

Project Development Workshop

29th October 2020

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Agenda

1:00 – 1:10 - Welcome and Introduction

1:10 – 1:15 - Funding Streams

- Feasibility Study, Pilot Project
- Single Stage
- Dual Stage

1:15 – 1:30 - Is my project in scope?

1:30 – 2:00 - How to prepare a strong application

- Ten Question – Guidance

2:00 – 2:15 - Q&A

2:15 – 2:20 - Break

2:20 – 2:40 - Project funding and eligible costs

2:40 – 2:50 - Application Process

2:50 – 3:10 - Q&A

3:10 - Wrap up & Close

Canada is an Advanced Manufacturing Nation

- NGen is the industry-led, not-for-profit organization that connects Canada's strengths.
 - Manufacturers
 - Technology providers
 - Government organizations
 - Research organizations
 - Academia



Canada is an Advanced Manufacturing Nation

Our Mission is to build world leading advanced manufacturing capabilities in Canada.

NGen measures success by the benefits it delivers to Canadians.

NGen aims to:

Develop world-leading technological capabilities in advanced manufacturing

Increase industry investment in innovation

Enhance value creation and economic growth

Connect and actively engage members of Canada's advanced manufacturing ecosystem

Contribute to the development of a skilled advanced manufacturing workforce; and

Improve the social well-being of Canadians

Canada is an Advanced Manufacturing Nation

NGen's goal is to add at least \$13.5 billion and 13,500 new jobs to Canada's economy by 2030

Expected Outcomes:

New domestic and international sales

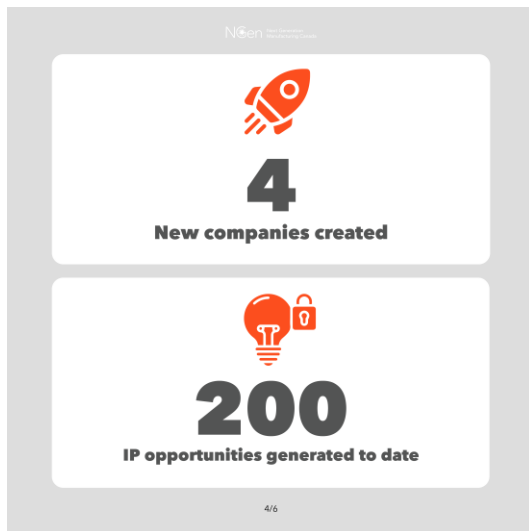
Jobs created

Companies created

New products, processes, and services

Intellectual property created

2019-2020 Year in Review



Project Case Study **EXERGY SOLUTIONS**

Exergy Solutions leads a consortium that includes Suncor Energy and Precision ADM Inc. The consortium is developing additive manufacturing solutions to reduce the environmental impact of oil sands industrial users. The project will develop new oil sands and mineral processing technologies aimed at reducing energy intensity and enhancing reliability, as well as cleantech to drastically reduce water usage and potentially eliminate tailings ponds.

- The project currently supports 24 jobs and anticipates creating 30 jobs over 5 years and 100 jobs over 10 years

“NGen funding allows for the involvement of local SMEs, and offers expansion opportunities for both Exergy and Precision ADM into the mining industry via Suncor. The project aims to deploy advanced additive manufacturing as a way for Canada to become a global technology leader in the industry.”

Exergy Solutions



Project Case Study
ARCELORMITTAL DOFASCO

The ArcelorMittal Dofasco-led consortium, including IBM Canada Ltd., Tenova Goodfellow Inc., and i-50 Canada, is creating a smart technology platform to digitally transform ArcelorMittal Dofasco's secondary ladle metallurgy facility.

This project brings together research and collaboration partners from: McMaster University, Mohawk College, University of Toronto, University of Windsor, Western University, National Research Council, Natural Resources Canada, Haltech Regional Innovation Centre, Mitacs and Prosensus.

"Collaboration is key to becoming a global leader in advanced manufacturing technology. NGen's funding support encouraged the inclusion of SME's and Canadian suppliers that may not otherwise have been included. The supercluster framework enabled collaboration between many partners to accelerate completion and meet the diverse technical needs of the project."

Roger Tang-Poy, Vice President Technology,
ArcelorMittal DofascoExergy Solutions



Photo by Stephen V

Funding Streams

Ngen: SME Funding Streams from \$50K - \$500K

Feasibility Studies	Cluster Building	Pilot Projects
Partnership of 2 or more SME's working to prove or demonstrate the technical or economic feasibility of an advanced manufacturing opportunity	Group of SMEs with geographical, industry or technical interests, collaborating to forming a mini-cluster to address shared challenges and opportunities for business growth	Partnership of 2 SME's working on a smaller scale advanced manufacturing project.
Funding at 50%	Funding at 50%	Funding at 50%
Total project size between \$50 to \$200k	Total project size up to \$150k	Total project size between \$100 to \$500k
400 words per question	400 words per question	400 words per question

Ngen: Funding Streams from \$500K - \$20m+

Major Projects Single stage	Major Projects Dual Stage
Partnership of at least 2 organizations with an advanced manufacturing project. Project must include 1 SME.	Partnership of at least 3 or with an advanced manufacturing project. Project must include 1 SME.
Funding at 44.4%	Funding at 44.4%
Total project size between \$500k to \$8m	Total project size between \$8m to \$20m+
900 words per question	Stage 1 - 900 words per question Stage 2 - 2500 words per question

Project Scope

It's all about... Advanced Manufacturing

Digital Technologies

High fidelity modeling, simulation and analysis, machine learning and AI for manufacturing processes, blockchain, innovative new sensing techniques, advanced vision systems

Advanced Robotics

Autonomous robotics, proximity to or collaboration with humans, improved manipulation, manufacturing flexibility or precision

New Industrial Platform Technologies

Data Engineering and Analytics, development of 3D printing technologies, the creation of new groundbreaking processes

It's the Cutting Edge

It's all about... Making Canada a global leader

Transformative,

Involving the development of Advanced Manufacturing capabilities with the potential to confer a significant global competitive advantage to Canadian industry.

