

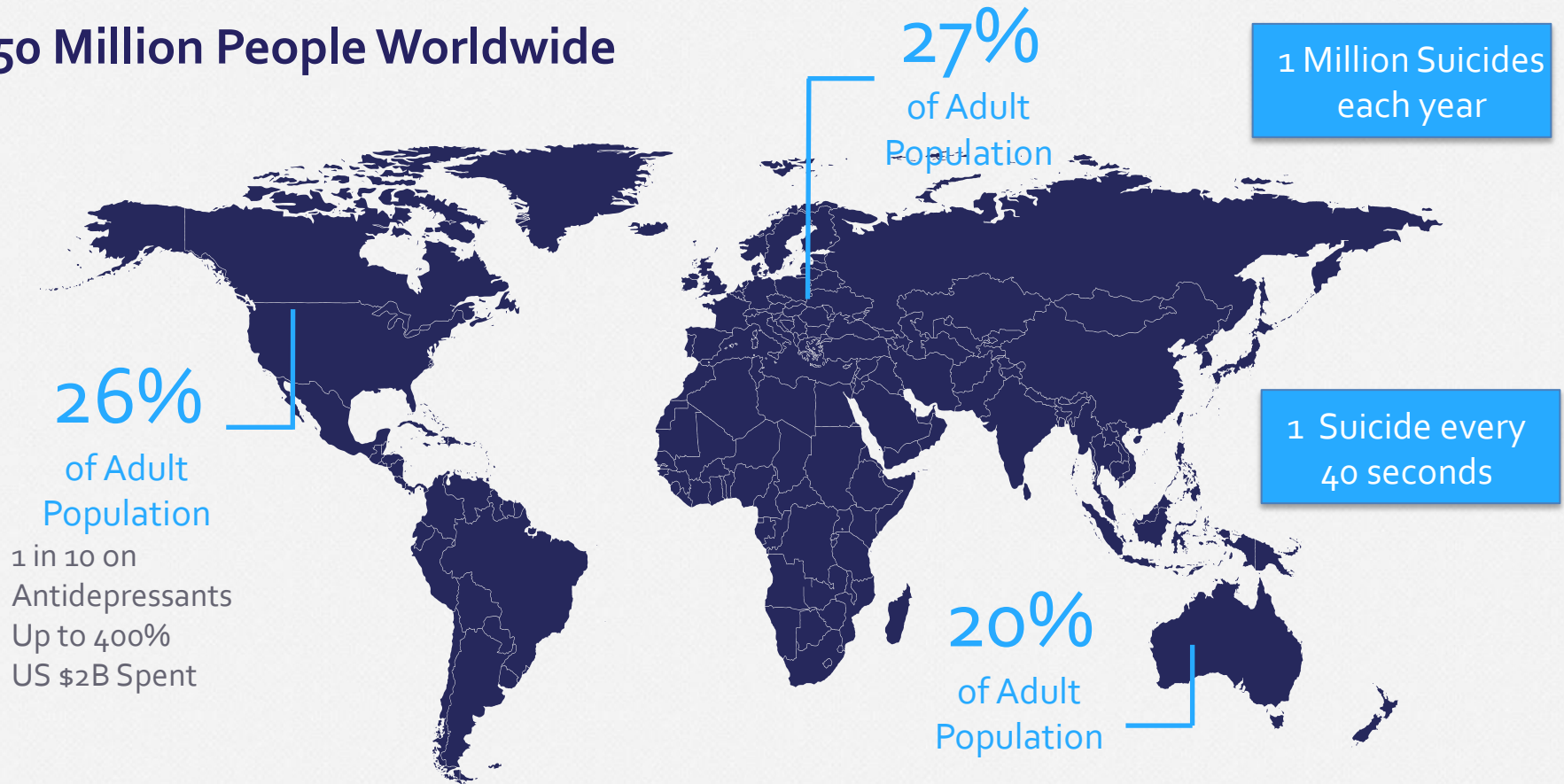
# BioProspect Limited (ASX: BPO)

## Capital Raising Presentation

# Mental Health Industry

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350 Million People Worldwide



**Global Cost US\$2.5T** (2030 est. US\$6T) — Depression and Anxiety account for **+50%** of this burden

## U.S. National Institute of Mental Health “May 2013”

“We will no longer endorse DSM5, as it has fundamental flaws and we are actively seeking a diagnostic system that is evidence based”

“We need a quantitative method for diagnosing depression”

“It is critical to realize that we cannot succeed if we use DSM categories as the gold standard”

