

# Revitalizing Northern BC's Economy Through Education and Research - presentation by Charles Jago and the three northern colleges, May 2004

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## 1. The Consultative Process

On May 2, 2003 the Presidents of Northwest Community College, the College of New Caledonia, Northern Lights College and the University of Northern British Columbia signed a Memorandum of Agreement committing themselves to "the development of a larger, more integrated, and more comprehensive educational strategy than could be provided by the institutions working on their own". As institutions rooted in northern communities and regions, they regard themselves as "uniquely positioned to identify and respond to the distinct economic development needs and opportunities of the north".

In pursuit of these objectives, the presidents held two consultative sessions lasting several days each, the first in August, 2003, the second in November. In these sessions the Presidents met with community economic development officers from across the north; with representatives of the major resource industrial sectors including forestry, mining, oil and gas, tourism, engineered wood products, machinery supplies, and the emerging high-tech sector, and with representatives of the Canadian Association of Petroleum Producers, the B.C. Business Council, and the Integrated Resource Management Business Group. The presidents also met with leaders in the fields of health services and social services, and with First Nations leaders. The discussions were both welcomed and informative. The invited participants expressed their gratitude in having the opportunity to engage in informal discussion with educational leaders. They also expressed their amazement at seeing three college presidents and one university president working so amicably and collaboratively together. For their part, the presidents were challenged to understand better the needs of northern communities, social agencies and industries and to consider how to improve their future prosperity and success.

Assisting in this process of understanding were various reports either commissioned by the northern Colleges themselves, or produced by other agencies, associations, and governments at all levels, municipal, provincial and national. These reports included a study of impending skilled trades shortages commissioned by CNC, a report on the needs of the mining industry conducted by NWCC, the innovation task force reports issued by the Government of Canada, the Progress Board reports issued by the Government of British Columbia, a municipal benchmarking study issued by Initiatives Prince George, a report entitled Promoting Innovation and Commercialization in Rural BC commissioned by Western Economic Diversification, a socio-economic report on Western Canada produced by the Conference Board of Canada, a study on strategic human resources produced by the Petroleum Human Resources Association of Canada, the work of David Baxter and of Greg Halseth, and a host of other studies from such sources as B.C. Stats and the Business Council of British Columbia. The focus of most of these reports is the challenges facing the resource-based economies of Western Canada in general and of rural and northern British Columbia in particular.

## 2. B. C.'s "Heartland" Economy

The resource-based economy of rural and northern British Columbia is the mainstay of the provincial economy. Over 76 percent of B.C.'s manufacturing exports come from non-metropolitan B.C. in a province where manufacturing, which dominates the province's international exports, is central to

provincial economic health.

In contrast to Ontario where manufacturing strength is located in large metropolitan regions close to the centres of corporate and government power, in B.C. the manufacturing centres tend to be far removed from corporate and government headquarters making the urban/rural divide potentially more problematic. In urban B.C., for example, great attention is paid to emerging industrial sectors such as high-tech and bio-technology, growth areas of some significance that are predominantly urban based and closely linked with large urban universities and colleges. In rural B.C., by contrast, attention is focused on the traditional resource-based industries - forestry, mining, energy production, pulp and paper manufacturing - the very basis of rural community sustainability. These distinctive orientations are easily explicable: whereas only 12 percent of British Columbians have their income directly dependent on forestry, mining, fishing and trapping, in the Northwest, New Caledonia, and Northern Lights regions, the percentages are 39.2, 37.9, and 38.7 respectively. No wonder northerners pay attention to commodity price indices!

The December, 2002 report of Project 250: Regional Economies Panel of the Progress Board of British Columbia acknowledged the decline experienced by most sectors of the province's resource-based economy during the 1990s and proposed a set of remedies. Since the report was released, the combination of government action, industry initiatives, community leadership, and changing market conditions for primary materials has significantly improved the situation. Oil and gas exploration and production is expanding. Mining is reviving with annual investments exceeding even the government's optimistic targets. Prices for northern B.C. wood products are high making primary wood production profitable again despite a rising dollar and U.S. tariffs. Prices for pulp and paper are relatively steady. All of these signs point to the real possibility that the northern resource-based economy is turning around, becoming rejuvenated, and re-establishing itself as a source of provincial wealth. For example, government revenues from oil and gas exploration and production have risen fourfold over the past decade, now exceeding \$2B annually.

