2.21 FI Innovations – Industry 4.0 HERE WE COME

Evaluation, Cover Sheet and Decision Form

Project:	**FI Innovations – Industry 4.0 HERE WE COME**	**FOR:**	**Approval**
Applicant:	FI Innovations Limited	**PDU ID:**	Commercial Information
Application type:	PGF	**(A) Total Project Value:**	$Commercial Informa
Funding type:	Grant	**(B) PGF Funding Sought:**	$370,000
Entity Type:	**Company**	**(C) PGF Funding Recommended:**	$370,000
Region:	**Southland**	**(D) Applicant Contribution:**	$Commercial Informa (cash)
Tier:	**2 - Sectors**	**(D/A) Co-contribution Rate:**	Comm%
Sector:	Manufacturing/ Engineering		
Application summary:	FI Innovations is a company based in Invercargill since 2002, specialising in fibreglass, flooring and flexible urethane. They provide innovative solutions for their clients such as high-tech carbon fibre jet boat interiors. The applicant has clients throughout New Zealand and Australia with a diverse range of products from custom manufacturing to in-house 3D design services. The applicant seeks the financial support for two pieces of advanced 3D equipment in order to increase their productivity and meet customer demands in a more innovative and timely manner. The two pieces of equipment required are: 1. Selective Laser Sintering (SLS) 3D printer 2. High-resolution portable 3D scanner This investment would also enable the applicant to set up a dedicated 3D design and manufacturing facility within their workshop. The equipment could be used by local manufacturers to develop new products and by Southern Institute of Technology (SIT) students for training and research purposes.		

It is recommended that SROs:

a) **Agree** to approve up to $370,000 for a grant from the PGF towards the purchase of two specific pieces of engineering equipment because:

- it aligns with the PGF objectives in regard to uplift in productivity, enhanced economic opportunities, more highly-skilled jobs/apprenticeships (Com FTE) and resilient communities
- it will enable local firms and the Southern Institute of Technology to develop new products using the new equipment
- it aligns with the Southland and Otago Regional Engineering Collective objectives to build the capability and capacity of Southland and Otago manufacturing and engineering firms

Subject to:

- The applicant maintaining alignment to the Southland and Otago Regional Engineering Collective (SOREC) objectives evidenced by the continued reporting to the Ministry on its outcomes

- Satisfactory financial analysis.

b) **Note** this funding request is part of the agreed PGF allocation for the Southland and Otago Regional Engineering Collective, in which 8 projects have already been approved by SROs for grant funding.

Section A: Triage – Assessment against PGF eligibility criteria

Is the project:	
➢ an illegal activity?	No
➢ located in the three main metropolitan areas?	No
➢ seeking investment in large scale infrastructure of social assets?	No
➢ three waters	No

Application description

The applicant seeks financial support for two pieces of 3D equipment to help bring more of the process in establishing its outputs in-house. The two pieces of equipment the applicant requires are:

Item	**Cost (excluding GST)**
Selective Laser Sintering 3D printer	$[redacted]
3D scanner	$[redacted]
Total	**$[redacted] (of which PDU recommends funding [redacted]% - $[redacted])**

PGF funding will enable the applicant to increase its productivity and meet the customer demands in a timelier manner. The equipment sought not only contributes to the growth of the applicant, but the Southland Engineering sector as a whole as well as those industries the applicant supports, services, and maintains. An advanced 3D printing hub would assist local businesses in rapid prototyping without long lead times or at a high cost. This hub will accelerate 3D creativity and further unlock innovation in Southland.

Detail of the equipment and the benefits to the company are as follows:

1. Selective Laser Sintering 3D printer - 3D Systems 'ProX SLS6100'
Capable of producing accurate, cost-effective prototypes or end use production parts from high grade materials. Being in-house means that local businesses will enjoy quicker communication during the development phase and reduced lead times and transport costs for manufacture.

2. 3D Scanner - HandySCAN Black Elite
The portable 3D scanner allows technical dimensions and complex shapes to be quickly and accurately recorded. Immediate uses include shape capture (e.g. prosthetics) and reverse engineering (e.g. scanning existing mechanical parts for repair or re-manufacture). These processes are possible using traditional techniques but they are labour-intensive, inaccurate and/or invasive.

