

# Bluechiip Ltd (ASX:BCT)

Capital Raising Presentation

1-for-3 Non-renounceable Rights Issue

August 2016



*Unique patented MEMS technology combining secure wireless tracking with integrated temperature sensing for extreme environments*



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# Bluechip

Sample tracking for extreme environments using MEMS sensors

## The Company

- Founded in 2003
- Listed on Australian Securities Exchange (ASX) in 2011
- Head office in Melbourne, Australia
- Global Distribution Network
- Key manufacturing partners in Europe, UK and Malaysia.
- OEM Partnering agreement in Assisted Reproductive Technologies (ART) and IVF
- Strong IP portfolio – 24 granted patents, 6 pending in 9 patent families



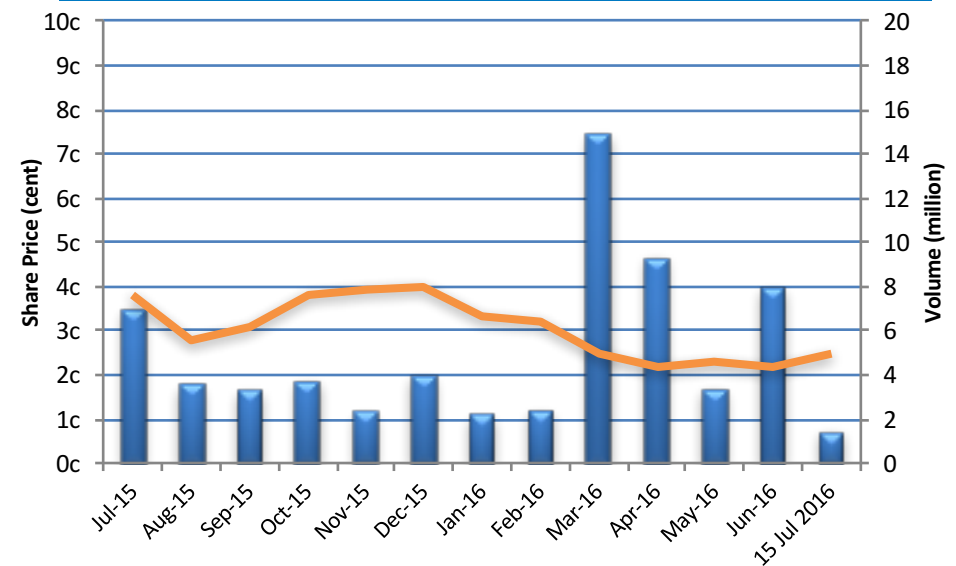


# Corporate overview

## Top Shareholders

Pulitano Family	9.04%
Dr. Stephen Woodford	7.64%
Chairman & Entities	7.13%
Australian Executor Trustees Limited	5.76%
Roshi Blue Pty Ltd & Entities	5.09%
Top 20 Shareholders	49.15%
Founder	2.12%

## Share Price



## Summary

Number of Shareholders	706	Market Cap. (30 Jun'16)	\$5.03m
Share Price (30 Jun'16)	2.5c	Net Cash (30 Jun'16)	\$0.49m
Shares on Issue (30 Jun'16)	201,377,647	Enterprise Value (30 Jun'16)	\$4.54m



# Our Team

## Board

### Iain Kirkwood

Chairman

Experienced investor and non-executive director (listed and unlisted). Iain has considerable practical and operational experience gained from a successful financial career spanning 35 years including in resources, manufacturing and latterly healthcare in Australia, Britain and the USA. Iain has been a major shareholder in Bluechiip for over 5 years.

### Andrew McLellan

Managing Director

Experienced in innovation and commercialisation combined with significant technical and operational background. Andrew has held senior positions including as VP of Business Development in North America and Director at Leica Microsystems (previously Vision BioSystems a division of the publicly listed Vision Systems), and as CEO of the Advanced Manufacturing Co-operative Research Centre (AMCRC)

### Michael Ohanessian

Non-executive Director

CEO and Managing Director of Praemium Ltd, Michael brings executive experience in technology-related businesses. Previously CEO of Vision BioSystems Michael led the technology commercialisation into global markets before its parent Vision Systems was acquired by US based Danaher Corp. Michael brings a mixture of operational, strategic and leadership capabilities to his role at Bluechiip.

