

Advanced Braking Technology Ltd

# Advanced Braking Technology Limited

Investor Presentation November 2012

# Company Overview

- › ABT is a developer, manufacturer and worldwide distributor of its award-winning, patented **Sealed Integrated Braking System (SIBS®)**
- › SIBS® is a fail-safe, enclosed “wet” braking system for off-road and on-road applications
- › SIBS® technology is extensively proven and has been established in the mining industry over many years
- › ABT is now using its SIBS® technology to target full scale commercial roll out of its garbage truck brake product in CY2013

## ABT is a Listed Company on the ASX

Share Price	\$0.019
Shares on Issue	1.1 billion
Market Cap	\$21 million
52 Week High	0.026
52 Week Low	0.013

**THE SAFER  
BRAKING SYSTEM**

# Investment Proposition

- › Unique, proven and **patent protected technology**
- › Global **market potential across multiple applications and sectors**
- › Significant **competitive advantages** over alternative products
- › Compelling customer offering – “**triple bottom line**” benefits
- › Robust **commercial model** with attractive margins and high scalability
- › **Strong Board and management** with extensive technical and commercial expertise
- › Significant **valuation upside** potential

# Vision and Strategy

## Vision:

To be the industry leader in developing, manufacturing and distributing safe and efficient braking technology across multiple applications and sectors

## Strategy:

### › Pursue robust growth through:

- Leveraging **strong mining market** positioning to provide funding for product and sector expansion
- Commercial roll-out of **Garbage Truck Brake** in Australia and other countries – North America and Europe
- **Entry into other sectors** using “frequently stopping trucks”
- Expand **export sales into new markets**
- Invest in **research and development** – focusing on upgrading and expanding product range to increase market share and expand into new industries

# Our Technology

## Sealed Integrated Braking System (SIBS®)

- › Fully enclosed, single rotor, high speed wet brake
- › Incorporates fail-safe features
- › Designed for retro-fit or factory fit
- › Comprehensively patented Australian invention
- › Virtually wear and maintenance-free (unlike conventional drum and disc brakes)
- › Manufactured in Thailand, through wholly-owned subsidiary

