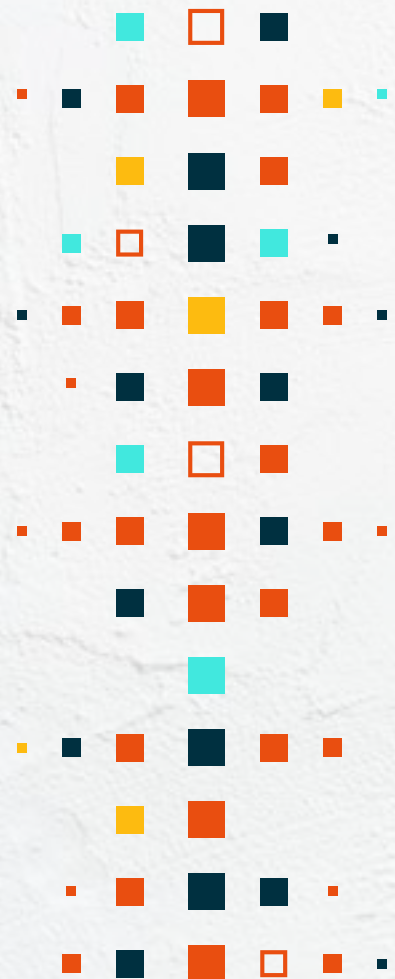




Corporate Plan 2023-2024



April 2023

www.ngen.ca



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Next Generation Manufacturing Canada

SUMMARY: PRIORITY OBJECTIVES FOR 2023-2024

1. Facilitate the successful completion and commercialization of projects and conclude funding under Phase I of our Global Innovation Cluster (GIC) program.
2. Launch funding for Technology Leadership projects under Phase II of the GIC program, the Pan Canadian AI Strategy, and National Quantum Strategy, focusing specifically on:
 - Commercialization of Artificial Intelligence solutions in manufacturing.
 - Applications of Quantum technologies in manufacturing.
 - Innovation challenges in the Electric Vehicle value chain.
 - Scale-up and demonstration of de-carbonization and circular solutions in manufacturing.
 - Other leading-edge advanced manufacturing solutions in fields like aerospace, electronics, advanced manufacturing systems, medical devices, biomanufacturing, robotics and customized automation.
3. Continue to support Ecosystem Development initiatives that promote Canada's advanced manufacturing capabilities across Canada and internationally, build connections and collaboration across Canada's advanced manufacturing sector, attract more young people into advanced manufacturing, develop a more highly skilled, equitable, diverse, and inclusive advanced manufacturing workforce, and help manufacturers manage business and technology transformation including their transformation to net-zero facilities.
4. Fulfill our obligations for delivery of our Future Ready and Metal and Engineered Plastics Additive Manufacturing Industrial

Demonstration programs funded respectively by Employment and Social Development Canada (ESDC) and NRC-IRAP.

5. Secure additional funding to support transformative Technology Leadership projects, Ecosystem initiatives, and associated operating requirements.

OUR MISSION

NGen is dedicated to building world-leading advanced manufacturing capabilities in Canada, for the benefit of Canadians.

We aim to strengthen the competitiveness and growth potential of Canada's critical advanced manufacturing sector and deliver step-change improvements in greenhouse gas (GHG) emission reductions, environmental sustainability, health and safety, food and water security, and supply chain resilience for Canadians and the world.

We work to fulfill our mission by:

- Promoting Canada's advanced manufacturing capabilities across the country and around the world.
- Making connections, facilitating innovation partnerships, and improving access to ecosystem resources, including advanced manufacturing education and training programs and centres that enable technology scale-up and adoption.
- Funding and supporting collaborative Technology Leadership projects that leverage Canada's research, technology, and manufacturing strengths to accelerate the development, scale-up, adoption and commercialization of innovative solutions for manufacturing.
- Supporting the development and attraction of a highly skilled, diverse, and inclusive advanced manufacturing workforce in Canada, with special emphasis on attracting youth and under-represented groups into advanced manufacturing careers.
- Helping companies improve the management of advanced manufacturing processes and

implement net-zero emission facilities.

All our initiatives are designed to be:

- **Transformative:** enabling world-leading solutions that address strategic innovation challenges in advanced manufacturing.
- **Applied:** developing, scaling up, and demonstrating advanced manufacturing solutions that have significant strategic commercial potential.
- **Collaborative:** enabling capabilities that no individual company or organization can achieve on its own.
- **Enduring:** contributing know-how and resources in support of Canada's advanced manufacturing ecosystem.

OUR STRATEGIC VISION

In 2022, NGen's Board of Directors refreshed our Strategic Plan and reaffirmed NGen's vision to become Canada's Leading Enabler of Transformation and Business Success in advanced manufacturing in support of Canada's transition to becoming a leading green supplier to the world. Accordingly, NGen aims to:

- Respond knowledgeably and rapidly to industry needs, identifying strategic opportunities, and working collaboratively to support the development, adoption, scale-up, & commercialization of leading-edge manufacturing solutions.
- Support an ecosystem that is a magnet for talent & investment by providing strategic leadership, deepening connections and collaboration across value chains, amplifying

and promoting ecosystem capabilities, and undertaking strategic initiatives that address ecosystem gaps to enable transformation in advanced manufacturing.

- Excel as an organization creating positive change by engaging expert, entrepreneurial, and motivated professionals pursuing their career objectives in a respectful, equitable, diverse, and inclusive work environment.
- Become a financially sustainable business outperforming expectations through compliant and responsible stewardship of investments in high-impact projects and ecosystem development initiatives.

STRATEGIC TARGETS

NGen measures success based on the value that our Technology Leadership projects and Ecosystem Development initiatives create by developing and commercializing unique advanced manufacturing solutions and supporting their adoption by Canadian industry.

NGen aims to build on the strong track record of success we have achieved since 2018, during Phase I of the Global Innovation Cluster program, to meet even more ambitious investment, economic growth, and job creation targets over the next five to ten years.

Our goal is to invest at least \$260 million in additional funding in Technology Leadership projects and Ecosystem Development initiatives over the next five years, leveraging 1.7X that amount in industry contributions, to generate a cumulative total of \$1.3 billion in innovation investments between 2018 and 2028. We aim to create or sustain 15,000 jobs and generate \$15 billion in GDP over that ten-year period.

Economic Impact	Result by: Mar. 31st, 2023	Cumulative Target March 31st, 2028	Cumulative Target March 31st, 2033
Industry Investment Match for Projects*	1.68**	1.7	1.7
Approved NGen Investments in Projects	\$218 million	\$480 million	\$1 billion
Total Innovation Investments in Projects	\$585 million	\$1.3 billion	\$3 billion
Revenue Generated (Total Direct & Indirect GDP)	\$2.6 billion	\$15 billion	\$25 billion
Jobs Created/Sustained (Direct & Indirect)	5,668	15,000	25,000

*For Technology Leadership projects and Ecosystem initiatives where an industry match is required.
** Excluding COVID Rapid Response projects where no industry match was expected.

NGEN'S FIVE YEAR STRATEGY

NGen builds world leading advanced manufacturing capabilities in Canada for the benefit of Canadians.

Business Strategy			
A National Force – A Driver of Growth – A Creator of Networks – A Catalyst for Skills Development			
NGen leverages Canadian research, technology, manufacturing, and ecosystem strengths to support the development, adoption, scale-up, and commercialization of leading-edge solutions that will strengthen the competitiveness and growth potential of Canada's advanced manufacturing sector and help position Canada as a leading green supplier to the world.			
Unique Value Proposition			
Industry-Led – Strategic Foresight – Connections – Collaboration – Focus on Scale-Up for Manufacturing Focus on initiatives that are strategic, transformative, collaborative, applied, enduring, with significant commercial potential			
Values & Leadership Behaviours			
Respect – Trust – Commitment – Innovation – Collaboration – Accountability			
Stakeholders			
Industry Manufacturers & Tech Providers	Ecosystem Partners	Employees	Funders
Vision			
Leading Enabler of Transforma- tion in Advanced Manufacturing	Collaborative Ecosystem A Magnet for Talent & Investment	Team of Rock Stars Creating Positive Change	Financially Sustainable Business Outperforming Expectations
Strategies & Targets to 2028			
- Strategic Foresight - Promote Canadian capabilities - Connections and collaboration - Project support - Access to funding - IP strategies - Workforce development - Transformation management	- Domestic and international scope - Strategic gap analysis - Promote ecosystem capabilities - Network of networks - Connections and collaboration - Access to ecosystem services - Fill in ecosystem gaps	- Engage expert, entrepreneurial, and motivated professionals pursuing their career objectives in a respectful, equitable, diverse, and inclusive work environment - Continuous improvement and lean management that enhances stakeholder value	- Compliant and responsible stewardship of investments in high-impact projects and ecosystem development initiatives - Leverage funding partnerships - Ensure best-in-class governance, operating, and financial management practices
- \$1.3 billion in total innovation investments - \$15 billion in new sales and IP licensing revenues - 15,000 new jobs - 5,000 companies registered in NGen workforce development and management support services	- 45 advanced manufacturing clusters working together and supported by NGen - 50 public and private sector partners working with NGen to support Technology Leadership projects and Ecosystem Development Initiatives - Recognition as leading ecosystem connector for MNEs	- 90% employee engagement rating - Recognition for staff professionalism	- NGen funding matched 1.7X by industry investments - \$11.4 million annual revenue for operating expense - \$70 million raised in additional funding with \$13.1 million for operating expenses - Recognition of top-grade governance, financial management, and compliance assurance practices
Objectives & Targets for 2023-2024			
- Close out and help commercialize Phase I projects - Launch funding for Phase II, PCAIS, Quantum projects - Deliver Future Ready and Additive Demonstration programs	- Expand/support cluster network - Increase Canadian presence at international events - Launch strategic roadmap - Expand programs to attract youth and under-represented groups - Launch collaboration platform - Increase participation in events	- Renew full time employment agreements - Strengthen employee engagement - Develop individual employee development plans - Review and improve processes for project and member engagement	- Ensure no compliance violations - Ensure accurate and transparent financial reporting - Access additional funding for Tech Leadership projects and Ecosystem Development initiatives
- \$218 million Phase I funds invested - \$135 million new funding approved - Solution Centre with 100 use cases - 300 additional companies registered in workforce and management support services - 700 new employee placements - 20 companies in new markets - Project NPS = 70	- 4 roadmaps commissioned - 7,000 members - 24 clusters in network - 4,000 companies on collaboration platform - 1,000 companies in NGen events - 80 companies at Hannover - 50,000 students engaged - Ecosystem NPS = 50	- 90% employee engagement rating	- No compliance violations - Financial statements signed off by external auditor - \$25 million in additional revenue raised from other sources, with \$3 million for operating expenses



STRATEGIC OBJECTIVES

NGen’s five-year strategic objectives are aimed at achieving our longer-term growth targets. In line with the objectives of the Government of Canada’s Global Innovation Cluster program, NGen aims to position ourselves as a:

- **National Force** – Developing ecosystems that create a global advantage for Canada by leveraging and attracting industry investment, developing a global profile, and collaborating on projects at a national scale.
- **Driver of Growth** – Accelerating the scale-up of small and medium-sized enterprises (SMEs) by fostering collaboration and integration into emerging value chains, to drive international opportunities, expand market share, and grow revenues.
- **Creator of Networks** – Strengthening connections and collaborations among private, public, and academic organizations to drive impactful commercialization outcomes and develop domestic capacity.
- **Catalyst for Skills Development** – Addressing skills gaps, acting as a magnet for global talent, collaboration, and skills and talent development, and fostering opportunities for equity-seeking groups to benefit from connections, to drive innovation and contribute to inclusive economic growth.