## Team

### Scott Turner

Engineering Manager

### Dr Ian Johnston

Product Engineering Manager, MEMS (EU)

### Irvin Teoh

Finance Manager

### Oscar Val

Technical Sales and Marketing Manager

### David White & Hugh Douglas

Business Development North America (US)



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Unique patented technology  
combining secure wireless  
tracking with integrated  
temperature sensing for extreme  
environments

*Differentiated technology to labels,  
barcodes and RFID*





# Bluechiip

Sample tracking for extreme environments using MEMS sensors

## Our Product : Chip + Reader + Software

- Unique technology, superior to labels, barcodes and RFID
- Operates reliably down to  $-196^{\circ}\text{C}$
- Instant sample temperature sensing
- Gamma resistant
- Reduces human error
- Increases productivity
- Extremely difficult to copy
- Applications in niche markets, e.g. cryogenic storage and biobanking







# Core Technology | Chiip

## MEMS smart Chiip

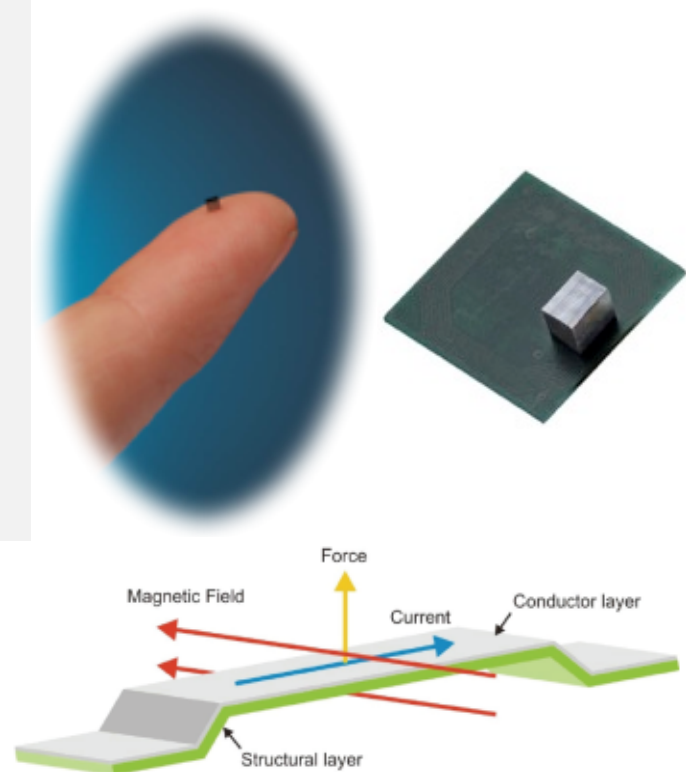
Micro-Electro Mechanical Systems (MEMS) is a manufacturing technology used to make micro devices with features less than the width of a human hair

- Functional at Cryogenic temperatures ( $-196^{\circ}\text{C}$ )
- Unique ID coded into each Chiip at manufacture
- Provides temperature when polled by reader
- Reading time under 0.5 second, even through frost
- Gamma resistant
- Can be molded into any plastic

### ***MEMS chips are superior to RFID in harsh environments***

*Most RFID tags use integrated circuit (IC) technology with electrical components sensitive to damage by temperature extremes and gamma radiation.*

*MEMS devices contains micromechanical components that are rugged and able to withstand exposure to wide temperature ranges and gamma radiation.*

