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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 drive connections between technology and industrial companies to accelerate the development, adoption, and scale-up of transformative capabilities in Canadian manufacturing.

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

WHAT DOES THE SUPERCLUSTER FUND UNDER CLUSTER BUILDING?

The objective of a Cluster Building Project is to support a group of Canadian for-profit SMEs to work together to within an industry-lead membership-based organization to enhance the capabilities and growth of those organizations through the application of, or access to, advanced manufacturing technologies, best practices, global benchmarks, workforce development, enhanced training and/or market expansion.

- Newly formed clusters involving not less than five Canadian SMEs who are members of NGen are eligible to apply for Cluster Building project funding.
- Existing manufacturing clusters comprised of not less than five Canadian SMEs
 who are members of NGen looking to take more extensive advantage of advanced
 manufacturing technologies and processes and digital workflows, creating and
 implementing new approaches to training and work-force development, and/or
 implementing new digitally-enabled approaches to collaboration and/or market
 expansion are are eligible to apply for Cluster Building project funding.

WHAT DOES THE SUPERCLUSTER FUND UNDER CLUSTER BUILDING?

Organizations forming a cluster must be inter-related in some fundamental way such that their collaboration in a cluster offers demonstrable economic benefit. Some types of interrelationships that could support the development of a cluster include:

- Geography
- Type of service(s) offered
- Industry or industries supported
- Resources utilized

Cluster Building Project funding is also available to existing industry clusters for the purpose of developing new benchmarks and technology implementation roadmaps relating to the implementation of advanced manufacturing practices and technologies providing that 70% or more cluster member organizations are SMEs. For eligibility, these organizations must receive a majority of their funding from industry.

Supercluster Cluster Building Projects support initiatives that are:

- Transformative, supporting opportunities for higher rates of business growth and competitive advantage for the member companies than would otherwise be achievable,
- Applied, resulting in the development of market insight, industry benchmarks, technology development roadmaps and other tangible resources to support the growth of the member companies,
- Collaborative, attracting the participation of industry partners, in support of SMEs, new partnerships between SMEs, and new relationships between clusters to grow Canada's advanced manufacturing economy,
- Enduring, leaving a legacy in skills development, tools, testbeds, intellectual property and business knowledge for the involved organizations or the advanced manufacturing ecosystem at large.

WHO IS ELIGIBLE TO APPLY

- SMEs that are members of the Advanced Manufacturing Supercluster may submit an application for Cluster Building project funding. NGen membership for the members of the cluster is a requirement of funding.
- Recipients of Supercluster funding must be incorporated in Canada.
- Funding recipients must be either for-profit organizations or not-for-profit organizations that facilitate and fund research and development for whom over 50% of funding is received from private-sector organizations in the form of membership fees or similar.
- 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 participate as partners in NGen Cluster Building Projects, but any project activity undertaken by these organizations will not be eligible for Supercluster funding.
- For the purposes of NGen, an SME is an organization with fewer than 500 employees.

CLUSTER BUILDING PROJECT REQUIREMENTS

- Funding for Cluster Building activities is intended to facilitate broader collaboration and cooperation among SMEs and supporting organizations to accelerate the implementation, scale-up, and commercialization of advanced technologies for manufacturing in Canada.
- Clusters must demonstrate strategic collaborative potential leading to transformative change for participating SMEs and advanced manufacturing in Canada, extensive SME engagement, short-term commercial benefits, and the development of tools, testbeds, training, IP, and supporting services for project participants and other SMEs in the ecosystem.
- NGen will only fund costs defined as eligible under the guidelines of the Innovation Supercluster Initiative. Eligible costs incurred in Cluster Building activities must involve

CLUSTER BUILDING PROJECT REQUIREMENTS

support for enhancing collaboration among Canadian SMEs in advanced manufacturing. This may include, but is not limited to:

- Staffing costs
- Office costs
- Legal costs
- Travel Costs
- Costs incurred for joint assessments, studies and reports
- Key deliverables of a Cluster Building project include:
 - The formation of a collaborative consortium of not less than five (5) SMEs with a plan to undertake a transformative initiative in advanced manufacturing.
 - The formation or reactivation of a collaborative advanced manufacturing cluster with a stable membership base and a sustainability plan that defines how the collaboration initiated under NGen funding will be continued after the end of the NGen funded activity.
 - A business plan for the long-term operation and self-sufficiency of the cluster is a requirement of a Cluster Building project.
- Clusters must be developed in Canada and cluster participants receiving NGen Capacity Building support must be SMEs. This does not preclude larger organizations from joining these clusters.
- The maximum value of a Cluster Building project is \$150,000. NGen will reimburse up to 50% of the maximum value. Only eligible costs as defined in the NGen Capacity Building Finance Guide will be reimbursed.
- Although the total amount allowable for subcontracting under an NGen Cluster Building Project is not capped, only expenses incurred for Canadian subcontractors are reimbursable by NGen.
- The project must be completed within twelve months of contract initiation.
- Capital & equipment expenses may not exceed the lesser of ten percent (10%) of the total value of the project or \$15,000.

CLUSTER BUILDING PROJECT REQUIREMENTS

- Where there are multiple independent organizations in the project consortium, a
 Collaboration Agreement must be in place among those members defining the roles of
 project partners, allocation of project costs, and joint risk management provisions.
- If the collaboration being formed under the project will involve the sharing, disclosure and/or creation of IP belonging to any of the members, the Collaboration Agreement must set out how any foreground IP arising in the Cluster Building project will be shared among project partners
- Applications for Cluster Building will be based on the applicants' answers to the ten
 questions provided in the Application Overview. The response is limited to 400 words
 per question and should focus on how the collaborative activities and cost-sharing
 engendered by the new partnership will accelerate business growth and reduce risks for
 each of the members of the consortium or cluster.
- Participating companies will be required to pay a one-time, non-refundable project administration fee to NGen equal to 2.5% of the total cost of the project at the time of project launch. This fee can be paid by one partner or divided amongst partners.
- NGen staff will work with funding recipients to monitor and report on the progress of projects.

GETTING STARTED

If you have an idea you believe is suitable for NGen Cluster Building Project funding, please get in touch through **capacity@ngen.ca** or register as a member and complete the NGen application screening below.

- 1) Register as a member of NGen www.ngen.ca/join
- 2) Click on "Supercluster Projects".
- 3) Select the Project Application Guide for an NGen Cluster Building project (this document).
- 4) Download the recommended supporting documents including the All-Capacity Financial Workbook, Application Agreement and Project IP Strategy Template Tables.
- 5) When you are ready to apply, please choose Apply for NGEN Feasibility Study Project. Note: You will be redirected to a Hockeystick site. Hockeystick is the host of the NGen application portal.
- 6) Login with your NGen member login information.
- 7) In the Project Title field please make sure you include the word CLUSTER.
- 8) Sign and upload your Application Agreement
- 9) Do NOT complete the questions in tab titled "Project Additional Information", these questions are not for Cluster Building applicants.
- 10) In tab titled Collaboration Partner Details please complete the following with "Test Partner 1" and "Test Partner 2" as these fields must be complete but are not applicable to cluster building.
- 11) The "Individuals" two fields below these fields can be left blank.
- 12) To save your work click on the "Save Draft" button.

PROJECT SCREENING

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

- Describe the purpose of their project.
- Identify the Contracting/lead organization for the Cluster Building Fund and contracting (this is also the company that will sign the Application Agreement).

- The Contracting organization can be an industry association applying on behalf of their industry members provided that greater than 50% of annual revenues are from industry contributions.
- The Contracting organization may be a newly formed industry cluster provided that it is already incorporated in Canada and is supported by a minimum of five (5) private sector, for-profit Canadian SMEs. These partnering organizations may act as contracting or non-contracting members of the project consortium but must be identified in the proposal in either case.
- If the application is approved, the lead/contracting company will be required to enter into the Cluster Building Contract with NGen as will any contracting members of the project consortium.
- Certify that private sector partners looking for funding are incorporated in Canada and that the project will be carried out in Canada.
- Certify that the project could 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 and agree to NGen performing the requisite financial due
 diligence, which includes permission for NGen to request a Business Credit Report from
 Equifax or conducting other financial reviews as required to ensure that the project
 consortium has the financial means necessary to complete the envisioned project as
 proposed. The financial due diligence will be performed on all Contracting partners
 identified in the application.
- Certify that they have read, understand, and are willing to comply with NGen's project requirements. This is documented in the NGen Application agreement, which must be filled out, signed by the project team members, and uploaded into Hockey Stick before the screening can continue.
- The green SAVE DRAFT button enables the applicant to return to the application process. Note it is possible to save your work in progress on the project screening form.