More specifically, over the next five years, NGen aims to:

- Achieve a track record of advanced manufacturing initiatives that create strategic advantage for Canadian companies and significant environmental, health, and employment benefits for Canadians.
- Augment our role in building Canada’s advanced manufacturing ecosystem focusing especially on commercialization, scaling companies, capacity building, skills development and talent attraction.
- Become an effective means for governments to achieve strategic policy objectives aligned to our mission.
- Implement a more systematic approach to enhancing our national and global presence.
- Support the adoption of advanced manufacturing solutions in Canadian industry and their widespread commercialization in

global markets.

- Facilitate and support a syndicated funding approach to support the development, scale-up, and commercialization of leading-edge technology solutions for manufacturing and NGen-led ecosystem development initiatives.
- Develop a cross-Canada ecosystem that is connected, aligned in addressing the challenges and strategic opportunities facing Canada’s advanced manufacturing sector, and globally recognized as a magnet for international talent and investment in advanced manufacturing.
- Expand cross-Canada engagement of academic and research institutions, technology providers, manufacturers, and other ecosystem partners in NGen funded projects and ecosystem initiatives.
- Increase industry investments in advanced manufacturing initiatives funded by NGen. Our goal is to exceed \$1.50 in industry contributions for every dollar of funding while ensuring a minimum 1:1 industry match.
- Sustain a highly cohesive and motivated team recognized as leading experts and change activists for advanced manufacturing in Canada.
- Enhance our financial sustainability by leveraging funding from a variety of public and private sources.

STRATEGIC INITIATIVES

In pursuit of these objectives, NGen will:

- Strengthen our leadership role in developing long-term national ecosystem strategies to take advantage of emerging innovation opportunities that drive economic growth and benefits for Canadians.
- Put special emphasis on initiatives that significantly reduce GHG emissions and improve supply chain resiliency.
- Develop a portfolio of strategically focused Technology Leadership projects that deliver superior economic results in terms of GDP and job growth, create scale-up and accelerated growth opportunities for SMEs, and improve environmental sustainability and Canadian supply chain resiliency.
- Focus on high-quality projects with the potential of attracting co-investment or follow-





on funding from private sector investors or from public funders including provincial innovation programs, regional development agencies, and other federal programs that can support their further development and commercialization.

- Build on significant program achievements by developing, protecting, sharing, and commercializing IP and technology solutions resulting from project activity.
- Continue to support the commercialization of solutions and IP arising from our Phase I projects. We will promote project outcomes, facilitate the licensing of IP to develop new value chain opportunities, identify potential customers, help companies navigate standards and regulatory issues, and work with financial and business services providers that can also support the commercialization of project results.
- Expand our Ecosystem Development initiatives with added emphasis on strengthening collaboration across our network of advanced manufacturing clusters; creating fully inclusive opportunities for equity-seeking groups such as women, visible minorities, Indigenous populations, and persons with disabilities; supporting the transformation management capabilities of SMEs, including their transition to net-zero processes and facilities, through NGen's Transformation Leadership Program; and addressing workforce talent gaps through skilling, upskilling, and reskilling programs.
- Develop a more systematic approach to enhancing our global presence, including initiatives that enhance the international promotion of NGen activities and Canadian advanced manufacturing capabilities, attract advanced manufacturing talent and investment to Canada, enable international innovation partnerships, and support the commercialization of Canadian technology solutions in global markets and supply chains.
- Strengthen collaboration with other Global Innovation Clusters, particularly in initiatives that address common missions of fighting climate change and strengthening supply chain resiliency.
- Continuously improve our governance and operating processes.

STRATEGIC PRIORITIES FOR 2023-2024

In line with our strategic plan, NGen will pursue the

following priority objectives in 2023-2024:

1. Facilitate the successful completion and commercialization of projects and conclude funding under Phase I of our Global Innovation Cluster (GIC) program.
2. Launch funding for Technology Leadership projects under Phase II of the GIC program, the Pan Canadian AI Strategy, and National Quantum Strategy, focusing specifically on:
 - Commercialization of AI solutions in manufacturing.
 - Applications of Quantum technologies in manufacturing.
 - Innovation challenges in the Electric Vehicle value chain.
 - Scale up and demonstration of de-carbonization and circular solutions in manufacturing.
 - Other leading-edge advanced manufacturing solutions in fields like aerospace, electronics, advanced manufacturing systems, medical devices, biomanufacturing, robotics and customized automation.
3. Continue to support ecosystem development initiatives that promote Canada's advanced manufacturing capabilities across Canada and internationally, build connections and collaboration across Canada's advanced manufacturing sector, attract more young people into advanced manufacturing, develop a more highly skilled, equitable, diverse, and inclusive advanced manufacturing workforce, and help manufacturers manage business and technology transformation including their transformation to net-zero facilities.
4. Fulfill our obligations for delivery of our Future Ready and Metal and Engineered Plastics Additive Manufacturing Industrial Demonstration programs funded respectively by Employment and Social Development Canada (ESDC) and NRC-IRAP.
5. Secure additional funding to support transformative Technology Leadership projects and Ecosystem initiatives.

These priorities deliver on our strategic objectives and further the initiatives previously undertaken by NGen. They follow on the objectives and activities of our 2022-2023 Corporate Plan.

COMPLETION AND COMMERCIALIZATION OF PHASE I PROJECTS

Objectives for Last Year

In our Corporate Plan for 2022-2023, NGen aimed to complete all projects funded under Phase I of the GIC program by March 31st, 2023, accounting for the full \$218 million allocated for that purpose. We expected that we would actually disburse \$200 million of funding by that date and the remaining \$18 million over the next three months as final claims were reconciled.

Status by 2023

NGen has approved investments of \$218 million in 165 projects with a total project value (including contributions from industry and other sources) of \$585 million. The projects involve 624 partners, including 372 industry partners, 328 of which are SMEs, and 252 academic and research partners. By January 2023, 80 projects had been completed, accounting for an NGen investment of \$87 million. Completed projects had by then generated \$2.6 billion in revenue and led to the creation of an estimated 5,668 direct and indirect jobs. To date, every dollar invested by NGen has returned an estimated \$4.50 in tax revenue back to the federal government. Project details can be found on our **Impact Page** and our **Annual Report**.

While most projects finished by the end of March 2023, the opportunity to offer longer-term projects an extension in completion dates and funding into 2024 has provided additional time for their completion – a benefit to partners in large projects facing delays as a result of supply chain and production constraints as well as to those working on very short time lines (as is the case for the Electric Vehicle projects that NGen has funded which would otherwise have only a year for project completion). We expect that \$198 million of Phase I funding will be expended to cover eligible project costs incurred by March 31st, 2023. NGen has requested \$20 million in Phase I funded be extended into 2023-2024.

Objectives for 2023-2024

NGen will facilitate the successful completion and commercialization of projects and conclude funding under Phase I of our Global Innovation Cluster (GIC) program.

Activities Planned for the Coming Year

NGen has set an end-of-September deadline for the completion of all Phase I projects, accounting for the full \$218 million we have allocated to them. All claims will be reconciled, projects officially closed out, and results reported by March 31st, 2024.

NGen will continue to work with Phase I project partners (and Phase II partners as projects complete) to enable the successful commercialization of their solutions within Canada as well as in international markets and supply chains. Specifically, over the coming year, we plan to:

- Conduct a commercialization needs assessment of our project partners.
- Conduct ecosystem gap analyses and innovation needs assessments of larger manufacturers operating or looking to invest in Canada and facilitate introductions to our project partners
- Convene a conference of Phase I project partners and other ecosystem partners to showcase project outcomes and identify further opportunities for collaboration and business development.
- Launch an online Solutions Centre to promote the capabilities of project partners and other NGen members and showcase solutions and use cases for advanced manufacturing.
- Increase and promote IP assets available for licensing to NGen members.

- Work with government partners to identify and remove regulatory barriers to commercializing solutions arising from our projects.
- Connect project partners and other NGen members to technology commercialization centres in international markets, including Global Affairs’ Canadian Technology Accelerators as well as international accelerators in the US, Europe, and Asia.
- Promote NGen project partners in our media activities as well as at trade shows and events within Canada and other strategic markets.

Targets for March 31st, 2024

- \$218 million of Phase I project funding fully expended.
- Final project close-out reports for all Phase I projects.
- Solution Centre operational with 100 use cases showcased on the site.

NEW TECHNOLOGY LEADERSHIP PROJECTS

Objectives for Last Year

In our Corporate Plan for 2022-2023, NGen aimed to raise additional funding to invest in world-leading advanced manufacturing projects, support ecosystem development initiatives, and sustain NGen’s operating budget. We said that we would deploy these funds to invest in five types of Technology Leadership projects aligned to the federal government’s innovation priorities and opportunities identified by NGen members:

1. Zero-Emission Vehicles.
2. Net Zero-Emission Manufacturing Processes and Facilities.
3. Circular Manufacturing of Materials.
4. Accelerated Scale-Up and Adoption of Transformative Manufacturing Technologies.
5. The commercialization of Artificial Intelligence (AI) solutions in manufacturing.

We set a target to raise \$250 million in additional funding in 2022-2023.

Status by 2023

NGen was successful in raising \$231.6 million in new funding, including \$165 million specifically for Technology Leadership projects:

- \$135 million from Phase II of the Global Innovation Clusters (GIC) program.
- \$25.8 million from the Pan Canadian AI Strategy (PCAIS) program.
- \$6.2 million from the National Quantum Strategy (NQS) program (half of a joint initiative with Canada’s Digital Innovation Cluster).

NGen launched our first call for project proposals under the PCAIS funding stream in September 2022. We received 17 applications involving 42 industry partners (35 of which were SMEs) with a total funding request of \$32.5 million and overall project value of \$93.8 million. Following our assessment process in February, six projects were approved and are now in the contracting stage for NGen funding amounting to \$9.9 million. Those



projects involve 15 industry partners, 11 of which are SMEs, and will result in total innovation investments of \$28.3 million. At the end of March 2023, we had 60 AI project proposals left in our pipeline with a total funding request of \$33 million and an overall estimated value of \$100.6 million.

Objectives for 2023-2028

Based on funding obtained to date, NGen will target investments over the next five years to support industry-led collaborative Technology Leadership projects in the following priority areas:

- \$45 million from Phase II GIC funding to build Canada's EV Value Chain, focusing on projects that address strategic innovation challenges that stand in the way of a sustainable global industry, including green processing of critical minerals, improvements in battery chemistry and performance, development of battery testing infrastructure, and the design, development, testing, and production of materials, powertrain, electronics, fuel cells, and other parts for battery and hydrogen powered vehicles.
- \$45 million from GIC Phase II funding for Industrial Decarbonization and the Circular Manufacturing of Materials, focusing on the scale-up, demonstration, testing, and application of technology solutions that will enable manufacturers to achieve net-zero emission facilities and the development and scale-up of manufacturing processes that repurpose by-products and GHGs into new production feedstocks and materials or produce bio- and recyclable materials.
- \$45 million from GIC Phase II funding for other Transformative Advanced Manufacturing solutions in fields like aerospace, electronics, advanced construction systems, biomanufacturing, medical devices, robotics, and customized automation systems.
- \$24 million from Pan-Canadian AI Strategy funding for projects that increase the adoption of AI solutions by Canadian manufacturers, help applied technology companies and research centres scale their AI solutions and user base, and develop a diverse top-tier AI talent pool specializing in advanced manufacturing applications. NGen will focus on projects that enable the implementation of AI solutions for rapid prototyping and testing of materials, products, and processes; systems optimization within manufacturing facilities and/or across supply chains; the development of autonomous vehicles, robotics, and automation equipment; and the development of new AI-enabled manufacturing services.
- \$6.2 million from National Quantum Strategy funding to develop, scale up, and demonstrate Quantum solutions for manufacturing.

