

A Global Health Technology Company

ASX:CDX

AUGUST 2018

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# INTRODUCTION

Craig Cooper - CEO





#### **AUSTRALIA**

 Co-Founder - NRG Asia-Pacific -Australia's largest independent energy producer



- Senior Associate Lawyer Blake Dawson Waldron (counsel to United Airlines, The Disney Corporation, DHL International (External General Legal Counsel))
- Founder Private Energy Partners (PEP)



 Partner – M-Mobile (largest independent mobile retail distribution company in Australia)

#### USA



- Co-Founder Boost Mobile USA
- Managing Partner The Action Fund
- Investor The Huffington Post (acquired by AOL), BuzzFeed (USD\$3B), Buddy Media (acquired by Salesforce), Associated Content (acquired by Yahoo), xAD (\$USD1B)
- TV Host and Investor CNBC's "Adventure Capitalists"



- Head of Venture Capital and Digital
   Media Saban Capital (\$700M)
- Founding Partner Softbank Capital (\$500M)



- Venture Partner VantagePoint Capital Partners (\$3B)
- Co-Founder EBT Mobile (China) LTD

"Craig has built and transformed some of the leading businesses in consumer Internet and digital media. He has a vision for big market opportunities and a passion for living life to the fullest."

**Anthony Robbins** | Entrepreneur, Author and Peak Performance Strategist

#### **BOARD OF DIRECTORS**



Donal O'Dwyer

Director - Fisher & Paykel (NZE: FPH)

**Director** - Cochlear Ltd (ASX: COH)

**Director** - Mesoblast Ltd (NASDAQ: MESO)

**Director** - NIB Holdings Limited (ASX: NHF)

Cordis Cardiology/Johnson & Johnson

Baxter Healthcare



NON-EXECUTIVE DIRECTOR

#### **Niall Cairns**

BEC, ACA, FAICD

Managing Partner - Kestrel Capital Pty Limited

**Director** - Tru-Test Corporation Limited

Chairman - ComOps Limited (ASX: COM)

**Director** - Chant West Holdings Limited (ASX: CWL)

Managing Partner - Kestrel Growth Funds

Managing Partner - Carnethy Evergreen Fund



EXECUTIVE DIRECTOR & CEO

# Craig R. Cooper BEC, LLB (Hons)



NON-EXECUTIVE DIRECTOR

#### R. King Nelson

President and CEO - Uptake Medical Corporation

**President and CEO** - Kerberos Solution

President and CEO - VenPro Medical

Baxter International, American Hospital Supply



#### KEY MANAGEMENT



Doug Kurschinski

EVP & HEAD OF GLOBAL SALES

(AtCor Medical)
Cardiac Pathways, Corp
St Jude Medical, Corp
Stereotaxis, Corp



**Jarrod White** 

**CHIEF FINANCIAL OFFICER** 

Traverse Accountants
University of Sydney



ZiHan Lin

DIRECTOR OF CORPORATE DEVELOPMENT

Masimo
Uptake Medical
Cirtec Medical Systems
Harvard (MBA)
Stanford (Engineering)



