

Hydrix Limited

Hydrix brings technologies to life which enhance people's health, safety and well-being

Investor Presentation

October 2019

Hydrix unique value proposition is bringing client technologies to life which aim to solve complex global problems

Our core areas of expertise are within large addressable, global, high growth sectors

Medical Technology

- Cardiology
- Neurostimulation
- IVF
- Orthopedics
- Exoskeleton



Defence & Aerospace

- Simulation & training technology
- Information, surveillance and reconnaissance
- Specialised staff augmentation



Consumer & Industrial

- Utility meters
- Rail
- Mining



Selection of our Clients



Universal Biosensors



Cochlear®

SIEMENS



LBT INNOVATIONS

MICRO-X

Chemring
Group

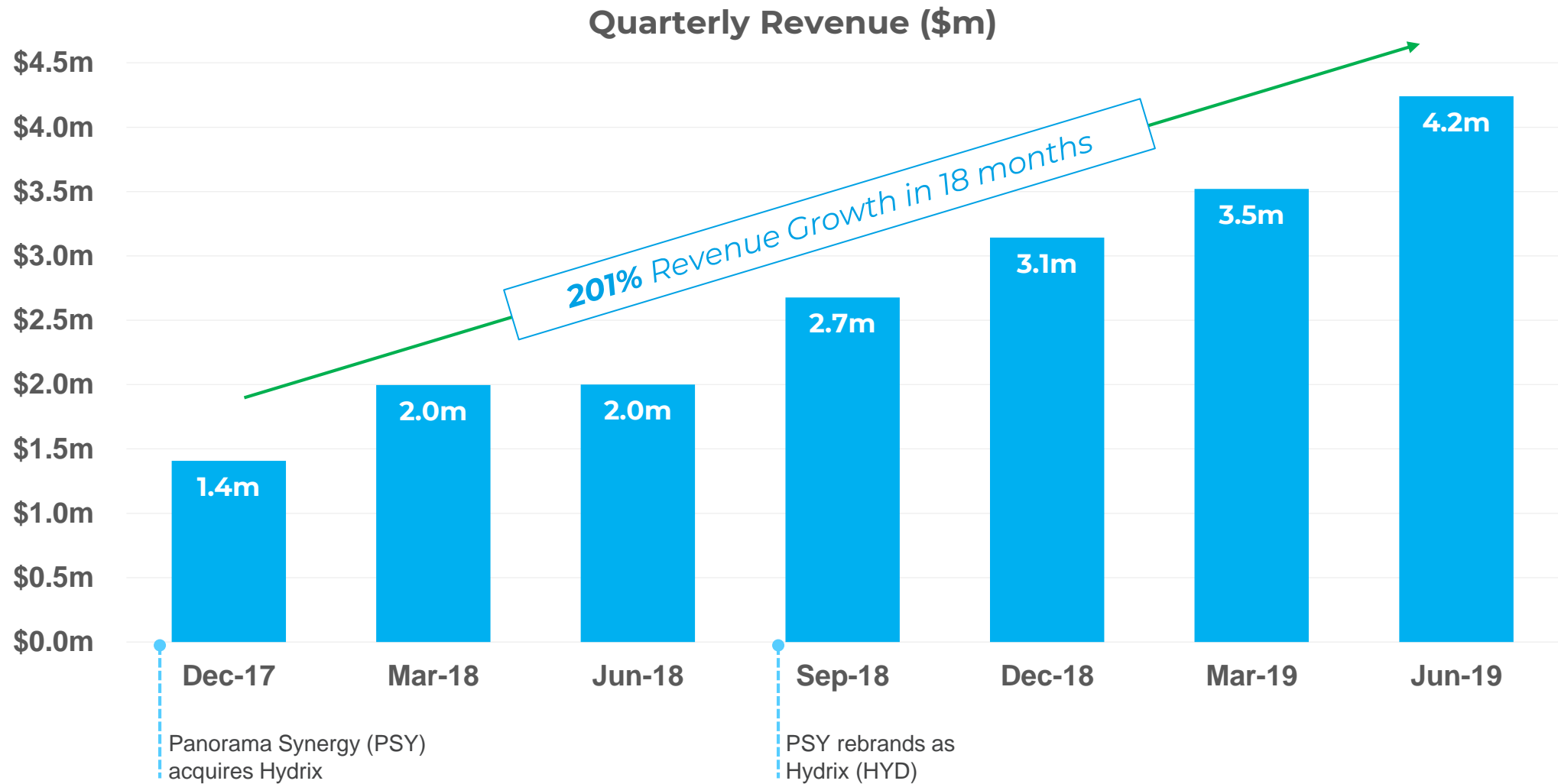


Hydrix leverages its talent & know-how acquired through diverse customer engagements to deliver novel solutions