In addition to the revitalization of traditional industries, the north is developing or expanding other areas of economic activity. The transportation sector is projected to expand and improve with the takeover of B.C. Rail operations by C.N., with the creation of a container port in Prince Rupert, with new road building in the northeast, and with the expansion and internationalization of the Prince George regional airport. Tourism will benefit from the world-wide attention being brought to B.C. by the 2010 Olympics and by such developments as the cruise ship terminal in Prince Rupert. In the Prince George region, between 2001-03 the high-tech sector consisted of 172 companies contributing an estimated \$133.4M to the local economy with annual revenue increasing at the rate of 12% and payroll at 24%, all at the time of the dot.com crash. The emergence of a northern high-tech industry has prompted some to refer to Prince George as "Silicon North".

There are certain important features of this re-energized northern economy that merit comment. The first is its heavy reliance on skilled labour. The B.C. average for the percentage of the population engaged in technical and trades occupations is 25.6 percent; however the percentages in northern B.C. are 30% for the Northern Lights region, 28.1% for New Caledonia, and 26.6% for the Northwest. By contrast, the incidence of professionals is well below the provincial average of 13.7%: it is 9.9% in New Caledonia, 8.7% in Northern Lights, and 10.1% in the Northwest. These averages attest to the concentration of professional services in metropolitan areas and the resulting difficulties faced by the north in attracting professionals to the region.

Another strong feature of northern B.C.'s economy is the incidence of small and medium sized enterprises (SMEs). In a recent Bank of Montreal report on SMEs in Canada, three northern B.C. communities ranked among the top ten non-metropolitan regions in the country for the incidence of SMEs: Fort St. John (2), Terrace (6) and Williams Lake (7). Of the 111 communities listed, three other northern B.C. towns and cities were in the top 40 including Quesnel (26), Prince George (35), and Dawson Creek (36). By any standard, northern B.C. is over-represented in this category of

communities whose economies are heavily dependent on SMEs.

There are explanations for this phenomenon. For example, SMEs are a major component of B.C.'s manufacturing sector in which 76% of all enterprises employ less than twenty employees and 88% less than fifty. In the case of the oil and gas industry, which is the predominant sector in the northeast, the BMO report notes that "the knowledge-based professional, scientific and technical services sector supporting the oil and gas industry ... is disproportionately made up of small firms".

But there is a reverse side to the coin to northern B.C.'s high ranking as a region of small entrepreneurs. In the BMO ranking of SMEs by their rates of growth, northern B.C. was over-represented in the category of failing enterprises. Again of the 111 communities ranked, six northern B.C. communities were in the bottom forty, all but one (Williams Lake) showing negative growth rates: Prince Rupert (106), Kitimat (98), Williams Lake (96), Dawson Creek (89), Terrace (88), and Quesnel (80). Forty-first from the bottom, and showing negative growth, was Prince George.

With SMEs playing such a significant role in the northern B.C. economy, it is important that efforts be made to foster their growth and development and to assist them in their ability to succeed in the context of a globally competitive environment. In this regard, the creation of a roundtable for developing high-tech enterprises in Prince George by the Innovation Resource Centre is highly valued. Local Chambers of Commerce also play a pivotal role in working to develop the capacities of their member SMEs. The role of Industry Canada, the Government of British Columbia, and UNBC through IRAP (Industry Research Assistance Program) and UILO (University/Industry Liaison Officers) is also very important in this regard. Nevertheless, post-secondary institutions need to further develop their role in working with all the full range of industries operating in the north, including SMEs.