Collaborative

Developing industry relationships including building trust and sharing in knowledge, risk, investment and the resulting benefits.

Projects must include at least 1 small and medium-sized enterprises (SMEs) and are encouraged to consider the inclusion of academic and research organizations.



It's all about... Making Canada a global leader

Enduring

Leaving a legacy in skills development, tools, testbeds, intellectual property, business knowledge for Canada's advanced manufacturing ecosystem beyond the partners and timeline of the project.

Applied

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



Projects Requirements

- All projects must demonstrate the development or application of an **Advanced Manufacturing** Technology or Process.
- Projects must demonstrate that they are **Collaborative, Transformative, Enduring and Applied**.
- All projects need to **demonstrate meaningful collaboration** with a minimum of three partners. NGen will consider projects with just two partners if total costs are under \$8 million.
- 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

Projects Requirements

- The total cost of projects should be between \$500K and \$20M, although projects above that range may be considered if they demonstrate transformative potential and significant additional benefits to Canada's advanced manufacturing ecosystem
- Capital expenditures over more than \$1 million must be pre-approved by the Government of Canada
- No single partner may receive more than 70 percent of reimbursed funding
- Project partners cannot also be a sub-contractor or consultant within the project

Projects out of Scope

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**
- Activities where **benefits accrue to a single firm** or organization
- Activities that could be viewed as **anti-competitive**
- Capital investment for production or for purposes not related to the research being conducted
- 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

Unsure if you are in Scope?

Still unsure if you are in scope e-mail: project@ngen.ca

How to prepare a strong application...

Project Guide V1 vs V2

There is a new and improved project guide coming out.

Are you looking for more detail in the application?

The guidance has been enhanced based on learning from **successfully funded** projects. This is help you provide the detail the assessors have been looking for.

Which one should I use?

If you have already passed the screening in Hockeystick then its your choice. Let your NGen contact know.

If you are before screening, we expect version 2 to be used, unless you have an almost complete offline version. Please register your project for screening ASAP and speak to your NGen contact.

Project Guide V1 vs V2

What is the opportunity the project addresses?

What is the overall project and risk management plan?

What is transformative about the project?

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

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

How will the results of the project be *exploited*?

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

What is the financial commitment required for the project?

What is the opportunity the project addresses?

What is the overall project and risk management plan?

What is transformative about the project?

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

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

How will the results of the project be *commercialized*?

What is the collaborative nature of the project including the partner skills and experience, to deliver the identified benefits?

What is the financial commitment required for the project?

Project Guide V1 vs V2

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

How does NGen add value to your project?

What is the impact on the **broader Advanced Manufacturing ecosystem?**

How does NGen add value and what additional benefits will be achieved including **social and environmental** benefits?

Tips and general principles

- Follow the guide to help support the development of the proposal.
- This new guidance is enhanced with more suggestions of how other projects have previously answered the questions.
- You do not have to apply all the suggestions for each question. Use the ones that are most relevant to your project.
- Consider the amount of funding being requested and the impact the project can have on leaving a legacy for Advanced Manufacturing in Canada.
- Every project is unique - therefore please include any other pertinent information not covered in this guidance.

Tips and general principles

Answer the questions.

- **This is not an exam.** The assessors however are only able to assess what is written in the application. To the best of your ability, try to address the relevant guidance provided for each question.
- Do not answer the questions in isolation. **Work with your partners** to understand all the benefits that might accrue from the project.

Tips and general principles

Benefits timescale

- Consider the benefits in the Short, Medium and Long-term.
- The benefits might not be fully realized for up to 10 years.
- These are best estimates as it's impossible to consider the external factors that might positively or negatively affect the end results.

NGen's goal is to add at least **\$13.5 billion** and **13,500** new jobs to Canada's economy **by 2030**

Tips and general principles

Plan the project with your partners.

- The business case, project plan and financials need to hang together with all your project partner info.
- Brainstorm the project benefits together and think about all the opportunities that the project might achieve. These will be differentiating factors in the assessment.

Quantify

- Where possible provide evidence for your statements. Do you have market analysis or survey information?
- Use credible sources. Don't quote Wikipedia.

Tips and general principles

Succinct answers

- Clearly articulate the answers to the questions. Assessors are looking for a straightforward case.
- Graphs, charts and tables are your friends. Use them for:
 - Market projections.
 - The economic case.
 - To provide a project governance or team structure.
- Avoid quoting the guidance back to the assessors or making general unquantified statements.
- What are the specifics relevant to your project?
- The word count limit is an indication of the expected level of detail.