**Rhonda Welch** 

REIMBURSEMENT AND STRATEGIC PLANNING

Biosense Webster
Johnson & Johnson
Baxter Healthcare



#### Yervant Chijian

DIRECTOR OF REGULATORY AFFAIRS & QA

ResMed UTS Engineering



#### **Lawrence Chan**

DIRECTOR OF PRODUCT DEVELOPMENT

Cochlear

Silverbrook Research



#### Ahmad Qasem -PhD

PRINCIPAL SCIENTIST

PhD - Biomedical Engineering



#### **Lindsey Shultz**

MANAGER - OPERATIONS &

AWA

Commander

**PWV Medical** 



#### **Mary Hoxworth**

**MARKETING DIRECTOR** 

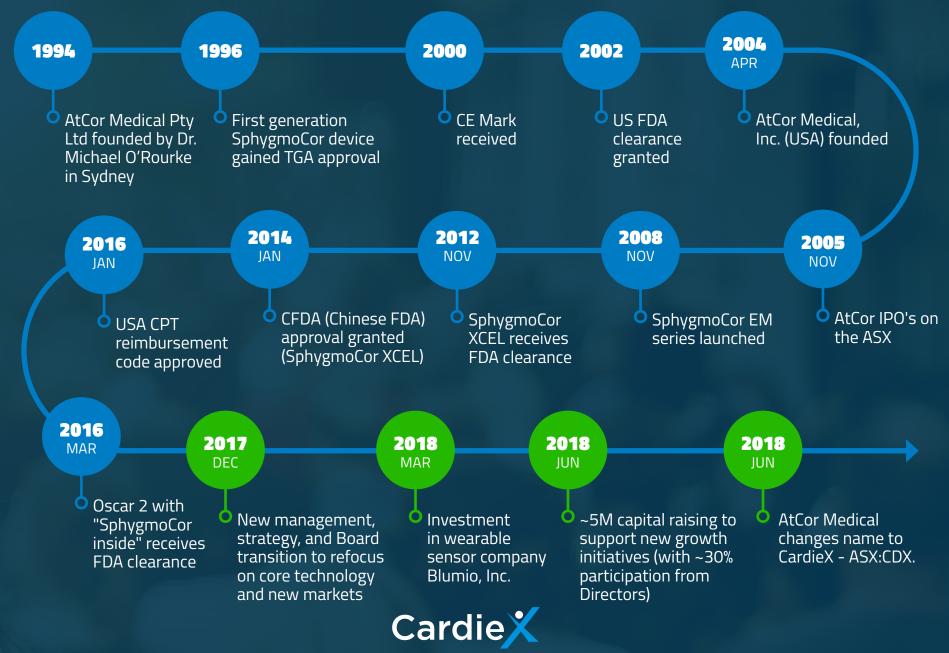
**IBM Watson** 

Pointshare, Corp

Ostex International



#### CORPORATE HISTORY



# **BUSINESS OVERVIEW**



#### **OVERVIEW**

 We provide technology solutions for large scale population health disorders with significant market scale.

 Current focus is on cardiovascular disease (CVD) and heart health - the #1 cause of premature death globally.

 Our long term future lies in developing large scale health technologies in other significant global wellness markets (e.g. obesity, orthopedic health, diabetes management, urology).

Our health solutions and IP have the potential to disrupt a multi-billion dollar market in preventative diagnostics, patient management, wearables, and consumer/digital health.



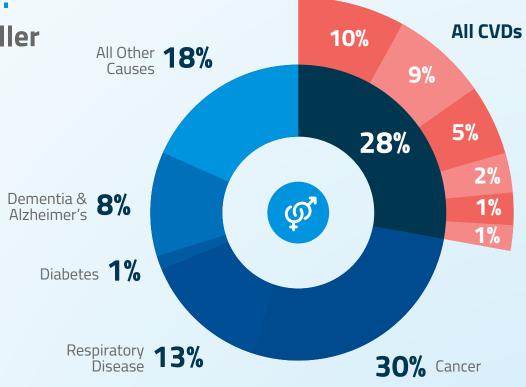
Cardie X



THE PROBLEM - A GLOBAL HEALTH EPIDEMIC.

Cardiovascular disease is the **#1 killer of humans** by non-natural causes.

- Over **1 billion** hypertensives globally.
- 20M deaths a year from CVD-related disorders (31% of all global deaths).
- New American Heart Association (AHA) guidelines - 45% of American adults are now considered at risk for CVD.
- Current embedded technologies (brachial blood pressure cuff) are failing to properly detect, prevent, and manage heart disease
   leading to significant under- and overtreatment.
- We need a better way to detect CVD and manage patient health outcomes.



#### **All Cardiovascular Diseases (CVD)**

- **10%** Coronary Heart Disease
- **9%** Stroke
- **5%** Other Heart Diseases
- **2%** Diseases of Arteries, Arterioles & Capillaries
- **1%** Hypertensive Diseases
- **1%** Other Diseases of the Circulatory System



#### OUR CURRENT SOLUTION

XCEL SphygmoCor® System (XCEL)

The XCEL allows specialist practitioners, pharmaceutical companies, and research institutions to non-invasively measure central arterial pressure in patients.

Measuring central arterial pressure is the only way to accurately determine and predict pre-hypertension and arterial stiffness - the main precursors to key organ damage and cardiovascular disease.

The XCEL detects key parameters associated with CVD that are usually only detected with an invasive catheter.

- Over **1,000** peer-reviewed studies.
- **4,400** XCEL systems deployed globally.
- The only FDA 501(k)-cleared device for sale in the USA deemed to be substantially equivalent to an invasive catheter for all central measurements.
- **CPT 1** reimbursement code.
- Significant IP and patent portfolio.





