TECHNOLOGY CAREERS

Shaping Our Future
Building Careers in Technology
Technology Professionals...
The ‘INVISIBLE’ Careers

Careers in Technology:

A strategic planning conference, hosted by ASTTBC in 2005, focused on developing a strategic approach to meeting demand for qualified technologists and technicians.
The Labour Shortage…

Canada faces a crisis in its workforce – a crisis brought on by converging economic and demographic trends. In the next few years…

- almost half of the current technologists and technicians will retire as the oldest baby boomers start to leave the workforce.

- the BC and Canadian economies are forecast to grow steadily, led by the high tech sector and technology-based processes.

- in BC, the 2010 Olympics, construction and real estate development, mining and resource projects, and the growth of our cities and population, have and will create a huge surge in demand for trained and qualified workers.

- by 2010, there is projected to be a 70% shortfall in the supply of needed supervisors, managers and contractors in trades and technologies.
“Human capital has and will become the ultimate scarce resource. Technologists and technicians are a precious commodity because they not only know what needs to be done, but also know how to do it with the right tools and equipment.”

Roslyn Kunin, Economist
Recognition of Scarce Resources

Dave Chalk, High Tech Expert, TV Host and Futurist:
“The technologies... will change everything... we cannot afford to get trapped in the old paradigm. We must plan for today by looking to the future, not the past.”

Tom Roemer, Associate Dean, Science & Technology, Okanagan College:
“The general public has a lack of understanding of the role of technologists and technicians, and of their significance in our world.”
The ‘INVISIBLE’ Career Choice

Building Careers in Technology

From electronics to aviation, manufacturing to construction, mining to the environment, and biology to geology, technicians and technologists are working at the frontiers of Canadian industry contributing to the success of businesses and industries in BC, across Canada and around the globe.

Yet... we cannot currently ensure a steady and sustainable supply of technologist and technician professionals as these careers remain largely ‘invisible’ to the public at large and are not promoted to the same extent as other career choices.
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Building Careers in Technology:

Strategic planning conference **KEY OUTCOMES:**

+ Technologist / Technician careers are ‘invisible’
+ ASTTBC MUST assume leadership role
+ Partnership is essential to success
Many models are well-understood by the public:

- **Health** (Doctors, nurses, administrators)
- **Military** (Officers, NCO’s, Private)
- **Justice** (Judges, lawyers, police, bad guys, corrections)
- **Business** (CEO, VP’s, Middle Managers, Supervisors, Administrators, Consultants, Specialists, Workers)

TV, Movies, Newscasts, other media routinely portray these hierarchy models, but....
Some models are NOT well understood by the public:

- **Engineering** (Professional Engineers, Applied Science Technologists, Certified Technicians, Journeyman Tradespeople)
Sector hierarchy & structure

The Engineering Team:

License requirements
Licensed to practice
Licenses seldom required
Licensed to practice
No Licensed required

Professional Designation
PEng or PGeo
AScT or CTech
Journeyman Tradesperson
Skilled worker

Years of Education & credential
4 or 5 years, Degree
1 to 3 years, Diploma or Certificate of Technology
40 weeks over 4 years Red Seal
10 weeks to qualify in a sub-trade
ASTTBC Demographics

AScT & CTech Members

6.12% (301/4917)
Ages of AScT's & CTech's

- Over 35: 5000
- Under 35: 1000

10.0% (490/4917)
ASTTBC Demographics

AScT's & CTech's under 35

13.9% (68/490)
ASTTBC Demographics

Students & GradTechs

18.2% (317/1736)
Shaping Our Future

Key Stakeholders:

- Government
- Employers and Companies
- Professional and Cultural Associations
- Post-Secondary Educators
- Career & Guidance Councillors and Teachers
- Technologists & Technicians
Shaping Our Future – Associations Call to Action:

- Create campaigns promoting the essential role of technologists and technicians
- Consolidate/update existing technology career information providing one-stop locations or a web-based ‘technology career portal’
- Facilitate the integration of foreign-trained professionals
- Coordinate workplace preparation, job placement and mentoring programs
- Partner with government, educational institutions and industry to increase and expand technology training programs and funding throughout all provincial regions
- Create K–12 school promotions to build technology career awareness with youth
Critical Success Factors...

- Increase Technology Career Awareness
- Promote Technology Career and Education Pathways
- Attract and Recruit Students and Youth
- Integrate Foreign-Trained Professionals
- Increase Corporate/Employer Recruitment and Participation
Our mission... to advance the profession of Applied Science Technology and the professional recognition and career development of Applied Science Technologists, Certified Technicians and other members in a manner that serves and protects the public interest.

- The Applied Science Technologists and Technicians of British Columbia is a self-governing association that regulates standards of training and practise, ensuring that BC’s technologists and technicians maintain a high standard of performance and professionalism.

- Established in 1958; incorporated under the ASTT Act in 1985

- ASTTBC is taking a leadership role in developing technology career pathways and promoting technology careers of tomorrow.
# Disciplines and Special Certification fields

8500 members in 16 disciplines and 9 specialist fields

- Building
- Chemical
- Civil
- Electrical
- Electronics
- Environmental
- Biological Services
- Forest Engineering
- Biomedical Engineering
- Gas & Petroleum
- Geomatics
- Industrial
- Information
- Mechanical
- Metallurgical
- Mining
- Building Design
- Public Works Inspection
- Construction Safety
- Site Improvements Surveys
- Fire Protection
- Steel Detailing
- House & Property Inspection
- Timber Cruising
- Onsite Wastewater
ASTTBC has sister organizations in all provinces:
TechWORKS! is a province-wide career development initiative of ASTTBC for secondary school students with an interest in applied science technology.

Mission - To work in partnership with industry and education to build seamless, technology-focused career pathways that satisfy the abilities and aspirations of young British Columbians while meeting the human resource needs of industry.

- Started in 1995 with a video showcasing careers in technology.
- Program expanded in 1997 when HRDC funded a pilot that resulted in TechWORKS! partnering with the Langley, Surrey and Coquitlam school districts to identify 60 technology-focused work experience opportunities for Grade 11 and 12 students.
Accomplishments

• Between 1997 and 2002, the program grew to include 22 School Districts.
• The Work Experience program saw participation of more than 1,200 Grade 11 and 12 students.
• TechBAR! kiosks were distributed to more than 280 public secondary schools, in 58 of the 59 SDs.
The Video

- Produced in cooperation with **The Knowledge Network** and a large number of other sponsors.
- Showcased a variety of technology-related jobs in most of the 14 disciplines represented by ASTTBC.
- Distributed only in VHS videocassette format.
**TechBAR!** display... a product of TechWORKS! program.

- Career information in one page monographs for a wide variety of technology-related occupations.
- Also included career information relating to trades and professional engineering.
Technology Professionals…
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ASTTBC is *building a parade*…

- Publish CALL TO ACTION *(Fall 06)*
- Meet employers & Others *(Winter 06)*
- Engage Government *(Winter 06)*
- Review Products & Services *(Spring 06)*
- Develop Strategic Plan *(Spring 06)*
- Program roll-out *(Summer – Fall 06)*
Shaping Our Future
Building the Partnership...

Issuing an urgent challenge...

We need the participation of industry leaders and stakeholder representatives willing to invest the time, money and effort needed to build the broad strategic plan and supporting infrastructure required to ensure that BC employers have a sufficient supply of qualified technology professionals well into the future.

If we are bold in our approach and come together to create a comprehensive strategy, we can open a world of opportunities for Canadians looking for long term career success.
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