The 10 Questions

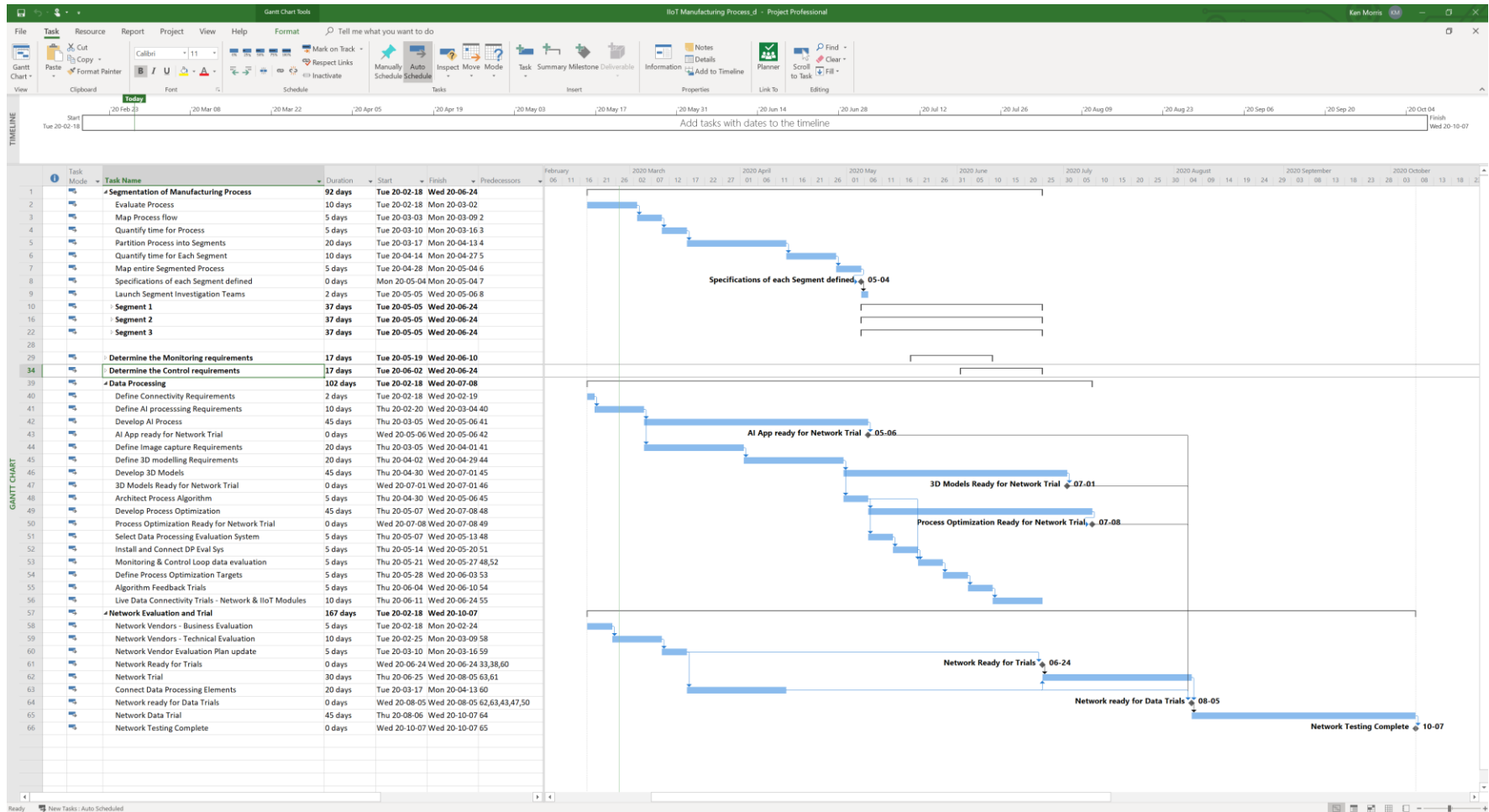
1. What is the opportunity the project addresses?

- Outline the **big-picture motivation** and the overall **advanced manufacturing objectives**, that the project intends to achieve.
- Provide an overview of the project considering both technology and business impacts, highlight other strategic benefits.
- 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 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?
- Clearly describe the project partners and how the partners will collaborate towards the overall opportunity.

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

- Describe the **Project and Risk Management approach**, 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 minimize risk.
- Describe how you are going to **measure the success** of the project.
- Summarize your overall project plan, including work-package descriptions and describe the key milestones and deliverables that show how the overall project will be achieved.
- Provide a Project Plan consisting of a **Gantt chart (Appendix 1)** that details the Work Packages, tasks, timelines, milestones, deliverables, dependencies and resource allocation for all partners.
- Describe the resource and management requirements for successful project completion, including how the work will be shared among project partners.