Co-Funding Table

Co-Funder	**Pledged/Confirmed/Cash/In-Kind**	**Amount**
FI Innovations Ltd	Cash	$[redacted]

Total		$Commercial Informa

Additive Manufacturing – an advanced 3D printing hub in Invercargill

Traditionally there has been slow uptake across the manufacturing and engineering sector for digital innovations. This hub would support local businesses to move into the 3D space by providing open access to the above equipment. The applicant is not aware of these machines being available for open use in Otago or Southland.

The applicant has been working with Southern Institute of Technology (SIT) on how it can make this equipment available to students and staff. The applicant intends to form an agreement for an 'open source' arrangement.

Southland and Otago Regional Engineering Collective

The Engineering and Manufacturing sector has been identified by the RED Ministers as a key sector for PGF investment. Linked to this is the identification that Otago and Southland are two regions which possess a high number of firms in this sector.

Through previous funding provided by the PGF, an analysis was undertaken by Commercial Inform to identify the 'pain points' currently being faced by engineering and manufacturing firms in Otago and Southland. From this, a document outlining the steps to addressing the perceived issues was developed titled the 'Southland and Otago Regional Engineering Collective'. The applicant was approached as part of the analysis, and now has the opportunity with the support of the PGF to address its current challenges, specifically around its ability to meet demand, and provide good employment options for high to low skilled employees and apprentices.

Please note that in August SRO's approved Com Otago projects as part of the Engineering package and this coversheet should be read alongside the other Comm related SOREC projects from Southland.

Overseas Investment Office	
➢ Is the application being made by a non-New Zealand based legal entity? (Foreign investment laws may apply and the Overseas Investment Office consulted)	No

Section B: Operational Assessment Criteria (Complete for EoIs and Applications)
(Rate and comment – 1= poor, 5 = very good - Provide the number for this project, not subsequent phases)

Fund and government outcomes		Please highlight number below
Would the project:		
➢ create permanent jobs?	The applicant currently has Comm people working for it in Invercargill. Funding would enable Comm new sustainable jobs and C jobs during the construction and installation. Jobs created include highly skilled to apprentice level.	N/A 1 2 **3** 4 5
➢ deliver community benefits?	Indirectly, the creation of new sustainable roles will have flow on effects to the local community.	N/A 1 **3** 4 5
➢ increase utilisation of and returns on Maori assets?	Not evident.	**N/A** 1 2 3 4 5
➢ enhance the sustainability of natural assets?	Not evident.	**N/A** 1 2 3 4 5
➢ mitigate climate change effects, or assist with the	Not evident.	**N/A** 1 2 3 4 5

lowering of emissions?		
Additionality		
Would the project:		
➢ add value by building on what is already there, without duplicating effort?	Engineering and Manufacturing is a strong sector in Southland which has been constrained due to the inability for companies to meet the demands through the lack of efficient equipment and a lack of access to 3D machinery for innovation.	N/A 1 2 **3** 4 5
➢ be a catalyst for productivity potential in the region?	With the purchase of the new equipment, the applicant will be able to increase productivity as it will have the equipment it needs to accelerate the production and output required to meet the demands of its customers. A 3D hub would also introduce 3D innovation to a range of Southland companies.	N/A 1 2 3 **4** 5
Connected to regional stakeholders and frameworks		
Does the project:		
➢ align with regional priorities, such as frameworks, or regional plans?	The applicant aligns with the objectives of the Southland and Otago Regional Engineering Collective (SOREC). SOREC is the incubator for building the capability and capacity of the Southland and Otago manufacturing engineering Firms. SOREC will grow the region by increasing collaboration to successfully compete for new work, adopt new technologies or methodologies, and increase the calibre and number of regional apprentices.	N/A 1 2 **3** 4 5
➢ have the support of local governance groups (councils, iwi and hapu)?	This project broadly aligns with Southland's goal of '10,000 more people by 2025' in their Southland Regional Development Strategy. The project fits with several of their objectives around developing innovative business environments, removing obstacles to doing business in Southland, and developing new industries in Southland.	N/A 1 **2** 3 4 5
Governance, risk and project execution		
Does the application show:		
➢ robust project management and governance systems?	The applicant will oversee the installation of the equipment and procurement of the relevant staff to join the company. The two Directors have overseen the procurement of new pieces of equipment previously. Great South (previously Venture Southland) is supportive of the proposal and has indicated its willingness to help guide and develop the hub. Risks are identified and mitigated appropriately.	N/A 1 2 **3** 4 5

➢ plans for future ownership and operational management?	Existing arrangements.	**N/A 1 2 3 4 5**
➢ how the project will be delivered and managed?	Plans and personnel are in place to deliver the project.	**N/A 1 2 3 4 5**
Complete assessment and undertake due diligence?	☒ **Yes**. *Complete the Evaluation/ Recommendation form and submit DD request form.* ☐ **No**. *Complete the front page of this form, recommending the application be declined.* **Note:** Due Diligence has been undertaken and nothing of note was found.	

