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Information and Communications Technology Council  
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# NORTHERN ALBERTA INSTITUTE OF TECHNOLOGY CASE STUDY

## The Challenge

The Northern Alberta Institute of Technology (NAIT) is an institution recognized as a leader in technical training and applied education. In particular, its School of Applied Media and Information Technology (SAMIT) is known for producing quality graduates who are in high demand by employers.

NAIT is constantly looking for ways to be innovative and leading-edge, all the while ensuring its programs are of the highest standard and relevance for industry. Following a number of consultations with members of its Industry Advisory Committee and other regional and national experts, the SAMIT leadership team realized the need to enhance its current ICT programs. A number of challenges came to light during the consultations:

- For employers, the curriculum needed to address the rapidly-changing ICT industry requirements for graduates to possess not only strong technical skills, but also business and inter-personal skills. Employers also needed to understand the competencies of new graduates exiting the program in order to help them with their recruitment efforts for skills-specific job requirements.
- For students, it was often difficult to ascertain which ICT course best suited their ambitions and talents. As a result, many students entering the existing ICT programs found themselves training for a career which did not match their long term aspirations.
- For SAMIT, it was critical to meet the needs of industry and to offer the best program for their students to ensure a perfect fit between career aspirations and employment upon graduation. The SAMIT team realized the need for a curriculum flexible enough to permit students to explore their interests within ICT. The curriculum also had to be built on proven core competencies of the various ICT occupations with clear learning outcomes.

## The Solution

The SAMIT leadership team was tasked with examining a variety of models to help them redesign their curriculum. As the members of the SAMIT team worked with ICTC validating the ICTC ICT Competency Profiles Framework, there was growing recognition of the value of the framework in designing the new NAIT ICT program. The competency-based framework of knowledge, skills and abilities is the first Canadian national model of its kind, and will assist the team by providing current as well as evolving industry requirements. The SAMIT team has found that an advantage of the framework is its unique online capability and

centralized database, which contributes to it being extremely user-friendly and customizable based on the needs within the region. With a detailed description of core industry competencies and learning outcomes, the framework also has the potential of ensuring a national standardization of ICT skills, which will prove useful given the increased mobility of today's workplace. The SAMIT team already recognizes that the framework will be a great asset and will be used as a benchmark to help guide the design of the new curriculum.

## The Impact

The framework is expected to have a widespread impact across the industry and benefit in a number of ways:

- For employers, it will ensure that graduates have the necessary qualifications to meet industry's hiring needs. It will also allow for identification of any skills gap in an organization, and can assist an employer with human resource management practices.
- For students, the curriculum will be modified to ensure all students obtain a comprehensive base knowledge of ICT and the occupations within the industry before they decide on their chosen career. This will ensure a better match of students to their chosen careers and provide them with the required competencies to succeed.
- For SAMIT, it will allow for a more clearly defined curriculum with the opportunity to match competencies to industry needs. It will also contribute to a more flexible program should students wish to alter their ICT specialization. The program will further ensure that students have the necessary knowledge, skills and abilities for their chosen occupation, making graduates more employable.

The online capability of the framework also plays a critical role in its impact. The SAMIT team anticipates the web-based solution will assist virtually anyone with ties to the ICT sector. For example, secondary school career counselors can use this tool to ensure their students are making educated decisions about their career paths, and smaller post-secondary institutions can integrate this framework into their curriculum without having to conduct lengthy and costly consultations with industry.

Perhaps one of the best features of the framework is the capacity it has to be customizable. This is seen as offering enormous possibility when it comes to working in partnership with industry. In time, institutions across Canada will have the ability to customize the framework on-line in an interactive setting in order to respond to regional employment needs.

"The framework allows us to continuously update the list of competencies and learning outcomes as the need arises, and introduces the flexibility necessary to keep up with the fast-paced industry. It has the potential to be an indispensable tool for all ICT stakeholders."

Dr. Konrad Morgan, Dean of School of Applied Media and Information Technology  
Northern Alberta Institute of Technology



Canada

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