Activities Planned for the Coming Year

NGen will select the projects it will fund from our remaining \$14 million in PCAIS funding in a second call for proposals in May 2023. All PCAIS project funding will be fully allocated at that time. We aim to contract all PCAIS projects by the end of September.

We will launch a call for proposals for transformative advanced manufacturing projects in April 2023, with timelines to develop projects, identify project partners, assess applications, contract, and finally approve funding by the end of September.

A second call for proposals for Electric Vehicle projects will be launched in the summer allowing for completion of project contracting by December.

A third call for decarbonization and circular manufacturing projects will be launched in the fall which will allow for completion of project contracting by March 2024. This call for proposals will be based on strategic opportunities arising from NGen's work to bring together and facilitate partnerships among large industrial emitters, technology solution providers, government regulators, and public and private sector investors.

We also intend to launch our call for Quantum projects by the end of September and expect contracting to be complete by March 2024.

Targets for March 31st, 2024

- \$105 million in funding approved for GIC Phase II projects.
- \$24 million in funding approved for PCAIS projects (\$14 million in 2023-2024).
- \$6.2 million in funding approved for NQS projects.

ECOSYSTEM DEVELOPMENT INITIATIVES

Objectives for Last Year

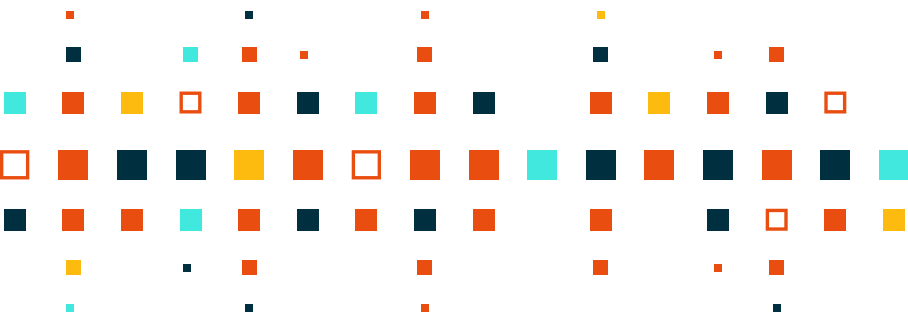
Last year and again in 2023-2024, NGen has made it a priority to grow our Ecosystem Development initiatives to promote Canada’s advanced manufacturing capabilities, build connections and collaboration, attract more young people into advanced manufacturing, develop a more highly skilled, equitable, diverse, and inclusive advanced manufacturing workshop, and help manufacturers manage business and technology transformation, including their transformation to net-zero facilities.

Status by 2023

By March 2023 NGen had:

- Supported and strengthened collaboration among 17 advanced manufacturing clusters and five technology groups across Canada.
- Offered transformation management and skills development support to more than 300 manufacturers across the country.
- Provided manufacturing entrepreneurship and financial literacy education to 567 Indigenous students in 10 elementary and secondary schools in northern Canada.
- Engaged more than 470,000 young Canadians in investigating future careers in advanced manufacturing and provided \$100,000 in financial support to secondary students entering advanced manufacturing programs in Canadian colleges and universities.
- Promoted NGen and Canada’s advanced manufacturing ecosystem at more than 200 international trade shows, conferences, and investment promotion events in the United States, Europe, and Asia.

More detail about NGen’s achievements can be found in our **Annual Report**.



Strategic Objectives 2023-2028

NGen has allocated a total of \$32.37 million from our new funding programs (\$22 million from Phase II GIC, \$3.75 million from PCAIS, \$6.3 million from ESDC, and \$0.32 million from NRC-IRAP) specifically for Ecosystem Development initiatives over the next five years.

Using that funding, we aim to:

- Develop strategic opportunity roadmaps for advanced manufacturing in Canada based on industry and technology trend analysis and innovation needs assessments of larger companies leading Canadian supply chains. The roadmaps will identify innovation and commercialization opportunities for Canadian advanced technology and manufacturing companies, with a priority focus on fighting climate change, improving environmental sustainability, and strengthening Canadian advanced manufacturing value chains and supply chain resiliency. NGen will also establish a Consultative Panel on Green Manufacturing to advise NGen and our members on strategic trends in the sector.
- Expand and deepen connections among advanced manufacturing clusters that are part of NGen’s cross-Canada cluster network, providing education and tools that will help them and their members develop innovation partnerships, access, protect, and commercialize IP, find new sources of funding, promote their capabilities in international markets, attract skilled workers, share best management practices and advice, manage technology adoption and improved environmental sustainability, mitigate supply chain risks, and improve business performance. NGen supported the development and growth of 22 clusters during Phase I of GIC funding. We aim to double this number by 2028.
- Support transformation management on the part of SMEs looking to develop, protect, and commercialize IP, adopt advanced manufacturing technologies, or develop their technology solutions for business growth. NGen will scale up delivery of our IP advisory service, our educational workshops focusing on strategic issues, opportunities, and critical technologies for advanced manufacturing in Canada, as well as delivery of our Transformation Leadership Program (TLP). TLP is designed to help manufacturing executives manage technologies more productively, transform their business to capitalize on changing market conditions, and build more resilient supply chains. We will add TLP modules to help manufacturers transform their processes and facilities to net-zero and build more circular systems of materials re-use and recycling. NGen aims to take 300 companies through the TLP program by 2024 and grow from there.
- Help build a more equitable, diverse, inclusive, and highly-skilled advanced manufacturing workforce by further developing NGen’s **CareersoftheFuture.ca** initiative aimed at attracting young people from diverse backgrounds into careers in advanced manufacturing; building partnerships with educators and other organizations supporting skills development for advanced manufacturing and workforce placements, especially those engaging under-represented groups; and developing tools that will enable manufacturers to conduct customized assessments of their skills requirements.
- Enhance NGen’s existing workforce development programs. We will expand our open-source online education program (AmpUp) to include more modules on energy management, net-zero processes, circular manufacturing, advanced technologies, and digital transformation. NGen will continue to partner with universities and colleges to develop micro-credentials and training programs for advanced manufacturing processes. And we will expand our Indigenous advanced manufacturing education and skills development programs in partnership with NGen members, the Martin Family Initiative, and the Indigenous Manufacturing and Suppliers cluster that NGen helped establish in Phase I. Our goal is to engage 8,000 students by incorporating manufacturing curriculum in Indigenous entrepreneurship, financial literacy, and adult education courses in over 100 schools across Canada by 2028 and supplement those programs with courses on coding and advanced manufacturing technologies.
- Facilitate innovation partnerships and help commercialize Canadian IP and technology solutions by connecting SMEs with larger companies and global commercialization opportunities, facilitating member access to support services provided by ecosystem partners within Canada and internationally, and creating an online platform for promoting made-in-Canada advanced manufacturing solutions.



- Promote Canada’s advanced manufacturing ecosystem and company capabilities on a global stage, including expanded participation in key trade events like Hannover Messe, the largest advanced manufacturing trade show in the world, and support for Canada’s participation as partner country at the fair in 2025.

Objectives for 2023-2024

NGen plans to invest a total of \$12.27 million in strategic Ecosystem Development initiatives in 2023-2024, including \$6.3 million for our Future Ready program, \$0.32 million for NRC-IRAP’s Additive Manufacturing Industrial Demonstration Program, \$1.25 million for promotion, education, and workforce development initiatives to support the commercialization of AI solutions in manufacturing, and \$4.4 million for activities that contribute to strategic opportunity road mapping, promote NGen and Canada’s advanced manufacturing capabilities in Canada and internationally, strengthen our cluster network, facilitate collaboration and commercialization opportunities, and support education programs for youth and under-represented groups in advanced manufacturing.

Our specific ecosystem development goals for last year, their status as of the end of March 2023, and planned activities for 2023-2024 are outlined in more detail below.

A) STRATEGIC INSIGHTS

Objectives for Last Year

In 2022-2023, NGen aimed to provide strategic insights to our members and the ecosystem at large by providing industry and technology trend analysis and through and conference participation.

Status by 2023

Last Year NGen:

- Researched and published industry and technology trend analyses related to decarbonization in manufacturing, circular manufacturing of materials, industrial applications of small modular nuclear reactors, and technologies for resource extraction and manufacturing in outer space.
- Hosted an executive conference on the EV value chain in partnership with Electric Autonomy. The conference was held in-person with over 250 industry leaders and was subsequently posted online as a podcast with 520,000 social media impressions.
- Made presentations about strategic trends and Canada’s advanced manufacturing ecosystem at 117 other conferences, 85 to Canadian and 32 to international audiences.
- Hosted 16 educational workshops on strategic business issues like IP management, cybersecurity, technology trends, and supply chain risks and opportunities.
- Hosted a CEO roundtable on manufacturing supply chain risks, opportunities, and mitigation strategies.

Objectives for 2023-2024

NGen will strengthen our leadership role in advanced manufacturing by providing expert insights with respect to key technology and manufacturing trends and developing strategic opportunity roadmaps to take advantage of emerging innovation trends that drive economic growth and benefits for Canadians.

Activities Planned for the Coming Year

NGen will continue to undertake research on strategic industry and technology trends, providing insights to inform our members and assist in project development. We will participate in advanced manufacturing and investment conferences within Canada and internationally. We also plan to increase the number of workshops on strategic trends affecting the sector as well as our project podcasts.



NGen plans to develop strategic opportunity roadmaps for the EV value chain, net-zero processes, biomanufacturing, and quantum applications for manufacturing. NGen will also engage with public officials and industry leaders to develop a collaborative action plan for implementing transformative decarbonization and circular manufacturing solutions to speed Canada’s transition to net zero.

Targets for March 31st, 2024

- 45 workshops and podcasts.
- Strategic opportunity roadmaps for the EV value chain, net-zero processes, biomanufacturing, and quantum applications for manufacturing.

