ASX Code: "PVL"



Powerhouse Ventures Limited

1H18 Results

"We find great science and build global companies"





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Powerhouse — at a glance

Corporate

*as at 22 March 2018

ASX Code PVL
Ordinary Shares 28,986,363
Market Capitalisation* A\$7,247,000

Key Board and Management Contacts

Russell Yardley Chairman
Paul Viney Chief Executive Officer

Andy Matheson Chief Investment Officer

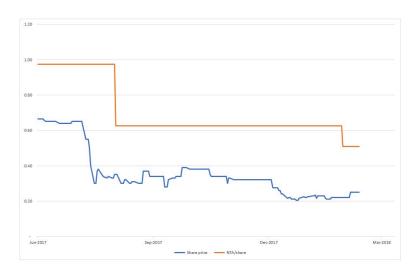
Stuart Whitham Chief Financial Officer

Share Price A\$0.25 as at 22 March 2018.

Powerhouse Ventures

(ASX:PVL) Daily Share Price, NTA per share





Summary Overview

1H18 has been a period of stabilisation and building a platform for growth.

- Powerhouse Board Changes
 - Mr Russell Yardley appointed as Director on 28 February 2017 and Chairman on 14 June 2017
 - Dr Stephen Hampson resigned as Managing Director on 25 August 2017
 - Mr Paul Viney appointed CEO on 25 August 2017
- Comprehensive review of operating model and portfolio carrying values completed
- Disposal of 'off-model' investments Syft at 10x, ArcActive at 4x realising \$2.9M in total
- Powerhouse pursuing value creating transactions in Motim and Solarbright
- Investee Croplogic proves "IP to IPO" pathway, but share price weakness impacts 1H results (listed at A\$0.20, trading at A\$0.094 as at 31 December 2017)
- Invert Robotics expands into Europe and completes \$8m capital-raise, with significant sales contracts and expansion opportunities presenting

Commercialisation landscape

New Zealand

The New Zealand Government is strongly supportive of innovation

- Powerhouse enjoys unparalleled access to NZ universities
- Powerhouse is by far the largest of 3 accredited, government-approved technology incubators in NZ
- We have Investment Managers assigned to each NZ university hub
- The modus operandi of Powerhouse Investment Managers is to search for transformative, breakthrough technologies

Australia

In Australia, the Government is pursuing an innovation and 'ideas' boom

- There is strong interest from Australian universities in the Powerhouse model with letters of intent received from:
 - CSIRO
 - Deakin University, Victoria
 - University of South Australia
 - University of Adelaide
 - · Flinders University

Discussions underway with others

- IP from Australian universities and CSIRO currently under review
- Over 50 technologies reviewed and approximately 6 investments presenting
- Targeting innovation Fund management mandates and substantial grant funding
- Australian office discussions underway with Victoria and South Australia



1H18 Results Summary

- Statutory loss after tax of NZ\$(4.3)m. Croplogic one-off fall in share price contributed \$(1.7)m
- Prudent write downs of NZ\$1.0m** including Solarbright and Veritide
- Fair value uplifts from portfolio external capital-raisings delayed until 2H18
- Current share price represents a 50%* discount to 31 December NTA of NZ\$0.56/share
- Sale of 'off model' holding in Arcactive for \$1.9m resulting in a 4x return

