



PROJECT APPLICATION GUIDE

Key Information On:

Advanced Manufacturing Commercialization
of Quantum Technologies Program

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Overview

Next Generation Manufacturing Canada (NGen), an industry-focused, not-for-profit corporation dedicated to building world-leading advanced manufacturing capabilities in Canada.

NGen aims to connect and strengthen collaboration among manufacturers and technology companies to accelerate the development and scale-up of transformative capabilities in Canadian manufacturing.

Advances in quantum science have the potential to transform how people work and live in Canada and around the world. Canada's investments in quantum technologies and research over many decades have made the country a global leader in the field, with a growing ecosystem of world-class centres of quantum expertise in universities and businesses across the country. As the rest of the world expands its own quantum programs, Canada must continue to invest and innovate if it is to stay ahead.

To strengthen Canada's quantum ecosystem, the Government of Canada launched the National Quantum Strategy (NQS) in January 2023. The NQS aims to amplify Canada's significant strength in quantum research; grow Canadian quantum-ready technologies, companies and talent; and solidify global leadership in quantum science and its commercialization.

The NQS sets out three key missions to ensure Canada stays on the path of quantum innovation and leadership, on quantum computing, communications, and sensors. To foster these missions and other quantum initiatives, the NQS is built on the three pillars of research, talent, and commercialization.

NGen is delivering the commercialization pillar of the NQS. The objective is 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 world-leading Canadian enterprises, and develop a modern and inclusive workforce with the skills to excel in advanced manufacturing.

What Does NGen Fund?

NGen will invest up to \$6 million of National Quantum Strategy funding in collaborative industry-led projects before March 31, 2028.

NGen projects must be:

Collaborative, developing industry relationships, building trust and sharing in knowledge, risk, investment and the resulting benefits. Projects must include at least one small or medium-sized enterprise (SME). Projects are encouraged to include multiple industry partners and consider the inclusion of academic and research organizations;

Transformative, involving the development of novel Advanced Manufacturing tools and techniques for quantum technologies or quantum technologies to be deployed in

manufacturing with the potential to confer a significant competitive advantage to Canadian industry;

Enduring, leaving a legacy in skills development, tools, testbeds, intellectual property, and/or business knowledge for Canada's advanced manufacturing ecosystem beyond the partners and timeline of the project;

Solutions-focused with potential to generate significant long-term commercial and economic benefits, including jobs maintained and created.

Projects must align to one of the 3 key missions under the National Quantum Strategy **Commercialization Pillar**

Mission: Quantum computers and software



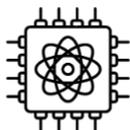
The Quantum Computers and Software mission aims to make Canada a world leader in the continued development, deployment and use of quantum computing hardware and software to the benefit of Canadian industry, governments and citizens.

Mission: Quantum communications



The Quantum Communications mission intends to ensure the privacy and cyber-security of Canadians in a quantum-enabled world through a national secure quantum communications network and a post-quantum cryptography initiative.

Mission: Quantum sensors



The Quantum Sensors mission seeks to enable the Government of Canada and key industries to be developers and early adopters of new quantum sensing technologies.

Who is Eligible to Apply?

- Any business member of NGen may submit an application for project funding or apply to be considered as a partner or co-investor in CQT (Commercialization of Quantum Technologies) projects. Register as an NGen member at www.ngen.ca/join.
- Recipients of CQT funding must be a business registered in Canada and have a value-added presence beyond a sales office.
- Funding recipients must be:
 1. for-profit organizations,
 2. not-for-profit organizations that facilitate and fund research and development on behalf of the ecosystem and whose funding and/or revenue is received primarily from private-sector or industry organizations,
 3. non-federal Crown corporations whose funding is derived from commercial activities, or
 4. indigenous organizations.
- Other publicly funded not-for-profit organizations, post-secondary institutions, federal Crown Corporations, and government departments or agencies are not eligible to receive CQT 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 a registered business presence in Canada) may also participate in CQT projects, but any project activity undertaken by these organizations may not be eligible for funding.