B) PROMOTION, CONNECTIONS, AND COLLABORATION

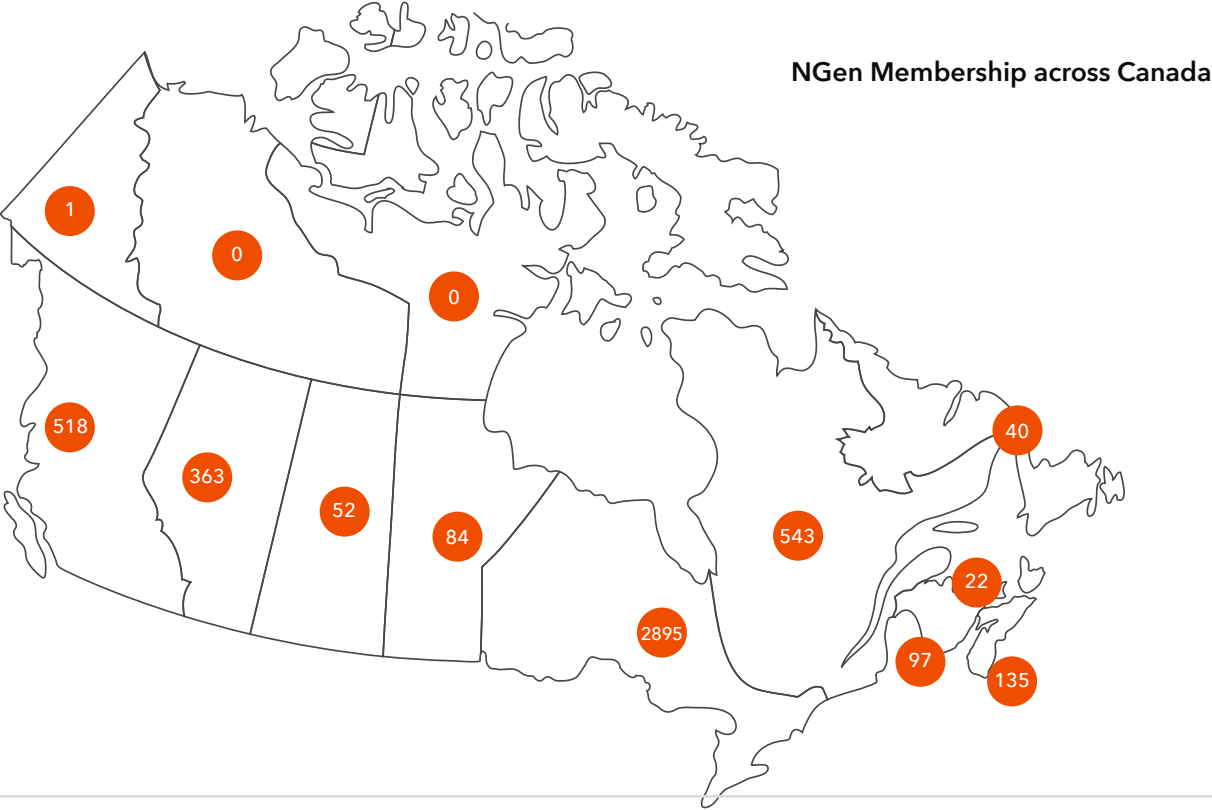
Objectives for Last Year

To enable a greater range of connections and collaboration opportunities NGen planned to expand our network of engaged members across Canada and set a target of 5,500 members by the end of March 2023. We said we would put special emphasis on engaging researchers, technology providers, and manufacturers around the activities of our Technology Advisory Groups, including partners to engage in our initiative to commercialize AI applications in manufacturing. We planned to convene online collaboration events to facilitate innovation partnerships. NGen also planned to enhance our media presence to promote our activities and the capabilities of our member companies.

NGen also undertook to work collaboratively with ecosystem partners, including colleges, universities, research organizations, industry and innovation networks, business services, public and private sector funders, as well as federal and provincial departments across Canada, to help promote, coordinate, and support their efforts on behalf of our advanced manufacturing sector. We aimed to expand the number of formal working arrangements between NGen and other funding organizations and ecosystem partners in 2022-2023.

Status by 2023

By March 2023, NGen had grown its ecosystem to 5,393 members, including 3,019 companies and other ecosystem partners and 1,733 individual experts. We had 641 international members and 4,752 members representing every province and one territory across Canada.



To promote NGen and the capabilities of our members last year we:

- Hosted 18 online podcasts showcasing NGen projects and the capabilities of partner companies with 3,718 views on LinkedIn and You Tube and 170 downloads.
- Partnered with the Rideau Hall Foundation to nominate NGen projects for the Governor General’s Innovation Awards.
- Partnered with MaRS and Electric Autonomy to promote NGen and NGen projects in public media across Canada.
- Posted 36 media spots highlighting NGen with over 517,000 impressions.
- Took part in 32 media interviews highlighting NGen activities.

NGen’s collaboration events assist in defining project opportunities and identifying potential project partners. We hosted a collaboration event in November 2022 following our call for proposals for projects to commercialize AI applications in manufacturing. The event attracted 489 technology providers, manufacturers, and other ecosystem members, and allowed NGen to identify AI solution providers from across Canada and engage them in our AI for Manufacturing cluster.

By the end of the year, NGen had developed 11 formal agreements with other ecosystem partners, including additional funding agreements with NRC-IRAP and Employment and Social Development Canada. Our relationships with cluster partners are detailed below.

Objectives for 2023-2024

In 2023-2024, NGen will continue to grow our membership to create more opportunities to engage manufacturers, technology providers, and other ecosystem partners in collaborative ventures and develop an even larger critical mass to attract investment and talent into Canada’s advanced manufacturing sector.

We will enhance our media presence and increase the number of activities that help us promote NGen’s achievements, our projects, and the capabilities of our members. We will provide members ongoing access to collaboration opportunities. We will strengthen our collaborative work with other Global Innovation Clusters. NGen will also expand the scope of our working relationships with other funding organizations and ecosystem partners.

Activities Planned for the Coming Year

Initiatives we are planning over the year ahead include:

- Launching an AI-enabled collaboration platform and online solutions centre to engage more companies and ecosystem partners as NGen members and strengthen collaboration across the ecosystem.
- Continuing our partnership with the Rideau Hall Foundation.
- Continuing our series of project podcasts.
- Hosting a conference of project partners to showcase completed projects and develop new collaboration opportunities.
- Organizing collaboration events following our calls for project proposals related to transformative advanced manufacturing solutions, the EV value chain, and decarbonization and circular manufacturing.

We will strengthen our collaborative work with other Global Innovation Clusters by:

- Partnering with Canada’s Digital Supercluster to support Quantum projects, including sharing project information, promoting each others’ calls for proposals to our members, referring members as possible project



- partners, and inviting representatives from Digital to sit as observers in project assessment meetings. Our partnership will serve as a model for other cluster collaboration activities.
- Undertaking joint communications initiatives with other clusters that promote the Global Innovation Clusters program and its successes, build engagement across Canada and internationally, and demonstrate collective benefits for Canadians and the world.
 - Exploring opportunities to develop an all-cluster IP Registry open to all Cluster members.
 - Developing joint education initiatives to strengthen IP, workforce, EDI, and innovation management capabilities.
 - Pursuing opportunities for joint calls for project proposals, particularly when aligned with the common missions of emission reductions and supply chain resiliency.

Targets for March 31st, 2024

- 7,000 members.
- 20 podcasts.
- 3 collaboration events.
- Project Partner Showcase.
- Collaboration platform launched with the capabilities of 4,000 companies and other ecosystem partners searchable on the site.
- Formal working agreements with 20 ecosystem partners.
- Collaboration processes developed with the Digital Cluster that can serve as a model for other cluster collaboration initiatives.

C) ADVANCED MANUFACTURING CLUSTER NETWORK

Objectives for Last Year

NGen has supported the development and growth of 17 advanced manufacturing clusters across Canada. NGen’s cluster ecosystem brings together more than 1,750 companies and research organizations from across the country with an industry footprint valued in excess of \$50 billion in sales. In addition to funding, NGen plays an active role in providing advice and other support services for cluster management and service delivery, as well as in facilitating collaboration among clusters. All clusters and cluster members have access to NGen services and workshops as well as our database of member capabilities. They serve as important channels for NGen communication and engagement with the ecosystem beyond NGen membership. They all work to support their own networks of advanced manufacturing companies and ecosystem partners.

In our Corporate Plan for last year, we undertook to facilitate, support, and strengthen collaboration across the advanced manufacturing clusters that NGen has funded, with a particular focus on helping grow membership and services provided by start-up clusters, including the Saskatchewan Indigenous Manufacturing Cluster.

Status by 2023

NGen’s network of advanced manufacturing clusters includes the:

- Saskatchewan Indigenous Manufacturing and Contracting Network (IMCN).
- Ontario Aerospace Council.

- Canadian Association of Mold Makers (CAMM).
- Canadian Association of PPE Manufacturers (CAPPEM).
- Réseau Trans AL.
- Canada Makes, Canada’s additive manufacturing cluster.
- Canadian Manufacturers & Exporters, Newfoundland & Labrador (CME-NL) Division’s advanced manufacturing cluster.
- AI4M Canada, Canada’s cluster of technology experts in artificial intelligence working with manufacturers to raise awareness about the benefits, use cases, and requirements involved in commercializing AI applications in manufacturing and accelerate the adoption of those solutions by manufacturers.
- Saskatchewan Industrial & Mining Suppliers Association (SIMSA).
- Wood Manufacturing Cluster of Ontario.
- Verschuren Centre, a pan-Canadian cluster based in Nova Scotia which brings SME clean technology companies together with manufacturers to replace petrochemical ingredients with bio-ingredients.
- Materials Atlantic, another Nova Scotia-based cluster that brings technology experts in advanced, nano, energetic and battery materials together in collaborative ventures with manufacturers.
- Photons Canada.
- Alberta Manufacturers & Exporters Enhancement Cluster (Alberta MEE) which brings together SMEs from across Alberta to connect and collaborate in developing new lines of business in advanced manufacturing and support workforce development.
- Materials & Reliability in Oil Sands (MARIOS) cluster which helps SME manufacturers with an oil and gas focus broaden their customer base and increase revenues by de-risking Industry 4.0 solutions for greater efficiencies.
- Deep-Tech Canada, a cluster specializing in nano- and quantum technologies.
- Canadian Advanced Air Mobility Network.

Over the past year, we hosted two all-cluster meetings, resulting in six joint initiatives involving 15 of those clusters. We participated in and supported ten conferences and networking events hosted by our cluster partners, including those organized by IMCN, CME-NL, Deep Tech Canada (Nano-Canada and Quantum Days), Canada Makes, and AI4M. NGen has facilitated over 300 introductions between clusters and NGen members including manufacturers, technology providers, academic partners, business services, and individual industry experts. Clusters are also sharing their tools and services with each other as well as across NGen’s broader membership. For instance, SIMSA has made its carbon calculator available and helped facilitate the establishment of the Saskatchewan Indigenous Manufacturing and Contracting Network. The Verschuren Centre has integrated a Net-Zero Accelerator cluster under its umbrella to advance its work on advanced materials for battery research and storage. The Verschuren Centre also used its cluster-building initiative to develop the Bio-Processing Centre subsequently funded as a NGen Technology Leadership project.

NGen put special emphasis on starting up and supporting the Saskatchewan Indigenous Manufacturing and Contracting Cluster, Canada’s first Indigenous Manufacturers’ Cluster which is dedicated to developing training opportunities for Indigenous youth, sharing best practices in manufacturing management and technology adoption, and generating new business opportunities for Indigenous manufacturers. IMCN has facilitated collaborations between Indigenous suppliers and BHP, SaskTel, and SaskPower and is working with SIMSA to connect suppliers with mining companies in Canada and around the world. IMCN is consulting with businesses

and not-for-profit organizations to advise them on strategies for Indigenous workforce development. It is also partnering with NGen’s education partners to develop placement opportunities for Indigenous youth.

NGen also engaged industry and ecosystem partner participation in five Technology Advisory Groups involving 152 members focusing on how to accelerate the adoption of advanced technologies in Canadian manufacturing. The Technology Groups cover the fields of Artificial Intelligence and Machine Learning, Additive Manufacturing, Automation and Robotics, Digital Twins, and Cybersecurity. Our AI and Additive Groups have established themselves as self-governing clusters supported by NGen while attracting additional contributions from their members to fund market needs assessments, participation in international trade shows, and promotion activities and education workshops for NGen’s general membership.