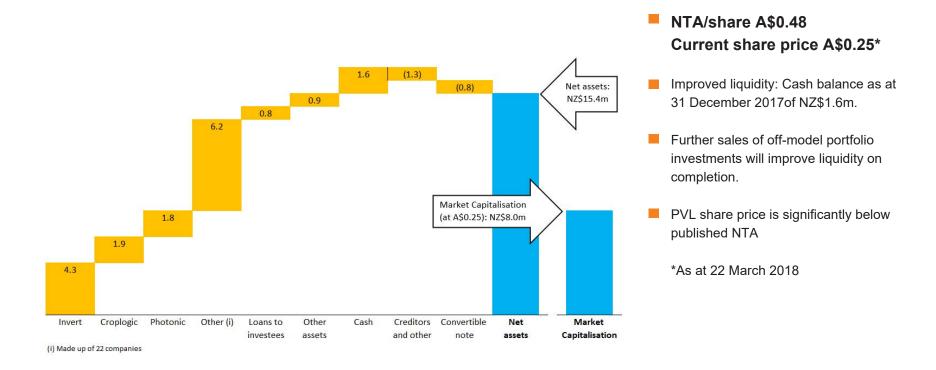
^{*} A\$0.25/share as at 22 March 2018

^{**}Equity balances



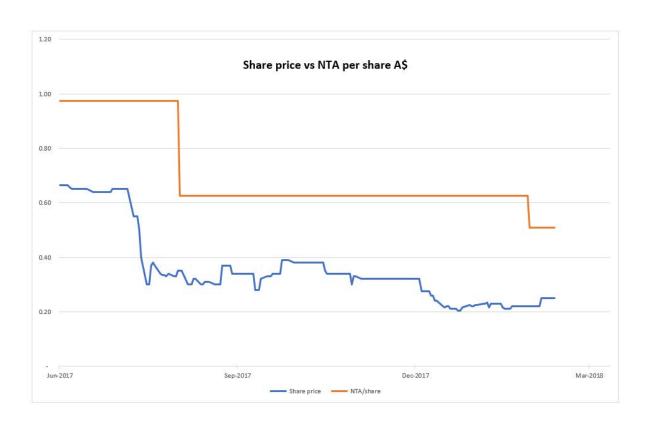
Net assets 1H18

Net Assets Breakout Analysis (NZ\$'m)





NTA per share



- Current share price represents approximately 50% discount published NTA.
- Significantly deeper discount compared to peer stocks listed on the ASX.



Movements in 1H18

Statement of Financial Position (NZ\$'000)

	30 JUNE 17	31 DECEMBER 17	MOVEMENT
Cash	1,320	1,614	294
Receivables	1,974	1,168	(806)
Portfolio Assets	17,470	14,263	(3,207)
Intangibles	13	3	(10)
Other	330	409	79
Total Assets	21,107	17,457	(3,650)
Trade and Other Payables	790	747	(43)
Provisions	493	493	-
Convertible Notes	-	818	818
Total Liabilities	1,283	2,058	775
Net Assets	19,824	15,399	4,425
Net Assets Per Share (NZD)	\$0.68	\$0.53	\$(0.15)

Pathway to Restoring Shareholder Value

- NZ team restructuring completed
- Operating costs reduced
- Board reduced in size from 7 Directors to 4
- Model refined to include potential for licensing/royalty deals, trade sales with regular recycling of capital
- Strong focus on 'off model' realisations continues
- Governance improvements throughout portfolio
- Staged Australian expansion underway with strong investment pipeline





2H18 potential portfolio fair value uplifts

Invert Robotics

- Robot inspections in dairy, petro-chem & aircraft
- \$8m capital-raise complete
- Sales contracts, licensing and joint venture being negotiated

Photonic Innovations

- Laser-based gas leak detection
- \$300k \$500k capital-raise planned
- Significant milestone: signed distribution agreements in NZ and AU

Upstream

- Heart attack risk detection technology
- Investment bank appointed for US \$5m raise
- Potential uplift to PVL of up to \$1.4m

Tiro

- Breast cancer screening technology
- Capital-raising in 2018
- Value uplift anticipated in 2018*

Avalia

- Cancer vaccines
- Options for major capital-raise under consideration
- Value uplift anticipated in 2018*

Motim

- Augmented reality technology
- US offer received to purchase assets and technology
- Potential uplift to PVL of up to A\$3.6m**

^{*}Uplift dependent on investee board approving uplifted share price for capital-raising based on milestone achievement and sufficient independent capital being raised to validate uplift.

**May be progressively recognised over a 3 year period. Uplift is dependent upon conversion of secured and unsecured loans in favour of PVL, completion of due diligence by Motim on acquiring vehicle, acceptance of deal proposal by Motim shareholders and successful IPO of acquiring vehicle for US\$15m.