# OUR TECHNOLOGY & INTELLECTUAL PROPERTY

- Gold standard FDA-approved device for the measurement of blood pressure and cardiovascular risk parameters (Current FDA "predicate device").
- Current IP and technology focused on cardiovascular health.
- Significant trademarks in consumer and wearable sectors.
- Future applications in "Quantified Athlete", remote patient monitoring, and broad health categories.
- Proprietary IP & technology in cardiac load, athletic capacity, arterial stiffness, arterial age, and other consumer health diagnostics.
- Expanding licensing and co-development opportunities in broad medical health and consumer segments.
- Over 1000 published peer-reviewed studies.
- 13 USA patents covering significant applications in cardiovascular health and consumer wearables.



1939 Hypertension

1961 Elevated Cholesterol

Arterial Stiffness PWV



(PWV) is the most research supported method to assess arterial stiffness in order to improve cardiovascular risk prediction (American Heart Association, American College of Cardiology). **CardieX's XCEL** is the the most clinically validated, peer viewed, and study based technology for measuring PWV.

#### HOW WE MAKE MONEY

We sell/lease the XCEL and related products to:





Research and Pharmaceutical companies for clinical trial services related to CVD and hypertension.





IDN/health care service providers in the USA for sale to their affiliate hospital and caregiver networks.



Specialist practices (principally Cardiologists, Nephrologists and Endocrinologists) for measurement of **pulse wave** and cBP (central blood pressure).

MAYO
CLINIC
CHOCK Cleveland Clinic

Licensing agreement with SunTech Medical for 24-hour Ambulatory Blood Pressure Measurement (ABPM) for Oscar 2 SphygmoCor® device.





# OUR 2018 PLAN

Three new growth, product, and revenue platforms + New China Strategy



#### **CardieXMED**

Clinical, Pharmaceutical, and Research.

- Existing business segment focused on research and Pharma markets + specialist MDs (Cardiologists and Nephrologists) utilizing existing XCEL device for CVD and hypertension.
- Reinstatement of reimbursement development efforts to increase addressable market with specialists.



#### **CardieXHEALTH**

Consumer Health and Direct-to-Practitioner (D2P) Marketing.

- Sales focus on M.D., N.D.
   (Naturopathic Doctor), nursing care, alternate, and broader health practitioner markets. ~1M+ US licensed physicians.
- Business model based on reflexive testing – turning a non-billable event (brachial cuff BP test) into a billable event.
- New consumer-oriented "Arterial Health" product, team leadership, and marketing strategy with industry evangelists and influencers + direct-to-patient marketing campaigns to drive awareness.





#### **CardieXLABS**

Wearables, Mobile, and Digital Health Technologies.

- Sensor and wearable devices/ partnerships/JV's.
- Acquisition, IP licensing, and development of new technologies, products, and services.
- Mobile app and digital behavioral/lifestyle strategies for heart health (CardieX App).
- Joint venture partnerships and strategic investments.

# DIRECT TO PRACTITIONER

 Newly rebranded and customizable XCEL
 SphygmoCor® (V.2) allows sales to multiple markets (consumer/health practitioner/specialist) with a single product at variable price points.

 Expanding our core technology and products to a broader health practitioner market (1M+ licensed MDs and 30K naturopathic professionals in the USA) - a 30x increase in our current addressable market.

 Enabling health practitioners to create new significant revenue streams (turning a non-billable event into a billable event by using our CPT 1 reimbursement code).

 Direct-to-practitioner marketing and training using online and direct sales channels.

- Sales focus built around a multi-platform health management
   + lifestyle program w/ CardieX App.
- Expand CPT reimbursement program from (current) 46% USA coverage.



Cardie

Cardie<sup>X</sup>

Total Addressable Market Opportunity



### WEARABLES AND DEVICES

- Co-developing a sensor-based consumer blood pressure wearable incorporating artificial intelligence (A.I.) and CardieX intellectual property - a USD\$7.5B global market opportunity.
- Developing a suite of A.I.-based consumer data applications for licensing to device manufacturers/OEMs (i.e. Apple) for "cardiac load" and "exercise capacity".
- Co-developing a wearable ambulatory 24hour ABPM that measures BP and cBP (a USD\$8B global market opportunity).