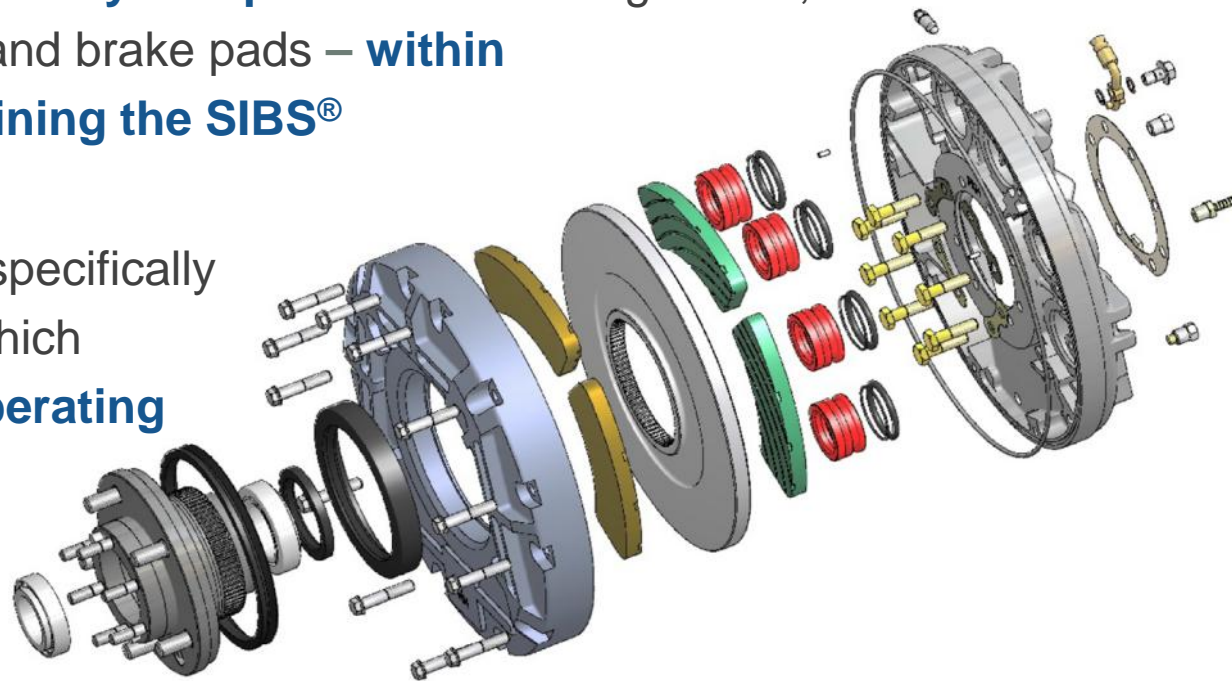
## Comprehensive Patent Protection

- › 61 international patents or patent applications
- › Average patent life of 12 years
- › New patents being lodged as developments continues
- › Trademark protection on various trademarks including “SIBS” and “ABT”



# How Our Technology Works?

- › Wet brake technology enables a **cooler operating temperature**, essential to longer lasting and safer braking systems
- › System **encloses key components** – the single rotor, brake callipers and brake pads – **within a casing containing the SIBS® cooling fluid**
- › Cooling fluid is specifically formulated oil which **controls the operating temperature** of the system



# Blue Chip Customers

RIO  
TINTO

bhpbilliton

BARRICK

ANGLO  
AMERICAN

xstrata

Companhia  
Vale do Rio Doce

Barminto  
Underground mining professionals

CAT

Holcim

Downer EDi  
Mining

BYRNECUT  
MINING

MACMAHON

LEIGHTON

DYNO  
Dyno Nobel

# Global Market Potential



*“Breaking  
into a  
Mainstream  
Market by  
leveraging  
off the mine  
tough  
heritage”*



# Prime Target Market – Waste Sector

## Multiple customer “calls to action”:

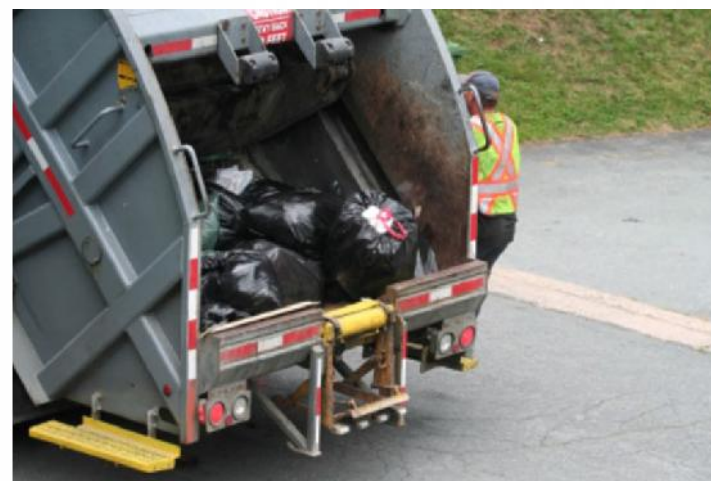
- › Brakes are the second biggest expenditure after fuel for garbage truck fleet operators
- › Public desire for noise reduction
- › Global drive to reduce pollution

## Australian market:

- › Dynamic, recession-proof industry
- › Annual growth rate of 5.4% (ABS, 2011)