Involvement of the National Research Council of Canada (NRC)

NGen welcomes the participation of the NRC in its projects. The mechanism for the NRC to participate in a project would be through a subcontract to an industry partner. There are options on how NRC will be treated in an NGen project:

- NRC will be part of the consortium Collaboration Agreement recognizing that they will bring value to the consortium, that may be bringing IP or are critical part of the project delivery.
- NGen will recognize the NRC as a partner in the publications and promotion of the project activity.
- NRC's portion of the project would be subcontracted directed by an industry partner – the agreement is solely between the industry partner and the NRC. NGen may recognize the NRC as a partner in publications and promotional activity as agreed to by the consortium.

Basic Eligibility Requirements

- All projects must demonstrate the development and application of an Advanced Manufacturing Technology or Process either using quantum technologies or for the next generation of quantum technology manufacturing.

- Projects must demonstrate that they are Collaborative, Transformative, Enduring and Solutions-Focused.
- Projects must be aligned to one of the National Quantum Strategy Priority Areas:
 1. Quantum computing (Hardware or Software)
 2. Communications,
 3. Sensors
- Projects must demonstrate the development and application of either:
 1. Novel Advanced Manufacturing tools and techniques for quantum technologies (AM4Q) OR
 2. Quantum technologies to be deployed in manufacturing (Q4AM)
- Projects should consider a combination of manufacturing and quantum technology expertise in order to meet the project and program objectives.
- All projects need to demonstrate meaningful collaboration with a minimum of two unassociated industry partners.
- At least one small to medium-sized (SME) company (an SME is defined as an organization that has fewer than 500 employees globally) partner needs to be involved. Applicants are strongly encouraged to include more SME partners as well as academic and research partners.
- Projects must have the potential to deliver significant commercial benefits and jobs both within the consortium and beyond.
- Project participants must have robust project management processes in place. Project work packages, milestones, timelines, and estimated costs should be well-defined.
- Independent experts will evaluate and recommend which projects NGen will fund

Project activities that are out of scope and will not be funded include:

- 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 CQT funding
- Projects that focus primarily on product development or the design of products themselves. The project must focus on the development and/or scale-up of advanced manufacturing capabilities.
- Projects related to experimental or theoretical work without any direct commercial application or use. Projects must demonstrate a strong commercialization plan.
- Activities that subsidize full scale production.
- Capital investment for production or for purposes not related to the project.
- Activities that could be viewed as anti-competitive.
- 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.

Funding

- Projects must involve at least two (2) unassociated Canadian industry partners (a lead and partner(s)) contributing to project costs.
- The total amount of the project should be between \$1 million and \$5 million. Any minor deviations to this will require written NGen approval. The maximum project value allowed for NGen funding support is \$5 million. Projects with total costs over this amount will be accepted; however, NGen funding support will be capped at CAD \$2 million.
- NGen will reimburse up to 40% of total eligible project expenses incurred by industry partners.
- Eligible project costs are defined in the Project Finance Guide
- No single partner may receive more than 80% of NGen funding.
- Up to 100% of the acquisition cost of new equipment (Capital & Non-Capital) may be claimed and cannot exceed 25% of the value of total project costs. Small adjustments to this limit may be considered on a case-by-case basis and would require preapproval by NGen.
- Capital expenditures over more than \$1 million must be pre-approved by NGen.
- An amount of product design, testing, and validation is allowed within a project as long as it can be demonstrated as being required to support the achievement of the advanced manufacturing goals. No more than 35% of the funding allocation can be related to product development.
- The total amount of sub-contracted or consulting costs with non-academia suppliers cannot exceed 40% of the value of total project costs, and the work must be performed in Canada. Where significant justified academic or research participation is involved, adjustments to this limit may be considered on a case-by-case basis and would require preapproval by NGen.
- Project partners cannot be a sub-contractor for labour services or a consultant within the project.
- NGen CQT funding is intended to support initiatives incurring inside Canada. Costs incurred outside Canada may be eligible, only on an exceptional basis, with advance approval by NGen.