## **BPO is developing a ground-breaking quantitative test for mental illness**

- Based on analysis of circadian heart data
- No cost effective competing technologies
- No FDA approved quantitative test
- Protected by patents and know how

## **Multiple global market sectors—all large**

- Depression diagnostic alone is a \$16 billion revenue opportunity

## **Supported by over 10 years of research**

## **Validation trials to commence in 4Q 2014 in both:**

- U.S.A
- Australia

## **Early revenue opportunity—chronic stress app (pre-validation)**

## Team

Directors	Executives	Advisory Board
Mr Chris Indermaur ( <i>Chair–incoming</i> )	Dr Matt Mesnik (CMO)	Mr Stephen Pearce (Chair)
Mr Kris Knauer	Mr Claude Solitario	Dr Hans Stampfer
Dr James Campbell	Mr Stephen Stapelberg	Dr Stephen Addis
Vince Fayad ( <i>Chair–retiring</i> )		

## Balance Sheet

- Negligible Debt
- Minimal fixed operating costs



No approved objective tests for mental illness

Current methods are subjective

Subjective approaches can lead to inadequate or incorrect diagnosis

This leads to

- Inappropriate or ineffective treatment, and
- Huge cost burden on the healthcare system



Quantitative, evidence-based test

Relies on biological data

No input from the patient required

Simple, safe and unobtrusive

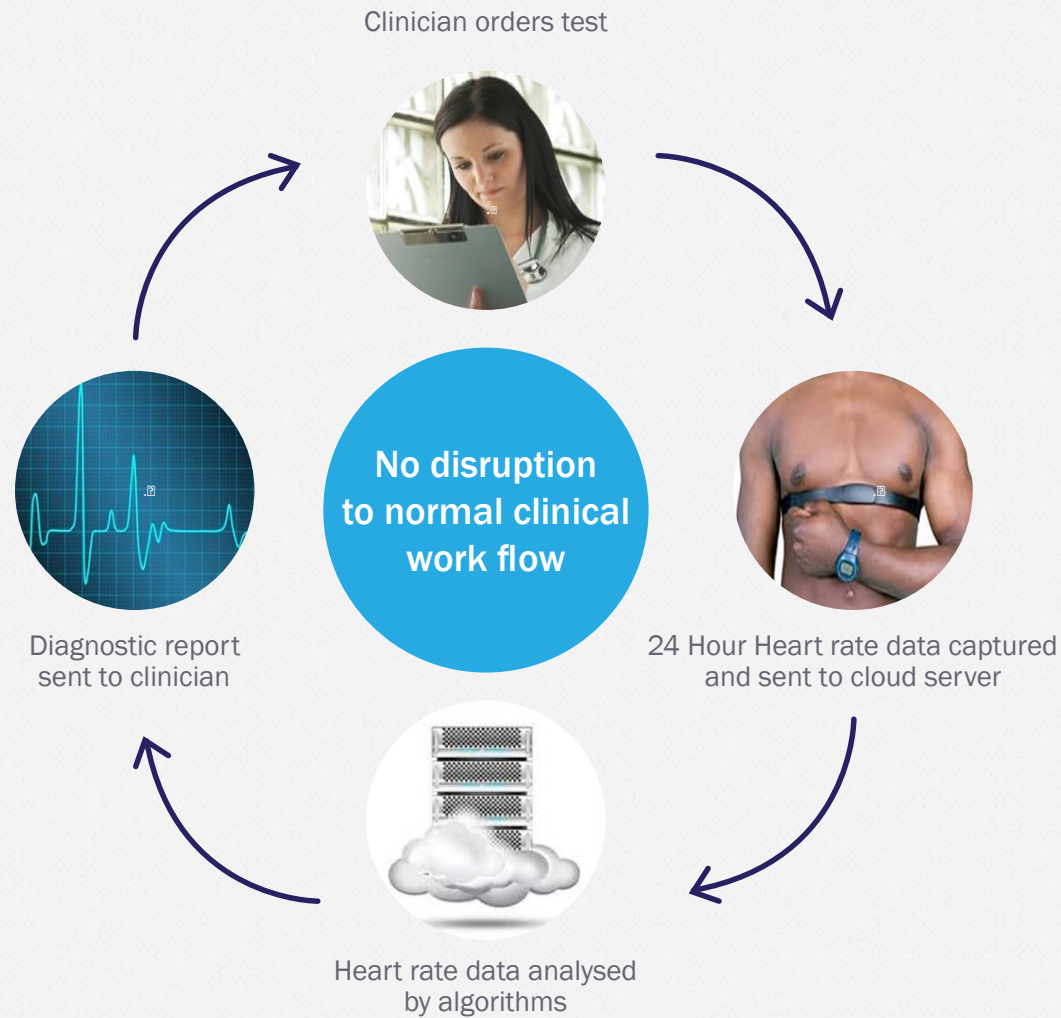
Measures clinical change

Earlier diagnosis = earlier intervention = improved outcomes

Improved monitoring = effective treatments



# How it Works





Heart rate data of patients with a psychiatric disorder is distinctly different to the heart rate data in those who are free of psychiatric illness