### **3. The Issue of Skilled and Professional Labour**

It is well understood that both established and new industries operating in northern B.C. require a number of favourable conditions if they are to flourish. They need political stability and certainty, supportive public policy, a competitive tax regime, an adequate transportation and telecommunications infrastructure, access to land, a readily available supply of skilled labour, and a quality of community life conducive to attracting and retaining people and enterprises to the regions in which they operate. In recent years, the Government of British Columbia has tackled many of these issues and created favourable conditions for economic growth. However, the issue of labour supply is now rising to the fore as an area of concern as witnessed by the creation of the B.C. Oil and Gas Education and Training Consortium by the provincial government to address labour shortages in the northeast.

There are good reasons why the supply of skilled labour and knowledge workers is receiving growing attention from industry, industrial associations, communities and governments alike. The resource sector in today's knowledge-based economy is technologically sophisticated: it requires people with technical skills, business acumen, and innovative capacity. Furthermore, in order to attract and retain the skilled labour that large industries and SME's alike require, there must be in place an acceptable social infrastructure of community services to meet their needs and those of their families. Hence, a growing and revitalizing economy requires teachers, doctors, nurses, social workers, bankers, financial advisers, lawyers, culture providers and other service providers whose presence is of critical importance to make life in the north an acceptable alternative to urban living. As one community economic development officer noted, for entrepreneurs and industries considering the possibility of investing their money and talents in the north, questions invariably turn to the quality of educational and health services, to the availability of recreational facilities, and to other quality of life and life-style issues.

The inter-connectedness of economic and social considerations and the importance of the availability of the broad range of technical skills, professional services, and social services is well captured in the report of the Petroleum Human Resources Association of Canada in their Strategic Human Resources

Study of the Upstream Petroleum Industry. The report focuses on human resource issues with respect to four regions: the Western Canadian Sedimentary Basin (WCSB), the Athabasca tar sands, the north, and the eastern provinces. It does not comment specifically on the B.C. frontier of the WCSB, an area that faces both the challenges of the mature WCSB in Alberta as well as the frontier exploration and early production area of the north.

It is certainly true of northern B.C. as it is of the northern territories that "attracting and retaining workers will be the challenge" and that "the need for co-ordination and collaboration among industry associations, all levels of government, educational institutions, private training service providers, unions and industry" is of paramount importance. Indeed, this process of collaboration has begun through initiatives taken by Duke Energy, Encana, and the B.C. Ministries of Energy and Mines, and Advanced Education.

The Petroleum Industry Report underlines the fact that in this industry there are very few places left for "unskilled workers". It notes that "the majority of the industry reports that the standard for entry-level skills has risen and now includes literacy of technical language and essential employability skills and aptitudes across a broad range of competencies (i.e. mechanical aptitude, exposure to technology, and literacy)". The skill set required of employees includes more than technology skills; they include skills in such areas as leadership, problem-solving, communications, team orientation, decision-making, and business literacy and acumen. Ideally the industry wants people with cross-functional skills combining expertise, such as that of a millwright, with that of a welder, geological skills with business knowledge, geoscience and petrophysics knowledge with knowledge of economics.

These complex labour requirements hold especially true where the petroleum industry is at an active exploration and early development phase, as it is in much of B.C. The Report notes:

Identifying and developing new non-conventional gas reserves will require new technology and new skills. High-end geoscience and strong computer/reservoir modeling skills will be required as technology advances. There will be an evolution from integrated teams to individuals with multiple skills.

Specifically the report notes the need for geoscientists "familiar with geological, geophysical, petrophysical and engineering analysis who are able to conduct economic evaluations", as well as a need for seismic interpreters, structural geologists, petrophysicists, and information technology professionals. In addition, in light of requirements to comply with government regulations and societal norms relating to environmental protection and the protection of First Nations' heritage sites, it needs educated people who can conduct environmental risk assessments and archeological investigations.

Thus, while the immediate short-term industry needs in northeastern B.C. are for more trades people and labourers, long-term sustainability requires a broad range of people with combinations of technical, scientific and socio/economic knowledge and skills. This will also be true for the north-central region and the northwest if the petroleum industry moves there as expected.