NGen Administration Fee

NGen is a not-for-profit organization. Project administration fees are applied to projects as a condition of funding. The fee is a one-time, non-refundable project administration fee payable to NGen equal to 3.5% of the total cost of the project. Payment of the fee is a non-negotiable condition of project funding.

Program Timeline

Please refer to the Program website, <https://quantumadvantage.ca> for the most updated project guides, templates, and webinar recordings.

Project Development webinars that will outline program requirements, the application process, and finance rules will be announced. (Bilingual Event)

Register as an NGen member www.ngen.ca/join, only organizational members can apply for funding.

We are accepting three intakes of project proposals, assuming budget is available following the first intake.

First intake

Application deadline: 29th November 2023

Second intake

Application deadline: 24th January 2024. 5:00PM ET

Third intake

Application deadline: 7th March 2024. 5:00PM ET

Failing to meet this deadline will mean the proposal will not be considered for funding.

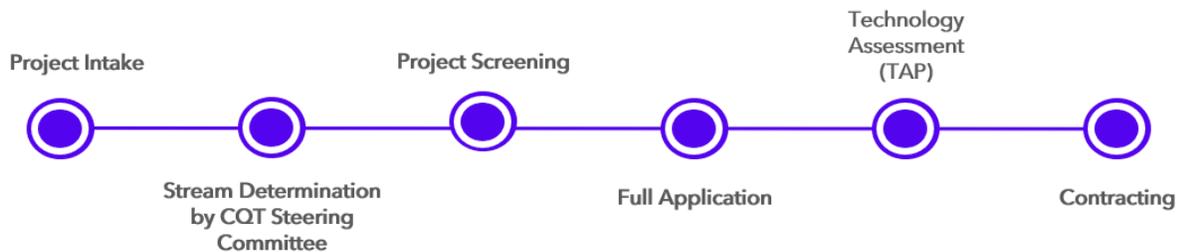
- Members can apply for funding through the member portal (<https://portal.ngenconnects.ca/opportunities>) under funding programs the portal will be open to receive project registrations by November 1, 2023.

Once submitted, applications will be sent to an independent third-party panel for assessment Applicants will be notified of assessment results shortly after. Projects that are recommended for funding will proceed to the contracting phase.

It is recommended that project teams review the Collaboration Agreement and the Master Project Agreement drafts on the NGen website before applying. All projects complete and claims filed by January 31, 2028.

APPLYING FOR PROJECT FUNDING

The Process



NGen Support for Project Applications

NGen's project team may assist in the development of CQT 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,
- Provide advice for improving Intellectual Property plans or identification of IP used in or developed by the project.

Project Intake

Project Proposals will be started by completing an intake form describing the concept and potential partners. This form provides basic details about the project proposal so it can be assessed for fit with the program. The form is available on the Program website: <https://www.quantumadvantage.ca>

This intake proposal will be reviewed by the joint CQT Steering Committee comprised of NGen and Digital Supercluster leadership to determine if the project is eligible for funding and which funding stream (NGen's or DIGITAL's) the project will be applied to.

The priority areas for DIGITAL projects are:

- Healthcare and wellness
- Natural resources and environmental health
- Digital Services

Project Screening

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

- Complete the Application Agreement and agree that project information will be shared between NGen and Digital as part of this joint program under the NQS.
- Certify that they have read, understand, and are willing to comply with NGen's project requirements,
- Describe the purpose of their project and how it contributes new Advanced Manufacturing capabilities in Canada,
- Indicate that their project is collaborative and identify lead private sector partners,
- Certify that private sector partners looking for funding are registered 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 CQT funding,
- Provide an estimate of project costs and indicate that they are willing to invest in the project within the timelines of NGen's CQT funding horizon,
- Certify that they have adequate financial means and project management capabilities to carry out the project,
- Agree to provide information necessary for NGen to conduct Financial Due Diligence.
- Provide a short title and description of the project (this information may be disclosed publicly).

