NGen Next Generation Manufacturing Canada

Industry-Led Collaboration

Ground-Breaking Innovation

Workforce Development

Shared Insight and Resources

Provincial Report: Prairie Provinces, 2021

September 2021

NGen Update:
Prairie Provinces

NGen's projects and initiatives are making a real life impact across Canada.

Prairie companies are building world-leading advanced manufacturing capabilities that are helping Canadians battle the COVID-19 pandemic, improving environmental sustainability, and developing new digital and high-performance technology applications boosting the competitiveness and growth potential of Canadian manufacturers from coast to coast.

Next Generation Manufacturing Canada (NGen) is the industry-led network committed to enhancing Canada's advanced manufacturing capabilities for the benefit of Canadians. NGen leads Canada's Advanced Manufacturing Supercluster. It works to combine research, technology, manufacturing, and workforce strengths across the country to accelerate the development, adoption, scale-up, and commercialization of innovative solutions that enhance the competitiveness and growth of Canada's manufacturing sector, add value and new jobs to the Canadian economy, and tackle some of society's most pressing challenges like health care, food and supply chain security, and environmental sustainability.

NGen works to identify, promote, connect, and strengthen collaboration among experts, companies, and organizations that contribute to advanced manufacturing in Canada. It funds and supports transformative, industry-led, collaborative innovation projects with the potential to deliver significant economic and social benefits for Canadians. NGen also leads initiatives that improve access for smaller companies to education, training, and testing facilities across Canada and that enhance the skills and management capabilities of Canada's advanced manufacturing workforce.

Prairie Provinces
Highlights

NGen Membership.

Since inception, 381 prairie-based companies, experts, and organizations have joined NGen's advanced manufacturing membership network.

Project Participation.

35 prairie companies and research centres are partnering in 22 world-leading advanced manufacturing projects funded by NGen.

NGen Investments.

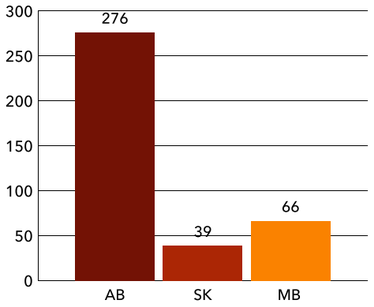
NGen has approved investments of $29.5 million in projects involving prairie partners, with total innovation spending estimated at $62.7 million.

Economic Impact.

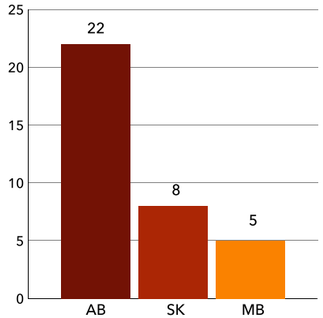
NGen Projects involving prairie partners will create more than 5,000 jobs over the next five years.

Membership.

Across the prairies, 381 manufacturers, technology providers, academic institutions, research and innovation centres, business networks, and public sector partners are members of NGen's advanced manufacturing network. There are 276 NGen members based in Alberta, 39 in Saskatchewan, and 66 in Manitoba. In total, they represent 9% of NGen's 4,030 members from across Canada. NGen membership is open to any expert, company, or organization actively contributing to building advanced manufacturing capabilities in Canada. Members have access to NGen project funding, business and support services, and to a network that allows them to identify potential partners, business opportunities, and industry best practices.



NGen Members



Project Partners

Advanced Manufacturing Projects.

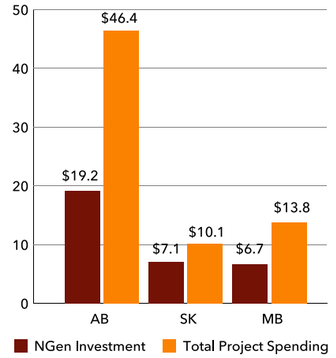
NGen co-invests with industry in collaborative projects that have the potential to transform manufacturing processes, lead to significant commercial opportunities, and contribute to Canada's advanced manufacturing ecosystem through the transfer of knowledge and intellectual property.

NGen-funded projects combine research, technology, and manufacturing capabilities in the development and scale-up of novel manufacturing processes. Collaboration provides project partners with innovation, scale-up, and commercial opportunities they would not be able to achieve on their own. Licensing agreements allow IP arising in projects to be shared with NGen members and applied across manufacturing sectors.