Distinct mental illness “markers” identified in heart rate data.

Sleep period is critical (no external influences)

Heart rate data normalises with effective treatment

Confirmed by over 10 years of research



# Automated Diagnosis (Algorithm)

Automated Diagnosis is critical for commercialisation

Trial program designed to determine if the existing algorithm could be improved

A sample of <10% of the research data used to trial a machine learning algorithm aimed to diagnose particular parameter psychopathologies using 24 hour heart rate data

Results to date excellent with sensitivity and specificity in the 80–90% range

Algorithm development will be ongoing and results are expected to improve with more data

Results have confirmed a valid automated diagnosis method is achievable

	Clinical Diagnosis	Algorithm Diagnosis	Sensitivity
<b>Psychopathology</b>	262	245	93%
<b>Depression</b>	133	110	83%

	Clinical Normal	Algorithm Normal	Specificity
	130	107	82%
	220	203	92%

SENSITIVITY: Patients diagnosed with a mental illness correctly identified by the algorithm.

SPECIFICITY: Patients without a mental illness correctly identified by the algorithm.

## Medical



- Primary Care Physicians
- Psychiatrists
- Psychologists
- Therapists
- Counsellors

## Corporate



- High Risk Occupations
- Insurance Companies
- Corporate Screening
- Courts
- Government

## Sport



- Team Sports
- Elite Athletes



**Pay per report/Licensing arrangements**



# Commercialization – USA (Depression only)

*"Appears the existing CPT & ICD9 codes for cardiac rhythm monitoring devices may be leveraged"*

	Medicare	Private	Insurance	Assumption
93225	Recoding (PCP)	\$26.87	\$40	
93226	Analysis with Report (BPO)	\$37.97	\$57	\$45
93227	Physician review & Interpretation (PCP)	\$26.87	\$40	

- 1. Untreated market (initial diagnosis)**
  - 3.5% population @ \$45 per report to BPO
  - US\$507m revenue opportunity
- 2. Treated market (ongoing monitoring)**
  - 3.5% population @ US\$22.50 per report–quarterly monitoring
  - US\$1014m revenue opportunity

*"Capture rate of 5% in first 5 years generates US\$100m in annual revenues"*

*"Given the capital expense of the equipment, proprietary software algorithms, and the work associated with the testing, the current payment levels should be sufficient for clinician adoption"*