Financial Due Diligence

NGen will undertake a financial assessment of each participating project partner to ensure they will be able to support their commitment to the project for its entire duration. Factors which will be evaluated include but are not limited to: Profitability, Liquidity, Leverage/Indebtedness and Cashflow.

In the event the supporting financial information provided by the applicants is insufficient to demonstrate the ability to complete the planned project as proposed, NGen Canada will:

- Request additional information from the participating member,
- Reject the proposed program on the grounds that the project team does not appear to have the ability to fund the proposed project to completion, or,
- Approve the project for a reduced amount of NGen funding until such time the participating members can provide further assurances on liquidity.

The Application Approval 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 assessment.
- Applications will be scored out of 100 marks (10 marks per question) by independent experts.
- Previous performance on NGen-funded projects may be taken into consideration during project selection and approval.

Independent Expert Assessment Panels

All project proposals will be subject to an independent assessment process undertaken by up to five external experts selected by NGen. The expert assessment panels will ensure that approved projects are of high quality, meet NGen's strategic objectives, and recommend project for funding on a fair basis.

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 and confidentiality.

Acceptance or Rejection

Following an Assessment and Recommendation from the Independent assessors. NGen staff will advise all applicants directly if their project has been accepted for funding or not.

Application 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 if funding stream is still active.

Application Guidance for Projects between \$1 Million and \$5 Million

Applicants who pass screening and meet eligibility requirements will be invited to submit a full application. Please ensure that following screening, as more information is provided that the proposal continues to meet all the eligibility and scope requirements of the program.

The application consists of:

A) Answers to ten (10) questions, with a maximum 7000-characters per question. To ensure that the level of information provided is fair for all applicants:

- Any information provided above 7000-characters will not be sent out to the assessors.
- No external links are allowed.
- No additional information such as reports are allowed to be submitted to the appendices.
- Please include any information in the application ten questions and if appropriate cite a suitable reference.
- Consider utilizing graphs, charts, and images.

B) Five (5) supporting documents

1. Project Plan (DOC, XLS, MSP, PDF) – attach as Appendix
2. Risk Register (DOC, XLS) – attach as Appendix
3. IP Plan Tables – input directly into Salesforce application portal
4. Additional attachments (e.g., letters of support) – attach as Appendix
5. Financial Workbooks (one for each partner) – input directly into Salesforce application portal There are no templates for the Project Plan or Risk Register; it is expected that the company uses the project management tools available within their company.

Application Scoring

Each project application will be assessed based on 10 questions by up to 5 independent assessors.

Responses are equally weighted in assessments.

Applications will be scored out of 100 marks (10 marks per question) by independent experts.

The assessors will answer two yes/no Gateway questions.

- Is the project in scope for funding for this program?
- Is the project recommended for funding based on the overall application and in particular the business case presented?

If the majority of assessors answer no to either gateway question the application, regardless of the overall score out of 100 will not be considered for funding. It is recommended throughout the application process that advice is sought from the NGen project team to ensure the project meets the scope criteria.

Ten Assessment Questions – Guidance

Assessment Question 1

1. What is the opportunity the project addresses?

RESPONSE GUIDANCE

- *Outline the big-picture motivation and the overall advanced manufacturing objectives that the project intends to achieve.*
- *Describe how this project aligns to at least one of the three missions of the National Quantum Strategy commercialization pillar (sensors, communication or computing)*
- *Provide an overview of the project considering both technology and business impacts, highlight other strategic benefits.*
- *Outline the gap and or opportunities that the project will be addressing in growing and strengthening Canada’s quantum capabilities.*
- *Outline what the project team needs to do to successfully achieve the project objectives within the desired timeframe and budget. What are the specific challenges, research questions, and/or technical complexities that need to be addressed within the timeframe of the project?*
- *Describe the nature of the challenges facing you and/or your potential customers, along with the potential market challenges or barriers to entry that the project addresses.*
- *How will the outcomes of the project overcome these challenges?*
- *Clearly describe the project partners and how the partners will collaborate towards achieving the overall opportunity the project addresses.*

Assessment Question 2

2. What is transformative about the project?

RESPONSE GUIDANCE

Projects must be globally transformative in nature. This is a core pillar of NGen projects. Projects that are not adequately transformative will be deemed out of scope for funding, regardless of the quality of the rest of the proposal.