Outlook

- Strong return to profitability anticipated in 2H18 driven by potential uplifts*:
 - Upstream

Photonic

Motim

Fluent

Avalia

Tiro

- Invert Robotics
- Focus on 'off model' investment realisations
- Significant cost control focus
- Increased focus on Australian investment opportunities and University relationships
- Australian grant funding opportunities
- Funding position underpinned by continuing interest in PVL's investments



Thank you

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Powerhouse Ventures Limited

Appendix





An actively managed, diversified portfolio

(as at 31 December 2017)

Investment Portfolio

Total Value \$14.3 million

Invert	\$4.3m	30.06%
Upstream	\$0.5m	3.56%
Tiro	\$0.4m	2.86%
Modlar	\$0.8m	5.56%
Mars	\$0.7m	4.86%
Veritide	\$0.4m	2.86%
Fluent	\$0.9m	6.36%
Photonic		40.00%
Photonic	\$1.8m	13.06%
Croplogic	\$1.9m	13.26%
Other	\$2.6m	18.16%

- Valuations have been externally reviewed
- Independent review of valuation methodologies completed
- Valuations are at cost, price of recent sophisticated third party investment, written down value, or mark to market.



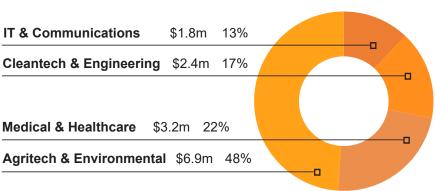
An actively managed, diversified portfolio

(as at 31 December 2017)

By Stage of Growth



By Sector



Board of Directors



Russell Yardley Chairman Non-Executive Independent Director

Russell has been a professional Non-Executive Director and Chairman for the past decade following a career in the informational technology and communications sector. He is Chairman of ASX listed Tesserent Limited. After spending more than 7 years at IBM he founded his first company Decision Engineers that was merged with ASI to form Applied Learning that was then listed on the ASX in 1993.



Rick Christie Non-Executive Independent Director

Rick is a professional Director and Chairman with experience in both the public and private sectors. His appointments include Chairman of AgResearch Ltd and Director of the Foundation for Research, Science and Technology. Rick is past Chairman of a Top 300 ASX Listed company. He also had extensive experience as a senior/ Chief Executive, including with BP Oil Limited, in Australia and the UK, Cable Price Downer involved in the ANZAC Frigate Project - and the diversified New Zealand investment company Rangatira Ltd.



Dianne McCarthy Non-Executive Independent Director

Di is the former professor at the University of Auckland, with an extensive list of peer reviewed publications. She has over 20 years' experience in various management and governance roles in the tertiary education, science and health sectors, including Pro Vice-Chancellor (Equity) and Council member at the University of Auckland, a Director of Agresearch, a Crown Research Institute. She is the immediate past Chief Executive of the Royal Society of New Zealand.



John Hunter Non-Executive Independent Director

John has held various Directorship positions for 23 years on both private and NZX listed companies, together with board membership on educational and health sector institutions. John executive career encompassed extensive chief financial officer experience as well as chief operating officer and general manager positions in New Zealand and Australia. His expertise includes HR, IT and legal responsibilities. He has extensive experience across the manufacturing, finance, retail, wholesale, information technology and primary sectors

Management



Paul Viney
Chief Executive Officer

As a career finance and governance professional, Paul has worked in Australian industrial and financial services organisations for over 20 years. Paul has specialised in financial and management accounting, value creation, mergers and acquisitions and corporate governance. Prior to joining Powerhouse Ventures. Paul was Chief Financial Officer/Company Secretary at a diversified ASX-listed banking group, which had a market capitalisation of over A \$400 million and an asset footprint of over A \$5.3 billion. Paul joined Powerhouse in May 2014 as CFO and Company Secretary, was a Director from April 2016 to August 2017 and became CEO in August 2017.