The conclusions of the petroleum industry study about the importance of broad, cross-functional, employee skills echo a similar conclusion in the Report of the Expert Panel on Skills to the Prime Minister of Canada in 1999. The report notes that:

The skills and attributes employers seek seldom come in neat occupational packages and, increasingly, those employers are looking for more than just technical or scientific capabilities. On many occasions, we heard from employers seeking engineers who can understand market research, biologists who can manager research teams and commercialize products, or trades people who can work in teams. Occupational levels, which can be quite static ... cannot do justice to the constantly evolving and expanding mix of technical, management and essential skills and attributes sought by employers.

In summary, the petroleum industry, both as a mature and as a developing industry, depending on the region it's in, needs people with a post-secondary education covering a broad spectrum from college technical diplomas to advanced degrees. And to recruit and retain such people, the industry needs to project a positive image which will require "collaborative partnerships, environmental stewardship and social responsibility", as well as "a good work environment and opportunities for further training and development".

Among the various resource industries, the petroleum industry is not exceptional in its labour needs. All resource industries are making significant productivity gains through the application of advanced technology. They all require skilled and educated workers and managers. As Gerry Lampert of the B.C. Business Council noted in the northern presidents' consultations, all the resource industries are facing a large volume of retirees and the need to recruit and train a large group of new employees. This picture is confirmed by the report on skilled trades shortages commissioned by the College of New Caledonia. The report observes that north-central British Columbia, "which is heavily dependent on skilled trades people for much of its economy, and much of its community stability", faces impending labour and skilled trades shortages with the "crunch" coming within the next five to ten years.

An ageing workforce and the challenge of finding the next generation of skilled and educated workers is certainly an issue of major concern in the forestry industry. And this concern is arising at a pivotal time in the evolution of the northern B.C. forest industry as it deals with the immediate issue of massive pine beetle kill and the longer term issue of a declining annual allowable cut, both of which will require creative and innovative solutions. In the case of the mining industry, a report commissioned by Northwest Community College also forecasts impending labour shortages, not due so much to retirements as to industry expansion. The industry is currently coping with "an acute shortage of skilled local personnel" by relying on "fly-in/fly-out" staffing drawn mainly from lower B.C. and out of province. However, the preference is for local personnel, particularly First Nations. In the consultations held by the northern Presidents, information was also presented on the escalating labour needs of an expanding tourism sector throughout B.C., and on the shortage of skilled labour hampering the further development of engineered wood products and machinery manufacturing.

The threat of labour shortages is general throughout the north, whether the issue is trades people, technicians, teachers, nurses, physicians, or other key personnel. It was for this reason that, in response to the expressed concern of northern school districts, UNBC developed a B.Ed. program for the training of primary and secondary school teachers in the north. It is also for this reason that the provincial government supported the expansion of medical education through an innovative, distributed model that includes the Northern Medical Program associated with UNBC; why it likewise supported the expansion of the UNBC/CNC collaborative nursing program, including its extension to Quesnel; why all three northern colleges have introduced programs for the training of Licensed Practical Nurses, and why there is a need to expand nursing education to the northwest and northeast. For the same reasons Northern Lights College is working closely with the northeastern School Districts, industry and government to bring students into the trades, CNC is working with School District 57 to link trades training with high school completion, and Northwest Community College is working to address the needs of the mining industry and to assess the potential training needs arising from the development of an off-shore oil and gas industry in the Hecate Strait.

#### **4. Building the North's Human Capacity**

In the competition for skilled labour and knowledge workers, northern B.C. faces a difficult challenge. The competition for skilled labour in British Columbia is becoming increasingly intense. There are huge labour demands associated with the projected Vancouver/Whistler Olympic mega projects; other major capital projects throughout the province; the growth of high-tech and bio-technology sectors, predominantly in urban B.C.; the growth of the province's service sector; and massive developments in neighbouring Alberta, particularly the Athabasca tar sands. With the 2010 Olympics forecast to

produce 130,000 incremental games-related jobs between 2003 and 2015, there is a legitimate fear that the heightened level of economic activity in the Greater Vancouver Region and elsewhere will accentuate the flow of population from rural B.C. communities. "Deruralization" or "agglomeration" as the phenomenon is variously called is a Canada-wide, even a world-wide phenomenon, but in B.C. it has the potential to have devastating consequences for the provincial economy if it deprives the economy of the workforce necessary to ensure its sustainability and further growth.

