

Project Application Guide

The Path to Supercluster Funding

BUILDING WORLD-LEADING ADVANCED MANUFACTURING CAPABILITIES IN CANADA



OVERVIEW

Canada's Advanced Manufacturing Supercluster is led by Next Generation Manufacturing Canada (NGen), an industry-focused, not-for-profit corporation dedicated to positioning Canada as a world leader in advanced manufacturing capabilities.

The Supercluster will connect manufacturers and technology companies to accelerate the development, adoption, and scale-up of transformative capabilities in Canadian manufacturing.

The Supercluster aims to strengthen the competitiveness of Canada's manufacturing sector, drive more innovation and investment in advanced manufacturing technologies in Canada, generate new commercial opportunities for Canadian companies in global markets, grow more large-scale world-leading Canadian enterprises, and develop a modern and inclusive workforce with the skills to excel in advanced manufacturing.



NGen will invest \$192 million of Supercluster funding in collaborative industry-led projects before the end of March 2023.

Overview

What does the supercluster fund?

Who is

eligible

to apply?

Basic project

requirements

Applying for project

funding

The process

Projects

under

Supercluster projects must be:

Transformative, involving the development of technological capabilities with the potential to confer a significant global competitive advantage to Canadian industry;

Applied, supporting later stage technology and manufacturing readiness with potential to generate significant long-term commercial and economic benefits, including jobs maintained and created;

Collaborative, attracting the participation of industry partners, especially small and medium-sized enterprises (SMEs); and,

Enduring, leaving a legacy in skills development, tools, testbeds, intellectual property, business knowledge for Canada's advanced manufacturing ecosystem.





- Any member of the Advanced Manufacturing Supercluster may submit an application for project funding or apply to be considered as a partner or co-investor in Supercluster projects.
- Recipients of Supercluster funding must be incorporated in Canada.
- They must be either for-profit organizations, or not-for-profit organizations that facilitate and fund research and development and whose funding is received primarily from private-sector organizations.
- Other publicly funded not-for-profit organizations, post-secondary institutions, federal Crown corporations, and government departments or agencies are not eligible to receive Supercluster funding directly, although they may bring their own contributions to projects or be sub-contracted by funded recipients to carry out project activities.
- International organizations (offshore companies and research organizations without an incorporated presence in Canada) may also participate in Supercluster projects, but any project activity undertaken by these organizations will not be eligible for Supercluster funding.



Basic Project Requirements

- Projects require a minimum of three partners, though NGen will consider projects with just two partners on an exceptional basis if total costs are under \$5 million.
- Projects need to include manufacturing and technology expertise
- At least one SME partner needs to be involved (applicants are strongly encouraged to include more SME partners and academic and research partners.)
- Projects must deliver significant commercial benefits and jobs within the consortium and beyond
- The total estimated cost of projects should be between \$1 million and \$20 million, although projects above and below that range will be considered if they demonstrate transformative potential or benefits to Canada's advanced manufacturing ecosystem
- Project participants must have robust project management processes in place. Project work packages, milestones, timelines, and estimated costs should be well-defined
- Capital expenditures over more than \$1 million must be pre-approved by the Government of Canada
- Independent experts will evaluate and recommend which projects NGen will fund
- NGen will reimburse up to 44.4% of total eligible project expenses incurred by industry partners.
- No single partner may receive more than 70 percent of reimbursed funding
- Projects will be required to pay a one-time, non-refundable project administration fee to NGen equal to 1% of the total cost of the project at the time of contracting
- NGen staff will work with funding recipients to monitor and report on the progress of projects



PROJECT ACTIVITIES THAT ARE OUT OF SCOPE AND WILL NOT BE FUNDED

- Those related to experimental or theoretical work without any direct commercial application or use
- Projects that develop products that are not used for Advanced Manufacturing
- Production activities themselves or activities that subsidize full scale production
- Capital investment for production or for purposes not related to the research being conducted
- Activities that could be viewed as anti-competitive
- Activities where benefits accrue to a single firm or organization
- Projects that would be undertaken at the same scale or scope and within the same timeframe without Supercluster funding
- Any routine or periodic changes made to existing products, production lines, manufacturing processes, services and other operations in progress, even if those changes may represent improvements





APPLYING FOR PROJECT FUNDING

The Process



NGEN SUPPORT FOR PROJECT APPLICATIONS

NGen's project team may assist in the development of Supercluster project applications prior to their assessment. Upon request, NGen staff may:

- Provide advice and guidance with respect to funding rules, eligible activities, and project requirements
- Make suggestions that might augment project plans
- Identify potential project partners
- Identify other sources of funding for project activities



INDEPENDENT EXPERT ASSESSMENT PANELS

All project proposals will be subject to an independent assessment process undertaken by up to five external experts chosen by NGen to ensure projects are of high quality, meet NGen's strategic objectives, and are selected fairly.