Andy Matheson
Chief Investment Officer

Andy has held senior executive roles in energy, infrastructure and clean-tech companies. He has worked as CEO, MD and Board Director in start-up businesses through the pre-seed to exit stages over 10 years. Before this Andy held international marketing and business development roles targeting the global industrial and utilities sector for 10 years. Prior to joining Powerhouse Ventures, Andy has worked at significant New Zealand investment company; a substantial shareholder of an NZX company with a market capitalisation of NZ\$1.7 BILLION. Andv joined Powerhouse as a contractor in February 2016 and was appointed as CIO in November 2016.



Stuart Whitham
Chief Financial Officer and
Joint Company Secretary

Stuart brings to Powerhouse his international experience working with young growth companies on modelling, audits, valuation, fund management and financial control. Stuart qualified as a Chartered Accountant at Coopers & Lybrand (now PwC) in London, specialising in the valuation of derivatives with Credit Suisse First Boston, Commerzbank and the Royal Bank of Scotland. After making a permanent move to Christchurch in 2004, Stuart took up a role with a global fund of funds, before later becoming Financial Controller at TSE lister Allied Telesis. Stuart joined Powerhouse in July 2011.



Rachel Triplow
General Counsel and
Joint Company Secretary

Rachel's experience includes more than 20 years in iellectual property and commercial law. Her roles have included: acting as the sole in-house counsel for the UK branch of an international company; providing specialised legal and strategic advice within leading IP firms in New Zealand and the UK; preparing legal opinions and policies at what is now the MBIE; and drafting legal decisions and practice guidelines as the Assistant Commissioner of Trade Marks at IPONZ. Since joining Powerhouse in 2015, Rachel has played a key part in listing on the ASX and as Company Secretary is now responsible for supporting the Board on governance matters.

Post-seed companies



Within the food-processing industry, food-safety is driven by eliminating bacterial contamination which can be harboured by cracks in industrial vessels such as tanks, dryers, silos. Historically these vessels have been serviced by scaffold or rope-based inspections, a hazardous process which is prone to errors.

Invert Robotics provides remote inspection services to global blue chip customers using its proprietary robotics technology. The mobile climbing robot system allows identification, recording and reporting of cracks in mission critical infrastructure.

Invert is currently expanding geographically into Europe, following success with inspection of milk silos and dryers in Australasia.



Pharmaceutical companies currently spend ~US\$1.5b developing each new drug. It can take 12–24 months for the pre-clinical trials of ~250 prospective drugs, with only 5 proceeding to clinical trials. These companies have a strong need for tools that will speed up this elimination process and aid getting drugs onto the market quicker.

MARS Bioimaging has developed a small animal x-ray molecular imaging system that has spectral resolution, using CERN-developed detector technology. This additional "colour" information provides new imaging capabilities.

Having initially targeted key opinion leaders, MBI has launched its first commercial release system and is now building a human scanner.



The architecture and construction industry is going through a rapid shift from 2D CAD (Computer Aided Design) to modelling buildings in full 3D BIM (Building Information Modeling).

Modlar's core product is a network which connects architects to building products manufacturers. This allows architects to more easily discover, discuss and specify real world products into their projects in full 3D. This in turn speeds up the design process and reduces errors on site.

Having raised ~\$3M of NZ Venture Capital, the company is now rapidly expanding into the North American market. Modlar is currently used by 130,000+ professionals globally including 80% of the world's top 100 firms.

Agritech and Environmental*

Stage: Post-seed Revenue: \$1m-\$5m

Indicative market capitalisation: \$10m-\$15m

Employees: 7

PVL shareholding: 22.9% PVL invested: \$834k



Medical and Healthcare*

Stage: Post-seed Revenue: <\$1m

Indicative market capitalisation: \$5m-\$10m

Employees: 10

PVL shareholding: 8.5% PVL invested: \$726k



Digital and ICT*

Stage: Post-seed Revenue: <\$1m

Indicative market capitalisation: \$5m-\$10m

Employees: 7

PVL shareholding: 9.9% PVL invested: \$570k



Post-seed companies



High-volume crop growers and processors have significant challenges ahead in order to meet rising food-demand. Growers need to optimise resources and processors need to plan to ensure efficient processing.