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



Mock-up plan - example only content is not relevant

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

YEAR: TASK	2020			2021						
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Work Group 1: Project Governance										
Project governance committee and reporting										
WP1:		1								
T1:										
T2:										
WP2:		2	3							
T1:										
T2:										
T3:										
T4 ...										
T5										
T6										
T7										
Work Group 2: Compliance										
WP1: Product and Compliance		4								
T1:										
T2:										
T3:										
T4 ...										
T5										
T6										
WP2:										
T1:										
T2:										
T3:										
Work Group 3: Process design										
WP1:					5	6				
T1:										
T2:										
T3:										
T4 ...										
T5										
T6										
WP2: Remote Mfg. Cell Development										
T1:										
T2:										
T3:										
T4 ...										
Work Group 4: Testing and certification										
WP1:										
T1:										
T2:										
WP2:										
T1:										
T2:										
Work Group 4: Pilot Production										
WP1:										
T1:							7		8	
T2:							x			
WP2:										
T1:							x			
T2:										

Mock-up plan - example only content is not relevant

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

WBS Legend and Reference Information			
WBS GANT Color Legend			
	Design / Development / Planning		
	Sample L/T or Preparation		
	Validation or Testing		
	Endurance or Scaled Testing		
X	Milestone		
Key Milestones Register			
	Milestone	Date (m/d/y)	Description
1			
2			
3			
4			
5			
6			
7			
8			

Description of WGs and WPs	Description of WGs and WPs
Work Group 1:	
WP1:	
WP2:	
Work Group 2:	
WP1:	
WP2:	
















WP and WG	Total cost	Partner activities and resource allocation
Work Group 1:	\$40k	Project lead - manages overall project management and governance
WP1:	\$10k	Partner 2
WP2:	\$30k	Lead and Partner 3
Work Group 2:	\$50k	Partner 2 takes the lead on all compliance activities
WP1:		Partner 3 supports the testing activities.
WP2:		
Work Group 3:	\$1m	Lead
WP1:	\$750k	Lead
WP2:	\$250k	All

Mock-up plan – example only content is not relevant

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

- Provide a comprehensive risk analysis including a **Risk Register (Appendix 2)** Identify the key risks within the project.
- Consider at least the: *Technical, Commercial, Managerial and Financial risks*
- Other risks to consider may include: *Resource, Intellectual Property, Freedom to Operate, Safety, Regulatory, Legal and Environmental risks.*
- Provide appropriate analyses of the **likelihood and impact** of each of the risks along with appropriate mitigation strategies.
- The assessors will be looking to see that **all the main risks are identified** and that there are sufficient risks within the project to warrant NGen funding and that these risks are appropriately controlled.

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

Risk Description			Inherent Risk			Risk Strategy	Risk Strategy	Action Owner
Ref	Type	Risk Event	Likelihood	Impact	Score			
1	Technical		1	8	 8	Avoid		
2	Technical		4	16	 64	Mitigate		
3	Technical		1	16	 16	Accept & Control		
4	Technical		1	16	 8	Avoid		
5	Program		1	16	 16	Mitigate		
6	Program		1	16	 16	Mitigate		
7	Program		1	16	 16	Mitigate		
8	IP		1	16	 16	Mitigate		
9	IP		1	16	 16	Mitigate		
10	IP		1	16	 16	Mitigate		
11	Safety		1	16	 16	Mitigate		
12	Safety		1	16	 16	Mitigate		
13	Safety		1	16	 16	Avoid		
14	Safety		1	16	 16	Avoid		
15	Commercial		1	16	 16	Avoid		

Risk type Examples		Likelihood	Impact	Strategies
Technical	Safety	1	1	Avoid
Commercial	Legal	2	2	Transfer
Program	Managerial	3	4	Mitigate
Financial	Environmental	4	8	Accept & Control
IP	Political	5	16	
Resource				

Mock-up plan – example only content is not relevant

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

Risk Description			Inherent Risk			Risk Strategy	Risk Strategy	Action Owner
Ref	Type	Risk Event	Likelihood	Impact	Score			
1	Technical		High	High	High	Avoid		
2	Program		High	Medium	High	Mitigate		
3	Commercial		Medium	Medium	Medium	Accept & Control		
4	P		Medium	Low	Medium	Avoid		
5	Resource		Low	Low	Low	Mitigate		
19								
20								

Probability Impact
 Low Low
 Medium Medium
 High High

How many risks to show?

- A reasonable spread of risks is recommended from each of the main categories.
- There is no magic number as the size and complexity of each project is different.
- Showing risk and how it is managed will demonstrate the ability to execute and also helps build the case for Question 7. Why do you need the funding.

Mock-up plan – example only content is not relevant

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

OR consider residual risk

Risk Description			Inherent Risk			Risk Strategy	Action Owner	Mitigated Risk			Contingency Plan
Ref	Type	Risk Event	Likelihood	Impact	Score			Likelihood	Impact	Score	
1	Technical	The final system does not have the reliability required for 72 hour lights out operation and cannot be achieved with the system that is designed within this project timeframe.	4	8	32	Mitigate	Lead Partner	2	8	16	Depending on how this technical risk evolves, if the proposed risk strategy does not work and the system is not meeting technical goals, an alternative solution could be to invest in redundancy although this comes with performance costs in other areas.

- Content is important - don't leave any elephants in the room where the assessors would wonder if you really understood the size, complexity and risk involved in the undertaking.
- Consider writing your risk statements so they can be understood in terms of what is the element that is uncertain, what is the cause and what the effect would be.

Mock-up plan – example only content is not relevant

3. *What is transformative about the project?*

- 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.
- 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.

3. *What is transformative about the project?*

- Identify the extent to which the project is transformative and innovative both **technically and/or commercially**. Explain how the project has the potential to transform or support the transformation of each partner organization. **Provide evidence** for these statements.
- This could include the results of:
 - patent searches,
 - competitor analyses,
 - literature surveys.
- If applicable, you should also outline your own background intellectual property rights, as related to the project.

3. *What is transformative about the project?*

- 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?