Objectives for 2023-2024

In 2023-2024, NGen will increase financial support for and strengthen collaboration among advanced manufacturing clusters across Canada.

Activities Planned for the Coming Year

NGen plans to:

- Host an in-person advanced manufacturing networking conference for all NGen-supported clusters in April to establish an action plan for the coming year.
- Invest in new cluster development.
- Launch a cluster accelerator program to facilitate inter-cluster collaboration.
- Provide education and promotional support for our AI technology working group/cluster as part of our PCAIS funding initiative.
- Implement a process to facilitate international cluster collaborations, including opportunities to certify NGen clusters to European cluster standards.
- Lead cluster delegations to Hannover Messe, other key international advanced manufacturing events, and UK catapult centres.
- Speak at cluster conferences throughout the year.

Targets for March 31st, 2024

- Network plan developed with input from all advanced manufacturing clusters.
- Seven new clusters launched.
- Cluster accelerator launched.
- Ten clusters participating in international events.
- AI solutions marketplace launched to educate and promote AI solution use cases.

D) TRANSFORMATION LEADERSHIP AND WORKFORCE DEVELOPMENT

Objectives for Last Year

In its Corporate Plan for 2022-2023 NGen undertook to develop and commercialize our Transformation Leadership Program (TLP) with the goal of building a stream of business services revenue to finance future operating expenses for program delivery. We also said that we would explore new funding opportunities to provide



smaller manufacturers access to online skills development programs through our AmpUp open-source training partnerships.

Status by 2023

In 2022, NGen was awarded \$15.8 million from Employment and Social Development Canada (ESDC) to support our Future Ready initiative in which we will deliver of our TLP and AmpUp upskilling programs, recruit new manufacturing employees from underrepresented groups and recent immigrants, documenting how manufacturers are accommodating them, and lead research projects on advanced manufacturing workforce requirements.

Over the past year, NGen delivered TLP to 123 participants, including 17 manufacturers in aerospace and fabricated metal product supply chains. We launched the development of an online system for scaling up the delivery of TLP courses in both official languages. Joint initiatives were also developed with six ecosystem partners to deliver other aspects of the ESDC program.

Objectives for 2023-2024

By March 2024, NGen will complete the first phase of our Future Ready program. We will also look to obtain additional support for continuing the initiative in future years.

Activities Planned for the Coming Year

In 2023-2024 NGen intends to:

- Continue to provide skills development and training opportunities to manufacturing employees via our Transformation Leadership and AmpUp programs.
- Deliver TLP to companies in both official languages – the French version of our strategic assessment tool will be complete by May 2023.
- Develop a just-in-time skills inventory system for Canadian manufacturers, beginning with five key high-turn-over frontline positions.
- Finalize a study addressing some of the workforce impacts of decarbonization and issue a RFQ for additional labour market and skills research.
- Prototype a credentialing framework that will enable Canadian manufacturers to identify and recognize key skills that are transferrable regionally and across manufacturing sectors.
- Develop a database to support benchmarking and measurement of skills baselines, which will enable NGen to measure the impact of our interventions.
- Launch a study with the support of Statistics Canada to examine the productivity and growth effects of our program’s interventions.
- Support the recruitment of new manufacturing employees with half coming from under-represented groups and recent immigrants.
- Lead research projects with partner organizations to investigate:
 - The impact of the introduction of Industry 4.0 and associated technologies on the manufacturing workforce for strategic sectors including aerospace and food processing.
 - The impact and/or role technology (both product and manufacturing technology) may have in the participation of equity deserving groups.
 - The impact of artificial intelligence (AI) on the manufacturing workplace and workforce.

- The skills requirements involved in the shift to a net-zero economy, Industry 4.0, and AI in manufacturing.

- Document the experience of the project team in working with settlement agencies to identify newcomers with potential to join the manufacturing workforce and how manufacturers are accommodating new hires from under-represented groups.

Targets for March 31st, 2024

- 1,000 employees registered in NGen TLP and AmpUp skills development programs.
- 300 companies enrolled in TLP across Canada.
- 700 new manufacturing employees – half coming from under-represented groups and recent immigrants.

E) ATTRACTING TALENT INTO ADVANCED MANUFACTURING

Objectives for Last Year

NGen aimed to expand delivery of our Indigenous Manufacturing Entrepreneurship and Financial Literacy courses and launch another phase of our Careers of the Future campaign to attract young Canadians into careers in advanced manufacturing. We also planned to promote the enrolment of more students across Canada on the Virtual Robotics Training Program platform developed by InspireTech with financial support from NGen.

Status by 2023

In 2021-2022, 196 Indigenous students were enrolled in Manufacturing Entrepreneurship and Financial Literacy courses that NGen developed in partnership with the Martin Family Initiative (MFI), in five schools in northern Saskatchewan and Alberta. Over the past year another 371 Indigenous students enrolled in these courses in ten schools in Saskatchewan, Alberta, BC, and Nunavut.

We recorded 67,394 engaged site visits to our Careers of the Future website in 2022-2023, 48% of them from females. There have been 473,710 engaged site visits (49% from females) to learn more about advanced manufacturing careers since the initiative was launched in 2021.

There have been 8,917 students who have been enrolled on InspireTech’s digital skills for manufacturing platform since 2021, with 4,615 added over the past year.

Objectives for 2023-2024

We will continue to work with MFI to support the expanded delivery of the Indigenous Manufacturing Entrepreneurship and Financial Literacy programs this year.

We will launch a third year of our Careers of the Future campaign.

We will develop partnerships with organizations dedicated to supporting equity-seeking groups in advanced manufacturing technologies.

We will also explore opportunities to attract international talent into Canada’s advanced manufacturing sector.

Activities Planned for the Coming Year

NGen and MFI will continue to seek ways to connect with schools and tribal councils to expand delivery of our two courses for Indigenous students in elementary and secondary schools across northern Canada. We will also support the development of a new Manufacturing Financial Literacy course for Indigenous adult education.

NGen plans to refresh our Careers of the Future website, develop a cohort of influencers, and provide financial support for student projects in advanced manufacturing, working with partners like the Rideau Hall Foundation,

First Robotics, and Skills Canada.

We will explore partnership opportunities with organizations like Vector, Actua, and Women in AI to attract equity-seeking groups into advanced manufacturing.

We will also promote career opportunities in Canada’s advanced manufacturing sector in partnership with Global Affairs and Immigration, Refugees and Citizenship Canada as well as at international trade shows.

Targets for March 31st, 2024

- Manufacturing Entrepreneurship and Financial Literacy courses being delivered in 20 schools across Canada with 1,000 Indigenous students enrolled.
- New material developed adult Financial Literacy and Manufacturing Entrepreneurship course.
- 50,000 additional engaged site visits to CareersoftheFuture.ca.

F) METAL & ENGINEERED PLASTICS ADDITIVE MANUFACTURING INDUSTRIAL DEMONSTRATION PROGRAM

Objectives for Last Year

In 2022-2023, NGen committed to identify and engage SME manufacturers in projects to develop, test, and apply metal and engineering grade plastic additive solutions in support of NRC-IRAP’s Additive Manufacturing Industrial Demonstration Program.

Status by 2023

In 2022-2023, NGen engaged 100 companies and completed 57 projects in the Metal and Engineered Plastics Additive Manufacturing Industrial Demonstration Program. We were allocated another \$400,000 to continue our support for the program into 2023-2024.

Objectives for 2023-2024

Building on our previous achievements in this program, NGen will continue to:

- Identify and engage NRC-IRAP eligible companies through their local Industrial Technology Advisors from all regions of Canada who are interested in undertaking a feasibility study of metal or engineering grade plastic additive manufacturing for their application and R&D needs.
- Identify and engage OEMs and their suppliers in projects to help create sustainable additive manufacturing supply chains for the Canadian manufacturing sector, particularly Aerospace and Automotive.
- Select and contract suppliers to supply raw materials and perform additive manufacturing and post-processing of test coupons and/or small parts as required to support selected projects.
- If necessary, contract a service provider to perform limited testing of small parts and coupons to assess micro-structure, material, hardness and mechanical strength.
- Support the approved projects by providing feedback and coordination between companies and contracted service providers to ensure project success.
- Increase the confidence and awareness of manufacturing companies in applying metal AM and new materials for specific tooling and applications.
- Reinforce and diversify Canada’s additive manufacturing supply chain.

Targets for March 31st, 2024

- 41 companies engaged in feasibility studies.
- 11 projects with OEMs.

INTERNATIONAL STRATEGY

NGen’s international engagement objectives over the next five years are to:

1. Promote Canada as a world leader in green manufacturing and the strengths of Canada’s advanced manufacturing ecosystem globally.
2. Attract advanced manufacturing talent and investment to Canada.
3. Assist our project partners commercialize their solutions in global value chains.
4. Help our members connect with innovation partners, suppliers, and potential customers in markets at the forefront of advanced manufacturing, particularly the USA, European Union, United Kingdom, Japan, Singapore, South Korea, and Taiwan.

NGen will work to enhance Canada’s profile internationally as home to innovative advanced manufacturing solutions and green supplier of choice to the world by organizing exhibition space and leading business delegations to key international trade shows for advanced manufacturing, including Hannover Messe, the largest advanced manufacturing trade show in the world.

We will leverage our participation on the advisory board of the World Manufacturing Forum to highlight Canada’s advanced manufacturing ecosystem and the unique solutions arising from our projects to a global audience. NGen will also develop media assets and provide speakers for investment attraction events in important markets for advanced manufacturing in partnership with Global Affairs and Invest in Canada.

To attract international investment into Canada’s advanced manufacturing ecosystem and potential customers for advanced manufacturing solutions developed in Canada NGen will target and work with multinational manufacturing companies that have established investment funds and are looking to source leading-edge technologies to address innovation challenges aligned with NGen’s priority areas of focus, including the EV value chain, industrial decarbonization and circular manufacturing, biomanufacturing, advanced automation and robotics.

To help attract international talent to Canada’s advanced manufacturing ecosystem, NGen will connect our manufacturing and technology members with Canadian colleges and universities that have collaborative R&D initiatives with foreign counterparts. We will also partner with colleges, universities, and interested members to develop an international recruitment campaign to attract foreign students to advanced manufacturing programs and job opportunities in Canada.

We will also identify and qualify potential international innovation partners, investors, and commercialization opportunities for NGen members.

Objectives for Last Year

In 2022-2023, NGen undertook to increase our international engagement activities and the participation of our members and ecosystem partners in international events and networking opportunities, including participation in the World Manufacturing Forum and Hanover Messe.

Status by 2023

Last year NGen participated in 32 presentations highlighting investment opportunities in Canada’s advanced manufacturing ecosystem to international audiences. We took part in two investment roadshows organized by Global Affairs to St. Louis, New York, Boston, and Chicago. NGen was represented on the Advisory Board and Scientific Committee of the World Manufacturing Forum. And in June, we organized an exhibition space in

partnership with the Governments of Canada, Ontario, Quebec, and Alberta, and led a delegation of 12 SME manufacturers and technology companies to Hannover Messe. Our discussions with Hannover Messe organizers were instrumental in obtaining Canada’s participation as partner country at the fair in 2025.