It does not need to be completed in one step. Do NOT click SUBMIT APPLICATION button until you are confident that all sections are complete and the required documents have been uploaded.

• Once completed, click the **SUBMIT APPLICATION** button on the bottom of the form. After the necessary materials have been completed, the NGen team will perform an assessment of the proposed project for its applicability for NGen funding based. This assessment is generally completed within two (2) business days of submission of the screening application.

After the project has successfully cleared NGen's internal screening, the project will be advanced to the assessment phase.

PREPARING THE PROJECT APPLICATION

There are six elements of an NGen Project Application:

- The Project Proposal
- Application Agreement
- The Financial Workbook
- The IP Strategy
- List of 5 (minimum) for profit SME organizations supporting the cluster build including name, contact, title, email. (Upload document in section titled "Project Financial Details" same place as Application Agreement is uploaded.)
- Risk Registry Table (see Question 2)
- Project Plan

THE PROJECT PROPOSAL

The NGen Project uses a ten (10) question format for project proposals. The questions that must be answered in the proposal for an NGen Cluster Building Project are:

- Q1. What is the opportunity the project addresses?
- Q2. What is the overall project and risk management plan?
- Q3. What is transformative about the project?
- Q4. What is the nature and size of the potential market the project will address?
- Q5. What sort of economic benefits is the project expected to deliver to those inside and

- outside the consortium, and over what timescale?
- Q6. What are the broader ecosystem, social, and environmental benefits of the project?
- Q7. How will the results of the project be exploited?
- Q8. Does the project team have adequate skills and experience, resources, and access to facilities to deliver the identified benefits?
- Q9. How does NGen add value to the project?
- Q10. What is the financial commitment required for the project?

There is a 400-word limit to the answer for each question. Risk registers, project milestone schedules and project work breakdown structures do not count against this word count limit.

Application guidance with regards to the ten questions is provided in the tables below. This input is not an application checklist but is intended to provide a broad level of guidance to the applicant. It is impossible to cover all points thoroughly within the 400-word limit. The recommended approach is to cover selected significant points thoroughly and with some rigor, and to avoid making broad, unsupported statements in the application.

THE FINANCIAL WORKBOOK

The NGen Project Financial Workbook may be found here Capacity Building Project Guides

The NGen Project Financial Guide may be found here Capacity Building Project Guides

THE IP STRATEGY

The NGen Intellectual Property Strategy may be found here Capacity Building Project Guides

At the application phase, only a summary level of detail is required for the IP strategy, however it will be considered by the project assessors while evaluating the project application.

A final, more detailed Project IP Strategy is a requirement of the Master Project Agreement (MPA), which will be put in place after the project has been approved for funding.

The NGen IP Strategy Guide and Tables for Applicants may be found here **Capacity Building Project Guides**

WHAT HAPPENS AFTER THE PROJECT IS SUBMITTED?

PROJECT ASSESSMENT

Once the project proposal (answer to 10 questions), Project Details, Project Lead Details, Collaboration Partner Details, Project Financial Due Diligence, Project Financial Details, Project Application Questions, Financial Workbook, Application Agreement, list of supporting cluster SME organizations, Project Documents such as Project Plan, Risk Register and IP Strategy documents have been completed and uploaded into Hockey Stick the project can be submitted for assessment.

The Financial Workbook will be reviewed for completeness and compliance with NGen's Contribution Agreement by members of the NGen Finance team and any needed clarification or missing information necessary to approve these documents will be requested directly before the project is approved for project assessment.

NGen uses independent external assessors to conduct project assessments. The assessment will be conducted by three independent assessors, exclusively on the basis of the answers to the ten questions discussed in this report and the supporting materials including Gantt charts, project plans and risk registers uploaded through Hockeystick.

The assessors will provide written feedback of their assessment of the project team's responses to each of the ten questions. Should the project fail assessment, these comments may be helpful in assisting the project team in modifying their proposal so that they can resubmit their project for consideration.

CONTRACTING

Once the project proposal, financial workbooks and IP strategy have been approved through assessment, the members of the project team will enter the contracting phase.

This will entail the development of a Master Project Agreement (MPA) between NGen and the Lead Applicant(s) of the Cluster Building project.