NGen's external experts includes former CEOs of manufacturing and technology companies, former senior manufacturing, engineering, and technology executives, senior personnel at universities and colleges, and executives from business consulting organizations. The assessors have a variety of sector specific manufacturing and technology backgrounds and technical and strategic expertise.

The identity of experts participating in individual project assessments will be kept confidential. Assessors will sign non-disclosure agreements as well as conflict of interest disclosures to ensure independence.

PROJECT SCREENING

NGen will screen all proposals to ensure they meet basic eligibility requirements for Supercluster projects. Applicants will be asked to:

- Certify that they have read, understand, and are willing to comply with NGen's project requirements
- Describe the purpose of their project
- Indicate that their project is collaborative and identify lead private sector partners
- Certify that private sector partners looking for funding are incorporated in Canada and that the project will be carried out in Canada
- Certify that their project would not be undertaken in the same form without Supercluster funding
- Provide an estimate of project costs and indicate that they are willing to invest in the project within the timelines of NGen's Supercluster funding horizon
- Certify that they have adequate financial means and project management capabilities to carry out the project
- Agree to providing information necessary for NGen to conduct due diligence



[The Process]

WHICH APPLICATION PROCESS?

- The total estimated cost of the project determines the sequence of the selection process
- The project's estimated cost is the total of NGen, industry, and other eligible government funding
- Each project application will be assessed on the basis of 10 questions
- Responses are equally weighted in assessments
- Applications will be scored out of 100 marks (10 marks per question) by independent experts

ACCEPTANCE OR REJECTION

NGen staff will advise all applicants directly if their project has been accepted or rejected.

FEEDBACK

Applicants whose projects are not recommended for approval at the initial proposal or full application stage will be given a summary of how their project was evaluated, outlining the reasons why they were not approved and given recommendations to strengthen their applications. These applicants may re-apply.





Projects Under \$5 Million

SINGLE ASSESSMENT

Applicants who meet eligibility requirements will be invited to submit a Single Application to provide:

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Projects under

\$5 million

Projects

between \$5 million &

Projects over \$10 million

Ten

assessment questions – quidance

Collaboration

among

\$10 million

- Names and contact information for each partner in the project
- The name of the leading project partner (this information may be disclosed publicly)
- A short title and description of the project to a maximium of 300 words (this information may be disclosed publicly)

ANSWER TEN QUESTIONS

- Guidance available here.
- Maximum 900-word answers for each question. No external links or tables allowed
- Six (6) appendices (no word limits)
 - 1. Project Plan (DOC or XLS or MPP)
 - 2. Risk Register (DOC or XLS)
 - 3. Question Appendix (DOC or PDF)
 - 4. IP Strategy Summary (DOC or PDF)
 - 5. Financial Workbook
 - 6. Application Agreement

Templates for the Financial Workbook and Application Agreement are available here.

There are no templates for the IP Strategy Summary, Project Plan, Risk Register or Question Appendix.

• Graphs, charts and images can accompany the application. They should be uploaded in the Question Appendix and appropriately labeled (for e.g. Fig 1, Graph 1, Image 1 etc...).

Single Applications will be assessed and scored by external independent experts.



TWO-STAGE ASSESSMENT

INITIAL APPLICATION

Applicants who meet eligibility requirements will be invited to submit an Initial Application to provide:

- Names and contact information for each partner in the project
- The name of the leading project partner (this information may be disclosed publicly)
- A short title and description of the project to a maximium of 300 words (this information may be disclosed publicly)

ANSWER TEN QUESTIONS

- Guidance available here.
- Maximum 900-word answers for each question. No external links or tables allowed.
- Five (5) appendices required:
 - 1. Project Plan (DOC or XLS or MPP)
 - 2. Risk Register (DOC or XLS)
 - 3. Financial Summary Table
 - 4. Question Appendix (DOC or PDF)
 - 5. Application Agreement
- Graphs, charts and images can accompany the application. They should be uploaded in the Question Appendix and appropriately labeled (for e.g. Fig 1, Graph 1, Image 1, etc...).