- *Clearly define the transformative Advanced Manufacturing aspects of the project and what new knowledge pertaining to advanced manufacturing is being created by each partner organization.*
- *Identify the extent to which the project is transformative and innovative both technically and commercially:*
 - *Are the technologies new or are you looking to apply existing technologies to develop unique transformative manufacturing solutions?*
 - *Outline the current state-of-art manufacturing processes and technologies for your industry (or sector) and describe how this project pushes the boundaries in the context of advanced manufacturing and quantum technologies.*
 - *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?*
 - *Describe how the project could be recognized globally as conferring or strengthening Canadian leadership in advanced manufacturing and/or quantum*
- *Provide evidence for the above statements. This could include the results of:*
 - *patent searches,*
 - *competitor analyses,*
 - *literature surveys,*
- *If applicable, you should also outline your background intellectual property rights, as related to the project.*

- *If applicable, 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 context.*
- *What is the plan and rationale for the protection of IP and sharing of IP among your consortium partners and, beyond this, with other NGen members?*
- *Elements of product development are eligible for funding under this program, and the novel transformative aspects of the product or technology can be described in response to this question. These other novel aspects are important to provide context. It is essential to note that the assessors will be awarding marks based on what is transformative for advanced manufacturing and Canada's quantum industry.*

Assessment Question 3

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

RESPONSE GUIDANCE

For each project partner, describe the market(s) that you are entering with the development of a new Advanced Manufacturing or Quantum Technology

AND/OR

Describe the existing market that you are operating within and how this advanced manufacturing or quantum opportunity will enhance your competitive position within the market.

- *Include the details of:*
 - *the specific target product, platform and or service applications.*
 - *the target market, including the size and projected growth rates, margins, market leaders, key competitors, price competition, and barriers to entry.*
 - *the market differentiators for your project outcomes.*
 - *the expected share of market to be captured because of this project.*
 - *the opportunity timeline and when you expect benefits to be realized.*
 - *the impact of the project on existing or future customer relationships.*
- *Describe the additional adjacent markets where the new technologies or capabilities could be commercialized.*
- *Provide evidence for your statements about the market opportunities your project opens up.*

Assessment Question 4

4. How will the results of the project be commercialized?

RESPONSE GUIDANCE

A key objective of this program is to develop and strengthen Canada's quantum industry by scaling-up and commercializing Advanced Manufacturing and Quantum capabilities. Please ensure there is a compelling commercialization plan describing how this proposal's benefits will be achieved.

- *The commercialization plan should highlight:*
 - *how each partner will take their expected project outputs to market and commercially integrate them into the Canadian Quantum industry and/or manufacturing value chain*
 - *other potential business opportunities for each partner in collaboration and individually.*
- *Outline the expected project outputs that will be commercialized, such as new or improved products, services, processes, capabilities, intellectual property, and manufacturing technologies.*
- *Describe how each of these outputs will be commercialized in the existing market, future, or adjacent markets as defined in Question 3. Consider:*
 - *A roadmap showing the routes to market, including details of specific channels being targeted, and estimated timelines.*