# Hypertensives Globally

Blood Pressure

# CONSUMER & DIGITAL HEALTH

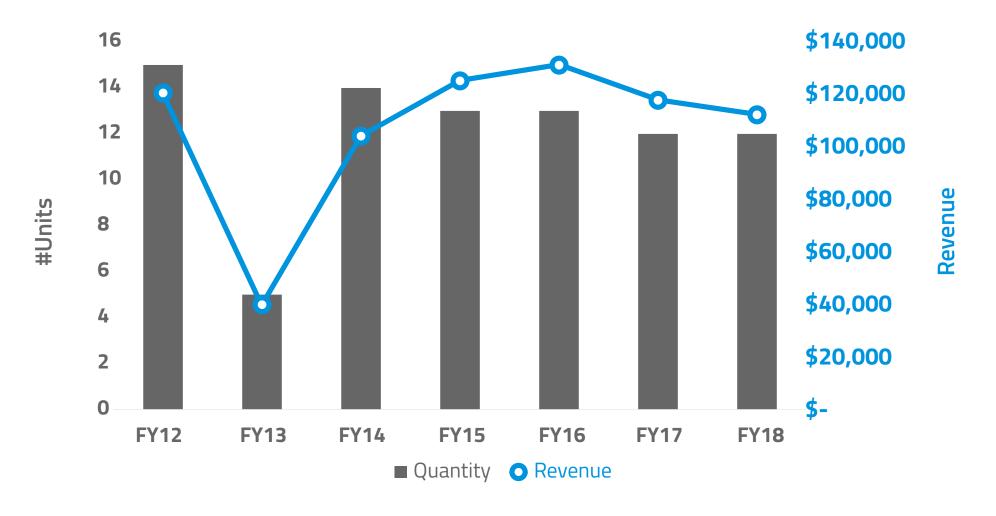
- Enabling consumers to directly manage their health through direct-to-consumer digital products, patient health coaching, and technologies that drive behavioral change (target market - over 1 billion hypertensive humans globally).
- Expanding our pilot branded programs for "concierge health".
- Establishing OEM partnerships for branded consumer blood pressure monitoring devices.
- Currently in due dillegence on multiple strategic opportunities.

CardieX

At home blood pressure monitoring expected to reach USD\$1.6B globally by 2023 (IEEE)

#### CHINA: CURRENT STATUS

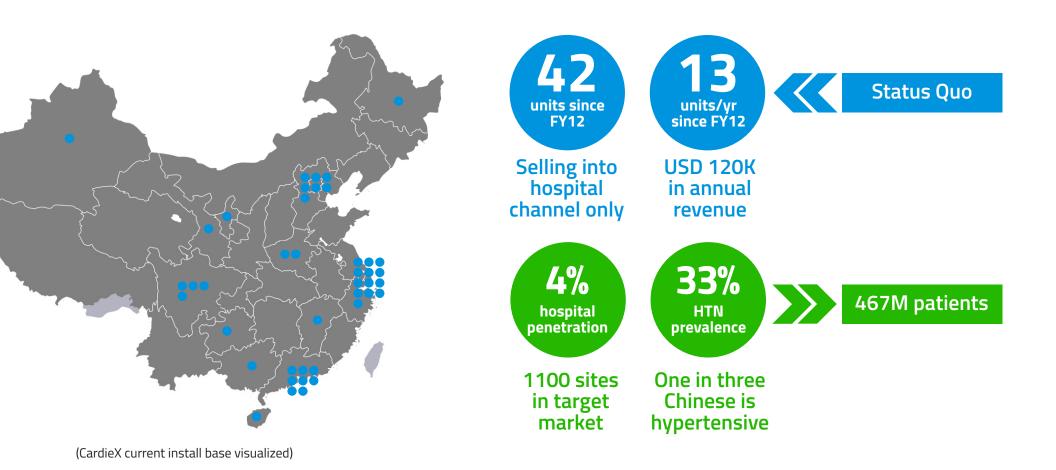
Historical performance in recent years flat to negative





#### CHINA: CURRENT STATUS

Small install base focusing specifically on hospitals



#### CHINA STRATEGY

Reassess existing distribution + build new partnerships + establish local entity









#### SIGNIFICANT INCREMENTAL REVENUE OPPORTUNITY

Evaluate current partnership with Angy Medical



Identify new channel partners for hospital market





Establish locally to gain control of CFDA registrations - CardieX [China]