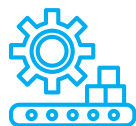


		Diverse skill sets & subject matter expertise applied across products and industries					
		Medical Technology			Consumer & Industrial		Defence & Aerospace
Engineering Expertise		Point of care diagnostics	X-Ray technology	Cardiac monitoring	Water control & measurement	Mining process improvement	Defence simulation tech Mobile defence communications
1.) Innovate	Concept design						
2.) Design	User Experience Design						
3.) Engineer	Connectivity (IoT, Bluetooth etc.,)						
	Compact Design Engineering						
	Power Management						
4.) Prototype	Rapid Prototyping						
5.) Manufacture	Cost to Manufacture						

Hydrix has delivered consistent strong quarterly revenue growth



All milestones were exceeded during FY19



	Milestones - FY19	Achievements	
	Minimum 15% revenue growth over prior half year period	Exceeded →	Exceeded each half year growth target by over two times Full year revenue growth of 149% (FY19: \$14.23m, FY18: \$5.7m)
	15% increase in engineering services capacity	Exceeded →	25% headcount increase supported growth, attracted talent
	Solidify global leadership in cardiac assistance control devices	Exceeded →	Several cardiac projects in various phases
	Secure six new significant and high-dollar value projects	Exceeded →	Large contracts included orthopaedic surgical tool, ventricular assist device controller, IoT connected smart meter, cardiac-monitoring device, defence training technology, exoskeleton robotics
	Target break-even in 4Q19	Exceeded →	Delivered 4Q19 maiden quarterly cash operating profit of \$0.43m
	Identify our next acquisition or equity investment opportunity	Exceeded →	Acquired strategic equity positions in Gyder Surgical P/L, Memphisys (ASX:MEM)

FY20 milestones and progress to date

Milestones for FY20

Status

Revenue growth to exceed **15%** over FY19

On Track

Deliver a full year cash operating profit¹

On Track

Implement one 'Buy, Build & Invest' strategy

On Track



FY20 Progress – Pipeline / Contracts

- ✓ **\$30m+** pipeline of potential revenue from **current** contracted projects, of a total aggregate **\$50m+** weighted revenue pipeline
- ✓ In July 2019, secured an up to **\$3m** services contract with AngelMed, a US-based cardiac device company