CropLogic delivers specialist agronomy services to growers using technology developed over 30 years at The New Zealand Institute for Plant & Food Research. CropLogic brings together crop science, environmental data and agronomic expertise to offer input for daily decision making that improves on typical "rule of thumb" recommendations. In addition to its expert system, CropLogic provides the telemetry required to gather field data.

Croplogic listed on the ASX in September 2017 (CLI).

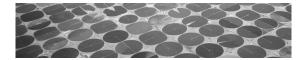
Agritech and Environmental*

Stage: Post-seed Revenue: \$1m - \$5m

Indicative market capitalisation: \$10m-\$15m

Employees: 20

PVL shareholding: 14.9% PVL invested: \$1.87m



Seed companies



The global mobile marketing sector is a high- growth area that is seeing innovation as technology and marketing mix, with consumers becoming increasingly 'connected' and smartphone technology becoming almost ubiquitous in the modern world.

Motim Technologies has developed a range of mobile interaction technologies, based on expertise in computer vision, augmented reality, image-recognition and mobile-software development alongside deep creative experience and expertise.

Securing direct relationships with major global brands is validation that Motim has a special proposition and the ability to execute and deliver on a global stage.



Stage: Seed Revenue: <\$1m

Indicative market capitalisation: <\$1m

Employees: 3

PVL shareholding: 41.8% PVL invested: \$719k





SolarBright is positioned to capitalise on the LED and Solar LED lighting phenomena that are changing the way the world is illuminated.

SolarBright is taking its innovation and manufacturing excellence to the international market with customers in over 20 countries, including the World Bank, Government Agencies, Local Authorities and bluechip companies.

SolarBright's approach of innovation and collaboration has led to use of its patented products in a wide range of applications and markets – from the supply and installation of solar street lighting in Pacific islands to development and manufacture of PATeye, the world's first commercially-available solar-powered ice-detection road stud.

Engineering and Cleantech*

Stage: Seed Revenue: <\$1m

Indicative market capitalisation: \$1m-\$5m

Employees: 3

PVL shareholding: 30.3% PVL invested: \$1.04m



VERITIDE

The food industry is driven by food-safety. Detection of harmful microorganisms through improved process control leads to higher-quality food, with better shelf-life and fewer product-recalls. Annually in the US, one in six people become ill and there are 200,000 hospitalisations and 4,000 deaths, all attributable to food poisoning.

Veritide is the creator of disruptive technology for real-time detection of faecal contamination on meat within meat processing plants. Providing both portable hand-held devices and fixed full carcass scanner technology Veritide scanners can be integrated throughout each stage of the food processing line.

Veritide's platform technology has many other applications in food, health and bio-safety areas.

Agritech and Environmental*

Stage: Seed Revenue: <\$1m

Indicative market capitalisation: \$1m-\$4m

Employees: 4

PVL shareholding: 19.7% PVL invested: \$980k



Seed companies



Many industrial and commercial operations manage controlled environments, where variables such as temperature, humidity and air quality need to be maintained within specific limits and dangerous substances such as toxic gases need to be contained.

Photonic Innovations uses a combination of ultra reliable, connected sensors combined with cloud based data management to address these challenges with minimal human intervention. Under a recurring revenue business model, PIL will monitor environmental variables, take corrective action and use the data to provide added value services such as predictive maintenance and energy management. The first target market is cold stores where patented highly reliable laser-based detection of gas leaks forms the platform for an Internet of Things business.



Over 2 Billion people use English to communicate on a regular basis every day. The negative impact of substandard english proficiency is significant and felt worldwide on both an economic and social level.

Fluent is combining new linguistic science with "big data" and machine learning to build an artificial intelligence platform that can provide improved and faster analysis of verbal communication skills and placement against real-world expectations.

This technology applies to a range of applications and industries. As a first step to market Fluent is initially applying it to language learning through a tool that will guide English language learners around the world towards real-world fluency.

