



The Alberta government has made significant investments in infrastructure to unleash innovation in the information and communications technology and life sciences sectors. The research and development infrastructure in Alberta offers excellent opportunities to test, pilot, and commercialize new applications. Here are some examples of key Alberta infrastructure and facilities:

**National Institute for Nanotechnology (NINT)** <http://nint-innt.nrc-cnrc.gc.ca>

- Canada's premier nanotechnology research institute, a provincial-federal initiative, is an integrated, multi-disciplinary institution involving several hundred researchers in physics, chemistry, engineering, biology, informatics, pharmacy and medicine.

**Integrated Nanosystems Research Facility (INRF)** <http://www.engineering.ualberta.ca>

- A one-stop-shop at the University of Alberta for the design, construction and understanding of nanosystems, with a focus in four areas: nanofabrication ([www.nanofab.ualberta.ca](http://www.nanofab.ualberta.ca)); biomolecular synthesis for self-assembled nanosystems; nanoscale characterization-probes and microscopy; computational lab-design and modeling.

**The Alberta SuperNet** [www.albertasupernet.ca](http://www.albertasupernet.ca)

- An ideal environment for the development of new broadband applications, the Alberta SuperNet connects over 4700 hospitals, schools, libraries and government facilities in over 429 provincial communities through a fibre optic high-speed broadband network. Recognized by the Institute of Electrical and Electronics Engineers (IEEE) as the most innovative global project of its kind, SuperNet provides the foundation for improved services in distance learning, telehealth, and e-commerce.

**WestGrid** [www.westgrid.ca](http://www.westgrid.ca)

- WestGrid, Canada's largest high performance computing grid, provides high performance computing, networking, and collaboration tools for researchers in seven participating institutions in Western Canada. The distributed resources are connected by the research networks in British Columbia (BCNet), Alberta (NeteraNet) and across Canada (CA\*net).

**TRnet** [www.trlabs.ca](http://www.trlabs.ca)

- TRnet is an experimental high-speed wide area network traversing three western Canadian provinces - the largest such network - to develop and test extremely high performance networks of the future. At 10 Gigabits per second, TRnet is one of the fastest test networks in Canada, offering a window to the future with exponentially faster networks and a new paradigm of networking, content and applications.

**Network for Emerging Wireless Technologies (NEWT)** [www.newt.trlabs.ca](http://www.newt.trlabs.ca)

- NEWT is a well-equipped wireless development centre that reduces costs of product hardware and software design by providing test support to developers. Unique opportunities exist to link into operational cellular, broadband, and other networks. NEWT is the only wireless ISP certification centre for companies to offer services over the Alberta SuperNet.

**National High Field Nuclear Magnetic Resonance Centre (NANUC)** [www.nanuc.ca](http://www.nanuc.ca)

- Viewed internationally as the centre of excellence for Nuclear Magnetic Resonance (NMR) methodology and research. NANUC has a mandate to further NMR science and will apply the most sophisticated techniques to NMR problems at 500 and 800 MHz. NANUC's Magnetic Resonance Diagnostic Centre (MRDC) is the only one of its kind in North America, and provides access to non-invasive routine diagnosis for a host of diseases.

**Northern Alberta Clinical Trials and Research Centre (NACTRC)** [www.clinicaltrials.ualberta.ca](http://www.clinicaltrials.ualberta.ca)

- NACTRC is a joint venture between Capital Health, one of Canada's largest integrated academic health regions, and the University of Alberta, one of Canada's leading research-intensive universities. NACTRC was established in 1999 to provide pharmaceutical and research-intensive companies with access to high-quality, cost-efficient clinical trial research. It offers state-of-the-art phase 1 facilities located in a major population centre.

**The Canadian Centre for Behavioural Neuroscience (CCBN)** <http://ccbn.uleth.ca>

- This internationally-recognized group has a broad range of research interests, including the neural mechanisms of learning, brain plasticity, recovery of function, brain development, and brain disease. The CCBN is a world-class research facility designed to provide a highly interactive and unique environment for behavioural neuroscience research. It has attracted post-doctoral fellows and visiting scientists from around the world.

**Health Research Innovation Facility (HRIF)** [www.cgi.ualberta.ca/hrif](http://www.cgi.ualberta.ca/hrif)

- This research facility, which is home to a range of institutes and centres, is located at the University of Alberta. It creates an environment for innovative bench-to-bedside health research by increasing the interaction between researchers and clinicians who are focused on common medical issues. A couple of the institutes within the facility include the Alberta Diabetes Institute and the University of Alberta Transplantation Research Institute.

**Health Research Innovation Centre (HRIC)** <http://faculty.med.ucalgary.ca/research/hric>

- This centre is located at the University of Calgary and has the capacity to serve over 150,000 patients per year. The multi-story research facility consists of wet and dry labs, office space and patient clinics. The buildings facilitate the translation of research from laboratory benches to patient bedsides. A couple of the institutes within the facility include the Southern Alberta Cancer Research Institute and the Libin Cardiovascular Institute of Alberta.

Many other new facilities are rolling out, including the Mazankowski Alberta Heart Institute and the U of C Veterinary School.