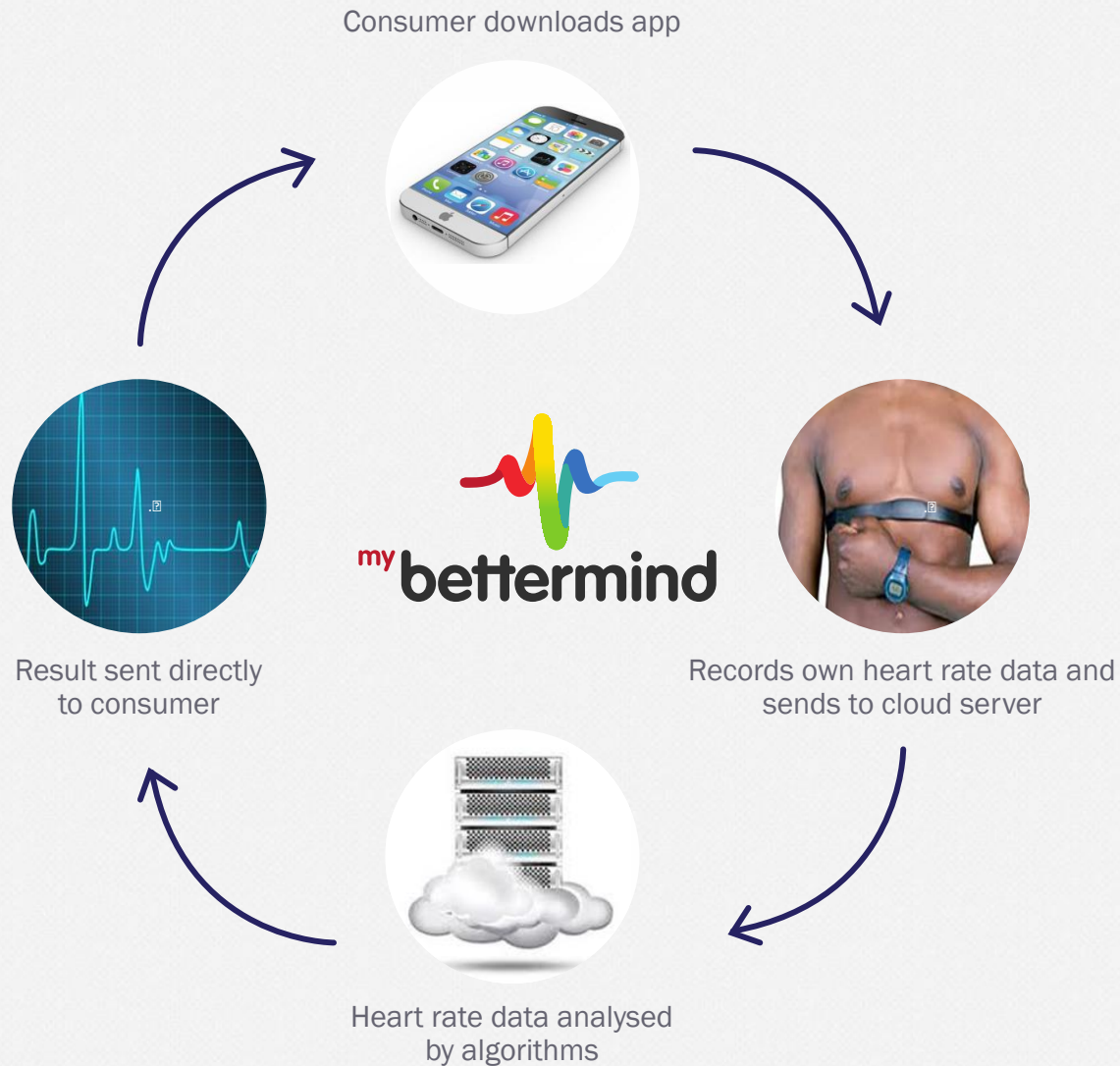


Consumer App  
(Chronic Stress)



# How it Works

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# E-Health Consumer Market

500 million smartphone owners using a healthcare app

1.7 Billion by 2018<sup>1</sup>

52% interested in buying wearable devices that measure their health<sup>2</sup>

Apple/Mayo Clinic partnership with IOS8. The Goal? Iphones/Apples Watch that make you healthier!

Samsung, Microsoft, Adidas, LG, Sony, Fit Bit, Nissan, Nike, Pebble and numerous others are already in this field



1. Source – Technology News.com.au
2. Accenture Digital Consumer Tech Survey 2014

# Capital cost of \$250K<sup>1</sup>

\$30 for ECG quality heart rate monitor and initial cost of \$10 to download the app

The \$10 gives you a month of complete usage excluding the stress management techniques

\$20 to subscribe for a 12 month period and have access to the stress management techniques supplied by major leaders in the category.