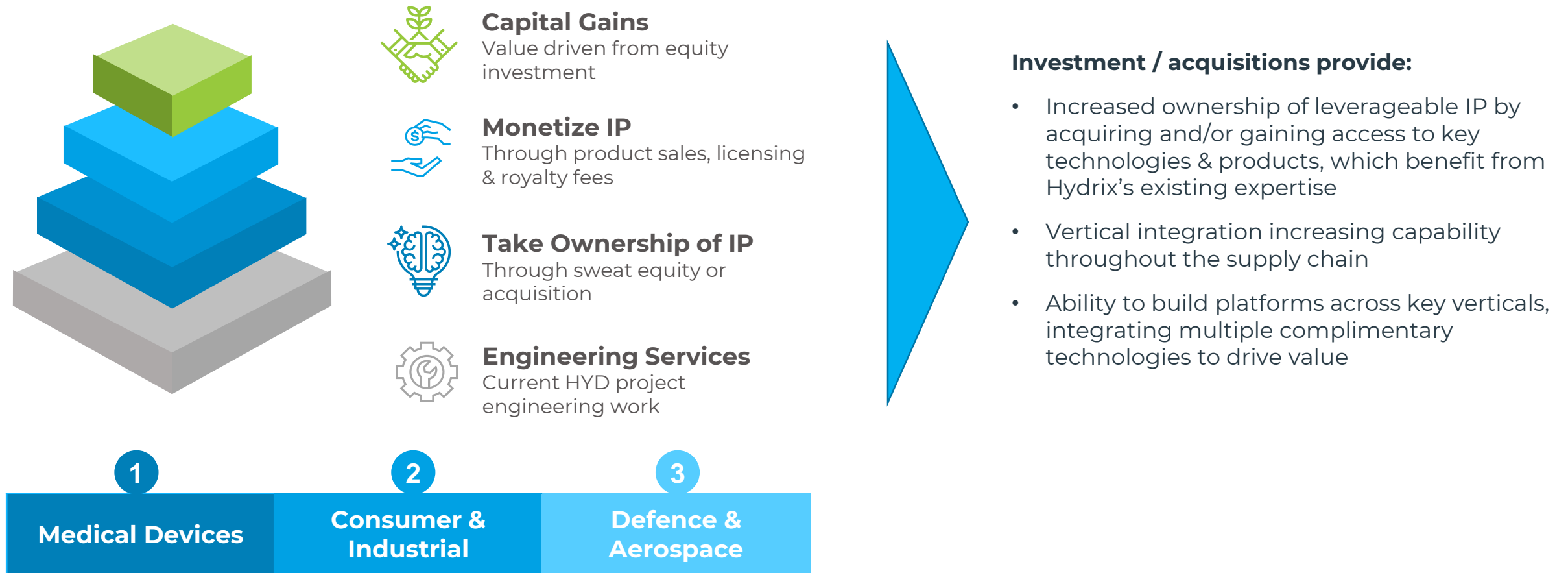
FY20 Progress – Financial

- ✓ In September 2019, announced a Binding Term Sheet with Pure Asset Management to refinance shareholder loans on equal or better terms
 - \$5.0m debt facility with equity warrants at \$0.05 exercise price
 - 4-year term, at 10% interest per annum

¹ Cash operating profit is Earnings before Interest, Tax, Depreciation, Amortisation (EBITDA) and Share-based payments for a full year and may vary on a quarterly basis. .

Meaningful progress implementing new Buy, Build & Invest strategy

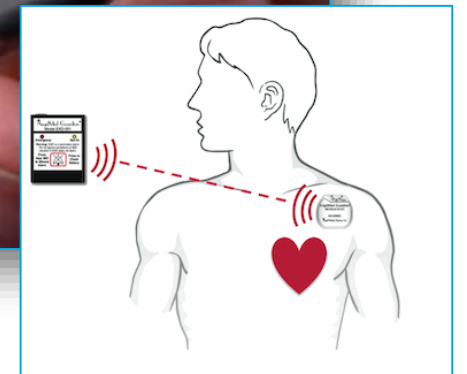
By accessing highly valuable early stage technology and leveraging design, engineering and commercialisation capabilities, Hydrix is expanding its revenue streams