To succeed in the competition for labour, northern B.C. needs to maximize its own human potential as well as to attract new people with skills and ambitions into the region. Neither task will be easy: the role of post-secondary education will be central to achieving both.

In pursuit of this objective, northern B.C. has a number of obstacles to overcome. First, there is a declining population base. Between 1997-2002 as the population of B.C. grew by 4.3 percent, the population of the northwest region declined by 7.6% and the northeast by 0.7%. The Nechako region grew during the same period by a modest 1.2%. In short, the north is facing pockets of demographic decline and general stagnation at a time when other parts of the province, most notably the Fraser Valley and the Okanagan, are growing. Losing relative demographic weight is not a good situation when other regions are bulking up and when much of government funding, whether for education or for health care, is calculated on the basis of demographic factors.

To measure this impact more precisely, K-12 enrolment projections for the north indicate that the College of New Caledonia region will peak at 2,181 students in 2003 declining to 1,906 by 2013 and that the Northwest and Northern Lights College regions will have generally static enrolments over the decade. These demographic determinants are already having an impact on Ministry of Advanced Education fee funding projections for provincial institutions, putting northern institutions at a potential funding disadvantage.

However, the more important point is that the north will not be fuelling economic expansion through demographic growth and will only succeed in meeting projected labour demands if it recruits significant numbers of new people into the region or provides more education to a higher proportion of its own population.

There will be significant obstacles to overcome if northern B.C. is to provide a higher proportion of its own population with the levels of post-secondary education required for most jobs in today's economy. The main reason is that northern K-12 students have poorer educational outcomes than do students in other parts of the province. For example, in the province as a whole, an astounding 66.1 percent of students either did not write or failed Grade 12 exams: in the northern college regions these percentages ranged from 79.6 to 82. In Vancouver it was 50%. Not surprisingly, therefore, the high school completion rate for B.C. is 74.8%; but for northern B.C. it ranges from 63.8% in the Northern Lights region to 69.75 in the NWCC region. Even more disturbing, Grade 4, 7 and 10 test scores in the three northern college regions are the worst in B.C. The north faces a huge educational challenge if it is to equip the next generation to aspire to jobs that require post-secondary education from diplomas through degrees.

In this regard there is an even greater problem with respect to the northern Aboriginal population. High school completion rates for Aboriginal students are just under 45%, well below the provincial average for all students. The effect of this wastage from the educational system has greater impact the north where the proportion of the Aboriginal population - 22.2% in the NWCC region, 10.5% in NLC, and 8.8% in CNC - is well above the provincial average of 3.8%. As a report from the Office of Government Relations of the University of British Columbia states: "The Aboriginal population represents the largest untapped labour force in the country", but to be mobilized "business, government and the Aboriginal community must ensure that potential Aboriginal employees possess the skills required to perform successfully in future employment positions". It adds: "This is not easily done". But where it is done, the results are dramatic.

Aboriginal unemployment rates are three times those of the general population, but these unemployment rates diminish as the level of educational achieved increases. The improvement is so dramatic that, at the university-degree level, Aboriginal unemployment rates are at the lower end of [the scale], and in the province of Alberta they are actually below those of the general population.

In an economy where post-secondary education is fast becoming the basic requirement for most new jobs, and where the proportion of Aboriginal students is well above the provincial average, improved educational outcomes for northern B.C. students, including First Nations, is essential if the north is to prepare its own youth fully to participate in the emerging northern economy.