Objectives for 2023-2024

NGen will enhance our international presence over the coming year to meet the objectives of our international strategy and build relationships that will strengthen our ability to promote the capabilities of Canada’s advanced manufacturing ecosystem, identify international partnership and business opportunities for our members, and attract talent and investment to Canada.

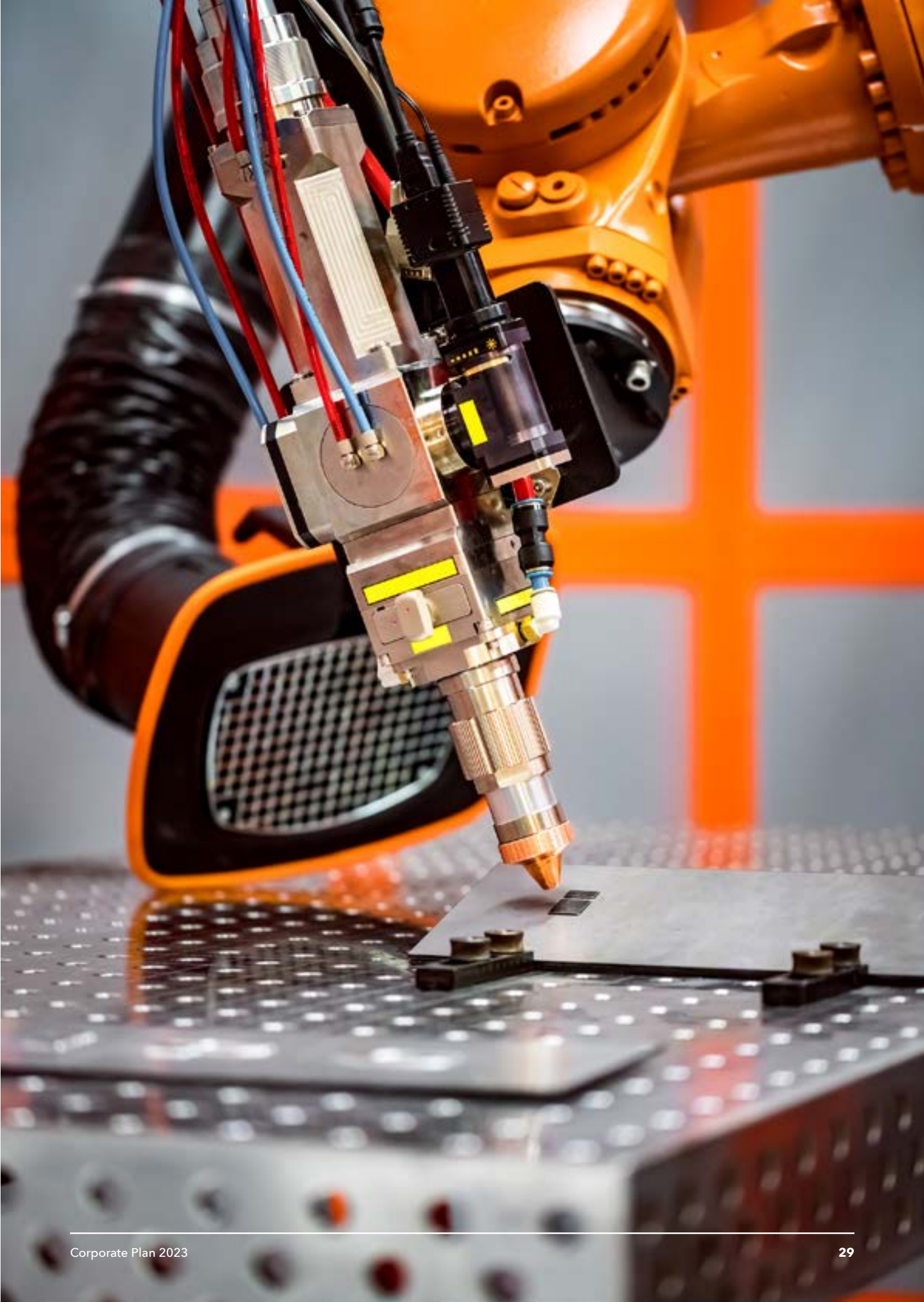
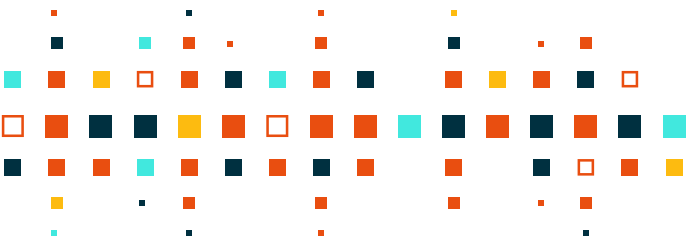
Activities Planned for the Coming Year

In 2023-2024, NGen plans to:

- Develop an international commercialization service as part of our strategic Ecosystem initiatives.
- Establish processes to prioritize, develop, and manage relationships with international advanced manufacturing clusters.
- Source funding for the participation of NGen members in international events and collaborative international partnerships.
- Identify international industry investment funds to support NGen projects and members.
- Partner with Global Affairs, Invest in Canada, Destination Canada, and NRC-IRAP to assist their efforts in promoting Canadian exports and international innovation partnership opportunities and attracting talent and investment into Canada’s advanced manufacturing sector.
- Organize an exhibition and lead a delegation to Hannover Messe.
- Work with federal and provincial colleagues and Hannover Messe organizers to expand Canada’s presence in 2024 and 2025.
- Participate with delegations of NGen members in other international trade shows, focusing on events specializing in the EV supply chain, decarbonization, and circular manufacturing, automation, and additive manufacturing.
- Continue to take an active role in the planning and organization of the World Manufacturing Forum.

Targets for March 31st, 2024

- Participation with Global Affairs in three international Science, Technology, and Innovation meetings.
- Delegation of 18 exhibitors, four government partners, and 60 companies at Hannover Messe.
- NGen participation in 12 international trade shows.
- Twenty project partners entering new international markets with NGen assistance.



INTELLECTUAL PROPERTY STRATEGY

NGen aims to maximize the commercial value, ecosystem impact, and the economic, environmental, and social benefits of intellectual property generated as a result of NGen investments, in Canada.

For the purposes of our IP strategy, intellectual property (“IP”) refers to intangible intellectual assets contributed to (“Background IP”) or arising from (“Foreground IP”) projects and ecosystem development initiatives in which NGen invests. IP thus includes, but is not limited to, patents, trademarks, copyrights, industrial designs, software, algorithms, data, machine learning models, trade secrets, confidential information, and know-how.

NGen investments are determined according to the transformative and commercial potential of the foreground IP expected to be generated by individual projects, as well as the extent to which resulting commercial, ecosystem, economic, environmental, and other social benefits are expected to accrue within Canada. The objective of NGen investment is not the creation of IP itself, but the application of that IP to create value for Canadian business and for Canadians.

NGen’s IP Strategy is posted on our website and outlines how we work to:

- Maintain clear, transparent, and predictable IP ownership policies and licensing structures for the management of background IP applied in projects, treatment of foreground IP arising from projects, and processes by which NGen members can request and negotiate licenses to use foreground IP.
- Educate project partners and NGen members about the nature and value of their IP, methods for protecting it, and strategies for commercialization.
- Strengthen IP protections for NGen project partners.
- Enhance the commercial value of Background IP contributed to projects.
- Enhance the commercial value of Foreground IP arising in projects.
- Support the commercialization and enhance ecosystem benefits of Foreground IP.
- Capture and maximize the value of IP retained and commercialized in Canada.

NGen has updated our IP Strategy to reflect the specific initiatives that we undertake in pursuit of these objectives, including provisions that would make the continuation of NGen funding contingent on the benefits of Foreground IP remaining in Canada in the case of any change in control of a project partner.

Objectives for Last Year

NGen committed to provide IP advisory support and develop IP commercialization strategies for all our project partners. Our goal last year was to provide licensable access to more than 100 IP assets on NGen’s IP Registry by the end of March 2023.

Status by 2023

By the end of March 2023, NGen recorded:

- 150 IP strategies developed for NGen-funded projects.
- 729 instances of Background IP contributed to projects.
- 507 instances where Background IP was shared with project partners.

- 726 instances of Foreground IP expected to be created by projects.
- 734 IP rights created.
- 116 IP profiles in its IP Registry available for sharing or licensing with other NGen members.
- 160 post-project licenses granted to date.

Objectives for 2023-2024

NGen will continue to work with all project partners to develop and support their IP Plans and commercialization strategies and to make Foreground IP arising from NGen-funded projects accessible to other members. We will also provide IP education, advice, and support services for SMEs in Canada’s advanced manufacturing sector.

Activities Planned for the Coming Year

In 2023-2024, NGen will help develop IP commercialization plans for all PCAIS funded projects. We will take stock of Foreground IP arising from all Phase I projects as they complete and encourage project partners to provide licensable access to that IP through our IP Registry and online Solutions Centre. We will continue to organize IP educational workshops for cluster members, working with other Global Innovation Clusters to do so. We will also explore opportunities to offer customized IP advisory and support services to SME members, including access to IP insurance.

Targets for March 31st, 2024

- 200 IP Commercialization Strategies developed.
- 800 IP rights created.
- 130 IP assets available for licensing to members on NGen’s IP Registry.

DATA STRATEGY

NGen’s Data Strategy aims to maximize the value of the data collected by NGen for the benefit of Canada’s advanced manufacturing ecosystem and to support the financial sustainability of NGen. The strategy determines how we acquire, store, govern, manage, use, and share data to accomplish our mission, achieve our strategic objectives, create value for our members and clients, carry out our operations, and ensure our long-term business success. Data privacy is a priority. NGen’s Data Strategy is posted on our website, as are our policies regarding:

- Privacy
- Data Use
- Member Data Use.

Our strategy is based on leveraging data as a strategic asset – focusing on business results, using data as a competitive advantage for NGen and its members, and supporting NGen’s strategic objectives. NGen has implemented robust operational, governance, and compliance processes to ensure data integrity, privacy, and security.

NGen’s Data, Information Technology, and Cybersecurity team is responsible for developing, implementing, and overseeing the policies and procedures related to the governance and management of data contained in and transferred into, out of, and between third party platforms and NGen’s corporate services IT stack. With respect to NGen’s internal management systems, all project application processes and NGen programs are administered online.



NGen continuously works to harden cybersecurity protection for the data we manage. We undertake regular third-party audits of our cybersecurity systems. Cybersecurity awareness training is provided to NGen staff on a bi-weekly basis. NGen also runs regular workshops for NGen members and other industry participants on cybersecurity. NGen is a member of Canada's Cybersecurity Advisory Council (CSAC) and the Cybersecurity Working Group of the Canadian Centre for Cybersecurity (CCCS).

Our data strategy has been reviewed and updated in 2023. The objectives remain the same and we will continue to pursue them over the next five years. The updates reflect changes we are making in our IT infrastructure as well as in the terms of our privacy, terms of data use, and member data use policies to add further protections and bring them in line with our amended GIC Contribution Agreement.

In 2023-2024, we intend to undertake new data initiatives including development of:

- A new online process for managing project information, including application intake, assessments, IP strategies, contracting, monitoring, and reporting that will help us consolidate data, improve project management efficiencies, and integrate project information into an enhanced CRM system.
- An online collaboration platform and solutions centre that will provide members access to a variety of NGen and partner services on a subscription basis, track traffic through the site, and direct potential business and partner leads to interested members. Privacy rights will be respected, and data protected, as per the high standards of our existing data strategy.
- Broader cybersecurity support services for Canada's advanced manufacturing sector.
- An expanded performance management and results reporting system.
- An automated due diligence process for sanctions compliance.