- Describing the number of manufacturers or facilities the project expects the technology to be implemented in.
 - Identifying the organizations necessary to access the intended market for the results of the project
 - Identifying the route(s) to market provided by the market-pull partner or Manufacturing customers that would be involved as a commercialization route.
 - Highlighting your competitive advantage and value proposition.
- - Provide insights into the sales and marketing plan aligned with the direct and indirect economic benefits (benefits to be described further in the response to Question 5.)
 - Describe the plan for managing and commercialization of the Intellectual Property, including the license to manufacture, licensing of IP, manufacturing, or direct sales in your IP Plan (Appendix 3). (Please note: IP is not just patents and includes trade secrets, know-how, copyrights, industrial design, etc).
 - Outline the plan for protecting and sharing IP among your consortium partners and, if appropriate, beyond this with other NGen members. Include a patent filing plan for domestic and foreign jurisdictions, if applicable.
 - Outline any other commercial spill-over opportunities and highlight how your activities will contribute to the wider industry and other sectors.

Assessment Question 5

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

RESPONSE GUIDANCE

Projects must deliver significant economic benefits to the partners. Identify the economic benefits the project will have for participating project partners and other suppliers/partners inside and outside the project. How does the partnership help each partner achieve greater economic growth?

Additional Revenue

Include tables (included in Salesforce) showing the expected additional revenue that will be generated for each partner over:

- *the duration of the project,*
- *0-2 years after the project, and*
- *3-5 years after the project.*

Direct and indirect jobs

Include a table (included in Salesforce) showing the job impact for each project partner (and if appropriate for suppliers):

- *over the duration of the project,*
- *0-2 years after the project and*
- *3-5 years after the project.*

Please identify:

- *the number of direct jobs created,*
- *the number of direct jobs maintained/safeguarded,*
- *the number of indirect jobs created within the supply chain (consider referencing multiplier effects based on direct jobs),*
- *the number of indirect jobs maintained/safeguarded.*

Highlight the type of jobs that the partners will create.

Additional direct and indirect economic benefits

The economic case can be further strengthened by representing additional direct and indirect economic benefits.

Examples include:

- *The potential economic opportunity to implement the solutions in multiple manufacturers/facilities*
- *The economic value associated with:*
 - *Efficiency gains*
 - *Reduced downtime*
 - *Reduced manufacturing footprint*
 - *Positive environmental benefits*
 - *Reduced material usage*
 - *Higher quality output*
 - *Reduced scrap and warranty.*

Indicate any commercial opportunities for other manufacturers/industry sectors arising from the application of the technology. Define the economic benefits that the project can have on the whole Canadian supply network upstream and downstream.

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

Assessment Question 6

6. What is the impact on the broader advanced manufacturing ecosystem and Canadians?

RESPONSE GUIDANCE

Projects must provide enduring ecosystem benefits. Benefits cannot accrue to one partner; the project must leave a legacy beyond the partners for Canadian manufacturing. It is important to highlight any workforce development and Equity, Diversity & Inclusion (EDI) opportunities practiced by the partners.

- *Describe how the project will create widespread positive impact, leaving a legacy for advanced manufacturing in Canada for the partners and beyond (considering how the project impacts beyond the partners and throughout the supply network).*
- *Describe the potential that this Quantum project can have for the good of Canada.*

Describe any other benefits that might be achieved because of this project, for example:

- *Outline the environmental improvements and impacts as an outcome of this project.*
- *Describe any expected positive social impacts, for example:*
 - *Diversity and inclusion, including activities that will be undertaken to ensure that women and underrepresented groups are meaningfully represented in, and benefit from the project*
 - *Enhanced quality of life*
 - *Social inclusion*
 - *Health and safety*
- *Describe other benefits that may arise from the project, for example:*
 - *Regulatory,*
 - *certification,*
 - *standards development,*
 - *supply chain transparency,*
 - *workforce development,*
 - *industry knowledge,*
 - *tools,*
 - *testbeds,*
 - *collaborative networks,*
 - *infrastructure support, and*

- regional and policy benefits, etc.