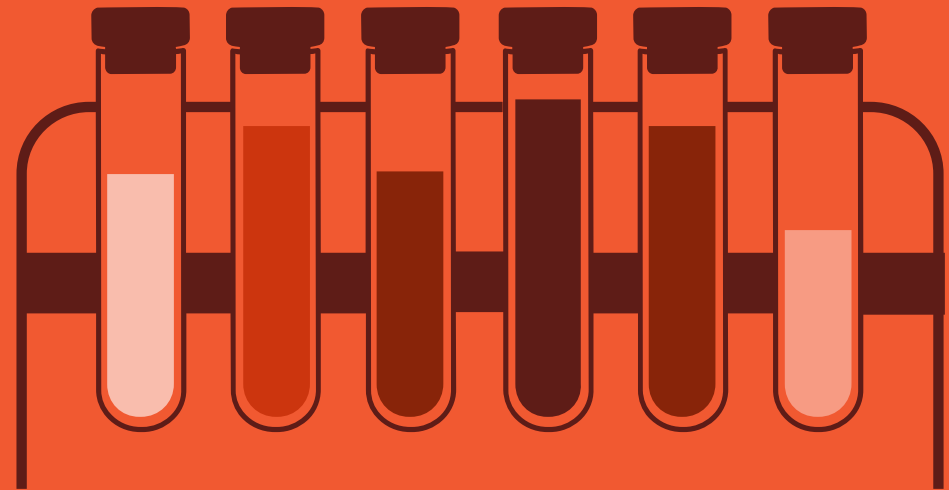






# Market Opportunities

300+ million biosamples per annum, 2+ billion in storage

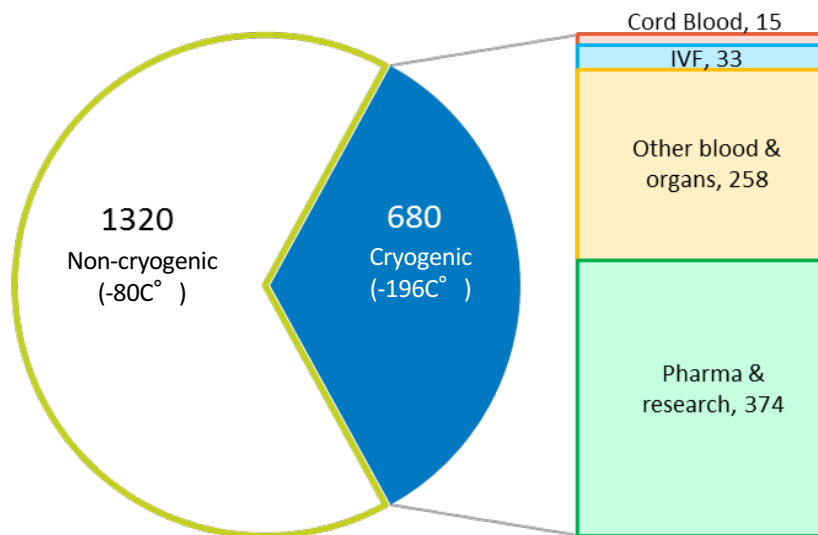




# Primary Market Opportunity

Global Biopreservation Market Greater than \$2B in 2015

Biobanking samples (millions)

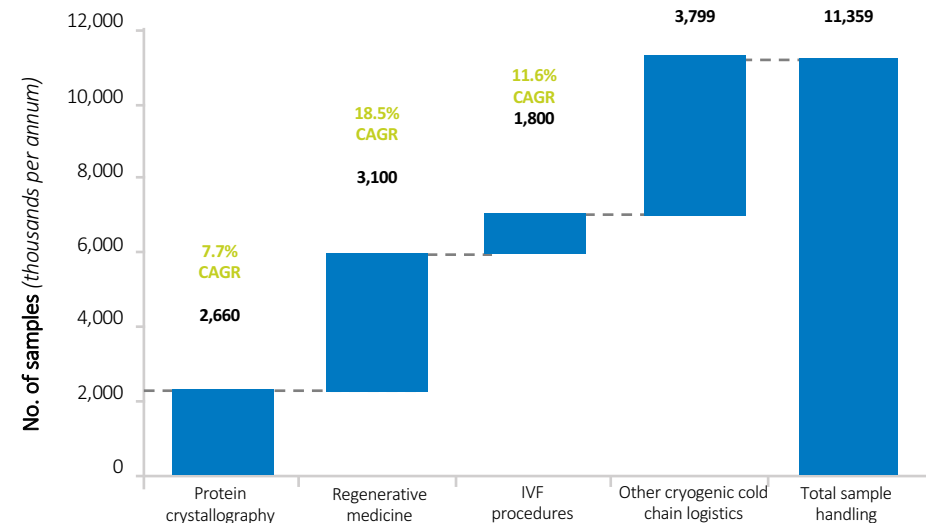


Total biobanking: 2B samples

Cryogenic biobanking: 680M samples

Note: Cryogenic biobanking is a segment of the biobanking market which stores samples at cryogenic temperatures (-196C) for extended periods. The market is dominated by human samples for biomedical applications.

Cryogenic transport and handling



Annual biobanking: 300M samples

Cryogenic handling: 11M samples

Note: Cryogenic transport refers to supply, transport and handling from long term storage facilities to application sites as well as short term storage and manipulation of samples at cryogenic temperatures (e.g. personalised medicine and protein crystallography).