Initial Applications will be assessed and scored by external independent experts.

Sucessful projects will be invited to submit a Full Application.





FULL APPLICATION - SAME TEN QUESTIONS, MORE DETAIL

- Expanded guidance will be provided separately
- 2,000-word limit to answers for each question. No external links or tables allowed
- Two (2) additional appendices required:
 - 1. IP Strategy Summary (DOC or PDF)
 - 2. Financial Workbook

FULL

APPLICATION

FULL

ASSESSMENT (F-TAP)

Templates for the Financial Summary, Financial Workbook and Application Agreement are available here.

There are no templates for the IP Strategy Summary, Project Plan, Risk Register or Question Appendix.

Full Applications will be assessed and scored by external independent experts.



Projects Over \$10 Million

TWO ASSESSMENT STAGES AND INTERVIEW

INITIAL APPLICATION

Applicants who meet eligibility requirements will be invited to submit an Initial Application to provide:

- Names and contact information for each partner in the project
- The name of the leading project partner (this information may be disclosed publicly)
- A short title and description of the project to a maximum of 300 words (this information may be disclosed publicly)

ANSWER TEN QUESTIONS

- Guidance available here.
- Maximum 900-word answers for each question. No external links or tables allowed.
- Five (5) appendices required:
 - 1. Project Plan (DOC or XLS or MPP)
 - 2. Risk Register (DOC or XLS)
 - 3. Financial Summary Table
 - 4. Question Appendix (DOC or PDF)
 - 5. Application Agreement
- Graphs, charts and images can accompany the application. They should be uploaded in the Question Appendix and appropriately labeled (for e.g. Fig 1, Graph 1, Image 1,etc...).

Initial Applications will be assessed and scored by external independent experts.

Successful projects will be invited to submit a Full Application.





[Projects Over \$10 Million]

FULL APPLICATION - SAME TEN QUESTIONS, MORE DETAIL

- Expanded guidance will be provided separately. •
- 2,000-word limit to answers for each question
- Two (2) additional appendices: •
 - 1. IP Strategy Summary (DOC or PDF)
 - 2. Financial Workbook

Templates for the Financial Summary, Financial Workbook and Application Agreement, are available here.

INTERVIEW WITH PROJECT PARTNERS

All project partners for projects with total costs estimated above \$10 million will be invited to an interview with an assessment panel to review their Full Application before a final recommendation is made.



Overview

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Applying for project funding

Based on 1-10 point score

1. What is the opportunity the project addresses?

- Outline the big-picture motivation and overall objectives the project is trying to achieve.
- Outline the current state of the art including (where possible) those near to market/ in development and any limitations thereto.
- Clearly define the business and/or technology opportunity.
- List the project partners and their overall opportunity and role within the project.
- Outline what the project team needs to do to successfully address the project within the desired timeframe and budget. What are the specific challenges, research questions, and/or technical complexities that will be addressed?
- Describe the nature of the challenges facing you and/or your potential customers, along with the potential market challenges or barriers to entry.
- How will the outcomes of the project overcome these challenges?



2. What is the overall project and risk management plan?

• Provide your overall project plan, including work-package descriptions and identify the key milestones and deliverables that show how the overall project will be achieved.

Based on 1-10 point score

- Describe the resource and management requirements for successful project completion, including how work will be shared among project participants and partners. This should include work package descriptions, a milestone and deliverables register, and a project plan which includes timelines.
- When describing the technical approach, explain how and why the approach is appropriate, how the innovative steps in the project are achievable and how you will measure success.
- Identify key project management tools and mechanisms that will be implemented to provide confidence that sufficient control will be in place to minimize operational risk. This should include the arrangements for managing the project team and its partners.
- Provide a risk analysis and overview of the overall risk management framework. Identify the key risks within the project. Consider at least the technical, commercial, intellectual property, managerial, financial and environmental risks that could occur in the course of the project and provide appropriate analyses of the likelihood and impact of each of the risks along with appropriate risk management strategies.
- The assessors will be looking to see that all the main risks are identified, that there are sufficient risks within the project to warrant NGen funding and that these risks are appropriately controlled.