Assessment Question 7

7. What is the overall project plan?

A project plan that outlines the necessary steps and includes a Gantt chart should be uploaded separately onto the Salesforce portal

RESPONSE GUIDANCE

- Describe the overall Project Plan, identifying key project management tools and mechanisms (e.g., Quality Management Systems) that will be implemented to provide confidence that sufficient control will be in place to deliver the project on time, within budget, and according to the specifications.
- Describe how you are going to measure the success of the project.
- Provide a summary of the project, including work package descriptions, a description of the key project milestones, resource, and management requirements, and key metrics to measure success.
- As part of Appendix 1, provide a detailed project plan consisting of a Gantt chart that details the Work Packages, tasks, timelines, milestones, deliverables, dependencies, and resource allocation for all partners, and work package costs.
- Describe the resource and management requirements for successful project completion, including how the work will be shared among project partners

The assessment and scoring for this question will consider both the written answer and Appendix 1. In evaluating the project plan, the assessors will consider the following:

- Is there sufficient detail provided when considering the complexity of the project?
- Is there sufficient detail to understand the tasks involved and the resources required?
- Is the timing of the key milestones realistic?
- Is there a demonstration of sufficient resource commitment and capability to undertake the project?
- Is the Project Plan aligned with the costs described in the response to Question 10?

Assessment Question 8

8. What is the overall risk management plan?

A Risk Register should be uploaded separately onto the Salesforce portal.

RESPONSE GUIDANCE

NGen recognizes that projects of this type are inherently risky and therefore have adequate arrangements for managing this risk.

- Describe the Risk Management approach, including the management tools and mechanisms to identify, evaluate and address the project risks.
- Key risks identified in the risk register can be elaborated upon as part of the answer to this question.

Provide a comprehensive risk analysis as part of the Risk Register Appendix 2.

- Identify the key risks within the project. Please provide enough information in the risk statement so that the cause, uncertainty, and effect are clear.
- Provide an analysis of the likelihood and impact of each risk and provide a relative ranking for each risk.
- Identify the management strategies for each risk. Strategies can include: - Avoid, Transfer, Mitigate (reduce), Accept (and manage).

- For complex, high-risk projects, it would be advantageous to provide the effect of each risk management strategy in terms of the residual risk.
- All relevant risks should be identified. Include at least the following risks categories:
 - Technical,
 - Commercial,
 - Managerial,
 - Resource
 - Financial,
 - Intellectual Property
- Additional risks categories could include and are not limited to:
 - Freedom to Operate,
 - Safety,
 - Regulatory,
 - Legal,
 - Environmental,
 - Supply chain risks.
- Assessors will be looking to see that all key risks are identified and that there is sufficient risk in the project **to warrant NGen funding and that these risks are appropriately controlled.**

Assessment Question 9

9. Describe the collaboration and the partner skills, experience, resources, and access to facilities to deliver the identified benefits?

RESPONSE GUIDANCE

Projects must demonstrate meaningful collaboration. This is a core pillar of NGen projects. Projects that do not adequately demonstrate collaboration will be deemed out of scope for funding, regardless of the quality of the rest of the proposal.

- Describe the collaborative nature of the project and how the consortium working together will achieve more than if they were working individually.
- Describe how the project partners will develop relationships and build trust and increase knowledge sharing.
- Describe any additional collaborative activities related to suppliers, sub-contractors, academic or research organizations involved in the project. Academic and research institutions will be recognized as contributing partners to the project, even though they cannot be formal industry partners.
- Use the IP Plan to demonstrate the nature of the collaboration in terms of the licensing and access to background and foreground IP during and after the project.
- Describe the track record of the project team members in undertaking and exploiting the results of research and development projects.
- Consider whether:
 - the project team has the right available mix of skills and experience to deliver the project successfully. Provide a high-level description of the partner's track record in achieving similar manufacturing R&D projects.
 - there are appropriate management reporting and governance structures between the consortium partners to manage and deliver the project. Consider including a governance structure diagram.
 - 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.
 - there is appropriate access to facilities and resources, including identifying and allocating appropriate space and infrastructure for the project to be successful (consider floor space, specialized equipment needs, specialized resources, etc).