Sources: Visual Fuse and MarketsandMarkets 2014



# Biobanking today

300+ million biosamples per annum, 2+ billion in storage



High volume  
processing



Dual  
labelling



Emerging guidelines  
(ISBER, CAP etc)  
including  
temperature



Increasing demand  
for Cryogenic  
storage



# Biobank tracking technology is not keeping up with the increasing value of biosamples



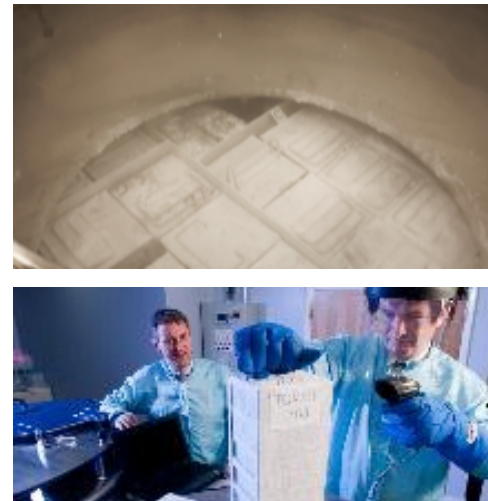
Tissue

Blood

IVF Sperm/Eggs









Plasma

StemCell





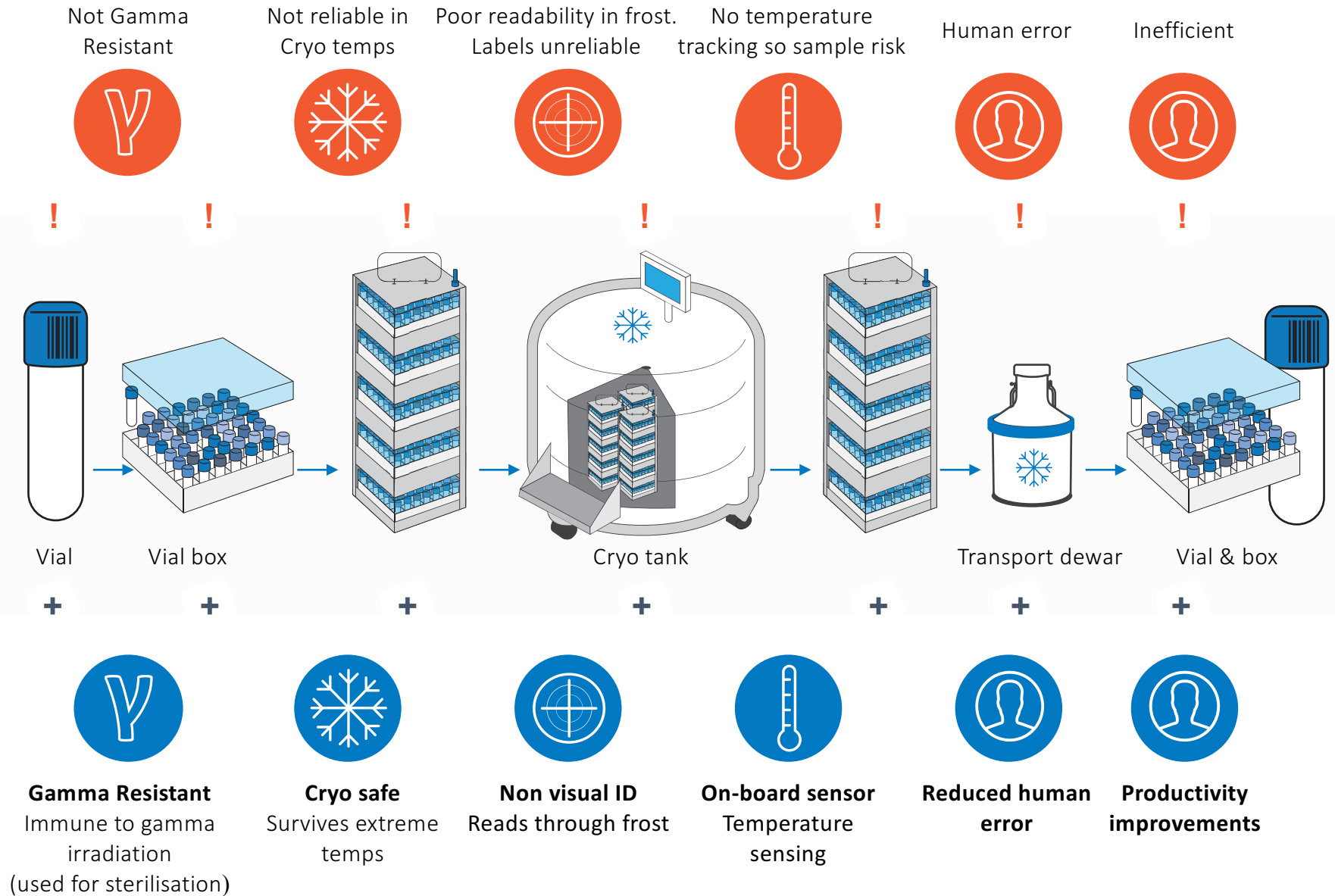
# Alternative technologies

	LABELS	BARCODES	RFID	BLUECHIP
 <b>Gamma Resistant</b>				
 <b>Cryo safe</b> Survives extreme temps				
 <b>Non visual ID</b> Reads through frost				
 <b>On-board sensor</b> Temperature sensing				
 <b>Reduced human error</b>				
 <b>Productivity improvements</b>				

Current Issues

Current Biobank Process

Bluechip Solutions





# Other addressable markets



## Cold Chain Logistic Pharmaceuticals

Item level **temperature tracking** of pharmaceuticals through-out the cold chain cycle.



## Cold Chain Logistics Food

Item level **temperature tracking** of frozen and temperature sensitive food stuffs through-out the cold chain cycle.



## Industrial and Manufacturing

High **temperature tracking**, structural health monitoring, tracking of tools and parts that are exposed to ionizing radiation or **gamma radiation** including sterilised medical devices, disposables and some food products.



## Security & Defence

**Anti counterfeiting** fashion, food and high value commercial items. Cloning a bluechiip® tag is extremely difficult. tracking of tools and parts that are exposed to **ionizing radiation**, security and defense.