Angel Medical Systems (AngelMed) – Guardian® device



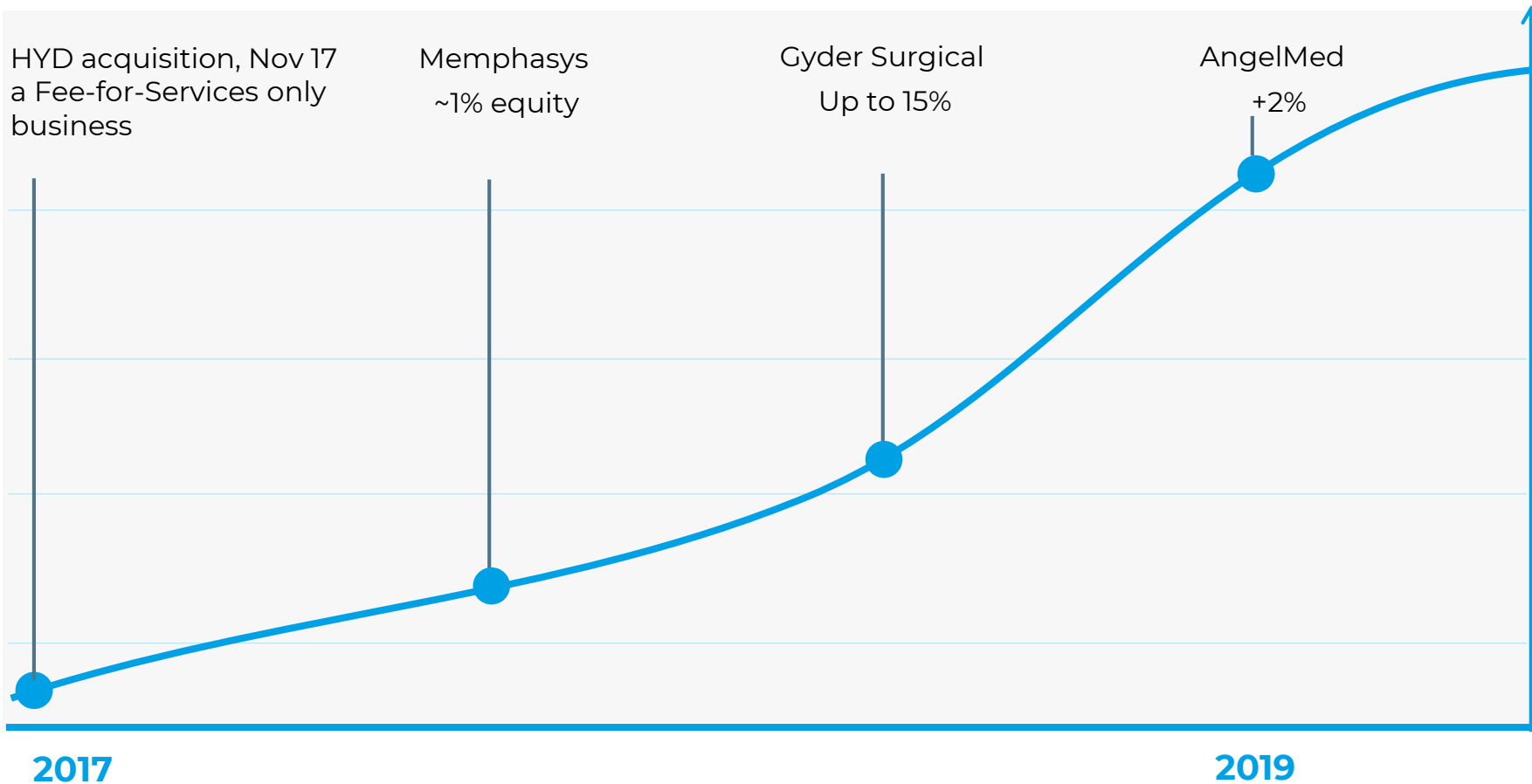
- **Guardian®** is the world's first FDA (PMA) approved implantable cardiac monitor and patient alerting system
- Guardian® uses AI machine learning based algorithms to accurately detect changes to the heart-beat indicative of a potential heart attack or acute coronary syndrome (ACS)
- Target patients are those presenting with an ACS condition and are at risk of a future heart attack
- Cumulative investment of ~ US\$175m to fund through to clinical trials which resulted in **FDA approval being granted in April 2018**
- 58 issued patents on all aspects of AI based cardiac monitoring and patient alerting
- Global market size is estimated to be a multi-billion dollar opportunity (2025 pacemaker market ~US\$10B)



Accelerating Hydrix market value through double-digit services growth and creating additional income platforms