Based on 1-10 point score

3. What is transformative about the project?

- Identify the extent to which the project is transformative and innovative both commercially and technically. What new knowledge pertaining to advanced manufacturing is being created by each partner organization?
- Each project must involve or support the development or application of technological capabilities with the potential to confer a significant global competitive advantage to Canadian industry.
- The transformative impact of each project will be assessed on the following considerations:
 - » Will the project lead to technological and business advantages that will allow Canadian companies to leapfrog global competitors and become world leaders in the application and/or production of advanced manufacturing technologies?
 - » Will the project provide an enabling platform for further technology development, application, and scale-up in Canadian manufacturing?
 - » Will the project be recognized globally as conferring or strengthening Canadian leadership in advanced manufacturing?
- Outline evidence that the intended work is both transformative and innovative. This could include the results of patent searches, competitor analyses, literature surveys etc. If applicable, you should also outline your own background intellectual property rights, as related to the project.
- Describe any novel research that will be undertaken as part of the project. Highlight and explain the timeliness and novelty of these research aspects of the project in an industrial and/or academic context.
- Explain how the project pushes the boundaries over and beyond current leadingedge technology or business practices.
- Are the technologies new or are you looking to apply existing technologies to new areas?
- What is the plan and rationale for the protection and or sharing of IP among your consortium partners and, beyond this, with other NGen members?





Based on 1-10 point score

4. What is the nature and size of the potential market the project will address?

- Describe the market opportunity that this project will create, including details of:
 - » the target market, including the size, margins, market leaders, key competitors, price competition, barriers to entry
 - » dynamics of the market quantifying its current size, including historical and projected growth rates
 - » the specific target product, platform and service applications underpinning the market
 - » the expected share of market to be captured as a result of this project
 - » the growth opportunity your project will create, including the projected market share it will make possible
 - » the opportunity timeline and when you expect benefits to be realized
 - » the impact of the project on existing or future customer relationships
- Provide evidence for your statements about the addressable market your project opens-up and outline your strategy for developing market share.





Templates & References

Overview

Based on 1-10 point score

6. What are the broader ecosystem, social, and environmental benefits of the project. Including the extent of collaboration with SMEs, academic, and other research organizations?

- Projects must have a significant and lasting impact on the development and capacity of Canada's advanced manufacturing ecosystem.
- Describe how the project will create widespread positive impact and leave a legacy for advanced manufacturing in Canada.
- What are the benefits this project will bring to the broader advanced manufacturing ecosystem?
- Describe the opportunity for new skills and training for existing staff. Outline opportunities for training and developing a highly skilled talent pool. Describe interaction with colleges, universities and/or research institutes.
- How will the project affect the environment or improve environmental impacts of company activities?
- Describe any expected social impacts, for example:
 - » gender and diversity including activities that will be undertaken to ensure that women and underrepresented groups are meaningfully represented in, and benefit from, the project
 - » quality of life
 - » social inclusion/exclusion
 - » public empowerment
 - » health and safety
 - » regulation



Based on 1-10 point score

6. What are the broader ecosystem, social, and environmental benefits of the project. Including the extent of collaboration with SMEs, academic, and other research organizations?

- Describe how the project will build greater capacity in the ecosystem with respect to training, tools and testbeds, collaborative networks, and/or SME opportunities and capabilities. The capacity building potential of each project will be assessed on the basis of the legacy the project will leave in terms of:
 - » gender and diversity including activities that will be undertaken to ensure that women and underrepresented groups are meaningfully represented in, and benefit from, the project
 - » Workforce Development Will the project contribute to the development of a skilled talent pool as well as the engagement of women and under-represented groups in the workforce?
 - » Industry knowledge Will the project serve as a model or learning platform for others or generate intellectual property that can be used by others to accelerate technology applications or scale-up of manufacturing in Canada?
 - » Infrastructure support Will the project help to develop or support the use of tools, testbeds, or data platforms that will foster future technology development, adoption, scale-up, and commercialization activity in Canadian manufacturing?
 - » Collaborative Networks Will the project further enhance the ability of industry, education, research, and other private and public organizations to work together to strengthen advanced manufacturing in Canada?



Based on 1-10 point score

7. How will the results of the project be exploited?

- Describe the activities that will be undertaken to ensure the sustainability and continued growth of the project outcomes beyond the project end.
- Outline an exploitation plan that establishes the basis for the project intellectual property management strategy and allows for broad impact from the project outcomes for each project partner, including:
 - » expected project outputs, including products, services, processes, capabilities, and manufacturing technologies. This may include expected Technology and Manufacturing Readiness Levels
 - the route to market, all aspects of intellectual property protection including patent filing strategy including domestic and foreign jurisdictions, changes to business models or processes, research and development (R&D), manufacturing services
 - » outline measures for protection, exploitation and dissemination of the project outcomes
 - » types of exploitation, such as licence to manufacture, licensing of IP, manufacturing or direct sales
 - » the potential impact of the exploitation on the project partners
 - » details of planned follow-on spending to further develop the technologies to commercialization
- Outline the commercial spillovers or dissemination plan, demonstrating how your activities will contribute to the wider industry and other sectors
- The exploitation plan should reflect the transformational nature and the high level of innovation outlined in the project and focus on the business opportunity and concept for commercialization with market entry at a globally competitive price level.