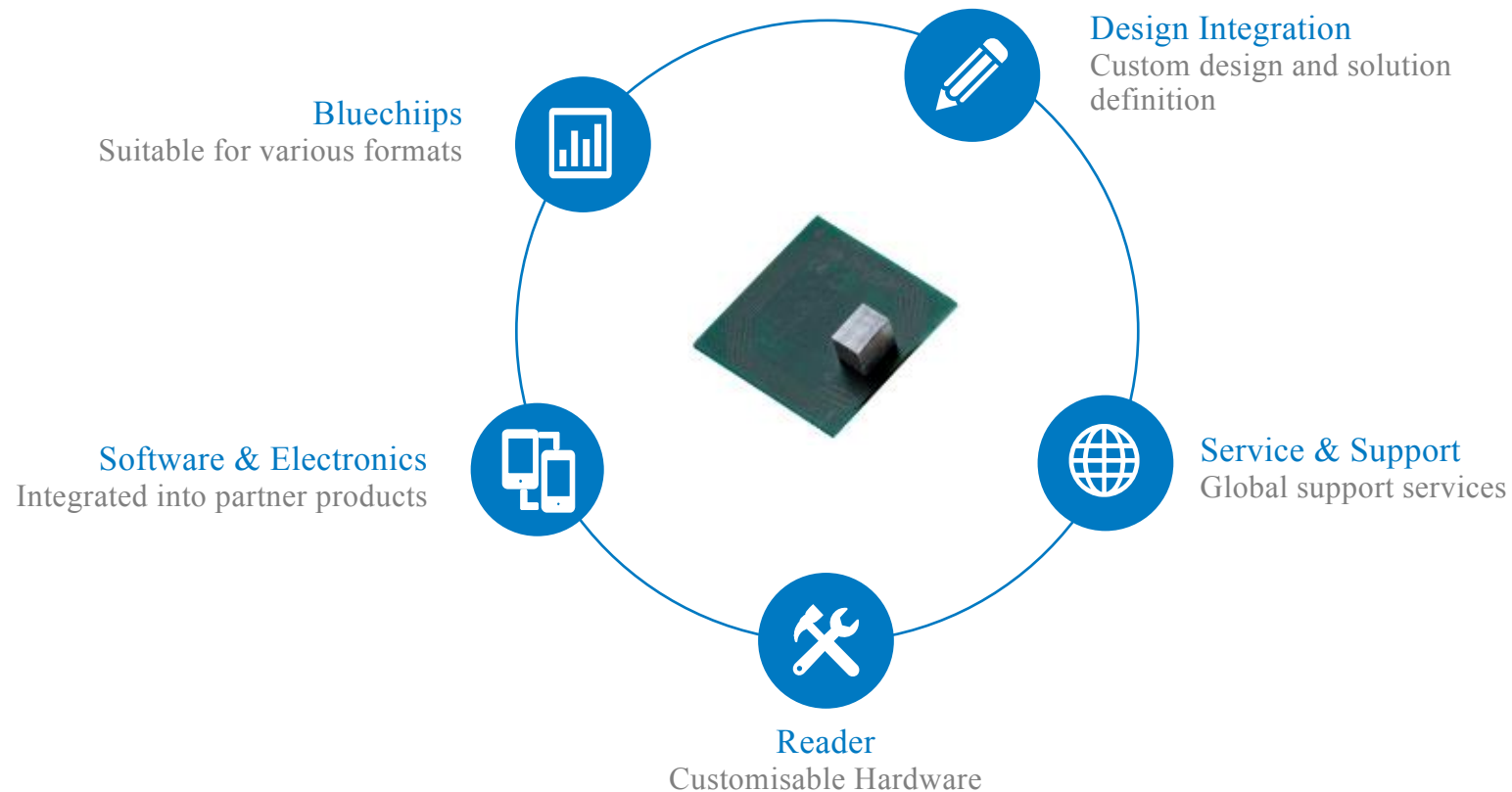


# Strategic Progress and Sales Pipeline





# Embedded solutions for OEM partners





# Genea Biomedx License & Supply Agreement



## ASX Announcement

For immediate release  
3 December 2015



## ASX Announcement

For immediate release  
Thursday 7 July 2016

### Bluechiip & Genea Biomedx License and Supply Agreement

Bluechiip Limited (ASX:BCT, "Bluechiip" or the "Company"), leader in the development of sample tracking technology for harsh environments, and Australian fertility innovator Genea Biomedx, have entered into a license and supply agreement to incorporate Bluechiip's sample tracking technology into Genea Biomedx's range of Assisted Reproductive Technology (ART) instruments used in IVF clinics across the globe.