The goal of enabling northern youth to fully participate in the north's developing economy is particularly important given the difficulties northern industries and communities have in attracting the graduates of urban B.C. colleges, universities and institutes into the region. The evidence is overwhelming that students educated in the north, including those recruited into the north from other parts of the province, work and stay in the north; and that those educated elsewhere, even if they hail from the north, generally do not. The study by Ferrence Weicker & Company, entitled Promoting Regional Innovation, notes the results of a recent survey that shows that 95% of university science and technology (S&T) graduates and 65% of college S&T graduates are educated in the lower mainland and Victoria with less than 2% of these living and working in the north. By contrast, 73% of 1996 UNBC graduates were located in the north, the vast majority of them employed. A survey of the graduating class of 2001 shows similar trends. For example, in the critical area of information technology, few if any of the graduates of UBC, SFU and U Vic came north, whereas 70% of UNBC's computing science graduates were employed in the north with average salaries far above their southern peers. Indeed, many of these graduates are behind the growth of the high-tech sector in Prince George.

Currently, the educational profile of northern B.C.'s population reflects the realities of a region that requires people with technical skills. The proportion of northerners with post-secondary certificates and diplomas is generally consistent with the provincial average, but this in a region that employs a higher proportion of such people than the provincial average. Obviously, the north has been able in the past to recruit skilled trades people into the region, but with the intensified demand for skilled labour throughout the province, it would be foolish to assume that such recruitment success can be sustained. As noted before, the proportion of northerners with a university degree is about half the provincial average. Emerging employment trends suggest that the north will need to increase substantially the proportion of the population with certificates/diplomas as well as degrees over the coming decade.

This conclusion is consistent with the major findings of the Conference Board of Canada report on Western Canada. The authors argue that the economic potential of the West can be significantly improved by increasing the amount of available labour to overcome current shortages, and also by improving the educational and skill level of the workforce. The growing Aboriginal population, they argue, represents the greatest opportunity both to expand the workforce and to equip it to handle the technological and knowledge demands of a changing economy. "Education", they state, "most certainly needs to be one of the top priorities for the next decade to turn the demographic opportunity [of a growing Aboriginal population] into economic potential and socio-economic success." In fact, they blame the phenomenon of "de-ruralization", in part, on the lack of educational opportunities in rural regions. "Ensuring that rural Western Canadians have the skills and knowledge to take advantage of future opportunities" they conclude "is paramount".

In summary, if the north is to achieve its economic and social potential it must acquire the next generation of trades people and professionals required to assist in the rejuvenation of the region's resource-based economy. In the face of demographic stagnation and decline, it must provide more post-secondary education to more of its youth. It must also attract others to the region who either have the requisite skills, or who will participate in post-secondary education at a northern college or

university and then stay in the north to work.

## 5. The Innovation Economy

In today's economy, the role of northern post-secondary institutions goes beyond providing an educated citizenry with the requisite skills to meet northern employment needs. Northern colleges and universities also devote considerable attention to understanding the ecology, culture, and social realities of the north, thereby enhancing northerner's self-understanding and enabling their social and cultural growth. They also engage in research and development (R&D), particularly at UNBC. In today's knowledge-based, global economy, regionally focused R&D is considered to be essential to promoting innovation and improved economic productivity.

In keeping with current economic thought, the Conference Board Report on Western Canada draws a firm link between Research and Development (R&D), much of which in Canada is done in universities, and innovation. Innovation, they argue, "is key in developing the productivity gains that underlie the potential for improved economic and social well-being". Following this same line of thought, the Ferrence & Weiker Report, Promoting Innovation and Commercialization in Rural British Columbia, attempts to measure the innovation capacity of non-metropolitan B.C. The conclusion it reaches, consistent with that of the Conference Board Retreat, is that innovation capacity is sorely lacking in large parts of B.C. The report sees promising opportunities for the future development of "knowledge-based clusters" including a "woods products cluster" in central and northern B.C., "an energy and mining cluster ... based mainly in the northeast", and a transportation and logistics cluster in the central interior. However they argue that for the potential of these possible clusters to be realized, there needs to be much closer links between the centres of R&D and industry leaders, and the R&D capacity of the regions need to be expanded and strengthened.