3. What is transformative about the project?

- If appropriate 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.
- Are the technologies new or are you looking to apply existing technologies to new sectors areas?

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

- Describe the market(s) that you are entering with the development of a **new Advanced Technology** OR Describe the **existing market that you are operating** within and how this Advanced Manufacturing opportunity will enhance your competitive position within the market.
- Consider including details of:
 - the target market, including the size, margins, market leaders, key competitors, price competition, barriers to entry
 - adjacent markets where the new knowledge could be commercialized

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

- Consider including details of:
 - **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 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.

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 economic benefits the project will have, both for participating **project partners** and **other suppliers / partners** both inside and outside of the project.
- Consider the impact in the **short** (1-3 years), **medium** (4-7 years) and **long-term** (8-10 years).
- For each of the project partners (and appropriate suppliers) provide an analysis of:
 - the expected **additional revenue** that can be generated.
 - the number of **direct jobs** created and safeguarded.
 - the number of **indirect jobs** that can be created within the Supply chain
 - expected exports
 - economic impact of new market opportunities or new expanded value chain opportunities

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

- Quantify any **indirect economic benefits** that might be achieved.
- Examples might include the potential cost savings associated with:
 - Reduced downtime
 - A reduce manufacturing footprint
 - Positive environmental benefits
 - Reduced material usage
 - Higher quality output
 - Reduced scrap and warranty.
- Outline **the benefits each partner** will see, **and over what timescale**.
- How does the partnership help each individual partner to achieve greater economic growth?

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

- Define the economic benefits that the project can have on the whole Canadian **Supply Network upstream and downstream**.
- Will the project enable more **localized supply** of material or components? What are the spill over economic benefits that this might achieve?
- Will the project **create spin-off business opportunities** (new businesses, new or expanded supplier or partner relationships) in Canada?

6. What is the impact on the broader Advanced Manufacturing ecosystem?

- Broader Ecosystem - Leaving a legacy in Advanced Manufacturing.
- Projects must demonstrate 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, 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).

6. What is the impact on the broader Advanced Manufacturing ecosystem?

- To highlight this, consider some of the following:
 - Workforce Development:
 - How will the project encourage the **engagement of women and under-represented groups** in the workforce?
 - Outline the opportunities for **attracting**, training and developing a **highly skilled talent pool** (both existing and new staff).

6. What is the impact on the broader Advanced Manufacturing ecosystem?

- To highlight this, consider some of the following:
 - Industry knowledge:
 - Will the project serve as a **model or learning platform** in Advanced Manufacturing for others? For example, providing tours, or use cases on best practise.
 - Will the project generate **intellectual property** that can be **used by others** to accelerate technology applications or scale-up of manufacturing in Canada?
 - Will the project **influence** the activities of **colleges, universities and/or research institutes** to support the education of **Advanced Manufacturing** resulting in the diffusion of this knowledge back into Industry?

6. What is the impact on the broader Advanced Manufacturing ecosystem?

- To highlight this, consider some of the following:
 - 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?

6. What is the impact on the broader Advanced Manufacturing ecosystem?

- To highlight this, consider some of the following:
 - Collaborative Networks:
 - Will the project further enhance the ability of industry partners, post-secondary education institutions, research centres, and other private and public organizations **to work together** to strengthen Advanced Manufacturing in Canada?
 - Describe how the project could build greater capacity / provide opportunities and capabilities in the **support of Small and Medium Enterprises**.

Other Advanced Manufacturing Ecosystem Benefits?

7. How does NGen add value and what additional benefits will be achieved including social and environmental benefits?

- Provide evidence that NGen support is essential to achieve the project goals. Questions to consider:
 - How has the project technical or commercial **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?
 - Is the project too risky for commercial investors?

7. How does NGen add value and what additional benefits will be achieved including social and environmental benefits?

- Describe the **Social** and **Environmental benefits** that this project enables for each partner.
- **Social Benefits**
- Describe any expected 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/exclusion
 - Public empowerment
 - Health and safety

7. How does NGen add value and what additional benefits will be achieved including social and environmental benefits?

- Environmental Benefits

- Clearly outline the environmental improvements and impacts as an outcome of this project?

Consider:

- GHG, Particulate matter reduction
- Process and Resource Efficiency
- Better Energy Management
- Reduced Volatile Organic Compounds
- Reduced land degradation
- Reduced water usage
- Footprint Reduction
- Reduced emissions due more efficient and optimized transportation and distribution within the supply chain
- Use or Creation of Sustainable Materials
- Reuse, Recycle, and Remanufacturing
- Other Life cycle benefits
- Other sustainability opportunities

- Describe **any other benefits** that might be achieved as a result of this project. (Regulatory, certification, standards development, regional and policy benefits etc).

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

- The response should highlight the new potential business opportunities for each partner **in collaboration** and **individually**.
- Outline the commercial spill over opportunities, demonstrating how your activities will contribute to the **wider industry and other sectors**.
- For each partner describe the activities that will be undertaken to ensure the sustainability and continued growth of the project outcomes beyond the project end date.
- Including:
 - the expected project outputs that will be commercialized - including new or improved products, services, processes, capabilities, and manufacturing technologies.

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

- Including (continued):
 - **the route to market** – what commercialization channels will you exploit to gain customer traction, if possible, identify specific channels being targeted and the timeframe.
 - an outline of the measures for protection, exploitation and dissemination of the project outcomes
 - **other market opportunities** (considering adjacent markets) that will emerge as a result of this project?