### Bluechiip displays OEM IVF tracking product at major trade show in Helsinki

7 July 2016





# Bluechip IVF Transport Cooler

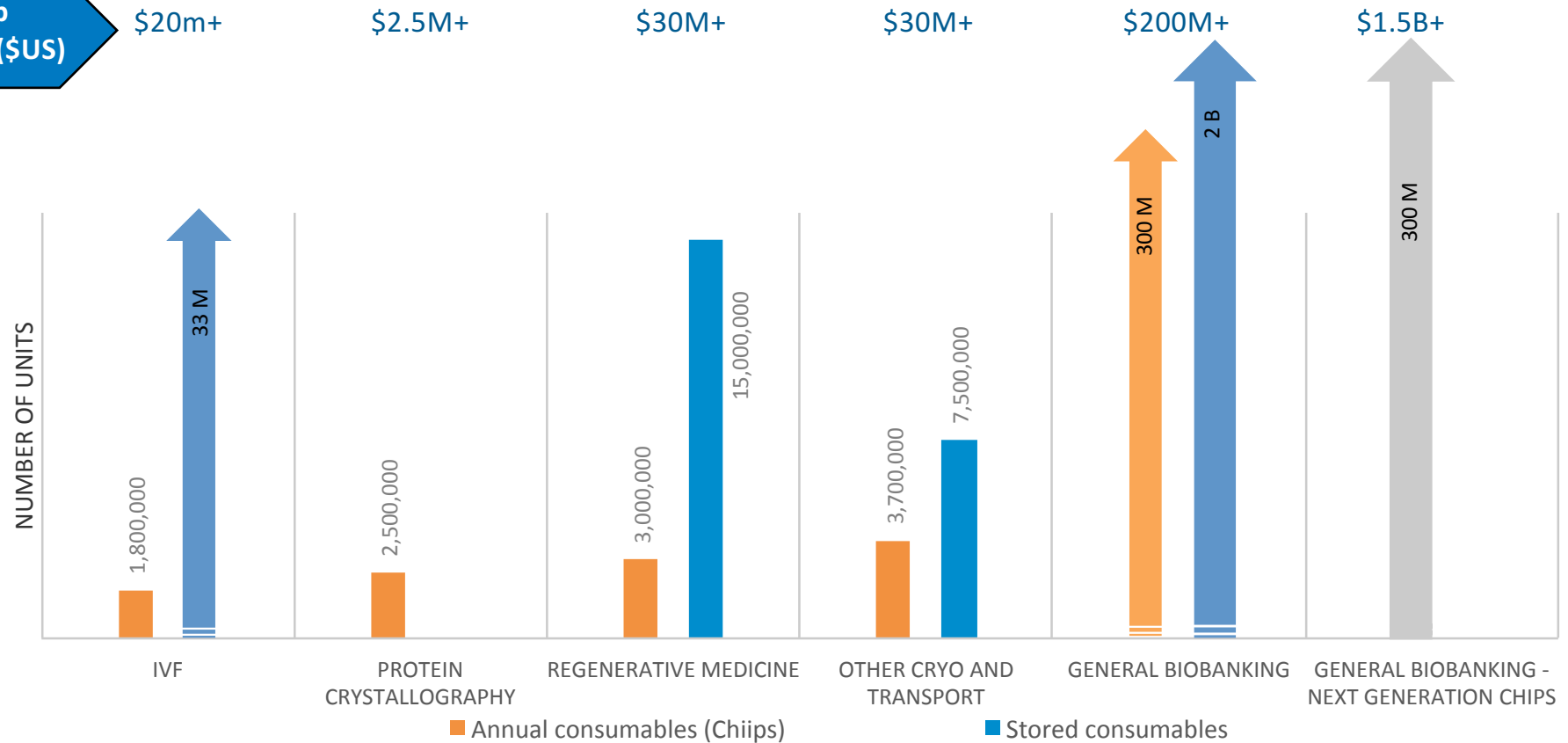
## Active ID and Temperature Recording in Liquid Nitrogen -196° C





# High Value Target Markets

Bluechip  
opportunity (\$US)



OEM PIPELINE CLIENTS	Agreement Dec 2015 <b>Revenue Mar 2016</b> <b>Displayed July '16</b> <b>Target Launch Q1 '17</b>	Executed agreement Evaluation in progress Validation Customers	Executed agreement Evaluation in progress Validation customers	Evaluation agreements & developer kits in progress	Developer kits sold with multiple vendors & validation customers	R&D Development. High value over temperature sensors
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# Our Sales



## CASE STUDY:



**Peter Mac**  
Peter MacCallum Cancer Centre  
Victoria Australia

### METHOD

Bluechiip tracking devices were attached to five cryocyte cryopreservation bags.

All bags were transferred to a cryogenic storage tank. Each bag underwent five consecutive freeze-thaw steps.

### RESULTS

All bags were successfully identified without the need to manually lift and visually check the patient identification label.

The Bluechiip tracking technology provided localised temperature information during the retrieval process.

Faster and more consistent search times compared to manual methods.

Bags were maintained in more ideal, less disrupted conditions compared to manual methods.