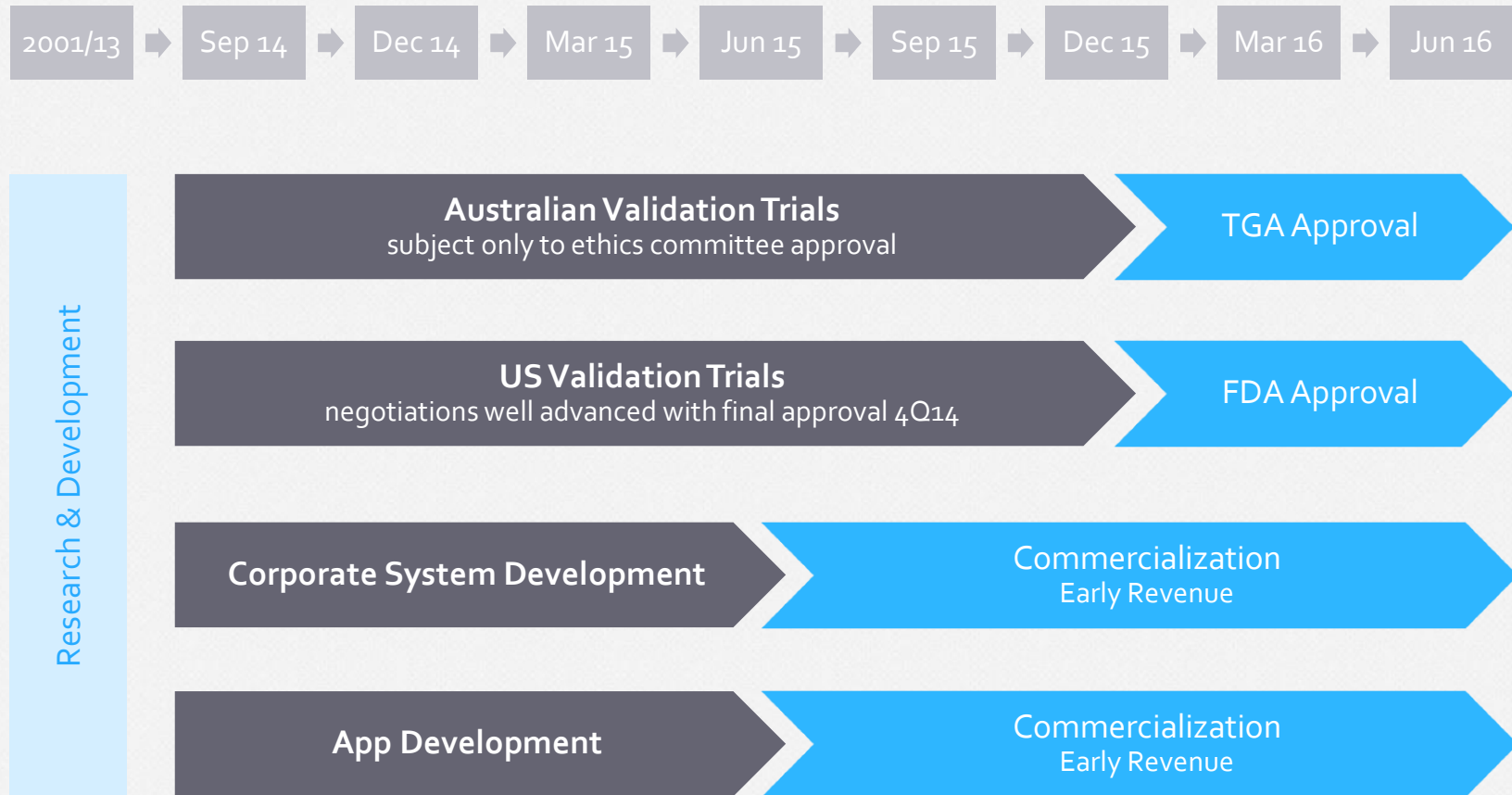
As per the above 8,500 downloads achieves break even on the capital costs (\$10 download + \$20 subscription)

Other apps on the market have achieved 25,000,000 downloads and we are confident our offering is superior

Soon to commence commercialisation study through Isobar to ascertain the ideal pricing structure.

1. All figures in \$US





# Capital Structure

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	Existing Capital Structure	Post 100:1 Consolidation	
		Shares	Options
Existing shareholders	3,173,189,372	31,731,893	—
Existing Convertible Notes	30 series "A" x \$50,000 @ 0.1¢ 40 series "B" x \$25,000 @ 0.3¢	15,000,000 3,333,333	15,000,000
Pending Share Issues		733,333	—
\$4 million Capital Raising		13,333,333	—
Invatec Vendors		25,500,000	
<b>TOTAL ON ISSUE AT COMPLETION</b>		<b>89,631,892</b>	<b>15,000,000</b>
Heartlink Patents		10,346,803	
Vendor Milestone 1	(VALIDATION)	6,000,000	
Vendor Milestone 2	(ALGORITHM)	6,000,000	
Vendor Milestone 3	(FDA/TGA)	6,000,000	
<b>ALL MILESTONES ACHIEVED</b>		<b>117,978,695</b>	<b>15,000,000</b>

Subject to relevant Shareholder approvals—anticipated in November 2014

# Funds Usage

Item	\$
US Validation Trial	\$700,000
Australian Validation Trial	\$300,000
App development	\$250,000
Miscellaneous Invatec Expenses (including but not limited to) 1. Algorithm Development 2. Sporting/Corporate Product Development 3. Other Research Initiatives 4. Patents	\$1,000,000
Non Invatec Assets and Overheads	\$1,500,000
Contingency	\$250,000
<b>TOTAL</b>	<b>\$4,000,000</b>

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