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

- Including (continued):
 - opportunities to **commercialize the Intellectual Property**, include licence to manufacture, licensing of IP, manufacturing or direct sales (IP Strategy Appendix 4)
 - the plan and rationale for the **protection of IP** and **sharing of IP** among your consortium partners and, **beyond this, with other NGen members**. Including a patent filing strategy for domestic and foreign jurisdictions, changes to business models or processes, research and development (R&D), manufacturing services (IP Strategy Appendix 4)

9. What is the collaborative nature of the project including the partner skills and experience, to deliver the identified benefits?

- 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
 - increase knowledge sharing
- Describe any additional collaborative activities related to suppliers, sub-contractors, academic or research organizations involved in the project.
- Consider using the IP Strategy (Appendix 4) to demonstrate the nature of the collaboration in terms of the licensing and access to background and foreground IP during and after the project.

9. What is the collaborative nature of the project including the partner skills and experience, 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 commercialize the technology.
- Consider whether:
 - the project team has the right available **mix of skills and experience** to deliver the project successfully. Provide a description of the partners track record in achieving similar manufacturing R&D projects.
 - appropriate **governance structures** between the consortium partners are in place to manage and deliver the project, consider providing a high-level 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/or infrastructure in order for the project to be successful (consider floor space, specialized equipment needs, specialist resources etc.)

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 workbooks.
- Supporting information and explanation for project costs should be provided in this section. For each partner explain how the funding will be used and why it is required for each of the main cost categories in the finance workbook (Labor, Subcontract, Equipment, Materials, Travel and Other eligible costs).
- Provide a breakdown of the costs per work package, showing how it aligns with the project plan.

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

- In evaluating the project, the assessors will consider the following questions:
 - has a **realistic budget** breakdown been provided 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?
 - have the costed **work package breakdowns** been described and **justified adequately**?
- Ensure that all key points relating to the finances are described. For example:
 - the reason for, and use of, subcontractors, their impact on the project, and why they are not formal project partners.
 - a justification for any pieces of capital equipment exceeding \$1M (NB: these costs require Ministerial approval).

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

- Please describe other **private sector co-investment/financial** contributions that this project will attract in the short, medium and long-term, identifying any future planned follow on funding.
- Please **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.
- 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.

Intellectual Property Strategy

- The Supercluster program puts a focus/importance on Intellectual Property
- A **Project IP Strategy is a requirement** for every project
- IP Strategy Deep Dive **Workshop on November 17th** <https://www.ngen.ca/events>
- In the meantime review the following documents: <https://www.ngen.ca/project-guides>
 - NGen Intellectual Property Strategy – highlights the overall “rules” around IP
 - Project IP Strategy Guide for Applicants and the Project IP Strategy Template Tables
- Busting myths about Superclusters and IP- found in the news section of our website - <https://www.ngen.ca/blog/busting-myths-about-superclusters-and-ip>
- Access the Expert series on IP - Peter Milne, Partner, Gowling WLG and Rhonda O'Keefe, IP Manager, NGen <https://www.ngen.ca/events> (Archived Events)

Summary and Final Tips

- Answer the questions.
- Quantify answers.
- Provide succinct answers.
- Plan the project with your partners.

Second pair of eyes

- When you have a draft, ask someone that understands how to write a business case and project plans, that has not been involved in the project to read the 10 questions along-side the guidance to determine if a fresh pair of eyes picks up on the same points as the project team preparing the proposal.

Agenda

1:00 – 1:10 - Welcome and Introduction

1:10 – 1:15 - Funding Streams

- Feasibility Study, Pilot Project
- Single Stage
- Dual Stage

1:15 – 1:30 - Is my project in scope?

1:30 – 2:00 - How to prepare a strong application

- Ten Question – Guidance

2:00 – 2:15 - Q&A

2:15 – 2:20 - Break

2:20 – 2:40 - Project funding and eligible costs

2:40 – 2:50 - Application Process

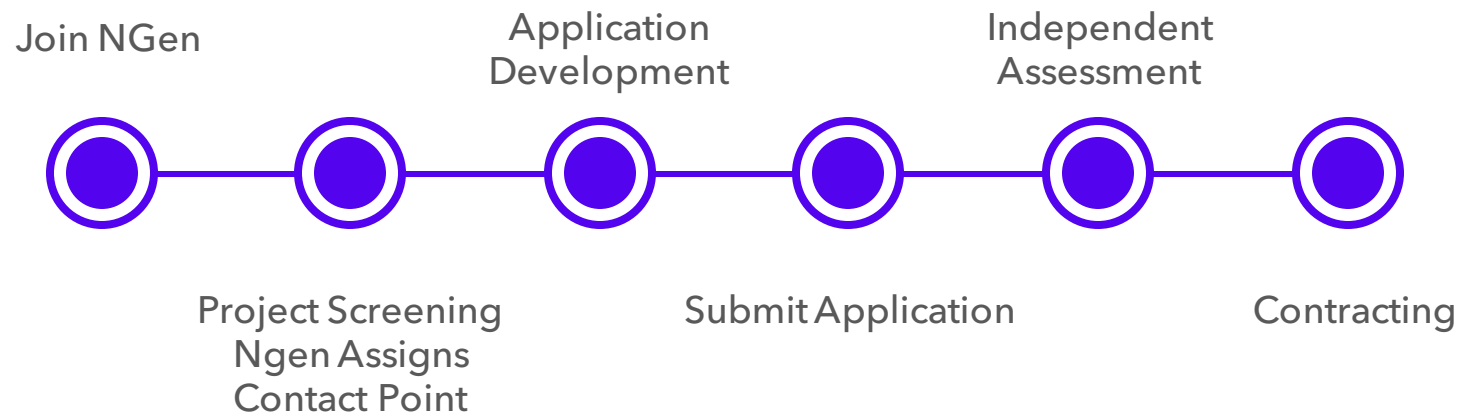
2:50 – 3:10 - Q&A

3:10 - Wrap up & Close

Project funding and eligibility rules...