# Targeted Sales & Pipeline Progress



Target Market	Market Size by Samples	Bluechiip Opportunity USD (Licence fee's, R&D services, Bluechiips & Readers)	OEM Partner Progress >15 partners in pipeline	Timing
Assisted Reproductive Technology (IVF)	1.8m IVF Cycles/yr, 33m samples in storage	\$20m+	Developer Kit Delivered <b>Supply Agreement Executed</b> Due Diligence Complete - Licence Fee received <b>Trade show demonstration – R&amp;D Fee received</b> Target Launch Q1 '17	July '15 Dec '15 Mar '16 July '16 Q1 '17
Protein Crystallography	2.5m Samples/yr	\$2.5m+	Executed agreement and delivery of trial kit Evaluation in progress End Validation Customers in place	Q4 '15
Regenerative Medicine	3m samples/yr 15m+ in storage	\$30-50m+	Executed agreement and delivery of trial kit Evaluation in progress Validation customers	Q4 '15
Other cryogenic cold chain logistics	3.5-7.5m samples/yr >250m in storage	\$30m+	Multiple evaluation agreements Developer kits delivered	Q1-3 '16
General Biobanking	300m+ samples/yr >2B in storage	\$200m+	Developer kits sold with multiple vendors End validation customer sales	

## Future Core Technology and Adjacent Market Opportunities

High value over temperature sensors	300m+	\$1.5B+	Government co-funded R&D Development
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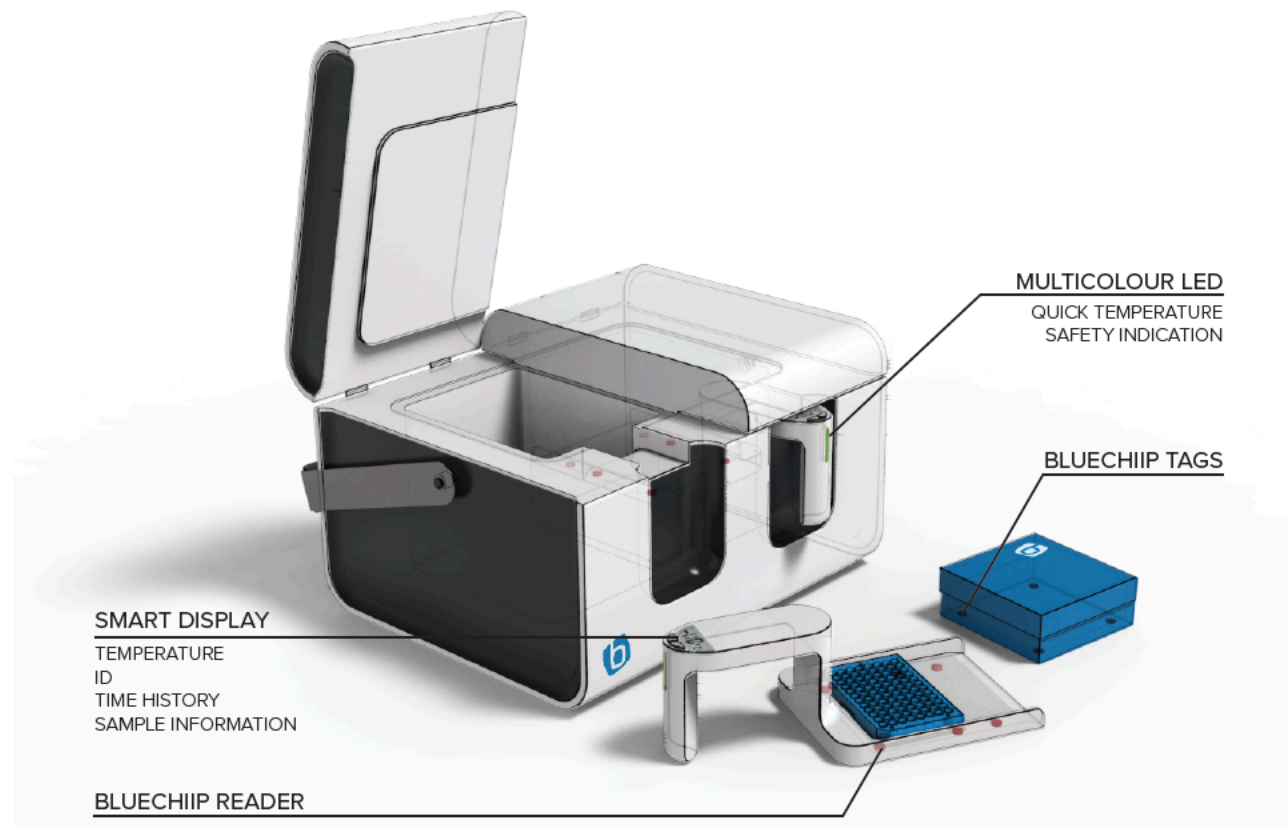
# Product Pipeline - Readers



# BLUE TRAY



A cryogenic smart sample transport solution providing continuous temperature and ID monitoring of cryoboxes fitted with bluechiip® tags. The Blue Tray provides immediate tracking direct from your storage tower, into the cold transport box which neatly accommodates the Blue Tray for a fully integrated package. All data is logged onboard and the display provides feedback of temperature, ID, time, and sample information. The transport box features excellent insulating properties in a rugged package which will ensure samples are kept at safe temperatures for many hours.