In summary, the creation of "knowledge-based clusters" is still in its infancy in northern B.C. If no concerted action is taken to harness the combined power of UNBC, the northern colleges, industries, community leaders and others to work together to foster innovation and growth, the region could well fall behind, even in those areas where it has comparative and competitive economic advantages. In partnership with the research agencies of the forestry industry - Feric, Forintek, and Paprican - the Canadian Forest Service, and its own faculty, UNBC is assembling the research basis for a nascent knowledge-based forestry cluster in Prince George, but much work and co-ordination remains to be done.

## 6. Where to from Here

As centres both for the transmission and creation of knowledge, northern post-secondary institutions have a vital role to play in partnership with communities, industries and others in helping to envision and to bring into being a brighter future for northern B.C.

For their part, UNBC, NWCC, CNC and NLC are individually and collectively prepared to serve the north through education, research, and a broad range of community services. Indeed, they are working closely with industry, social agencies, and communities to achieve this result. However, with their provincial funding based largely on current enrolment levels, and with prospect of future funding based in part on the north's relatively poor demographic projections, it is difficult for them to make the investments in new academic programs and research initiatives that the northern economy requires. This is a problem that northern leaders need to address; and it is a problem potentially exacerbated by the recent creation of new universities in Kamloops and Kelowna.

In the case of northern B.C., the truism that increased investment in education should result from economic growth needs to be reversed. For the north to succeed in today's highly competitive, global, knowledge-based economy, investments in education and research are essential pre-conditions for economic growth. If these investments are to be made, it is important that they be made on a co-

ordinated and planned basis with input from northern economic and community leaders.

To this end, the northern Colleges and UNBC will continue their collaboration and their conversations with northern leaders. It is our intention to hold major regional forums, or to participate in other forms of discussion, throughout the coming year focusing on key industry sectors: petroleum in the northeast, forestry in the central interior, mining and cultural tourism in the northwest. The institutions also need to undertake more effective collaborative planning together, perhaps involving other partners in northern Alberta and the Yukon.

It is important that in the current environment of scarce financial resources, each institution make clear choices in defining areas of particular emphasis and strength. It is equally important that they work together to augment their individual strengths and capacities through effective partnerships. As clearly differentiated institutions of post-secondary education, responsive to the distinctive sub-regions they serve, they need to further develop the means to work together thereby enabling northern B.C. to develop the capacities required to achieve sustained economic growth and an enviable quality of life.

There are significant challenges ahead with the revitalization of resource-based industries operating in the north. It is neither in the interests of the north, nor of the province, that economic expansion be limited and constrained by labour shortages and inadequate physical and social infrastructure development.

The challenges, at least in the short-term, will certainly be around trades, suggesting, therefore, the need for expanding the trades and technology training capacity of the north. Contrary to the recommendation of the of the Progress Board Panel on Education, Skills, Training and Technology Transfer" that "the existing research and capital infrastructure of BCIT" should be relocated to Prince George in order to "increase the overall profile and capacity of skilled trades and technical training" in the north, the northern presidents recommend that the northern colleges be funded to develop the capacity to meet the broad range of skills and technology needs that northern industries will require.

Likewise, as industries expand and move to new regions, such as the petroleum industry moving into the central interior of the north or off-shore, or mining expanding throughout the region, funding should be directed to UNBC so it can develop graduates with the geoscientific, petrophysical, and other relevant academic fields that will help to anchor these industries in B.C., especially in northern B.C., and ensure their long-term success as domestic B.C. enterprises rather than transient enterprises operating on the frontier from their bases in other jurisdictions.

In the economic and social development of northern B.C., post-secondary educators and researchers need to lead, not follow. Through their work and by their example, they need to challenge individual northerners, northern enterprises, and northern communities to be the best they can be. In partnership with communities, industry leaders, and government, they need to aspire to make northern B.C. a model of a successful resource-based economy, diverse in its cultures, vibrant in its social and cultural expressions, strong in its community life, and confident of its place in Canada and the world.