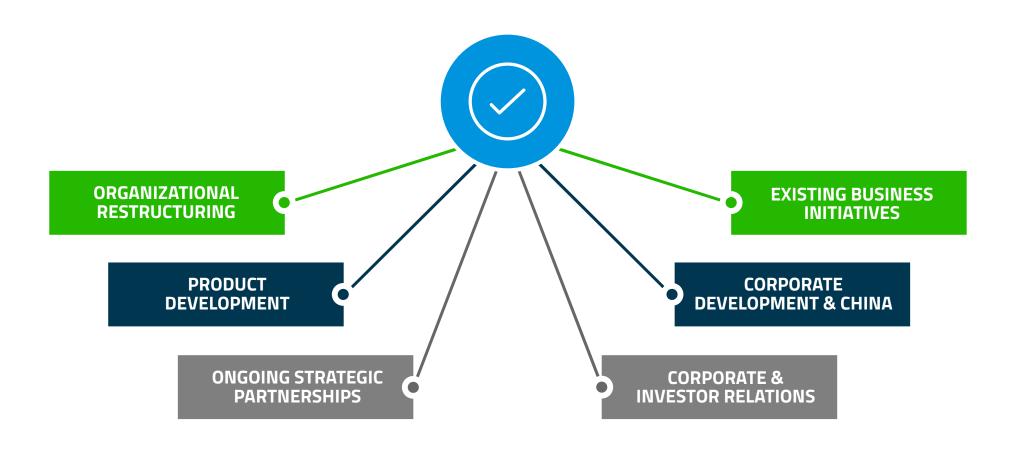


# KEY INITIATIVES UPDATE

Rapidly making headway in high-priority tasks

#### PROGRESS ON KEY INITIATIVES

Rapidly making headway in high-priority tasks





## ORGANIZATIONAL RESTRUCTURING

- Doug Kurschinski promoted to EVP & Head of Global Sales.
- Global sales and executive team restructured.
- Global distribution partnerships now managed from USA and undergoing holistic review.
- Transition of all APAC and ROW partnerships to be managed from USA.
- American and Australian office relocations.

## **EXISTING BUSINESS INITIATIVES**

- New digital presence and website in development (www.CardieX.com) to drive lead generation and support inbound sales and D2P marketing – to launch in Oct '18.
- Revised product reimbursement strategy in development – led by Rhonda Welch.
- Implementing new marketing strategies in US and other markets for D2P sales with marketing plan restructured and budget allocations directed towards new strategy.
- Potential new hire for "Director of Practitioner Marketing".



## PRODUCT DEVELOPMENT

- Focused on developing key feature set (cardiac load, athletic capacity, arterial stiffness, etc.) which can be licensed to third-party OEM/wearable/sensor companies.
- Potential new hire of "Director of Product Licensing" to drive licensing and device partnerships.
- New XCEL product software for consumer market in development.
- Building out enhanced IP and trademark exposure to solidify positioning in cardiovascular and wearable device markets.

# CORPORATE DEVELOPMENT & CHINA

- Appointing new "Director of Corporate Development" ZiHan Lin to manage Blumio partnership, China and Japan market development, M&A activities, licensing opportunities and business development.
- Developing Chinese sales and distribution strategy in collaboration with Angy Medical and AtCor Medical teams.
- Initiating exploratory discussions with corporate advisors regarding M&A and strategic partnerships/investments.
- Formulating M&A strategy for internal management guidance.



## ONGOING STRATEGIC PARTNERSHIPS

- Blumio IP license LOI under negotiation to license CardieX IP for Blumio sensor.
- First Blumio sensor trial with Macquarie University and CardieX team successful.
- Next phase directed towards further testing and refinement using CardieX technology as well as identification of further product co-development opportunities.
- Progressing with digital health opportunities and partnerships.
- SunTech Medical (consumer) partnerships and expansion of BD partnership.
- Other strategic business opportunities.

# CORPORATE & INVESTOR RELATIONS

- Corporate and investor communications plan developed and ongoing with NWR Communications group.
- Enhanced media and investor coverage of CardieX continuing.



# DIGITAL SALES & MARKETING UPDATE

- CardieX.com website re-launch October, 2018.
- New digital platforms focused on lead generation and sales support for both medical & D2P segments.
- Appointment of new marketing agency focused on brand messaging and practitioner outreach.
- Movement of training & support functions to online & video training tools.
- Focus on educating patients on arterial stiffness as the key determinant of disease risk – "Ask your Doctor about...".
- Scale up our content and influencer marketing strategy to drive awareness and leads.