Buy, Build, & Invest strategy progress since acquiring Hydrix

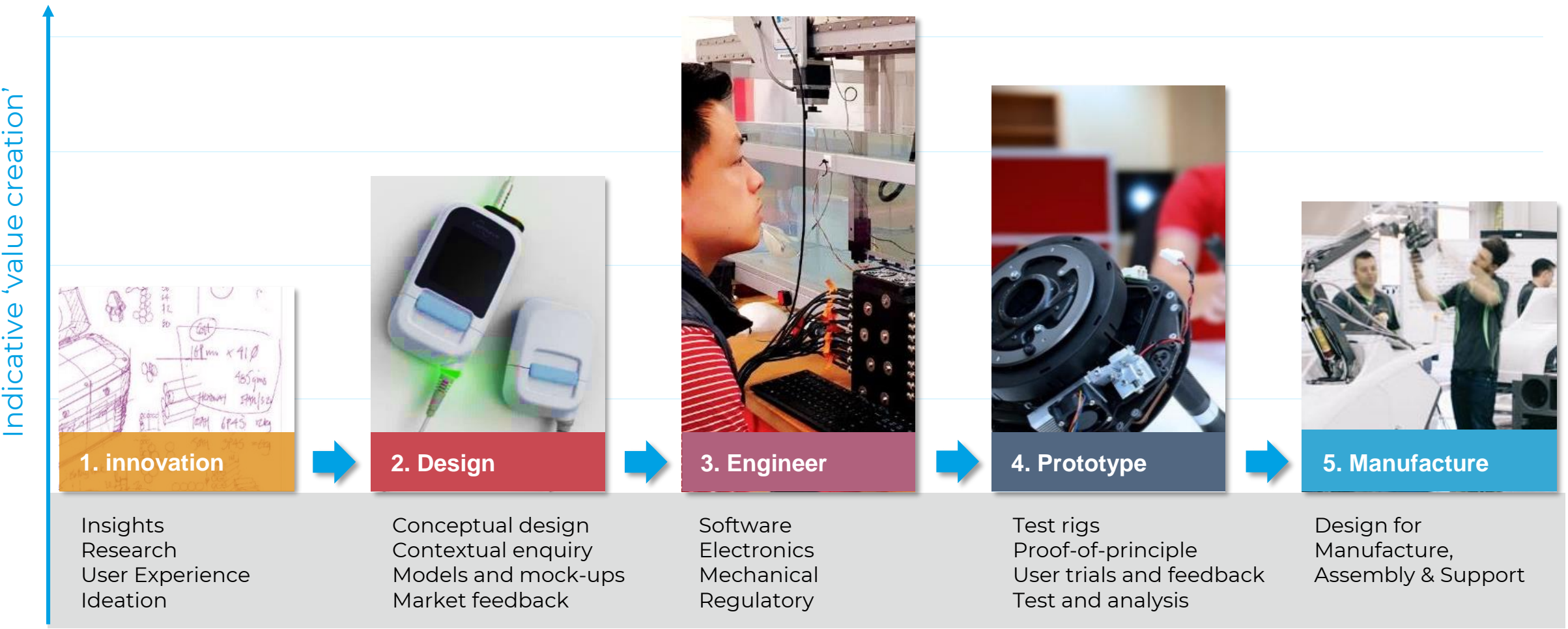


Example:
A 1%-10% equity position in clients who have subsequently listed would have created substantial additional value via capital gains:

Sample of ASX listed clients recent market cap range:

Micro X	MX1	\$50-\$60M
Memphasys	MEM	\$30-\$35M
LBT Innovations	LBT	\$25-\$40M
Nanosonics	NAN	\$1-\$2B

The Hydrix CUSTOMER journey



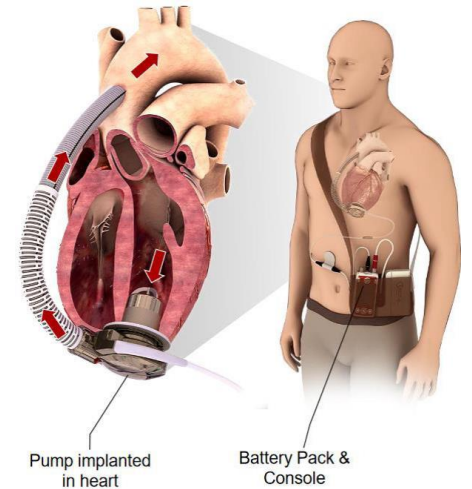
Medical Technology – Specialties in solving global healthcare problems

Global demand to help solve the world's healthcare problems & improve patient outcomes

Expertise in Cardiac technology

"We concluded that the Hydrix team's collaborative approach, controller development experience and innovation capabilities in user design were the best fit for Calon in terms of our Ventricular Assist Device controller development."

*Stuart McConchie,
CEO, Calon Cardio*



Cardiac

- Class leading capability in control systems for cardiac assist devices
- Delivering highly complex software and electronics systems design and power management for life saving therapeutic heart devices
- Delivering complex system updates and regulatory remediation for cardiac monitoring technology

Medical Devices

- Developing IVF incubation technology
- Cell separation instrument technology
- Orthopedic surgical tool for hip replacement
- Exoskeleton development for use with stroke victims
- Ambulatory infusion pumps
- Ultra sound treatment for Alzheimer's

Regulatory Consulting

- Offer regulatory strategy and device compliance services
- Deliver embedded regulatory compliance product development
- Supplemental regulatory remediation services to help clients launch devices into new regulatory jurisdictions
- Clinical trials consulting guidance and strategy

Medical Device Technology - Case Studies

Hydrix has an enviable track record in developing first-to-market technologies



Micro-X

The key development partner in the first carbon nanotube mobile x-ray platform. Unique ultra-lightweight, mobile x-ray imaging systems for medical applications. Guided client from “concept” to “commercialisation”.



Clever Culture Systems

Key role developing first of kind, FDA approved, AI automated culture-plate (of bacteria colonies) reading, screening and interpretation otherwise performed one-by-one manually by microbiologists.



AngelMed Guardian

World first implantable heart attack alert technology. Hydrix is integrating new technologies, providing regulatory guidance and will distribute product in parts of Asia Pacific.



