

## **A Vision for NAIT Based on Relevance and Responsiveness**

### **Dr. Glenn Feltham's Installation Address Northern Alberta Institute of Technology**

**May 5, 2011**

Honoured guests, colleagues, friends and relatives, ladies and gentlemen: I am honoured to have been chosen to lead the Northern Alberta Institute of Technology (NAIT). In this address, I would like to describe the NAIT I have come to know, and my hopes and aspirations for the institute.

The more one comes to know NAIT, the more one understands its fundamental importance to Alberta and Canada. So what defines NAIT?

NAIT is defined by what we teach – we provide technology-based education. Our programs fall within four groups or pillars:

- NAIT is science, technology and the environment.
- NAIT is health care.
- NAIT is trades.
- NAIT is business, including new venture and commercialization.

These pillars are of roughly equal size and importance.

NAIT is defined by its learning method. We deliver programs through a focus on hands-on learning. That is, students learn by doing, and then apply rigorous theory to generalize their knowledge.

NAIT is defined by its pragmatic programs. We are preparing our students for real jobs and real careers.

NAIT is defined by research that focuses on solving real problems for corporations and industry in Alberta.

And NAIT is defined through its partnership with industry. These relationships play a critical role in ensuring that our programs and research are relevant and respond to emerging needs.

How we teach (hands-on), what we teach (our four pillars), the nature of our research and our embracing of industry define us as a polytechnic or technical institute. This is what we are, and this is what we are very proud to remain.

As one of Canada's largest polytechnics, NAIT is a primary driver of economic wealth in Alberta. In this address I will describe why NAIT is critical to Alberta's and Canada's future – and how NAIT will become even stronger and be recognized as one of the world's great polytechnics.

I believe that NAIT will achieve its full potential where it remains true to what it is and focuses on two defining characteristics: relevance and responsiveness. My aspiration for NAIT is that it becomes the most relevant post-secondary institution in Canada, and the most responsive to the emerging needs of Alberta.

So, let me more fully paint the NAIT picture. I will discuss why NAIT exists, more fully define what NAIT is, present NAIT's competitive advantage and set out my aspirations for NAIT.

## **Context**

Let me begin with context – we must always remember that NAIT exists within Alberta, and is part of a broader post-secondary structure. NAIT exists to serve Alberta and its people – to meet the current and emerging needs of this province. NAIT belongs to the province and people of Alberta. Every decision we make should be informed by this simple fact.

And NAIT is blessed to exist in this context – that is, to exist in Alberta. Our province is defined by many characteristics. It is the most vibrant province in Canada. It has the strongest financial base in Canada, creating both wealth and jobs. Our economy is the most robust in North America. Alberta is defined by its place in Western Canada, as one of the world's largest oil and gas producers, and by entrepreneurship and innovation. Understanding and supporting this context is central to NAIT achieving greatness.

The future prosperity of Alberta will depend on its education system, and specifically its post-secondary system. The province of Alberta has taken a system-wide approach to higher education. This is a very good thing! In this system NAIT is appropriately defined as one of two polytechnics in Alberta, the other being SAIT Polytechnic.

Alberta's colleges, polytechnics and universities will provide the foundation for our future. Post-secondary education in Alberta is strong. In fact, this system is among the best in the world. This being acknowledged, I believe that the nature of polytechnic education and research provided by NAIT will have it play a disproportionately large role in building this future. Alberta needs NAIT to be one of the world's leading polytechnics.

## **NAIT Described**

Let me now describe in more detail the NAIT I know. As I stated, NAIT is clearly a polytechnic – it has each of the elements. Its programs are pragmatic, with a hands-on focus. Everything NAIT does is employer-driven. And NAIT has four programmatic and research pillars.

### NAIT is science and technology

This pillar includes programs in a wide range of applied sciences, including several programs in engineering. These programs range from robotics, to biological sciences, to forestry and architecture. And we have new programs to meet emerging needs in wireless systems, alternative energy and nanotechnology.

## NAIT is health

Our focus in this pillar is allied health programs – that is, health disciplines other than doctors and nurses. Our 15 programs educate a very large portion of Alberta’s health workers. Pretty much with certainty, one of our graduates has supported your health needs in the last year. If you have had a medical test, been to a doctor’s or dentist’s office, or had a pet treated, the chances are NAIT grads played a central role.

## NAIT is trades

NAIT is the largest apprenticeship trainer in Canada, and is recognized as a leading trade school internationally. We have trained trades around the world on four continents. Apprenticeship training – a system that dates back a thousand years – involves a close partnership between NAIT and industry. The apprentices learn their trade working for an employer, and strengthen and reinforce this learning at NAIT. We participate in the education of more than 30 different trades.

