PROVINCIAL DEVELOPMENT UNIT
New Zealand Government

2.25 PETRIDISH MAKERSPACE PROJECT – ENGINEERING MACHINERY

PGF Express Application		For: Approval	
Applicant:	Petridish Limited	**Pipedrive ID #**	Commercia
Entity Type:	Company	**PGF Funding Sought:**	$ (PGF recommends $240,000)
Region	**Otago**	**Total Project Value:**	$Commercial Inform
Tier:	**2 - Sectors**	**Co-contribution:**	$Commercial Inform (Comm %)
Sector:	Southland and Otago Regional Engineering Collective	**Funding Structure:**	Grant

We recommend that SROs:

a) **Approve** up to $240,000 from the PGF fund towards half of the costs for the purchase of specific pieces of engineering equipment for the 'Makerspace' and half of the Operations role salaries (Commerc FTE over 3 years) of the 'Makerspace', 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.

b) **Note** the applicant has applied for $Commercial Inform however PDU recommends PGF investment of up to $240,000 as this represents Commercial Inform investment in line with the Commercial Information of the PGF and is consistent with other funding in the Dunedin/Otago engineering package.

c) **Note** this project strongly aligns with PGF and Southland and Otago Regional Engineering Collective objectives**.**

d) **Note** this funding request is part of the agreed PGF allocation for the Southland and Otago Regional Engineering Collective.

Proposal:

Petridish is a Dunedin based community of creative media, tech, and small businesses occupying a full building in the CBD in what some call a 'shared working space'.

Its goals are to connect and empower people through an inspirational working space and the next phase of development is to expand to include a 'Makerspace' on the ground floor of the building. The 'Makerspace' will have dedicated areas where early engineering and manufacturing businesses can trial and test new, innovative products.

The space will be located on the applicant's ground floor and will have open access to the equipment for businesses to trial and test new, innovative products.

The applicant seeks financial support for the:

1. **Purchase of $Commercial Inform worth of equipment for the 'Makerspace' including:**

   a) **CNC Milling machine ($Commercial Info)**
   Roland ModelaDVX-50 CNC Router – For milling resins such as chemical wood and modelling wax. This machine allows for early stage prototyping, making new concepts more accessible by keeping material and machining costs down. It is also an entry point for CAD drawing and related machine operation.

   b) **Laser Engraver/Cutter ($Commercial Info)**
   Trotec Speedy 360 & 230 Vac Exhaust – For Engraving, Cutting and Marking various materials, precisely and quickly. This equipment is key to early stage prototyping, and also essential to professional grade finishing work. It is a CO2, Fiber or Flexx Laser and has a work area of 813 x508mm, and is up to six times faster than comparable machines on the market

   c) **CAD, 3D Printing Equipment, and Lathe ($Commercial Inform)**

2. Comme **FTE roles to oversee the operations of the Makerspace broken down as:**

   Commercial Information

The requested funding for these positions is $Commercial Inform of a total amount of $Commercial Inform (at Commercial Info over 3 years). The PDU recommends funding these positions at the Comm% suggested co-contribution ($Commercial Informa). These roles will ensure that day to day operations of the Makerspace are undertaken and that programmes are created that make product design accessible so that the community so that they know it is available and encourages use.

3. In addition the applicant has noted it will be spending $Comme on fit out costs (including office furniture and other miscellaneous items) which it is not seeking PGF funding for.

A breakdown of costs for the total project (including fit-out costs) and recommended funding from the PGF are as follows:

Items	Total cost of item	Amount requested from PGF	Recommended funding from PGF
CNC Milling machine	Commercial Information		
Laser Engraver/Cutter			
CAD, 3D Printing Equipment, and Lathe			
Commercial Infor roles to oversee the operations of the Makerspace (over 3 years) broken down as: Commercial Information and Commercial Information			
Fit-out costs			
Total			

(Please note that this coversheet should be read alongside the SOREC cover briefing and the other 7 related SOREC projects).

Assessment against the PGF criteria:

Eligibility Criteria

This application is eligible for PGF funding.

