if we do not change our approach to accommodate this information revolution, we will be left behind in the dust just as the buggy whip manufacturers were by the automobile.

Education

The key to participating in the information economy is education. In New Brunswick, we want people educated for

the jobs of today and tomorrow, not the jobs of the past. We are making sure that the children in our public schools have the tools they need. For the last couple of years, we have been involved in a process of education reform. In part, that means back to basics — stressing the essentials, the literacy, the numeracy that are key to success in any endeavour, that are intrinsic in a knowledge culture.

It also means making sure that students are learning what they are being taught and are on the right playing field. This means testing on a province-wide and a nationwide basis. It means keeping kids in school — and in New Brunswick, we have the highest stay-in-school rate in Canada. In summary it means making sure that children have the technical skills they will need.

In the past, we have spent too long sticking to what we were used to. When ballpoint pens were introduced, schools insisted that students continue to use refillable standard-nib pens. When calculators became available, engineering schools required their students to continue using slide rules. When typewriters became available to students, they were still required to submit hand written papers. When personal computers first came out, essays had to be either hand written or typed, but definitely not printed on a dot-matrix printer. This was inertia.

We are making sure that our children are computer literate, that they are using computers far more than fancy typewriters or calculators. In programs we have been putting in place, we teach skills like problem solving and planning. We have students using modems and electronic bulletin

boards to communicate with their peers in other parts of the province, other parts of the country — you may have heard of the national network of learning, soon to spread to other parts of the world.

Three specific examples to indicate the range of programs we have got in our schools are: the grade 12 control technology course in which students build on knowledge and skills learned in previous courses like microelectronics, computer assisted drafting, computer assisted manufacturing and various mechanical courses; the Junior High level computer simulation program that lets students actually run a business, where they learn to maintain inventory, establish pricing, select staff, develop a marketing plan and manage finances; at the elementary level, a creative writing program that linked children at one school to professors at York University. The students did their writing on the computer, then sent their material on modem to the University where it was critiqued, and sent back to them.

The strong basis our children will receive during their time in our public schools is continued at our community colleges, where the stress is on technology, and our universities, where we can boast world-class centres in such areas as GIS and remote sensing.

Teleeducation NB

This is our new interactive distance education network. Through this network New Brunswickers have access to courses provided by public education institutions and by private sector firms. Courses range from astronomy and philosophy, to business writing and the use of pesticides, to energy conservation and first aid training.

Teleeducation NB is a sound and efficient approach to training — both for the public and for industry. It will grow rapidly and provide New Brunswickers realistic access to courses in virtually all areas.

Economic agenda

In addition to providing industry with cost-effective training, Teleeducation NB fosters re-tooling our economy and private sector development in areas such as course design, computer and communications technology, graphic design and animation, visualization, multi-media production, distance conferencing, and information storage and retrieval. Private sector information technology growth is the essential element on our economic agenda.

We focus on our province's strength. One such area is telecommunications — and particularly, telemarketing. Another is consulting engineering and computer processing. We have a strong track record in these areas and strong support systems.

In telecommunications, for example, we have the advantage of having a pace-setter in NBtel. New Brunswick's phone company is the first to have completed a fully fibre-optic network throughout a province and the first to fully digitalize its switches. It led the nation in offering ISDN (integrated services digital network). Its new subsidiary, NBtel Interactive made some industry firsts with its introduction of the interactive services, screentalk and talkmail.

A recent survey by the Boyd company of Princeton, New Jersey, shows why our province is the call centre capital of North America — we have got the competitive rates, the services, and the personnel. No wonder we have attracted companies like Purolator, Camco, Northern Telecom, Federal Express, CP Express and transport — the list goes on.

Our telecommunications are boosting businesses in other ways. Internet, for example, opens the doors of a worldwide computer network to anyone with a computer and a modem — all for just \$10 an

hour of connect time and without any long-distance charges.

Many areas of consulting engineering and computing expertise are flourishing in New Brunswick: nuclear control systems, health care management systems, learning technologies. The province is a world leader in Geographic Information Systems (GIS).

Very early on we recognized the strategic importance of GIS in natural resources, agriculture, aquaculture, tourism, communications and transportation development. Just one example is Universal Systems. Using its New Brunswick-developed Caris software, the company is creating digital charts for the Singapore port authority — one of a host of international clients. Our engineering consulting firms are aggressively marketing their expertise, products and services and gaining international clients. Wood composite plants for South East Asia, computer control systems for Slovenia and waste water treatment facilities for the U.S. were designed in New Brunswick.

Our engineering expertise is world class. Adi, Neill & Gunter, Roy consultants and so many others have marketed their expertise far beyond our borders. For instance, Jacques Whitford Environment Ltd., A New Brunswick based engineering firm with offices throughout the region, is currently conducting a waste oil recycling feasibility study in Barbados and providing ongoing environmental support services in Indonesia.

The province's expertise in control systems and training simulation for power generating stations has been spurred by the Point Lepreau power generating station, a nuclear facility that consistently ranks as one of the best in the world. The plant's staff provides expertise and training all over the globe — training South Korean nuclear workers in New Brunswick and providing engineering and operator training expertise in Romania.

The construction and on-going maintenance of Point Lepreau have created a pool of New Brunswick-based expertise. Companies like Maritime Nuclear, a division of AECL Candu, is a centre of excellence in open architecture control systems. This New Brunswick company has won contracts in Canada, the United States, Finland, South Korea and Romania. And, it has been selected by Westinghouse to supply the largest power plant computer system in the world, a hardware and software

system being installed in Slovenia.

In recent years New Brunswick has attracted world leaders like SHL Systemhouse, specializing in systems integration, Andersen consultants, employing 26,000 people worldwide, Unisys, now operating in more than 100 countries. DMR, which was chairing the Infotech conference, chose New Brunswick as the site of its Atlantic advanced development centre.

Many companies started in New Brunswick found national and international success. At the other end of the scale often small towns, like Newcastle, New Brunswick, are locations where new technologies develop.

In New Brunswick, we have looked at where we want to be in the information age. We are focusing on our strengths and making sure our people have the skills they will need. We are creating the most favourable climate we can for it — with the back-up of strong research centres and a focus on technology transfer, with the right communications infrastructure, with an emphasis on forward-looking business approaches and with a skilled labour pool.

Next October New Brunswick hosts Softworld'94 and will demonstrate what is going on in our province. □

This article is based on a speech delivered to the Infotech conference in Toronto, September 27, 1993.