# Use of Proceeds

The proceeds raised from the Offer will be used to:

- ✓ Complete development of products in Assisted Reproductive Technologies Market with our first OEM partner Genea Biomedx;
- ✓ Complete current evaluation and development trials with pipeline customers in USA, EU and Asia;
- ✓ Launch and roll-out the first range of IVF products through partners; and
- ✓ Corporate overheads.



# Investment Highlights

- Unique patented technology combining secure wireless tracking with integrated temperature sensing for extreme environments
- \$2b+ bio-preservation/bio-storage target market
- Executed supply agreement with Genea Biomedx in the high value IVF market with global distribution through a major pharmaceuticals company
- Repeat initial revenue from license fees, service and product sales (2nd half FY16 \$150k);
- Pipeline of over 15 partners with initial revenue from developer kits and validation customers
- High revenue growth expected in short to medium term on IVF product release early 2017
- Trial and developer agreements in protein crystallography, cell therapies, general biobanking and Auto Identification and Data Capture markets
- Government co-funded projects with University of Melbourne & Swinburne University to make Bluechiips adaptable and suitable for formats with significant value enhancement
- Large adjacent market opportunities



# Summary of Rights Issue

A summary of the key information in respect of the Rights Issue is shown in the table below. Shareholders should read the Offer Booklet in its entirety before deciding to participate in the Rights Issue.

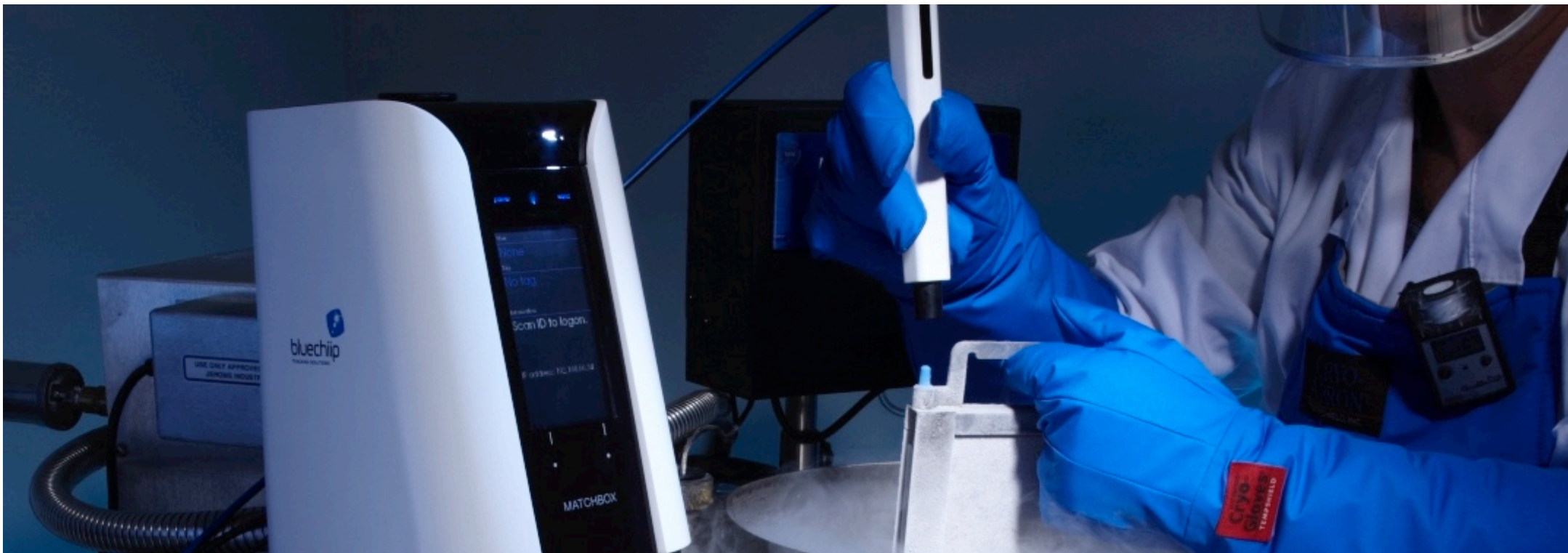
Ratio:	One New Share for every three existing ordinary Shares (Non-renounceable)
Issue Price:	\$0.0225 per share
Number of New Shares:	67,125,882
Gross Proceeds:	\$1,510,000 (If fully subscribed)



# Summary of Rights Issue

## KEY DATES (INDICATIVE)

15 August 2016	Announcement Date Appendix 3B lodged with ASX
19 August 2016	Ex Date
22 August 2016	Record Date
25 August 2016	Dispatch of offer documents Rights Issue opens
9 September 2016	Rights Issue Closing Date
14 September 2016	Shortfall Notification Date
16 September 2016	Settlement Date



# Contact

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