Application process...

Project Application Process



Join NGen

<https://www.ngen.ca/join>

← → ↻ ngen.ca/join 🔍 ☆

SEARCH Member Login

NGen Next Generation Manufacturing Canada About COVID-19 Projects Members News Resource Centre [Become a Member](#) FR

Join the Supercluster.

Organization

- Companies in advanced manufacturing
- Government agencies
- Educational institutions
- Industry groups

[Become a Member](#)

Individual

- Researchers and industry experts seeking opportunities in advanced manufacturing.

[Become a Member](#)

Become a member of the NGen database to participate in Supercluster projects, find partners and customers, and access NGen services. **Membership is free.**

Next Generation Manufacturing Canada

Project page


Go to the project page on the member site once logged in Super Cluster Projects

Click Project Applications

NGen
Next Generation Manufacturing Canada

COVID-19 Supercluster Search Supercluster Projects Got an idea? Hello, John Laughlin ▾

Supercluster Projects

 Projects \$1M - \$5M
Supercluster funding will help companies develop manufacturing-related technologies and bring them to market.

Project Guides Project Applications

Note:

- This is not the NGen public site, this is the member site.
- Only Organizational members can access the Applications. Individual Members cannot.
- You will be redirected to a Hockeystick site. Hockeystick is the host of the NGen application portal
- The Projects \$1-5m needs to be updated to \$500k - \$8m

Next Generation Manufacturing Canada

HockeyStick application portal

Please login with the
NGen member login
username and password

The screenshot shows the HockeyStick application portal login page. The page has a dark blue background. At the top, there is a navigation bar with the HockeyStick logo on the left and links for Products, About, Insights, and Login on the right. The Login link is highlighted in a lighter blue. In the center of the page, there is a login form with the title 'Login'. To the right of the title is a link that says 'Click here for HockeyStick Apps'. The form contains two input fields: 'EMAIL' and 'PASSWORD'. Below these fields is a blue 'Login' button. At the bottom of the form is a link that says 'Forgot Password?'. At the bottom of the page, there is a footer with five columns of links: PRODUCTS (HockeyStick Pro, Portal), COMPANY (About Us, Partners, Security, Press & Media, Blog, Careers), SUPPORT (Contact Us, Help), LEGAL (Open Database License, Terms of Service, Privacy Policy, Release Notes, Data Processing Agreement, Login by Cleartech), and COMMUNITY (LinkedIn, Facebook, Twitter). The footer also includes a copyright notice: 'Copyright 2022 HockeyStick.ca Inc.'

Next Generation Manufacturing Canada

Complete the Initial Application Details

Project title, projected start date, project duration (can be estimates), applicant and partner details etc.

Note:

You can save the application at any time, as a Draft and go back to complete it at a later time.

Client Profile / Add new client

Application Details

Print Page

Project Disclaimer: NGen will make every reasonable effort to maintain your information as confidential, however please be advised that any information you share with NGen through the application screening may be shared with the Ministry of Innovation, Science, and Economic Development and other provincial and federal government funding institutions. By submitting information to NGen you accept this.

Project Details

* Project Title

* Project Start Date

* Total Project Cost

Select...

* Primary Project Location

* Project Duration (in months)

Project Number

Public Project Description

* Brief summary of the purpose and objective of your project. Read the Application Guide for more information.

* Is this a greenfield project (creates new IP and does not leverage existing IP)?

☐ Yes ☐ No

* Would this project be first of its kind in Canada?

☐ Yes ☐ No

NGen Investment Value

* Would you undertake this project without NGen investment?

☐ Yes ☐ No

Project Lead Details

Eligibility Rules Confirmation

* Applicants for COVID-19 Response funding must meet all of the following criteria: All project participants have signed up for NGen membership. All project partners have read the eligibility checklist on the NGen members site. All project partners have read the project requirements on the NGen members site.

☐ Confirm

Lead Company Details

* Legal name:

CRA Business Number:

Registered Business Address:

Year's Incorporated in Canada:

Major Sectors:

Website:

Employees:

Project Contact Details

* Project Contact First Name

* Project Contact Last Name

* Project Contact Email

* Project Contact Title

Finance Contact Details

* Finance Contact First Name

* Finance Contact Email

Collaboration Partner Details (if applicable)

Project Partners in Addition to Lead Applicant

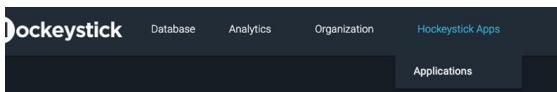
Organizations

Legal Name	CRA Business Number	Registered Business Address	Financial Contact Name	Financial Contact Email	Financial Contact Phone
<input type="text"/>					
<input type="button" value="Add Organization Partner"/>					

Individuals

Member Name	Member Address
<input type="text"/>	<input type="text"/>
<input type="button" value="Delete"/>	
<input type="button" value="Add Individual Partner"/>	

To go back into your Project: Log back into
Hockeystick: <https://www.hockeystick.co/applications>



Select Hockeystick apps & then Applications.

