

PRESS RELEASE

For Immediate Release

Canada's Manufacturing Supercluster and industry partners invest \$28.8 million in new and emerging technologies

HAMILTON, Ontario, July 8, 2020 – [Next Generation Manufacturing Canada](#) (NGen), the industry-led organization leading Canada's Advanced Manufacturing Supercluster, has announced a collaborative funding effort worth \$28.8 million to support nine cutting-edge projects across Canada. NGen's contribution of \$11.3 million is leveraging an additional \$17.5 million in investments from 27 industry partners.

"Manufacturing supports 1.7 million jobs across Canada, and is one of the key drivers of our economy," said Navdeep Bains, Minister of Innovation, Science and Industry. "Our Government's investment in the NGen Supercluster is resulting in Made in Canada solutions that improve our quality of life, create quality well-paying jobs and promote clean growth."

"The advanced manufacturing projects we support combine some of the best in knowledge, technologies and production capability that Canada has to offer," said Jayson Myers, CEO, NGen. "Collaboration allows Canadian companies to create leading edge solutions for Canada that can then be leveraged to capture new market opportunities around the world."

The projects, which combine Canada's manufacturing strengths with new and emerging technologies, were selected for NGen funding by a panel of independent experts.

Each of the nine projects approved for NGen co-investment will result in unique manufacturing capabilities in Canada:

- A consortium, led by Hamilton, ON based [ArcelorMittal Dofasco](#) is digitizing hot-ladle steel production at its secondary ladle metallurgy facility (LMF). The consortium is using digital technologies to improve its production process, minimizing manual intervention, reducing process variation, and improving final metal properties. The project will transform a heavy industrial asset with the best in advanced sensor development, video machine learning, and cognitive and cloud computing. The project partners, which include [ArcelorMittal Dofasco](#), Hamilton, ON; [IBM Canada Ltd.](#), Markham, ON; [Tenova Goodfellow Inc.](#), Mississauga, ON; [i-50 Canada](#), Windsor, ON, aim to create a hands-free production system, improve safety, quality and productivity, and prove that technologies in a challenging industrial setting can be applied across Canadian manufacturing. The project also involves several research and ecosystem organizations including: Mohawk College, McMaster University, the University of Toronto, the University of Windsor, Western University, National Research Council, Natural Resources Canada, Haltech Regional Innovation Centre, Mitacs, Institute for Border Logistics and Security, and Prosensus.

“Projects such as this bring together the best that Canada has to offer to undertake technology projects that will change our manufacturing processes for the better,” said a Roger Tang-Poy, Vice President Technology, Dofasco. “We’re excited to be home to the pilot and to see the impact these advanced technologies will have.”

- Etobicoke, ON-based [Conrex Steel Ltd.](#) is leading a collaborative project that will create the world’s most sophisticated steel forming press. The project, conducted in partnership with Concord, ON-based [Macrodyne Technologies Inc.](#) and Brampton, ON based [Source Industrial Services Inc.](#), will bring new capacity and data to manipulate large thick panels for domestic shipbuilding needs on Canada’s East and West coasts, international sphere storage vessel forming and finally thick steel heads for pressure vessels throughout North America. The consortium aims to challenge conventional capabilities and push new possibilities within the industrial use of Canadian steel, strengthen Canadian supplier networks, and showcase unique Canadian IP and manufacturing capabilities in press and crane technologies.

“Over the long-term, this project will elevate Canada’s ability to compete with European, Asian, and American steel fabricators, all the while strengthening demand for domestic talent within the steel industry,” said Larry Harrison, President, Conrex Steel Ltd.

- A consortium, led by Winnipeg, MB-based [Orthopedic Innovation Centre](#) (OIC) is aiming to improve the quality of orthopaedic surgery. Consortium partners [Orthopedic Innovation Centre](#) (OIC), Winnipeg, MB; [Pega Medical Inc.](#), Laval, QC; [Spinologics](#), Montreal, QC; [Conceptualiz](#), Halifax, NS; and [Precision ADM Inc](#), Winnipeg, MB, will revolutionize the manufacturing of orthopedic implants by integrating medical science, precise imaging and measurements with industrial 3D printing. Their project will develop a fully integrated platform that is expected to create customized medical devices that can be manufactured “on-demand,” simplifying surgeries, expediting the length of healing and return to function, and improving patients’ quality of life. These new made-to-order implants are designed to offer an alternative to off-the-shelf current devices that come in pre-set sizes. In addition to ensuring a better fit, the personalized 3D printed medical implants are expected to be comparable in cost to factory-produced models.