Assessment Question 10

10. Why is NGen funding being requested, and what is the financial commitment for the project?

RESPONSE GUIDANCE

Part 1: Why is NGen Funding being requested?

Projects must clearly articulate why NGen funding is being requested, how it will benefit the project, and demonstrate that the project activities are in addition to the regular business undertakings of the applicants. Questions to consider:

- *Will the project's technical or commercial scope be affected by NGen support?*
- *Why 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 partnerships have been formed without the project?*
- *Is the project too risky for commercial investors?*

Part 2: Financial Commitment

- *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 workbooks.*

Provide a breakdown of the costs per work package and by milestone, showing how it aligns with the project plan. Consider adding this to Appendix 1 or described in this section.

- *Supporting information and an explanation of extraordinary or specialized project costs should be provided in this section.*
 - *For each partner, ensure that all key points relating to these costs are described per cost category.*
 - *Ensure that project funding is not subsidizing production.*

Consider providing additional explanation of the eligible costs in the finance workbooks. Including:

- **Labour:** *Justification for the use of specialized labour or labour with especially high rates.*
- **Subcontract:** *Explain the reason for and use of subcontractors, their impact on the project, and why they are not formal project partners. Include details about any relevant inclusion of academics and researchers as subcontractors to achieve project goals.*
- **Equipment:** *It is essential that:*
 - *The equipment purchase is directly linked to the project goals.*
 - *The equipment is linked to the R&D capabilities supporting the creation of a new advanced manufacturing capability. It cannot subsidize full production.*
 - *It is creating a new capability that does not already exist within the organization.*
 - *It is not the purchase of multiple similar pieces of equipment that would be seen as subsidizing future production activities.*
 - *Considering the points above, please describe the capital required with a justification of why it is necessary to achieve the goals of the project and a rationale for any pieces of capital equipment exceeding \$1M CAD (Please note: these costs require pre-approval).*

Materials: *Please explain any excessive amounts of material or the use of expensive materials.*

Projects are not intended to subsidize production; the amount of material listed should be for the purposes of the project's R&D aspects. It should be linked to the prove-out of the advanced manufacturing capability.

- *In evaluating this question, the assessors will consider the following questions:*
 - *Has the project presented a clear case that these activities are in addition to regular business undertakings?*
 - *Has a realistic budget breakdown been provided, and is the budget realistic and reasonable for the scale and complexity of the project?*
 - *Is a financial commitment from other sources demonstrated for the balance of the project costs?*
 - *Have the costed work package breakdowns been described and justified adequately?*
 - *Is the project providing value for money for NGen funding? Considering the project's total potential impact and return against the amount of funding being requested.*
- *It is recognized that other funding sources may be required to complete the project. Specify*
- *other government or private sector funding sources necessary to achieve the project goals.*
 - *Describe other private sector co-investment/financial contributions that this project will attract in the short, medium, and long-term, identifying any potential follow-on funding.*
 - *Outline other government funding, including stacking limits, that this project has secured or plans to secure against the project.*
 - *Describe how the project can help attract or retain and promote industry investment and product mandates in Canada*

Upon Agreement

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

There must be a Collaboration Agreement in place among the members of the project consortia defining the roles of project partners and joint risk management provisions.

The Collaboration Agreement must also 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 Global Innovation Cluster, to whom, and on what conditions.

Project Teams will also be requested to submit updated project documents that have been improved through the feedback provided during the Project Assessment. The revised project documents include:

- Project Plan
- Milestone Register
- Risk Register
- Financial Forecast
- Commercialization Plan
- Finance Workbooks

Once the improved project documents have been approved by NGen and the other Contracting documents (i.e., MPA, Collaboration Agreement, IP Plan) have been submitted, a Funding Confirmation Letter (FCL) will be issued to the Project Team. The release of the FCL represents the official start of the NGen project.

Resources

For guides, templates, and resources, please visit the CQT website:

<https://www.quantumadvantage.ca/>