ASSESSMENT QUESTION

1. What is the opportunity the project addresses?

RESPONSE GUIDANCE

- Outline the big-picture motivation and overall objectives the proposed cluster is
 trying to achieve including the current challenges that are shared by the proposed or
 current members of the cluster and the potential impact of advanced manufacturing on
 projected outcomes.
- Clearly define the business and/or technology opportunity the new cluster will support including potential economic impacts.
- For an existing cluster, identify the aspects of advanced manufacturing that will be addressed by the proposed project.

ASSESSMENT QUESTION

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

RESPONSE GUIDANCE

- Provide your overall project plan, including subtask descriptions where necessary.
- Identify key milestones and deliverables that show how the overall project will be achieved as well as how costs will be allocated.
- Identify the cluster leader or facilitator and their relationship to the other members of the consortium and how tasks will be allocated.
- Provide an overview of the key risks to be overcome in the project in terms of likelihood and severity of impact and describe strategies for their mitigation.

ASSESSMENT QUESTION

3. What is transformative about the project?

RESPONSE GUIDANCE

• Explain how the successful completion of the project has the potential to transform or support the transformation of the member organizations and why these benefits could not be realized by any member working alone.

- Describe any further technology development opportunities that may emerge from the project and how the project will enable this. Include potential IP and how it will be exploited.
- Describe any novel technical or market research that will be undertaken as part of the project and its relevance.

ASSESSMENT QUESTION

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

RESPONSE GUIDANCE

- Describe the strategic importance of the cluster in terms of its economic size and commercial potential, its potential geographical and/or industry impacts, and its potential to develop globally competitive advanced manufacturing capabilities in Canada. Elements of this could include:
 - the target market, including the size, margins, market leaders, key competitors, price competition, barriers to entry
 - 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 capture it will enable or the extent to which the project will increase capacity.

ASSESSMENT QUESTION

5. What sort of economic benefits is the project expected to deliver to those inside and outside the consortium, and over what timescale?

- Identify the potential economic benefits the project will have, both for participating project partners and those outside the project consortium.
- Describe how the project can help protect or increase employment, exports and contribution to GDP in the sector, region or industry represented by the proposed or existing cluster.

• Will the project create spin-off business opportunities (new businesses, new or expanded supplier or partner relationships) in Canada?

ASSESSMENT QUESTION

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?

RESPONSE GUIDANCE

Describe the benefits this project will bring to the broader advanced manufacturing ecosystem:

- Are there needs/opportunities for new skills development and training programs?
- Will the project develop or support the use of tools, testbeds, or data platforms to promote adoption of advanced manufacturing?
- How will the new cluster collaborate with other organizations?
- Will the project enable the development of market data or insight that will be broadly applicable to the members of the cluster and the supporting ecosystem?
- Will there be any broader social benefits for Canadians, including, for instance, improvements in health care, the environment, workforce development, diversity, and inclusion?

ASSESSMENT QUESTION

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's end.
- Describe the long-term business plan for the cluster.
- If the results of the project will enable the members of the consortium to pursue additional and further development support under NGen or other manufacturing development initiatives, please identify how the proposed project fits into an overall

development and growth strategy for your organization.

ASSESSMENT QUESTION

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

RESPONSE GUIDANCE

- Describe the capability of the project team and selected partners to successfully accomplish the objectives of the project. Demonstrate:
 - the project team has the right available mix of skills and experience to deliver the project successfully
 - appropriate governance structures are in place to manage and deliver the project
 - if a professional administrator will be retained to lead the proposed cluster, how will this person be identified and selected?
 - Clearly define the roles of cluster members in achieving project objectives and benefits, and the longer-term viability and strategic potential of the cluster initiative.

ASSESSMENT QUESTION

9. How does NGen add value to your project?

- Provide evidence that NGen support is essential to achieve the project goals. Questions to consider:
 - Would this cluster come into being without NGen support?
 - For a previously existing cluster, will this project result in new and/or expanded programming for the members in association with advanced manufacturing.

ASSESSMENT QUESTION

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

- Ensure that all key points relating to the finances are described in the application form and that adequate resources are available to successfully complete the proposed activity. Address the following:
 - The total projected cost of the cluster initiative
 - Commitments made by all private sector industry members
 - Commitments made by all other members of the cluster initiative
 - Any additional government funding received by cluster members for the purpose of carrying out the cluster initiative.



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