“The potential of personalized medicine offered by 3D printing is a trend that may one day prove to become the standard-of-care for orthopaedic joint replacement in Canada.” Dr. Eric Bohm, Orthopaedic Surgeon, Chief Medical Officer, Orthopaedic Innovation Centre.

- [Exergy Solutions](#), based in Calgary, AB, is leading a consortium developing new technologies that will reduce the environmental impact of oil sands production. The project, conducted in partnership with Calgary, AB-based [Suncor Energy](#) and Winnipeg, MB-based [Precision ADM Inc.](#), will build collaboration with oil sands processors to discover ways in which additive manufacturing can improve industry performance. The project will develop new oil

sands and mineral processing technologies that will reduce energy intensity and resulting greenhouse gas emissions. It will also develop cleantech solutions that will mitigate the environmental impacts of using solvents, significantly reducing water usage and eliminating the need for tailings ponds.

“Deploying advanced additive manufacturing will position Canada as a global leader in environmentally improved oil and gas extraction and unleash the potential to expand our energy industry in a sustainable manner,” said Billy Rideout, President, Exergy Solutions.

- [NanoCnet](#), based in Waterloo, ON, is developing a printing process capable of depositing continuous and uniform ultra-thin films of Nano Silver Strands utilizing Waterloo, ON based partner [Evercloak](#)’s proprietary roll-to-roll advanced manufacturing printing process, designing an automated manufacturing system to scale up Nano Silver Strand production. This project will develop a system which can manufacture flexible, transparent electrodes and heaters utilizing Nano Silver Strand technology with a diverse range of clean technology applications such as batteries, electronics and solar cells.

“This solution is low cost and has diverse usage range,” said Hadi Hosseinzadeh, CEO, NanoCnet. “There is opportunity to grow these relationships into partnerships, so that these Canadian companies continue to lead in new areas, and draw in additional investment.”

- [Evercloak](#), based in Kitchener, ON, is partnering with [ZEN Graphene](#) from Thunder Bay, ON to develop a process for graphene and thin-film membrane production that will be primarily applied in the cleantech sector.

“The commercialization of Graphene Oxide (GO) technology, both in the production and thin-film manufacturing will unlock a number of other potential product opportunities for the cleantech sector and many others,” said Evelyn Allen, CEO, Evercloak.

- [MPC](#), based in Oro-Medonte, ON, along with partner [Niigon Machines Ltd.](#) from Vaughan, ON, are developing a new manufacturing process that will transform the way automotive components are made, allowing cycle times to be cut in half, increasing productivity, and decreasing costs.

“This project will create a Made-in-Canada world class manufacturing process, creating long term sustainability in the industry and creating new high-tech jobs,” said David Yeaman, president, MPC.

- [KSL](#), based in Burlington, ON and [Wolfedale Tool & Stamping](#), based in Mississauga, ON, are partnering to develop a solution that will improve tool life and reduce costs by reducing the amount of lubricant required in manufacturing processes. Their project will validate KSL’s

proprietary gel-based lubricant technology in various industrial settings and machining operations, and aims to show a 50% overall improvement performance and cost improvement compared to traditional lubricants.

“Validation of our lubricant technology will allow us to become the leading supplier to automotive manufacturers, resulting in real environmental and health and safety benefits,” said David Dennis, president, KSL.

- [Panevo](#), based in Vancouver, BC, has partnered with Toronto, ON-based [Accuenergy](#) to pilot [ioTORQ Lean Manufacturing OEE](#), a Microsoft Azure hosted software platform that enables real-time monitoring of production assets to help manufacturers identify inefficiencies, boost productivity and reduce waste.

“Utilizing Accuenergy’s data acquisition gateway, ioTORQ Lean Manufacturing OEE software enables organizations to unlock the maximum potential of their assets, increase productivity, embrace industrial IoT and transition to Factory 4.0,” said Craig Holden, CEO at Panevo.

These projects are part of a portfolio of advanced manufacturing initiatives that NGen will fund from the Canadian Government’s Innovation Supercluster Initiative. NGen’s goal is to generate at least \$13.5 billion in GDP growth and create 13,500 new jobs while addressing some of the world’s most pressing problems in health care, resource management, and environmental.

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About NGen - Next Generation Manufacturing Canada

NGen is the industry-led not-for-profit organization that leads Canada’s Advanced Manufacturing Supercluster. Its mandate is to help build world-leading advanced manufacturing capabilities in Canada for the benefit of Canadians. NGen works to strengthen collaboration among its membership of more than 2,500 manufacturers, technology companies, innovation centres, and researchers, and provides funding and business support to industry-led initiatives that aim to develop, apply, or scale-up transformative manufacturing solutions in Canada for commercialization in global markets.

Associated links

[Next Generation Manufacturing Canada](#)
[Innovation Superclusters Initiative](#)

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