We will continue to upgrade our website, enhance our virtual education and training programs, and provide NGen members access to online digital tools that will enable them to improve business performance. We will also focus on leveraging the data we collect from members and website traffic to identify strategic opportunities, identify potential partnerships, assess the impacts of our projects and ecosystem initiatives, increase funding for our members, and generate additional revenue to sustain the organization beyond 2028.

FINANCIAL SUSTAINABILITY

Over the next five years, NGen aims to become a financially sustainable organization raising funds to support Technology Leadership projects, Ecosystem Development initiatives, and required Operating and Administrative Expenses from a variety of public and private sources.

Objectives for Last Year

Our goal in 2022-2023 was to raise \$250 million in additional funding to continue our operations past the original five-year timeline for Phase I GIC (Supercluster) funding.

Status by 2023

By March 2023, NGen had secured a total of \$230,947,212 in additional funding, including:

- \$177,153,038 from Phase II of the Global Innovation Clusters program.
- \$30,000,000 from the Pan Canadian AI Strategy.
- \$7,000,000 from the National Quantum Strategy.

- \$15,839,000 from Employment and Social Development Canada.
- \$400,000 from NRC-IRAP.
- \$555,174 in industry contributions for our operating expenses.

Of that amount, \$224,042,038 has been allocated to support projects, ecosystem initiatives, and operating expenses over the next five years.

Objectives for 2023-2024

NGen aims to raise at least an additional \$25 million in funding, including \$3 million for operating and administrative expenses, this year to support Technology Leadership projects and Ecosystem Development initiatives. We assume that the additional funding we raise in 2023-2024 will be disbursed in subsequent years.

Activities Planned for the Coming Year

In 2023-2024, NGen will focus primarily on raising co-investments from other federal and provincial funding agencies to support our innovation priorities in the EV supply chain, decarbonization and circular manufacturing, and the development, scale-up, adoption, and commercialization of novel advanced manufacturing solutions. We will also work to expand our Ecosystem Development activities by finding funding partners for strategic opportunity roadmaps, workshops and collaboration events, and our education and management development programs. Industry contributions will be raised from sponsorships as well as from fees levied for project administration and business services provided by NGen.

Targets for March 31st, 2024

- \$25 million in additional funding.
- \$3 million in additional funds to cover operating and administrative expenses.

GOVERNANCE

NGen is a not-for-profit corporation governed by an industry-led Board of Directors. NGen’s Board operates according to the requirements of Canada’s Not for Profit Corporations Act, the Competition Commissioner’s Guidelines for Global Innovation Clusters, the provisions of NGen’s Contribution Agreement with the Global Innovation Cluster program, and a set of Governance Policies approved by the Board itself.

NGen’s governance policies are reviewed annually by the Board. Statements of compliance are received from our CEO at each Board meeting, and by the Director General of the GIC program and NGen’s legal counsel at our spring Board meeting. These procedures will be followed in 2023-2024.

The Board is assisted by four committees which report to the Board in carrying out its governance responsibilities: (i) The Executive Committee, composed of the Board Chair as well as the Chairs of our three other Board committees, (ii) Governance and Compliance Committee, (iii) Finance and Audit Committee, and (iv) Human Resources and Nominating Committee. Their roles and responsibilities are outlined in our Five Year Strategic Plan.

Board and Committee meetings are scheduled quarterly according to a workplan approved by the Board at the beginning of each calendar year. Meeting dates for the coming year are agreed at the Board’s fall meeting. The Corporate Plan for the coming fiscal year is approved in January. NGen’s performance is reviewed in the spring. Our Annual Report, Financial Statements, and any revisions of the Corporate Plan are approved in July. The Board reviews and, if necessary, updates NGen’s Five-Year Strategy at its fall meeting. This workplan will be followed in 2023-2024.

NGen’s Board currently consists of 15 members and five observers who are representative of and experienced

in a broad range of sectors, including automotive, aerospace, IT and digital technologies, electronics, defence, automation and robotics, solar and wind energy, materials and resource processing, and health care industries. Board members are also involved and expert in building capabilities in the EV value chain, industrial decarbonization and alternative energy, advanced materials, and supply chain management.

Currently, three directors are from SMEs, four from larger companies, and three from advanced manufacturing associations. Two colleges, one university, one private investment fund, and two regional development agencies (one federal and the other provincial) are represented as Board members and observers. Eight out of 15 Board members are female, including our Chair. Seven are independent directors. Two of the four members of NGen’s Executive Committee are female.

Succession planning for NGen’s Board takes industry, academic, and regional representation into account, as well as requirements to maintain at least 50% female Board and Executive Committee membership and at least one-third independent directors. Board members may hold appointments for two consecutive three-year terms. Recommendations for Board Chair, Committee Chair, and director and observer succession are made by the Human Resources and Nominating Committee of NGen’s Board. Board members and observers are elected during NGen’s annual Members’ meeting which is held in the fall of the year. No changes in Board composition are anticipated in 2023-2024.

OPERATIONS

Beginning in 2023-2024, NGen will make a number of important changes in the way we operate:

1. We will strengthen our leadership role in identifying strategic opportunities for advanced manufacturing and industry transformation in Canada, engaging industry and ecosystem leaders in regular meetings and structured consultations.
2. We will focus more selectively on Technology Leadership projects and Ecosystem Development initiatives that align with our investment priorities, create a strategic advantage for Canada, leverage further co-investment by industry and other federal and provincial funding programs, and have high commercialization potential.
3. We will assign responsibilities for our Ecosystem Development initiatives to teams from across the organization to ensure we focus on strategic outcomes, provide support for project commercialization, and coordinate activities effectively.
4. We will create a business development role to diversify NGen’s sources of funding and support the commercialization of solutions developed by NGen, our members, and ecosystem partners.
5. We will also create a coordinating role for our international business development activities to help us pursue international investment and talent attraction opportunities, strengthen our international promotion and collaboration activities, and undertake work with Trade Commissioners, EDC, Invest in Canada, and other partners within Canada and internationally.
6. We will expand our operational presence in Quebec.
7. We will improve our IT infrastructure to automate project application and data reporting processes and provide online tools and services for collaboration, showcasing technology use cases, managing IP, and improving workforce and management capabilities.
8. We will develop new guidelines for funding Ecosystem Development initiatives that will allow NGen to take the initiative in their design and execution.



Our Financial Management Framework has been updated to reflect the requirements of our amended Global Innovation Clusters Contribution Agreement as well as the need for segregated account management for multiple funding streams.

NGen will, however, maintain our processes for developing, assessing, contracting, and monitoring our GIC Technology Leadership projects which have served us well to date. We will continue to manage project intake through widely communicated calls for proposals. Guidance will be provided to applicants for each of these calls outlining their objectives, eligibility criteria, and the steps that will be followed in NGen’s project development, assessment, and approval process. NGen will organize briefing sessions for applicants, as well as collaboration events for them to pitch their projects and identify potential partners and other funding or investment opportunities. NGen’s project team will also advise applicants with respect to project development, potential partners, IP strategies, and eligible costs.

Strategic eligibility criteria will remain the same as in Phase I of the GIC program – projects must be industry-led, transformative, collaborative, contribute to ecosystem development, and have high commercialization potential. In Phase II, projects will also be assessed on the basis of their contributions to environmental sustainability, supply chain resilience, and building a more equitable, diverse, and inclusive workforce.

As in Phase I, project proposals will be evaluated by panels of independent industry experts. Government observers will also be invited to participate in panel assessments. Prior to contracting, partners in approved projects will be required to undertake a collaboration agreement stipulating how projects will be managed, IP shared, and costs and responsibilities allocated during their project. Project partners will need to have IP strategies developed or in place and approved by NGen as a condition of funding. A Master Project Agreement concludes the contracting process reflecting the terms and conditions for GIC funding in NGen’s Contribution Agreement.



CASH FLOW FINANCIAL STATEMENTS

A) PLANNED EXPENDITURES

2023-2024				2023-2028		
Program Stream	Direct Funding	Projected Industry Contributions	Projected Total Investment	Direct Funding	Projected Industry Contributions	Projected Total Investment
Technology Leadership Projects & Ecosystem Initiatives						
GIC Phase I	\$20,000,000	\$30,000,000	\$50,000,000	\$20,000,000	\$30,000,000	\$50,000,000
GIC Phase II	12,126,851	18,110,836	30,237,687	157,223,320	259,334,305	416,557,625
– EV projects	2,450,000	4,171,630	6,621,630	45,074,440	76,748,519	121,822,959
– Decarbonization and Circular Manufacturing	0	0	0	45,074,440	76,748,519	121,822,959
– Other Advanced Manufacturing	5,250,000	8,939,207	14,189,207	45,074,440	76,748,519	121,822,959
– Ecosystem Initiatives	4,426,851	5,000,000	9,426,851	22,000,000	29,088,747	51,088,747
PCAIS	6,050,000	11,251,190	17,301,190	27,775,000	52,230,791	80,005,791
– Projects	4,800,000	8,914,286	13,714,286	24,025,000	45,220,077	69,245,077
– Ecosystem Initiatives	1,250,000	2,336,905	3,586,905	3,750,000	7,010,714	10,760,714
NQS Projects	0	0	0	6,212,500	9,803,030	16,015,530
Future Ready (ESDC) Initiatives	6,304,624		6,304,624	6,304,624		6,304,624
NRC-IRAP Projects	320,000		320,000	320,000		320,000
Expenditures from Approved Funding	44,801,475	59,362,027	104,163,502	217,835,444	351,368,126	569,203,570
Additional Projects and Initiatives	0	0	0	62,125,000	105,000,000	167,125,000
Total Projects & Initiatives	44,801,475	59,362,027	104,163,502	279,960,444	456,368,126	736,328,570
Operating & Administrative Expenditures						
GIC Phase II	3,985,943	4,529,045	8,514,988	19,929,717	15,418,383	35,348,100
PCAIS	563,000	411,429	974,429	1,800,000	2,057,143	3,857,143
NQS	157,500	0	157,500	787,500	465,938	1,253,438
ESDC	3,634,376	1,950,000	5,584,376	3,634,376	1,950,000	5,584,376
NRC-IRAP	80,000		80,000	80,000		80,000
OPEX from Approved Funding	8,420,819	6,890,474	15,311,293	26,231,593	19,891,464	46,123,056
Additional Operating Requirement	0	0	0	7,875,000	5,250,000	13,125,000
Total Operating Requirement	8,420,819	6,890,474	15,311,293	34,106,593	25,141,464	59,248,056
Total Expenditures	53,222,294	66,252,500	119,474,795	314,067,037	481,509,590	795,576,627

B) ANTICIPATED REVENUES FOR 2023-2024 (BASED ON FUNDING SECURED TO DATE)

Revenue Source:	GIC Phase I	GIC Phase II	PCAIS	NQS	ESDC	NRC-IRAP	Total
Direct Funding	\$20,000,000	\$16,112,794	\$6,613,000	\$157,500	\$10,019,000	\$320,000	\$53,222,294
Industry Contribution toward Eligible Costs	30,000,000	18,110,836	11,251,190	0	1,950,000	0	61,312,027
Project Management Fees	0	4,529,045	411,429	0	0	0	4,940,474
Conference & Sponsorships	0	75,000	0	0	0	0	75,000
Membership & Registration Fees	0	0	0	0	0		0
Other Government Contributions	0	0	0	0	0	0	0
Interest Income	10,000	55,000	5,000	1,000	29,000	0	100,000
Total	50,010,000	38,882,676	18,280,619	158,500	11,998,000	320,000	119,649,795