We're shifting from an outbound "human" sales model to an inbound "digital lead generation" model



# KEY HIGHLIGHT

Wearable and A.I.



# OUR WEARABLE AND A.I. PARTNERSHIP

The Opportunity

7in10

USA adults track a health indicator for themselves or a loved one 88%

Of physicians want patients to monitor their health parameters at home 87%

Reduction in readmissions with remote patient monitoring



# GROWING DEMAND FOR NON-INVASIVE CONTINUOUS PHYSIOLOGICAL SENSORS

MARKET OPPORTUNITY
USD\$8.5B+



Arrhythmia
(ZIO)
USD\$1.5B Mkt Cap

USD\$12B+



**Continuous Blood Glucose Monitoring** 

(**Dexcom**)
USD\$5.2B Mkt Cap



USD\$8B+

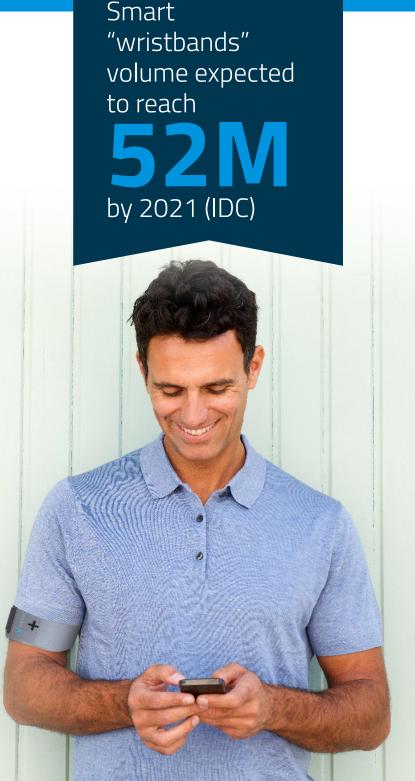


Blood Pressure and Heart Diagnostics

(CardieX) \$??B Mkt Cap

## SIGNIFICANT USE CASES FOR SENSOR-BASED CARDIAC MONITORING

- Home and ambulatory BP monitoring 1B hypertensives globally.
- Peripheral arterial disease management 20% of humans over 60 years old.
- Continuous blood pressure monitoring 592,000 patients in USA hospitals every day.
- Wrist wearables 58 million units annually.



# **OUR WEARABLE SOLUTION**

1

Financial & strategic partnership with Blumio, Inc. to codevelop wearables to detect hypertension, CVD, and other health disorders.