Productivity Potential

This project would accelerate the opportunity for existing and start-up companies looking to design and test their products in a neutral environment. The equipment being sought through this application not only contributes to the growth of the applicant, but the Otago engineering sector as a whole as well as all those industries the applicant support. The Makerspace will also be offered to engineering and manufacturing firms looking to mentor students in a controlled space.

By supplying this equipment and providing the resource it allows the PGF to invest in early stage development as well as established engineering companies.

The Makerspace will provide efficiencies to allow for accelerated growth, it will be a more publicly accessible space for early stage ideas.

Policy objectives and regional priorities

The Engineering and Manufacturing sector has been identified by the 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 offer a neutral environment for Engineering and Manufacturing companies to trial and test new innovative products and mentor students.

PGF Criteria	Assessment Commentary	Rating (0✓ to 5✓)
Link with fund and government outcomes		
Creates permanent jobs	• PGF support will enable the applicant to hire Com permanent staff. • The applicant notes that a number of new jobs could be created through this project indirectly, for instance in the growth of successful start-up manufacturing businesses.	✓✓
Delivers benefit to the community	• Indirectly, the creation of Com new, sustainable roles will have flow on effects to the local economy. • It will provide opportunities for mentoring programmes/internships and will allow for open	✓✓

	access to the equipment and the space for manufacturing and engineering companies.	
Increased utilisation and returns of Maori asset base	• Not evident	
Enhanced sustainability of natural assets	• Not evident	
Mitigation of climate change effects	• Not evident	
Additionality		
Adding value by building on what is already there	• Engineering and Manufacturing is a strong sector in Dunedin which has been constrained due to the inability for companies to meet demand through the lack of efficient equipment and little support for 'fast fail' innovations.	✓✓✓
Acts as a catalyst for productivity potential in the region	• With the purchase of this new equipment for the Makerspace, Southland and Otago Engineering and Manufacturing companies will be able to accelerate their designing and testing of new innovative products.	✓✓✓
Connected to regional stakeholders and frameworks		
Alignment with regional priorities	• While not yet public, the applicant's project aligns well to the objectives of the ORED Framework, specifically the objective to increase productivity of the region.	✓✓
Support from local governance groups (inc. Councils, Iwi/Hapu)	• The Dunedin City Council is aware of the applicant's application to the PGF. The Dunedin City Council is heavily involved in Engineering Dunedin Inc.	✓✓✓
Governance, risk management and project execution		
Robust project management and governance systems	• Current owners of Petridish will manage and govern the project.	✓✓✓
Risk management approach	• Risks are identified with mitigations.	✓✓✓
Future ownership / operational management	• Existing arrangements.	
Analysis of the benefits and costs		
The key benefit of this project is the addition of new equipment which will provide Engineering and Manufacturing companies including start-ups the ability to trial and produce products in timeframes which would have been delayed. It will allow for necessary efficiencies to allow for accelerated growth under a 'fast fail'		

approach.

Financial Analysis

Yes – 5 year financial and performance statements between 2015 and 2019 have been provided.

Funding Arrangements

A grant of $240,000.

Due Diligence and Ownership

Commercial Information

Risk Assessment

The key risks to the PDU and proposed mitigations of this investment are as follows:

Type of risk	Risk description	Mitigations	Risk Rating L/M/H
Duplication	Commercial Information .	While still in its infancy, SOREC will aim to undertake a cataloguing of equipment across the engineering firms that are part of SOREC to ensure that duplication of equipment is minimised.	Medium
Resource	The ability for the company to find employees to fill the roles may delay the operations of the Makerspace.	While still in its infancy, SOREC will aim to work with engineering firms including Petridish to understand the current employee shortages.	Medium

Consultation undertaken or implications:

MFAT has been consulted on any subsidies that could be provided through a grant to the Applicant. This project was considered low risk.

Commercial Information

Supporting proposal:	Yes
Appendices:	Yes – application has been provided
Author of paper:	HW, Investment Team