Section C: Risk Management Evaluation			
Does this application demonstrate consideration of the following risks?			**Yes**
Type of risk	**Risk description**	**Mitigations**	**Risk Rating**
Duplication	PGF funding may lead to the applicant purchasing equipment that competes directly with another engineering firm.	The PDU has sought assurance the new equipment will not adversely affect other firms, at times checking with those other firms. We will also seek a written statement from the applicant where this confirmation wasn't explicit in the application.	Medium
Resource	The ability for the company to find employees to fill the roles may delay the productivity potential of the applicant.	While still in its infancy, SOREC will aim to work with engineering firms to understand the current employee shortages, and then work with tertiary educators, employment agencies, and social development agencies to fill the employment gaps.	Medium
Buy-in	Local businesses do not buy into the 3D printing hub, leading to little innovation.	The applicant will need to work with Great South and SIT to further develop this hub to ensure success.	Medium

Section D: Funding and financial analysis		Please highlight number below
Does the application show:		The PDU is still awaiting financial documents
➢ How strong is the financial position of the applicant organisation?		**N/A 1 2 3 4 5**
➢ How does the scale of the project compare to their overall business?		**N/A 1 2 3 4 5**
➢ Why is Crown funding being sought rather than commercially-available funding?		**N/A 1 2 3 4 5**
➢ What does the independent financial analysis/ business case indicate?		**N/A 1 2 3 4 5**
➢ Is the funding model requested appropriate? Is the PDU recommending a different model?		**N/A 1 2 3 4 5**
➢ Has the applicant provided evidence of market pull for this project?		**N/A 1 2 3 4 5**
➢ Has the applicant provided evidence that their supply chain is secure?		**N/A 1 2 3 4 5**
Summary of funding and financial analysis:		**N/A 1 2 3 4 5**

Funding arrangements

Suggest a grant of up to $370,000 from the PGF fund towards the purchase of two specific pieces of engineering equipment.

Proposed deliverables include:

#	Deliverable	Due Date	Associated Payment (ex-GST)
1	Funding Agreement executed and any pre-conditions are met or waived	Commercial Information	Commercial Information
2	Equipment Piece One [SLS6100 3D Printer] installed and operational		
3	Equipment Piece Two [3D Scanner] installed and operational		
3	Quarterly report 1 of 4 submitted		
5	Quarterly report 2 of 4 submitted		
6	Quarterly report 3 of 4 submitted		
7	Quarterly report 4 of 4 submitted		
8	Final Report submitted		
		Total	$370,000

Consultation from partner agencies undertaken or implications

MFAT note that "Provided:

a. the funding is not contingent on export performance or the use of domestic over imported inputs; and
b. firms receiving PGF funding sell to other NZ firms at normal commercial prices.

Then MFAT has no material concerns from an international obligations perspective."

Summary statement of Peer Review undertaken

The following Peer Review has taken place in connection with this application:

All applications are discussed between the Regions Team and Investment Team during the assessment process and prior to submission to SROs / IAP.

Consultation with the relevant partner agencies has occurred allowing them to provide any relevant technical advice with any feedback included verbatim within this application form.

In the development of this form:

i. A peer review by an Investment Director has taken place and included the following to the satisfaction of the peer reviewer:
   a. An evaluation against the PGF criteria;
   b. Financial analysis;
   c. A risk assessment, highlighting any relevant or key risks;
   d. Conflicts of interest have been noted and accepted

   and the peer reviewer concurs with the recommendation proposed.
ii. The Head of Investment has reviewed this recommendation.
iii. This application has been reviewed by the PDU SLT.

Peer Review has been completed	Yes

Supporting proposal:	Yes
Appendices:	Yes – application is attached
Author of paper:	HW, Senior Investment Analyst, PDU Investment Team PS, Investment Director, PDU Investment Team