A screenshot of a web form for an application. The form is divided into several horizontal sections, each with a title: 'Project Lead Details', 'Collaboration Partner Details (if applicable)', 'Project Financial Due Diligence', 'Project Financial Details', 'Project Application Questions', 'Project Documents', and 'Contract Documents'. Each section appears to have a dropdown arrow on its right side. At the bottom of the form, there are two buttons: a green 'Edit' button and a white 'Go Back' button with a grey border.

Each section has a drop down and as you move through the process more drop downs will appear.

You can save the application at any time, to start to add information you need to click the edit button when you go back in.

Project Financial Due Diligence

* NGen will undertake a financial assessment of each participating member to ensure they can support their commitment to the project. NGen will require each participating member to provide their total contribution value (broken out by cash vs. in-kind), legal business name and address, CRA Business Number, last two years of audited financial statements, published credit rating (where applicable), and consent to an Equifax credit check. This must be completed before applicants submit an Initial Application.

☐ Verify all participating members agree to NGen's financial due diligence

Provide consent
for NGen to
conduct financial
due diligence

Complete Project
financials

Complete and sign
the Application
Agreement and
upload here.

Application
template can be
found here.
<https://www.ngen.ca/project-guides>

Project Financial Details

* Capital expenditure > 1 million?
☐ Yes ☐ No

* Other public funding aligned to this project?
☐ Yes ☐ No

☐ Agree to the project submission terms and conditions.

* Signed Application Agreement (with Terms and Conditions)

Project Financials By Partner

Project Financials

Company	Cash Contribution (\$)	Contribution In-Kind (\$)	Funding Sought From Ngen (\$)	Funding From Other Programs (\$)	Total Project Cost by Partner (\$)	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="Delete"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="Delete"/>
Total Project Cost	0	0	0	0	0	
Cost Ratios						

Financial Workbook (see the Application Guide to download workbook)

Note:

The application agreement is essential before assessment as it provide NGen the authority to share your application with the independent assessors.

Finance workbooks should be uploaded on this screen. However they are not expected at the project screening phase.

Cancel

Save Draft Submit Application



- Once complete and the files uploaded. Click submit screening application and it will go to the NGen team for Screening.

Submitting for screening is not submitting an application for funding.

- The screening allows NGen to identify any projects that do not meet the NGen Project Scope so that the issues can either be resolved or the applicant can withdraw without putting time and effort into the full application.
- Following a notification of successful screening, NGen finance will begin a Financial Due Diligence (FDD) check.
- If there are any issues or concerns at this stage, you will be contacted by NGen Finance team.

Note:

The screenshot displays a web application interface with a vertical list of sections on the left and a row of navigation buttons at the bottom. The sections are: Project Lead Details, Collaboration Partner Details, Project Financial Due Diligence, Project Financial Details, Project Additional Information, Project Application Questions, and Project Documents. The navigation buttons include 'Edit' (green), 'Go Back', 'Previous Application', 'Next Application', 'Save Draft' (green), and 'Submit Application' (orange). An orange arrow points from the 'Save Draft' button to a text box on the right.

Project Lead Details
Collaboration Partner Details
Project Financial Due Diligence
Project Financial Details
Project Additional Information
Project Application Questions
Project Documents

Edit Go Back Previous Application Next Application Save Draft Submit Application

- Once screening and FDD is complete.
- The applicant can now complete the 10 questions (Project Application Questions) in the portal.

Please **"Save Draft"** and not **"Submit Application"** while you are still working on your application. Once you are complete and all your final documents uploaded, you **"Submit Application"**.

Project Documents

Project Lead Details

Collaboration Partner Details

Project Financial Due Diligence

Project Financial Details

Project Additional Information

Project Application Questions

Project Documents

Edit

Go Back

Previous Application

Next Application

Five (5) appendices

1. Project Plan (DOC or XLS or MPP)
2. Risk Register (DOC or XLS)
3. Question Appendix (DOC or PDF) - If needed
4. IP Strategy Strategy (DOC or PDF)
5. Financial Workbooks – one for each partner

Independent Assessment

- 5 expert assessors separately, anonymously and independently score projects before the assessment panel meets to discuss the highest scoring proposals.
- Assessors are screened for conflict of interest, are under NDA and do not represent a particular organization.
- Assessors conduct an evaluation in three parts:
 1. Scope Gateway - Is the project in scope for NGen Funding?
 2. Overall recommendation Gateway - based on the information presented, would you recommend the project for funding?
 3. Assess and score 10 Evaluation questions - 10 marks per question application; scored out of 100 marks.
- The assessment will only be based on the information contained within the application.
- Links to websites are not permitted within the applications. If the information is important it should be incorporated into the application and with an appropriate source reference.



You're Approved!

Consortium and NGen sign a
Master Project Agreement.



We Kick-off the project

Q&A

Thank You!

NGen Next Generation
Manufacturing Canada

Canada's Advanced Manufacturing Supercluster

John.Laughlin@ngen.ca

|

project@ngen.ca