Based on 1-10 point score

8. Does the project team have adequate skills and experience, resources, and access to facilities to deliver the identified benefits?

- Describe the track record of the project team members in undertaking and exploiting the results of research and development projects, to show your capability to develop and exploit the technology.
- Consider whether:
 - » the project team has the right available mix of skills and experience to deliver the project successfully
 - » the project team's formation objectives are clear and if it would have been formed without NGen investment
 - » appropriate governance structures are in place to manage and deliver the project
 - » there are extra benefits demonstrated from the collaboration, for example, increased knowledge transfer
 - » the consortium is greater than the sum of its parts
 - » how the organizations working together will achieve more than if they were working individually
 - » the make-up of the consortium, along with their knowledge and experience will help improve the capabilities of the Canadian supply chain during the project and beyond



9. How does NGen add value to your project?

• Provide evidence that NGen support is essential to achieve the project goals. Questions to consider:

Based on 1-10 point score

- How has the project scope changed due to NGen support?
- Is NGen funding critical to undertake the project as proposed?
- Does NGen funding allow the project to be undertaken differently (more quickly, at a larger scale, with more partners)?
- Would the collaborative partnership have been formed without the project?
- Describe how the NGen-supported approach to your project:
 - » is of benefit to the Canadian Advanced Manufacturing ecosystem and economy.
 - » will strengthen customer demand for technology.
 - » allows for greater acceleration of the scale-up of Canadian technologies for production or application in Canadian Advanced manufacturing.
- Please provide evidence that:
 - » successful delivery of the project will increase the participating companies' total expenditures on research & development in Canada.
 - » the project will provide an enabling platform for further technology development and application in Canadian manufacturing.
 - » the project will be recognized globally as conferring or strengthening Canadian leadership in advanced manufacturing.
- Assessors will consider the above aspects as well as a determination of the value for money for NGen funding, considering the total potential impact and return of the project against the amount of funding being requested.



10. What is the financial commitment required for the project?

- Indicate the anticipated project cost, making clear the level of contribution from any project participants and the level of funding required from NGen. This information should be provided in the financial table in the application form.
- Supporting information and explanation for project costs should be provided in this section of the form, including costed work packages.
- Please describe other private sector co-investment/financial contributions that this project will attract.
- In evaluating the project, the assessors will consider the following questions:
 - » is the budget realistic for the scale and complexity of the project?
 - » is a financial commitment from other sources demonstrated for the balance of the project costs?
 - » has a realistic budget breakdown been provided?
 - » have the costed work package breakdowns been described and justified adequately?
- Ensure that all key points relating to the finances are described in the application form; for example the reason for, and use of, subcontractors, their impact on the project, and why they are not formal project partners.





- Projects must be truly collaborative with all partners sharing in risks, investment and potential rewards.
- Project partners cannot also be a sub-contractor or consultant within the project.
- There must be a Collaboration Agreement in place among the members of project consortia defining the roles of project partners and joint risk management provisions.
- The Collaboration Agreement must set out how foreground IP arising in projects will be shared among project partners. In addition, project participants must indicate the types of foreground IP they would be prepared to share with other members of the Supercluster, to whom, and on what conditions.



Upon Agreement

Upon the final recommendation of an independent assessment, NGen will conclude a Master Project Agreement (MPA) with selected funding recipients detailing project requirements, reporting, and NGen's compliance obligations.





Templates & References

Get the Financial Workbook template in Excel here. Get the Financial Summary template here.



Overview

What does the supercluster fund?

Who is eligible



Next Generation Manufacturing Canada

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JOIN THE PERCI T NGEN CA

NGen is founded on the principle that the transformation to advanced manufacturing will enrich the lives of Canadians, delivering better products and good jobs while generating the economic growth essential to a better future.

assistance in understanding the framework of the Innovation Supercluster Program. In case of any discrepancy or inconsistency Program Guide (which can be found here), the Innovation Supercluster Initiative Program Guide shall prevail.