Rex Bionics

‘First of its kind’ exoskeleton technology used in the rehabilitation of stroke patients.

Consumer & Industrial - *Leadership in connected technologies*



Demand for new, smart connected technologies to create safer more productive work places & better environmental outcomes

The Internet of Things

Hydrix leads in the development of communications and monitoring technologies for an increasingly connected world.

We are developing low-cost, low power, connected water and sewerage management technologies which help reduce water waste, and lessen the environmental impact from urbanisation.

We are making mining more efficient and improving mining workplace safety.



Mining

- A resurgent Australian mining and resources sector is providing a strong platform for growth
- Technologies to improve efficacy of explosives detonation
- Disruptive IoT technologies to improve workplace mine site compliance
- Technologies for remote management of collision avoidance systems to improve workplace safety

Utilities

- Large utility providers (water, sewerage) are undertaking long range initiatives to become more cost effective and environmentally friendly

Rail Infrastructure

- Australian Government commitments for +\$75bn over 10 years as part of its rolling infrastructure plan
- Hydrix has an established track record in rail communications technology

Consumer & Industrial - Case Studies

Solving complexity and delivering novel solutions in an increasingly connected world



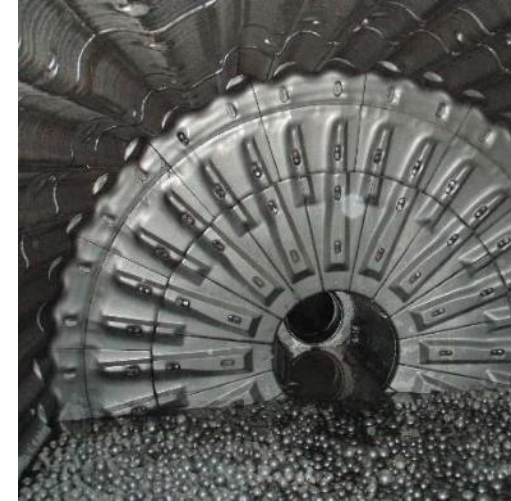
IoT enabled water management

Hydrix selected after global capabilities search to develop an IoT enabled digital water management technology that will transform markets, improve consumer billing and maintenance services, and drive water saving behaviours.



Iota OneBox

Hydrix created a connected technology that revolutionises sewer system management from a desktop or remote device.



Process innovation

Breakthrough continuous pulp chemistry analysis of the flotation process to minimise reagent usage and improve recoveries of gold and other metals.



Rail

Development of complex software and electronics technology to integrate and modernize communications systems for disparate rolling stock.

Defence and Aerospace - *Expanding market opportunity*



Market sector spending drives demand for Hydrix' highly specialised engineering capabilities

Building relationships, driving growth

Expanding Hydrix market presence in defence and aerospace by leveraging our highly talented information, security and communications know-how into 'staff augmentation' services on sensitive projects.



Defence

- Australian Defense Forces ISR (Intelligence, Surveillance, Reconnaissance) CAPEX expenditure is at \$18 Billion and \$16 Billion (sustainment) to 2025 / 26
- Hydrix engineers working on classified projects e.g., Australian Signals Directorate and other clients
- Secured several new projects which can operate and deliver outputs under ASDEFCON requirements

Aerospace

- UAV technologies presenting emerging threats to air traffic safety, key infrastructure assets and points of interest
- Hydrix has expertise in highly specialised critical system products (e.g. aircraft instrumentation) which cannot fail

Expansion Opportunities

- Build on Hydrix panel certification with key regulatory bodies around the world including Department of Defence, Directorate of Technical Airworthiness and the European Commission
- Expand 'staff augmentation' services where Hydrix engineers are 'embedded' within client project teams to build capabilities reputation
- High level agency clearance

Defence and Aerospace - Case Studies

Our clients rely on Hydrix' capabilities to keep people safe and to perform at the highest levels



Thomas Global Systems

Hydrix partnered with Thomas Global Systems to assist in the design and testing for a new digital "Attitude Display" to replace aging CRT display on the global Saab 340 commercial fleet.

This project required compliance with complex Defence development standards DO-178B and MIL-STD-1839 guidelines.



Collins Class Submarines

Engineering support partner on Collins Class submarine upgrade program.