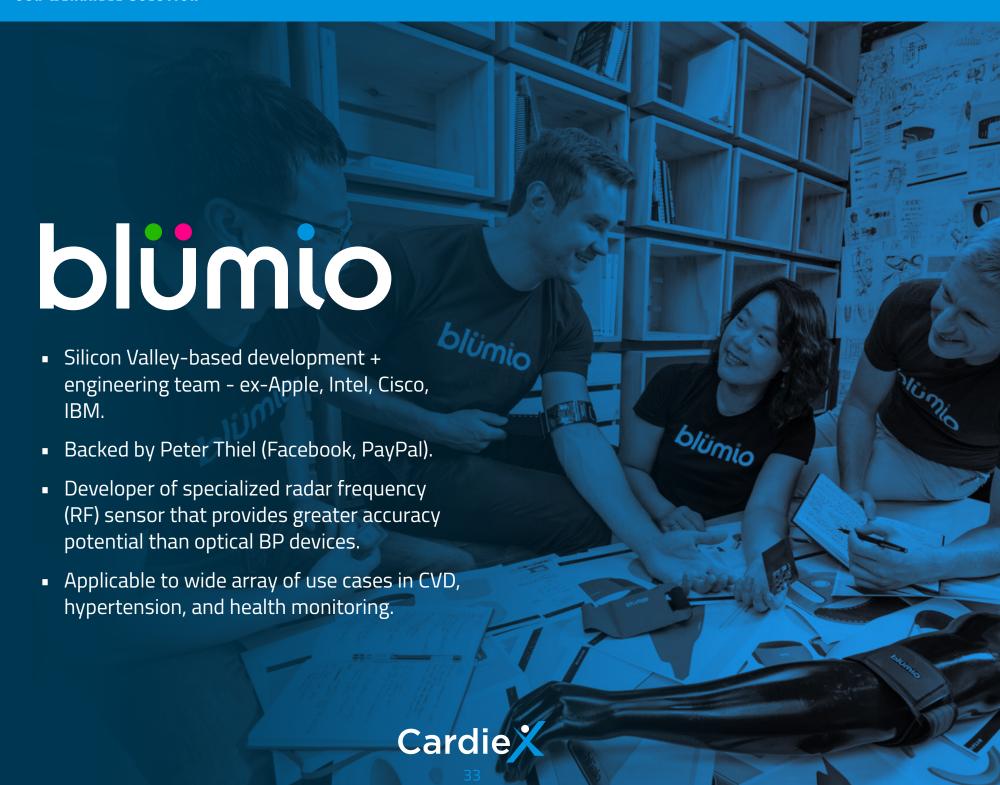
2

Expand our artificial intelligence (A.I.) analytics to sensor based wearables.

3

Incorporate CardieX IP & trademarks into proprietary consumer applications for health & fitness applications.





# BP Analytics Accurate Sensor Changer (CardieX) (Blumio) Game Changer for Continuous Health Monitoring

- Agreement to invest up to USD\$600K in Blumio for 7.5% (subject to due diligence and other conditions) plus Development and Collaboration Agreement for engineering and technical support.
- Development of Blumio sensor around CardieX IP and technology.
- Funding provides pathway towards FDA approval by 2020.

Integration of CardieX IP and data analytics into Blumio sensor technology has the potential to solve the "holy grail" of remote/cuffless BP monitoring - central blood pressure (cBP) and arterial stiffness measurement.

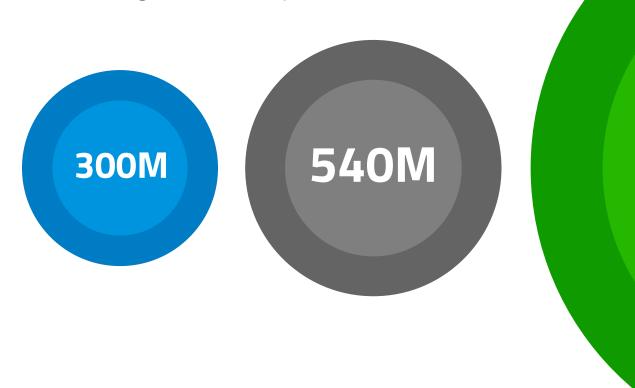


# SENSOR/WEARABLE REVENUE POTENTIAL

Ambulatory blood pressure monitoring (ABPM) - USD\$8 billion/year

Hardware OEM - USD\$540M /year

IP Licensing - USD\$300M/year



**8**B

# CARDIEX CONSUMER WEARABLE APPLICATIONS

- CardieX has significant proprietary IP and data in a number of unique consumer health applications -"cardiac risk", "cardiac load", "exercise capacity".
- IP licensing as part of the sale of a "sensor stack" to Blumio.
- Third-party IP licensing to Apple, Fitbit, other OEMs.
- Successful initial trials in partnership with Blumio and Macquarie University (completed June of 2018).

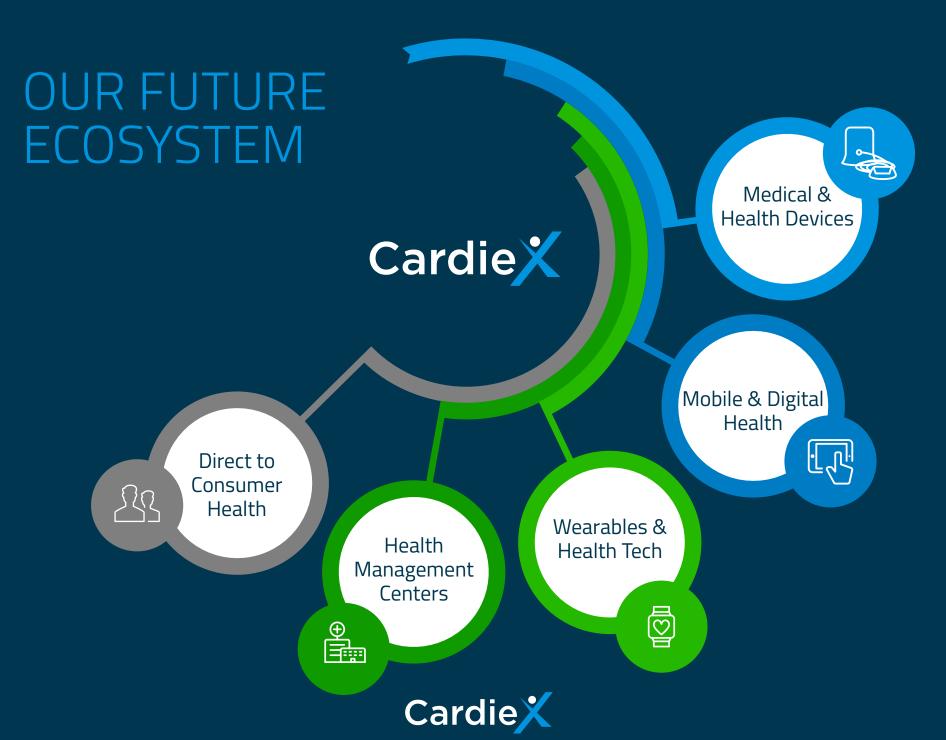
Our consumer IP and wearable applications have the potential to significantly increase human performance and personal data analytics