To date, NGen has approved investments of $203.3 million in 129 projects across Canada leveraging an estimated $497.2 million to total innovation spending. NGen's project portfolio involves 294 industry and 56 academic and research partners from across the country – 264 (90%) of the industry partners participating in NGen-funded projects are SMEs. One quarter of NGen-funded projects involve interprovincial collaboration among project partners.

NGen has approved investments of $29.5 million in 22 projects involving 35 industry and research partners based in the prairie provinces, which will lead to an estimated $62.7 million in total innovation spending. Fourteen of those projects involve collaboration with partners in other provinces across Canada. All but three prairie project partners are SMEs. To date, projects involving prairie partners have generated around $100 million in sales. As they progress and the results are commercialized, they are expected to create more than 5,000 jobs over the next five years.

Over $46 million will be invested by NGen and industry alike in advanced manufacturing projects involving partners based in Alberta, more than $10 million for projects with partners from Saskatchewan, and almost $14 million for projects involving partners from Manitoba. (Note that partnerships across these provinces lead to double counting of project investments.)



Approved Investments in Projects Involving Prairie Partners

Prairie Companies Leading the Way.

Prairie companies and researchers have led in the fight against COVID-19.:

- Among a number of important contributions to the production of Personal Protective Equipment, Precision ADM partnered with BOMImed, also in Winnipeg, and Synergy Moldworks in Brantford, ON to manufacture new filter material for respirators.

Prairie Companies Leading the Way

Continued...

- Researchers at the University of Saskatchewan helped Sona Nanotech test a new quick-response nano-based test kit for COVID-19.

- Fidelity Machine and Mould Solutions, Sentinent Tools Engineering, and Fidelity Medical Manufacturing, all based in Calgary, developed an automated system to manufacture procedure masks.

- Titan Clean Energy Products in Craik, SK are working with BIG-Nano and Swenco in Waterloo, ON, IPC Technologies in Cambridge and APC Filtration in Brantford, ON to develop a nano-fibre melt-blown production method for PPE and air purification filters.

- Titan is also partnering with Panther Industries in Davidson, SK, K&S Potash based in Saskatoon, BIG-Nano in Waterloo, and Canada Masq in Markham, ON to develop a new process for biodegradable melt-blown resin and fabric production for PPE.

- Suncor Energy is partnering with International Point of Care and Immune Diagnostics in Toronto and Precision Biomonitoring in Guelph, ON to scale up production of COVID-19 reagents and test kits.

- Roswell DHT in Calgary is partnering with Armfoam from Longueuil, QC to automate the production of N95 respirators.

- Northern RNA in Calgary is partnering with Providence Therapeutics from Toronto to develop and manufacture a made-in-Canada COVID-19 vaccine.

Prairie companies are also developing unique solutions for additive manufacturing and resource processing.

- OIC and Prescision ADM in Winnipeg are partnering with Spinologics from Montreal and Pega Medical from Laval, QC as well as Halifax-based Conceptualiz to develop and validate an automated software system for improving the additive manufacturability of patient-specific medical devices.

- Exergy Solutions in Calgary are working with Precision ADM in Winnipeg and Suncor Energy to develop and apply advanced manufacturing processes for mining and mineral processing.

In addition to advanced manufacturing projects, NGen has supported the development and growth of four prairie advanced manufacturing clusters – the Saskatchewan Industrial and Mining Suppliers Association (SIMSA), NanoCanada (Canada's Nanomedicine Cluster), a new Manufacturing and Export Enhancement Cluster in central Alberta, as well as InnoTech Alberta's Sustainable Manufacturing Cluster. NGen funding has allowed these clusters to connect with other advanced manufacturing clusters across Canada and to develop new performance enhancement and business opportunities for their 600 plus members.

NGen has partnered with two prairie-based education and training partners in its workforce development initiatives. Saskatchewan Polytechnic and the University of Manitoba's Asper School of Business both contribute courses to NGen's Advanced Manufacturing Productivity Upskilling Program (AMPUP).

NGen also partners with other industry and innovation networks based in the prairie provinces, including Protein Industries Canada, Agricultural Manufacturers of Canada, the CME's Manitoba Division, and Manitoba's Vehicle Technology Cluster.

More to Come

Prairie Provinces

More projects have yet to be announced! Prairie companies and research centres will be working to develop and produce new materials to improve environmental sustainability, new systems to enhance energy management and reduce greenhouse gas emissions, and new automation and robotics solutions that will be applied in a variety of manufacturing applications.

Learn more about NGen and keep an eye out for new project announcements at www.NGen.ca

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NGen's industry-led approach enables private sector leaders to pursue game changing, market-driven innovations.