Tiromedical

Mammography is the dominant method of breast cancer screening in New Zealand. However, mammograms are much less effective with radio-dense tissue (affecting 40% of the screened population).

The University of Canterbury has developed a painless, zero-radiation screening technology unaffected by radio-dense tissue.

Tiro Medical will develop technologies to enable more accurate diagnoses and treatments across a range of medical areas, improving care whilst reducing expenditure. Tiro's initial focus will be on the breast screening market, developing the University's technology for use as a supplementary scan to mammography of radio-dense tissue.

Engineering and Cleantech*

Stage: Seed Revenue: <\$1m

Indicative market capitalisation: \$5m-\$10m

Employees: 6

PVL shareholding: 29.9% PVL invested: \$630k



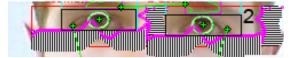
Digital and ICT*

Stage: Seed Revenue: <\$1m

Indicative market capitalisation: \$1m-\$5m

Employees: 6

PVL shareholding: 20.1% PVL invested: \$410k



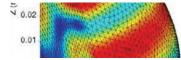
Medical and Healthcare*

Stage: Seed Revenue: <\$1m

Indicative market capitalisation: \$1m-\$5m

Employees: 2

PVL shareholding: 31.6% PVL invested: \$285k





Pre-seed companies



AuramerBio is a custom sensor development company. Its novel technologies allow accurate measurement of biologically relevant molecules at the point-of-testing. AuramerBio's technologies are being developed for application in drug and fertility testing.

The technology can be rapidly adapted to measure a wide range of targets in liquid samples (saliva, urine, blood, environmental water) providing access to a large number of future market opportunities.

AuramerBio is developing both simple economic 'qualitative' dipstick tests and also more complex 'quantitative' digital devices with its industry partners.



Avalia Immunotherapies' first vaccine product is a cancer vaccine to treat patients suffering from HPV associated cancers. Its vaccine approach has the potential to induce patient responses against HPV cancers that are not currently responsive to checkpoint immunotherapy.

Every day in the US, about 12,000 people ages 15 to 24 are infected with the human papillomavirus (HPV). Of those, 2,600 are infected with the HPV16 strain, which is responsible for 50% of human cervical cancers and more than 85% of HPV-positive head & neck, anal and anal-genital cancers. Preventative vaccines cannot cure established HPV infections and standard of care treatments cannot eliminate HPV outside the treated area. This unmet need will be satisfied with Avalia's vaccine.

Medical and Healthcare*

Stage: Pre-seed Revenue: <\$1m

Indicative market capitalisation: \$1m-\$5m

Employees: 3

PVL shareholding: 10.2% PVL invested: \$300k





CertusBio

Increased industrial efficiency and tighter environmental regulations are driving the global process analytical instrumentation market, currently worth US\$2.8b and projected to grow exponentially.

CertusBio's flagship biosensor technologies combined with process control systems will have the ability to make real-world efficiency gains in the primary industries across New Zealand and overseas. Analysis and shaping has revealed an opportunity from multiple research projects.

Detecting lactose in dairy processing plants is a customer need, and rapid detection of biological oxygen demand (BOD) is another. Both can be solved using hi-tech biosensor solutions emerging from the region's research organisations.

Agritech and Environmental*

Stage: Pre-seed Revenue: <\$1m

Indicative market capitalisation: <\$1m

Employees: 2

PVL shareholding: 30.6% PVL invested: \$272k



Medical and Healthcare*

Stage: Pre-seed Revenue: <\$1m

Indicative market capitalisation: \$1m-\$5m

Employees: 3

PVL shareholding: 18.9% PVL invested: \$200k

Pre-seed companies



Cirrus is an easily adopted process technology that significantly improves the mechanical properties of plated coatings in electronics, aerospace, and hi-tech manufacturing, without degrading the conductivity, corrosion resistance or appearance of the coating material.