C) ANTICIPATED INDUSTRY MATCHING FUNDS

Revenue Source:	GIC Phase I	GIC Phase II	PCAIS	NQS	ESDC	NRC-IRAP	Total
Industry Contribution toward Eligible Costs	\$30,000,000	\$18,110,836	\$11,251,190	0	\$1,950,000	0	\$61,312,027
Project Management Fees	0	4,529,045	411,429	0	0	0	4,940,474
Membership Fees	0	0	0	0	0	0	0
Other Amounts & Fees - in kind	0	100,000	0	0	0	0	100,000
Total	30,000,000	22,739,881	11,662,619	0	1,950,000	0	66,352,500

D) CASH FLOW REQUIREMENTS (ISED PROGRAMS ONLY)

Incoming Cash	
GIC Phase I Contribution	\$20,000,000
GIC Phase II Contribution	16,112,794
PCAIS Contribution	6,613,000
NQS Contribution	157,500
Membership & Registration Fees	0
Industry In-Kind Contributions	0
Sponsorships	0
Other Revenue	0
Total Items involving Cash	42,883,294
Items not involving Cash	
Amortization of Property, Plant, Equipment	20,000
Amortization of Intangibles	40,000
Accrued Interest	
Total Items not involving Cash	60,000
Total Annual Cashflow	42,883,294

E) AMOUNT OWING TO THE CROWN

NGen does not owe any amounts to the Crown pursuant to any legislation or agreement.

RISK ASSESSMENT & MITIGATION STRATEGIES

Current and potential organizational and operational risks are identified and reviewed quarterly by NGen’s senior management team and Board of Directors. Mitigating actions are undertaken by management to reduce or eliminate risks, and their implementation is likewise reported to and monitored by the Board.

The risks facing NGen over the year ahead and the mitigating actions we are taking relate to:

- Over-subscription. Industry’s funding ask is usually much higher than the amount of money we have available and allocated to funding streams. High industry demand for funding will allow NGen to be more selective in project selection. Project selection will be based on the quality of applications (not just demand for funding). If there are more high-quality projects in one funding stream than others, NGen retains the option to reprofile our funding, reducing allocations to other streams to support those projects. We will work with other public and private sector funders to support high-quality projects.
- NGen’s ability to resource our ambitious plans for 2023-2024 and the initiatives we want to undertake over the next five years. NGen undertakes annual talent reviews to ensure staff are placed in most productive positions. NGen will pursue other funding opportunities and business services revenues to improve financial sustainability. A business development role will be created to focus on revenue generation.
- Economic, labour market, and supply chain challenges that may slow down project applications and delay project progress and spending. NGen may provide cash advances to project teams in order to encourage progress. We monitor project performance and cash requirements on a regular basis.
- Project underspending which might leave some NGen funding unspent at the end of funding programs. We closely monitor project spending throughout their duration. The extension of Phase I project funding into 2023-2024 mitigates much of this risk. If an underspend does occur at the end of Phase I projects, we will seek to reprofile the remaining funding to support Phase II project activity.
- Cybersecurity threats to NGen and project partners. NGen undertakes regular cybersecurity audits and is continually upgrading cybersecurity protections and staff training. We are leading cybersecurity workshops for members and partnering with other organizations to provide education and tools that will help our members assess and address cybersecurity threats.
- Compliance with Canadian sanctions provisions. NGen will ask prospective project partners to sign attestations at initial screening and subsequent assessment stages of project selection. NGen will conduct an online check of project partners before contracting. Compliance requirements will be written into MPAs as legally binding contract terms. In cases of uncertainty, NGen will ask ISED for any risks identified by the Government. Processes will be fully documented.

PERFORMANCE MEASUREMENT & TARGETS

NGen measures success based on the value that our Technology Leadership projects and Ecosystem Development initiatives create by developing and commercializing unique advanced manufacturing solutions and supporting their adoption by Canadian industry.

Our targets and performance metrics build on progress achieved to date. They include core performance indicators that reflect short-, medium-, and long-term objectives of the GIC program, as well as impact measures for tracking success towards achieving NGen’s strategic objectives, including metrics for organizational effectiveness and continuous improvement of governance and operating processes. Metrics that are not reported for 2023 are newly added performance indicators.



A) CORE PERFORMANCE INDICATORS

Short-Term Indicators Timeframe by 2023	Status 2023	2023-2024 Target	Cumulative 2028 Target
Programmatic			
Average number of collaborating partner organizations per project	3.8		
Ratio of program funding to total funding commitments leveraged from all other sources	1:1.9	1:1.7	1:1.7
Percentage of projects with an agreed plan for IP Commercialization	100%	100%	100%
Number of IP assets anticipated	734		
NGen Specific			
Number of projects funded	165		
Project funding commitment and average per project	\$218 million (Ave=\$1.32 million)		
Total and average number of industry partners per project	372 (Ave=2.3)		
Total and average number of SMEs per project	328 (Ave=2.0)		
Total and average number of research partners per project	252 (Ave=1.5)		
Ratio of NGen funding to industry contribution commitments	1:1.6	1:1.5	1:1.5
Funding for Ecosystem Development Initiatives		\$12.3 million	\$32.4 million

Medium-Term Indicators Timeframe by 2025-2028	Status 2023	2023-2024 Target	Cumulative 2028 Target
Programmatic			
Average number of IP assets generated per project	4.5		
Progress towards products, processes or services developed, improved and/or commercialized by participants			
Percentage of funded project partners that are owned/led by equity seeking groups (women, visible minorities, Indigenous peoples, persons with disabilities)			
Percentage of funded projects that support organizations or enterprises employing equity seeking groups			
Percentage of Cluster entities with Gender Parity on board			

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NGen Specific			
Number and percent of projects completed	130 79%		
Funding disbursed by program and funding stream	\$198 million (GIC Phase I)	+ \$44.8 million	\$512 million
Total and average number of IP assets available for licensing per project	116 (Ave=0.7)	130	
Total number of use cases showcased on NGen Solution Centre		100	

Long-Term Indicators Timeframe 2028 and beyond	Status 2023	2023-2024 Target	Cumulative 2028 Target
Programmatic			
Number of SMEs that achieve high revenue growth			
Percent growth in SME project partner revenue			
Percent increase in SME project partners exporting goods and services			
GDP Impact	\$2.6 billion new sales & IP licensing revenue (Jan 2023)		\$15 billion new sales & IP licensing revenue
Direct & indirect jobs created or sustained	5,668 new jobs (Jan 2023)		15,000 new jobs
NGen Specific			
Total actual leveraged and follow-on investment from all sources			
Actual leveraged and follow-on industry Investment			
Revenue earned from sales of products and services			
Revenue earned from licensing IP assets			

B) IMPACT MEASURES FOR TRACKING SUCCESS

NGen also tracks progress against our strategic objectives to act as a national force, a driver of growth, a creator of networks, a catalyst for skills development, and an organization aiming to continuously improve our governance, operating processes, and service delivery, and achieve financial sustainability.



A National Force Developing ecosystems that create a global advantage for Canada by leveraging and attracting industry investment, developing a global profile, and collaborating on projects at a national scale.	Status 2023	2023-2024 Target	Cumulative 2028 Target
Amount of industry investment in projects and ecosystem initiatives	\$210.2 million (Feb 2023)	+ \$59.4 million	\$848 million
Amount of project and ecosystem co-investment – other sources	\$17.4 million	\$25 million	\$70 million
Total innovation investment in projects	\$405.7 million	+ \$104.2 million	\$1.3 billion
Percentage of projects and ecosystem initiatives that aim to deliver environmental, supply chain resilience, health and safety, productivity improvement, workforce training, EDI, and/or international business development benefits	69% Environment 46% Supply Chain 28% Health 55% Productivity		
Expected GHG emission reductions			
Number of members and project partners by province	5,393 members	7,000	10,000
Number of multi-provincial projects	55		
International investment into Canada supported by NGen			
Number of presentations to international audiences	32		
Number of international events with NGen presence			
Number of NGen members participating in international events			
Documented international recognition	World Manufacturing Forum		

A Driver of Growth Accelerating the scale-up of SMEs by fostering collaboration and integration into emerging value chains, to drive international opportunities, expand market share, and grow revenues.	Status 2023	2023-2024 Target	Cumulative 2028 Target
Revenue generated per dollar of NGen investment	30X (Jan 2023)		35X
Federal taxes generated per dollar of NGen investment	4X (Jan 2023)		5X
Revenue earned by SMEs project partners (total, international)			
New companies/joint ventures created	26		
Number and value of IP licenses granted	160		
Number and value of IP licenses granted to international companies			
Number of SMEs participating directly in international commercialization/supply chains			

A Creator of Networks Strengthening connections and collaborations among private, public, and academic organizations to drive impactful commercialization outcomes and develop domestic capacity.	Status 2023	2023-2024 Target	Cumulative 2028 Target
Number of academic and research organizations partnering in projects and ecosystem initiatives			
Number and geographic scope of advanced manufacturing clusters supported by NGen	17 Clusters with 1,190 members 5 Tech Groups with 150 members	24 Clusters 6 Tech Groups	45 Clusters
Number of inter-cluster partnerships	6 15 clusters		
Number of connections made in NGen collaboration events and activities	489		
Number and location of sources of co-investment and follow-on funding	12		
Number of NGen's ecosystem partnerships (backed by formal agreements)	11	20	50
Number and location of international cluster partnerships	3 (Germany, USA, S. Korea)		
Number of international organizations partnering in projects and ecosystem initiatives			

A Catalyst for Skills Development Addressing skills gaps, acting as a magnet for global talent, collaboration, and skills and talent development, and fostering opportunities for equity-seeking groups to benefit from connections, to drive innovation and contribute to inclusive economic growth.	Status 2023	2023-2024 Target	Cumulative 2028 Target
Number of individuals receiving skills training			3,000
Number and percent of individuals from equity seeking groups engaged in training programs, projects, job placements		700	2,000
Number of students from equity seeking groups enrolled in NGen supported programs	567	1,000	8,000
Number of participants in NGen's Transformation Leadership Program	133	+ 1,000	2,000
Participation of equity-seeking groups in NGen and in all NGen projects and ecosystem initiatives			
Number of participants in NGen IP & cybersecurity educational workshops	321		
Number of participants in strategic education workshops	690		
Number of participants in NGen Careers of the Future, talent attraction, or placement activities	67,394	50,000	



A Sustainable & Best Practices Organization Making continuous improvements to our governance, operating processes, and service delivery, and achieving financial sustainability	Status 2023	2023-2024 Target	Cumulative 2028 Target
Net promoter score for projects	76	75	
Net promoter score for ecosystem initiatives	68	50	
Amount of additional funding raised to support projects, ecosystem initiatives, and operating expenses	\$231 million (\$250 million target)	\$25 million	\$70 million
Net promoter score for employees	53	65	90
Female representation in NGen	53% Board 50% Exec Committee 55% NGen	56% 50% >50%	50%
Representation of Visible Minorities in NGen	28% NGen	28%	30%
Independent Board members	44%	44%	> 33%
Compliance with legal and contractual obligations	100%	100%	100%