### **BLUMIO UPDATE**

New revenue and product initiatives driven by CardieX IP







# **\*†††††**

SAN FRANCISCO/ SILICON VALLEY\*

**6** (engineering)

\*Co-development/engineering office with Blumio, Inc



**12** (product dev, research, compliance, sales & marketing)



## CARDIEX MARKET COMPARISONS

Company	Code	SP (as at Close 03/08/18)	Cash (\$m) 30/06/18	Mkt Cap (\$m)	Quoted Securities (m)	Options on Issue (m)	Debt (\$m) 30/06/18	Enterprise Value (\$m)	Receipts from customers (\$m) FY18	Indicative Revenue Multiple (Cash Receipts/EV)	Description
CardieX	CDX	\$0.035	\$2.736	18.6	531.0	174.0	0.0	15.8	4.0	4.0	Non-invasive technologies for measuring hypertension and cardiovascular disease risk.
Uscom	UCM	\$0.165	\$2.490	22.6	137.3	0.5	0.0	20.2	2.1	9.7	Non-invasive cardiovascular and pulmonary monitoring devices.
Nuheara	NUH	\$0.084	\$8.346	74.9	891.5	92.0	0.0	66.5	4.1	16.4	Personal hearing devices that enhance and amplify human experiences.
Resapp Health	RAP	\$0.180	\$3.415	118.6	659.0	151.6	0.0	115.2	0.0	nmf.	Digital health company developing smartphone applications for the diagnosis and management of respiratory disease.
Panorama Synergy (Hydrix)	PSY	\$0.040	\$0.016	22.5	562.2	32.6	3.3	25.7	5.4	4.7	Hydrix specialises in the design and development of high technology devices for medical equipment and industrial products.
Respiri	RSH	\$0.083	\$2.419	39.3	473.4	44.0	0.0	36.9	0.0	nmf.	Medical technology company developing devices and mobile health applications to improve the management of chronic respiratory disorders
DorsaVi	DVL	\$0.100	\$3.967	16.8	167.9	4.4	0.0	12.8	4.3	3.0	DorsaVi wearable muscle and movement sensors produce real time data to assess risk and guide interventions.
Catapult Group International	CAT	\$1.195	\$31.715	228.8	191.4	11.9	3.4	200.4	77.3	2.6	Uses data sciences and sensors to generate insights into sportsman and player health and performance data.
Medical Developments International	MVP	\$4.040	\$0.913	239.1	59.2	0.4	3.9	242.1	16.0	15.1	Focused on product solutions for pain management, asthma and resuscitation, plus veterinary equipment.
Nanosonics	NAN	\$3.310	\$66.500	990.8	299.3	3.3	1.2	925.5	61.4	15.1	Trophon product reduces cross contamination between patients - reducing the spread of Healthcare Acquired Infections (HAIs)
AirXpanders	AXP	\$0.130	\$8.553	64.6	497.1	6.1	15.0	71.1	11.2	6.4	Replacement product for saline based expanders used in breast augmentation therapy.
Somnomed	SOM	\$1.940	\$13.383	120.7	62.2	1.6	0	107.3	60.5	1.8	Targets sleep apnea market with products using their 'Continually Open Airway Therapy' or COAT™.
Impedimed	IPD	\$0.380	\$31.345	144.0	379.0	37.6	0	112.7	4.6	24.5	ImpediMed develops advanced medical products to characterize the conductive and nonconductive tissue and fluid components of the body.



### CONTACT

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