Cirrus technology has been developed and patented at The University of Auckland and is currently in early evaluation with some of the world's largest manufacturers, manufacturing process and chemistry suppliers.



Hi-Aspect provides topical formulations using its proprietary natural protein scaffolds to deliver active ingredients for skin and wound care. The skincare and medical markets have an increasing need to use natural materials with sophisticated functional properties instead of synthetic nanomaterials and polymers, which can be costly, toxic and persist in the environment.

The fibrils form strong gels that bind and release active ingredients in a controllable way, while holding them close to the site of action. With dimensions of 9–50 nanometres across and up to 1000 nanometres long, the fibrils have a high surface area to act as a scaffold. They can be made from a number of proteins and tailored to different applications.



Coatings that self clean, destroy bacteria and viruses as well as pollutants in air and water, simply by being exposed to light. Koti Technologies produces highly active, photo catalytic coatings via several novel application methods which produce coatings with exceptional performance characteristics.

Potential applications include antimicrobial healthcare and food production surfaces, air and water treatment and industrial catalysis applications.

Koti Technologies (translation from Maori is "to cloak or cover") is a University of Canterbury spin- out commercialising ceramic coating technology developed by Professor Krumdieck and her research team.

Engineering and Cleantech*

Stage: Pre-seed Revenue: <\$1m

Indicative market capitalisation: \$1m - 5m

Employees: 4

PVL shareholding: 7.1% PVL invested: \$113k



Medical and Healthcare*

Stage: Pre-seed Revenue: <\$1m

Indicative market capitalisation: <\$1m

Employees: 3

PVL shareholding: 63.2% PVL invested: \$150k

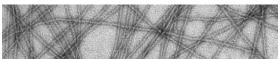
Engineering and Cleantech*

Stage: Pre-seed Revenue: <\$1m

Indicative market capitalisation: <\$1m

Employees: 2

PVL shareholding: 56.7% PVL invested: \$250k





Pre-seed companies



Orbis Diagnostics provides a platform technology for the analysis of fluids in agricultural and industrial processes using centrifugal microfluidics.

The first market is dairy farming, where the company will offer a single device for measuring all of the key variables in milk.

This will allow a farmer to make timely decisions around the yield, health and reproductive status of each cow.

Agritech and Environmental*

Stage: Pre-seed Revenue: <\$1m

Indicative market capitalisation: <\$1m

Employees: 1

PVL shareholding: 2.4% PVL invested: \$17k



UPSTREAM

MEDICAL TECHNOLOGIES

A large number of patients present in Emergency Departments (ED) each year with chest pain. One in eight has a life-threatening disease. Causes for this pain are many; heart, lung, bone and nerve problems. ED physicians require rapid and accurate methods to determine which patients require immediate life saving medical treatment.

Upstream Medical Technologies (UMT) has a novel technology platform built on many years of research. This provides a new class of diagnostic tests designed for ED use.

The lead assay can detect imminent heart attack BEFORE tissue damage occurs. UMT is building a pipeline of tests that enable earlier diagnosis for improved patient recovery.

Medical and Healthcare*

Revenue: <\$1m Stage: Pre-seed

Indicative market capitalisation: \$1m-\$5m

Employees: 2

PVL shareholding: 13.4% PVL invested: \$450k





Objective Acuity is a breakthrough digital health company that achieves early detection of vision and related disorders leading to changing lifelong healthcare and learning outcomes. There are many approaches to the measurement of vision and development disorders, but all rely on a co-operative subject and are intrinsically subjective.

Objective Acuity's first product is an objective measurement device that stimulates optokinetic nystagmus (OKN), an indicator of an intact vision pathway to determine poor vision. Clinical trials are about to get underway in children (200) and adults (120) to complete market validation, with a first market launch forecast for 2018.