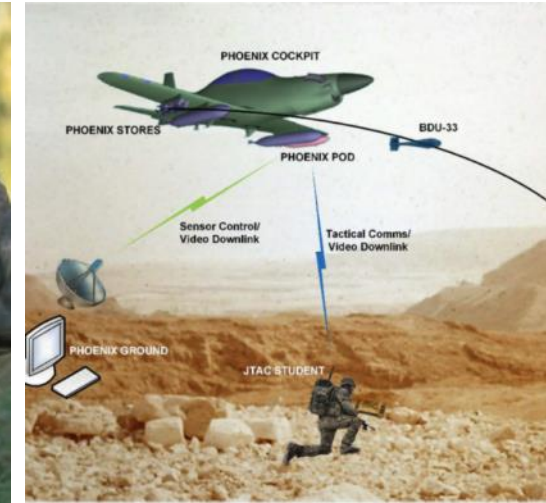
Design review of robustness of vessel's stability and rudder control systems.



Chemring Group

Hydrix developed an electro magnetic pulse electronics disabling system ("jamming system").

Portable, ruggedized, low power, low noise, natural cooling, lightweight pack.



JTAC program

Hydrix is providing integration and engineering services for the development of hardware and software for airborne Joint Terminal Attack Controller (JTAC) training system.

Hydrix is well placed for future growth and value creation



Strategy & Vision

- Increasing global demand for advanced engineering, regulatory & design services built over 12+ yrs
- Recognised sector specialty in: **Medical Technology, Consumer & Industrial and Defense & Aerospace**
- **'Buy, Build & Invest'** strategy to leverage the services business to generate long term, annuity revenue streams through ownership of product and IP – Gyder Surgical and AngelMed recent examples

Operations

- **Trusted relationships** with major global companies including GE, Cochlear, Philips, Siemens and others
- Ability to take on large global projects with world class designers, engineers and regulatory & commercialisation experts
- Highly specialised skills and track record in **high-end Class III medical devices**

Financial

- **\$30m+** pipeline of potential revenue from current contracted projects
- FY19 revenue of **\$14.2m**, up 149% year on year (FY18: \$5.7m)
- In July 2019, secured services contract of up to **\$3.0m** over the next 12-18 months with AngelMed
- Binding Term Sheet with Pure AM for a 4-year, \$5.0m debt (with equity warrants at \$0.05) to refinance \$3.0m of existing shareholder loans (on equal or better terms) and provide growth capital

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Appendix

Board & Corporate Overview



Board & Executive Leadership - expertise across multiple disciplines

The Hydrix Board and Executive possess highly relevant, diverse industry experience in strategy, governance, finance and capital markets, technology, IP, human resources, business development, marketing and manufacturing



Gavin Coote GAICD
Non-Executive Chairman

9.7m shares

25+ years' private equity, corporate M&A and financial strategy, diverse sectors, start-up to \$1B revenue, private & public companies, multiple buy/build/exit business successes



Joanne Bryant
Non-Executive Director

11.4m shares

35+ years experience in workplace performance and organisational culture



Julie King GAICD
Non-Executive Director

156.4m shares

35+ years experience in corporate communications, commercial negotiations, people and change management



Paul Wright FAICD
Non-Executive Director

30+ years' experience in leading and growing large-scale, multinational engineering product design & manufacturing companies



Peter Lewis AM
Chief Executive Officer

2.3m shares

30+ years' experience in leading technology-based organisations in product commercialisation, business development, international sales & marketing

Key Personnel – subject matter expertise, deep industry relationships



Name	Title	Biography
<i>Peter Lewis</i>	<i>Chief Executive Officer</i>	30+ years of international business development in Medtech & advanced technologies, across Asia, US & Europe, with ~\$1bn new technology business generated over career. Senior roles with CSIRO, Austrade, BlueAnt.
<i>Michael Trieu</i>	<i>GM Services Sector Lead - Medical Technology</i>	17+ years of R&D and delivery in active implantable medical devices and medical device engineering consulting. Includes Cochlear (ASX:COH) team leader for design and development of implants across multiple regulatory regions, and Nanosonics (ASX:NAN) Engineering Manager translating real-world clinical needs to products.
<i>Michael Zanker</i>	<i>Head of Projects and Quality</i>	20+ years' leading Medical Device and Automotive product development including FDA Class II IVD instruments and Class III cardiac assist devices, managed teams of up to 80 engineers, development budgets up to \$40M. Products delivered successfully for clients in Australia, Japan and the US.
<i>Andy Atkinson</i>	<i>Sector Lead – Consumer and Industrial</i>	25+ years of high-tech product development experience (UK and Australia) includes growing Hydrix from start-up to one of Australia's leading product development companies. Local and international client new product development and advanced technology engineering.
<i>Anthony Bianco</i>	<i>Sector Lead – Defence and Aerospace</i>	15+ years experience in large defense companies including Thales, Elbit Systems, and the Australian Department of Defence, includes developing Hydrix critical systems and defence market expansion.
<i>Alan Morris</i>	<i>Head of Marketing</i>	25 years+ in medical devices, including n vitro diagnostic devices, cell therapy and life sciences markets, in roles including marketing, business development, strategy, and brand management. International market experience includes Japan, South Korea and USA.