## NAIT is business

In fact, NAIT is one of the largest business schools in Western Canada with more than 2,000 full-time and 12,000 part-time students each year. As with other leading polytechnics, our business school is critical, as NAIT produces a disproportionate share of entrepreneurs and small business owners.

But NAIT is so much more. We have a renowned Hospitality and Culinary Arts program – a program that has won world culinary championships. And we are also home to media programs including radio and television, photography and digital media.

We are incredibly diverse, yet focus in only four areas. Our programs are of varying lengths to meet the students’ needs, including quicker entry into the workforce. This includes short, focused apprenticeship programs, certificates, diplomas, applied degrees and degrees. NAIT has a variety of delivery options, including online, co-op and related industry-partnered programs. We even travel to the where training is needed. With our mobile education units, the “NAIT in Motion” program reaches Alberta’s remote communities, many of them aboriginal, addressing local needs.

And NAIT is large – in fact, depending on how one measures size, we are the largest polytechnic in Canada. We have about 80,000 registrations each year.

## **Project President**

But to truly know NAIT you need to experience it. To allow me to experience NAIT, Project President was developed. Over the last two months I have engaged in a series of hands-on experiences with programs across NAIT – with well over 40 visits. I welded, extracted DNA

from a banana, battled robots, removed plaque from a dog's teeth, and worked in the kitchen with Susur Lee. What did I learn about NAIT?

It was clear that everything we do at NAIT is at a very high level – as high as I have ever seen in a post-secondary institution. And the scope of activity is mind boggling.

Perhaps it shouldn't have been a surprise given the technology focus, but almost all programs required a rigorous understanding of math and science. Across very diverse programs one saw, whether presented on whiteboards or rusted iron: trigonometry functions. I was equally impressed by the depth of theory in all programs. Theory tended to be taught in a very rigorous manner, but always to reinforce hands-on practice. In other words, the theory reinforced how and why the world worked in the manner the students were able to see and touch.

Each program focused on current and emerging methods, while ensuring students gain a strong appreciation for traditional methods. For example, in cabinetmaking the students started with a project that involved only two tools – a hammer and chisels – where they learned as artisans had for millennia. But they also had an opportunity to understand emerging technologies. In fact, it is clear that NAIT is a primary driver in the adoption of new and emerging technologies into industry as our students bring these into the workforce.

Much of what happens at NAIT is potentially very dangerous. A recurring theme across programs is the importance of safety – safety is a fundamental part of our culture. Learning is not only about how to do something, but how to do so throughout a career so that neither the individual nor their colleagues are at risk.

But my most powerful observation during Project President relates to the passion of our academic staff and our students. Across programs, there is incredible pride and a strong sense of accomplishment. There is camaraderie and a sense of purpose.

### **NAIT's Competitive Advantage**

What will define NAIT's future? NAIT will become one of the world's leading polytechnics if it remains true to what has defined it and if it builds on its competitive advantage. But what is NAIT's competitive advantage – that is, what can NAIT do better than any other post-secondary institution? I have given this considerable thought, and believe NAIT has two primary competitive advantages: *NAIT is relevant* and *NAIT is responsive*.

NAIT may very well be the most relevant post-secondary institution in Canada. But what do I mean by relevance? I believe that relevance has several dimensions.

To be relevant, our programs must meet the current and future needs of Alberta. NAIT's program focus is fully aligned with the future needs of our province. In the Campus Alberta Planning Framework, four areas are identified as being critical for Alberta, in that they play a central role in our economy but are projected to have labour demand far greater than the projected supply. These four areas are: trades and technology, health sciences, business, and physical, natural and applied sciences. This perfectly describes NAIT's program focus. That is, we are preparing our students to meet the current and emerging needs of Alberta.

Further, NAIT focuses on specific areas that align with Alberta's current and future wealth drivers. For example, a significant number of our programs support the oil and gas industry. We are strong in this area – and will become among the best in the world – in all matters of technology related to oil and gas. And we have a strong focus on entrepreneurship and innovation. A large number of our graduates, perhaps more than any other post-secondary institution in Alberta, start and run businesses.

NAIT's educational philosophy is relevant. We are educating our students for specific careers – what they learn is directly applicable to those careers. Further, we work directly with business, industry and other employers in defining our curricula to ensure our graduates have a foundation that will allow them to have a meaningful career.

NAIT's teaching method ensures a relevant education. We fully integrate hands-on learning with theory. Our students are not left wondering whether the theory they learn is applicable to their career goals. They see it.