Medical and Healthcare*

Stage: Pre-seed Revenue: <\$1m

Indicative market capitalisation: \$1m-\$5m

Employees: 2

PVL shareholding: 16.2% PVL invested: \$250k



Pre-seed companies

edpotential

EdPotential delivers software-as-a-service products based on advanced algorithms and data analysis capability, enabling schools to make more informed decisions, enhance teaching practice, saving teachers time and improving student outcomes. EdPotential is cloud based and designed specifically for analysis of school assessment results, allowing teachers to query assessment data, analyse the data to identify gaps and strengths and act to develop solutions to target student achievement.

Many of New Zealand's leading schools are now utilising EdPotential software, delivering better student outcomes and saving schools and teachers significant time compared to manually entering and processing data.

Digital and ICT*

Stage: Pre-seed Revenue: <\$1m

Indicative market capitalisation: <\$1m

Employees: 4

PVL shareholding: 20.7% PVL invested: \$150k





Ferronova is a medical device company, bringing together patented magnetic probe technology from University of South Australia and magnetic nanoparticle technology from Victoria University of Wellington.

Current cancer staging technology uses gamma probes with radioactive tracers; these have significant logistical issues and, due to their low resolution, are not suitable for more complex cancers.

The Ferronova magnetic probe and tracer system is being developed to allow staging of complex cancers, initially targeting oral cavity and other head and neck cancers. Improved staging of these complex cancers is anticipated to allow better treatment, lower patient morbidity and reduced healthcare system costs.

Medical and Healthcare*

Revenue: <\$1m

Indicative market capitalisation: \$1m-\$5m

Employees: 4

PVL shareholding: 27.0% PVL invested: \$395k





The marine and aquaculture industries face significant fouling issues, resulting in decreased yield, increased corrosion and operating costs.

Antifouling coatings are utilised extensively but remain expensive, ineffective or pose significant risks to the environment.

Inhibit Coating's surface coatings display strong antimicrobial activity against E.coli and prevent the settlement of microscopic algae. Preliminary tests show very good static resistance to biofouling in the New Zealand marine environment.

Inhibit Coatings novel coatings utilise very low biocide concentrations and exhibit very low leaching rates, providing robust coatings with a long antifouling lifetime and minimal environmental impact.

Engineering and Cleantech*

Stage: Pre-seed Revenue: <\$1m

Indicative market capitalisation: <\$1m

Employees: 2

PVL shareholding: 21.3% PVL invested: \$100k



Pre-seed companies

2.2gForce has been established to commercialise energy

dampers developed by University of Canterbury researchers.

kinetic energy of movement and cushion the impact between

Energy dampers operate as "shock absorbers" that dissipate the

They are versatile, cost effective and can be designed to protect structures from wind load, thermal motion or seismic events.



Hot Lime Labs

low carbon renewable energy sources.

Hot Lime Labs is developing CO2 capture technology for the commercial greenhouses to increase crop yields and transition to

Modern commercial greenhouse operations can produce up to 20 times the yields of open fields while using only a fraction of the resources typically needed. Commercial greenhouses produce \$35b of crops per annum and are growing rapidly.

CO2 enrichment enables up to 30% greater crop yields but the demand for CO2 far exceeds the current fossil-fule based supply. Hot Lime Labs technology will allow the production of clean CO2 from renewable biomass source, on site, to meet this global need.



Silventum is a dental materials business that is commercialising a novel platform for filling materials that have enhanced mechanical, structural and aesthetic qualities and resist bacterial decay better.

This will result in reduced levels of dental decay, or caries, which is the most prevalent disease in humans.

Silventum arises from a collaboration between the Department of Chemistry and the Faculty of Dentistry at the University of Otago.

Cleantech and Engineering*

Stage: Pre-seed Revenue: <\$1m

Indicative market capitalisation: <\$1m

Employees: 1

structures.

PVL shareholding: 100% PVL invested: \$25k

Agritech and Environmental*

Stage: Pre-seed Revenue: <\$1m

Indicative market capitalisation: <\$1m

Employees: 2

PVL shareholding: 2.6% PVL invested: \$25k

Medical and Healthcare*

Stage: Pre-seed Revenue: <\$1m

Indicative market capitalisation: <\$1m

Employees: 1

PVL shareholding: 41.2% PVL invested: \$70k