Key Personnel – subject matter expertise, deep industry relationships (cont'd)

Name	Title	Biography
<i>Kim Lester</i>	<i>Chief Technology Officer</i>	25+ years experience in leading engineering teams, across diverse market technologies including biomedical instrumentation, sonar systems, communications and intelligence systems for national security, government and enterprises.
<i>Brad Phillips</i>	<i>Director Business Development – Consumer & Industrial</i>	30+ years business development and consulting, engineering and project management, including 7+ years for the Australian Antarctic Division, 7+ years in aerospace, and for clients including ONR, NASA, BAE, Tenix & Aerosonde.
<i>Richard Stephens</i>	<i>Director Business Development - MedTech</i>	30+ years business development partnering with early through mature stage medical device companies assisting them in design, engineering, commercial market exploitation, regulatory approval, manufacturing process across USA, Europe, Asia, Australia. Mechanical engineer working in aerospace and automotive industries.
<i>Paul Kelly</i>	<i>Medical Advisory Board & Clinical Adviser</i>	30+ years international product distribution and services leadership experience for medical technology companies including Getz, Medtronic, Baxter Healthcare and CardioScan. Product distribution and pathology services experience includes implantable and non-invasive cardiac devices (pacemakers, stents, heart valves) and cardiology monitoring services.
<i>Stephanie Miles</i>	<i>Head of Regulatory</i>	Biomedical Engineer, 10+ years' experience with Hospitals, Medical Device Assessor with TGA. Led over 10 regulatory approvals for Hydrix clients.

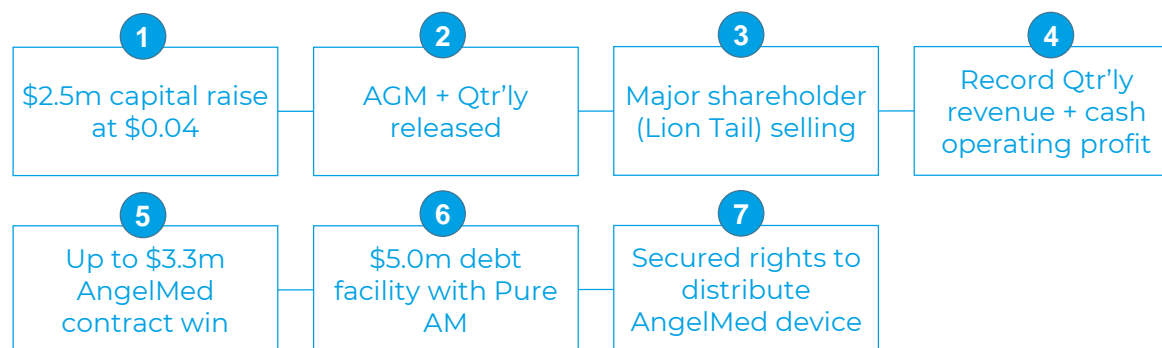
Hydrix – a corporate snapshot

Capital Structure (as at 7 October 2019)

Ticker	HYD
Share Price	\$0.029
Shares on Issue (m)	669.3
Options and Performance Rights (m)	41.4
Market Capitalisation (diluted) (\$m)	\$20.6

Major Shareholders	Shares (m)	%
John W King Nominees & Associates	166.8	24.9%
Flet Superannuation Pty Ltd	31.9	4.8%
Kurrawonga Pty Ltd	19.4	2.9%
BNP Paribas Nominees	15.0	2.2%
Goetzke Super Company	14.6	2.2%
Directors & CEO	23.4	3.5%
Top 20	332m	50%

Share Price History



A blue-tinted photograph of a modern office building with large glass windows. In the foreground, a large white sign displays the Hydrix logo and tagline. A smaller sign on the building also shows the logo and address.

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improving a billion lives

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