NAIT's research is clearly relevant. Applied research addresses real-world problems, as defined by industry. It is about working with our partners to solve problems. This allows Alberta companies to compete in a global environment. That is, we are providing real solutions to real problems. What could be more relevant? We lend our expertise and knowledge to advance Alberta's industry. This is, and will continue to be, our research focus. *NovaNAIT*, which includes the Duncan McNeill Centre for Innovation, serves as a focal point for applied research at NAIT. Related to this applied research agenda, the centre focuses on assisting entrepreneurs, business incubation and startups.

And our relevance is understood by students and industry. It is very competitive to get into most programs at NAIT, and on graduation our students find meaningful employment at very good salaries. Our placement rate last year, in the height of the recession, was about 91 per cent at graduation or shortly thereafter. The median starting salary on graduation, for those employed full time, was almost \$43,000. It is little wonder that a significant proportion of our students come to NAIT following university.

Our second competitive advantage is responsiveness. One of the greatest issues for post-secondary education is an inability to respond to a rapidly changing world. The word nimble seldom comes to mind when considering post-secondary.

Within this environment, NAIT's ability to be responsive and adapt to Alberta's changing needs is great. This is critical if NAIT is to meet the emerging needs of our province. And we are responding to those changing needs. We are evaluating our current programs and introducing new programs. While a difficult process, we are also suspending programs that no longer meet the current and emerging needs of Alberta and Canada. As industry evolves, what happens within our programs is evolving as well. Our people are responsive. Our staff members have a "just-do-it" attitude – rising to the challenges of a changing world. We are currently examining all our programs through a mapping process, ensuring each is providing the outcomes necessary for future graduates to play the roles Alberta requires. We are introducing new programs such as a nanotechnology diploma – the first program of this kind in Canada – to fill emerging needs.

We are also responsive to our province's applied research needs, focusing on the areas that will provide the greatest impact to Alberta. For example, through the Ledcor chair, NAIT scientists, engineers and business faculty develop real solutions for emerging issues in the oil sands related to water use, tailings management and land reclamation. Abandoned oil and gas well sites are of concern in many parts of our province. *NovaNAIT's* Boreal Research Institute in Peace River is exploring ways to restore these lands to near-original condition. These are not theoretical exercises. We are developing solutions that will allow Alberta industry to be internationally competitive and that build Alberta's environmental record.

### **Aspirations for NAIT**

What are my aspirations for NAIT? NAIT is, and will remain, a polytechnic. We have no aspirations to become anything else. But we do aspire to be one of the world's leading polytechnics! We will continue to provide hands-on and pragmatic education that is employer-driven and based in technology, and conduct applied research with industry to solve real-world problems. We are focused on becoming outstanding in our four program areas.

We will become even more relevant to Alberta and more responsive to its emerging needs. That is, we will focus on our competitive advantages – relevance and responsiveness – and take each of these competitive advantages to a higher level. In doing this we will adopt best practice, as found in other leading polytechnics worldwide, and in the broader post-secondary system.

Our academic model will evolve, building on our strengths as a leading polytechnic.

We will become an acknowledged leader in Canada and the world in applied research. The focus of this research will be in assisting Alberta industry and companies to become globally competitive. NAIT will be one of Canada's drivers of commercialization and play a central role in assisting industry in technology innovation and adoption.

### **Concluding Thoughts**

In closing, NAIT's fundamentals are strong. It has amazing people, who are dedicated to our academic mission. NAIT has a well-defined direction, one that is consistent with my beliefs – "to be globally valued for student success, applied research and innovation." We have a model that will serve Alberta very well. We are a leading polytechnic, providing technology-based

education in science and technology, health care, the trades and business. We deliver a pragmatic education using hands-on learning, which is generalized through rigorous theory. We partner with industry. And our research solves real problems that allow Alberta's companies to be globally competitive. We will stay absolutely true to this model.

I believe that NAIT can become one of the world's truly great polytechnics. To do so, we need to focus even more on relevance and on being responsive to Alberta's emerging needs. We need to be very strong in every activity and program we choose to undertake. But we need to be preeminent in areas of strategic importance to Alberta. This will include entrepreneurship and oil and gas.

I know we can achieve this because of the dedication and passion of our people. In my short time at NAIT, this single observation stands above all others. We have wonderful leaders – leaders who enable NAIT's success – including our Board of Governors, administrators, faculty, staff and students.

In my position as president and CEO, I will be NAIT's "cheerleader in chief," but I will be equally fervent in representing our great province of Alberta.

Alberta needs NAIT to be one of the world's leading polytechnics – our province's future depends upon it!

Thank you!