## Global growth potential:

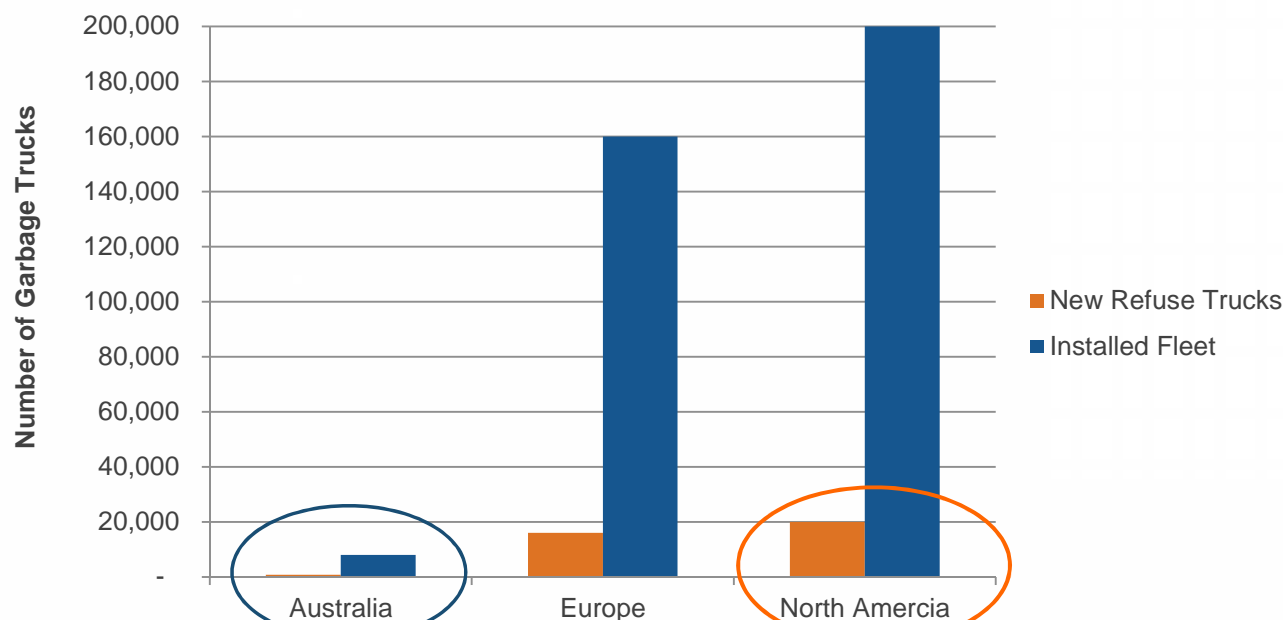
- › **Next targets:**
  - Expanding into North America and Europe
  - Highest waste generating markets in the world (per capita)



# Garbage Truck Brake

- › Multi year **development program now complete**
- › **Commercial roll out** set for CY2013
- › **Technical risk is very low:**
  - ABT has significant experience and expertise with the associated technology
  - Long history of successful application
  - Extensive and successful testing process
- › Targeted customers expressing **significant demand interest**
- › **Launch Strategy:**
  - Initial Sales into Australian retro-fit market – **low barriers to entry**
  - **Retro-fit facilitates rapid take up**
  - Australian OE – (new truck sales) will follow
  - Export markets (retro-fit and OE) will follow after Australian launch

# Garbage Truck Revenue Potential



## Australia

Annual sales 800 trucks  
 Installed Fleet 8,000 trucks  
 25% share of retro-fit = \$60 million revenue  
 50% share new sales = \$12 mill p.a.

## North America

Annual sales 20,000 trucks  
 Installed Fleet 200,000 trucks  
 25% share of retro-fit = \$1.5 billion revenue  
 50% share new sales = \$300 mill p.a.

*Note: The graph represents an indicative scenario based on current market estimates*

# Compelling Customer Offering

## “Triple bottom line” benefits

### › Financial Savings:

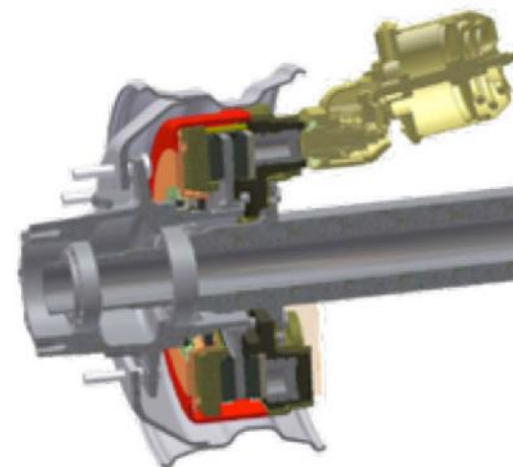
- Dramatically reduces frequency of brake overhauls from more than twice a year, to once every two years or longer

### › Superior Operating Performance:

- Brakes are virtually wear and maintenance-free, unlike conventional drum and disc brakes

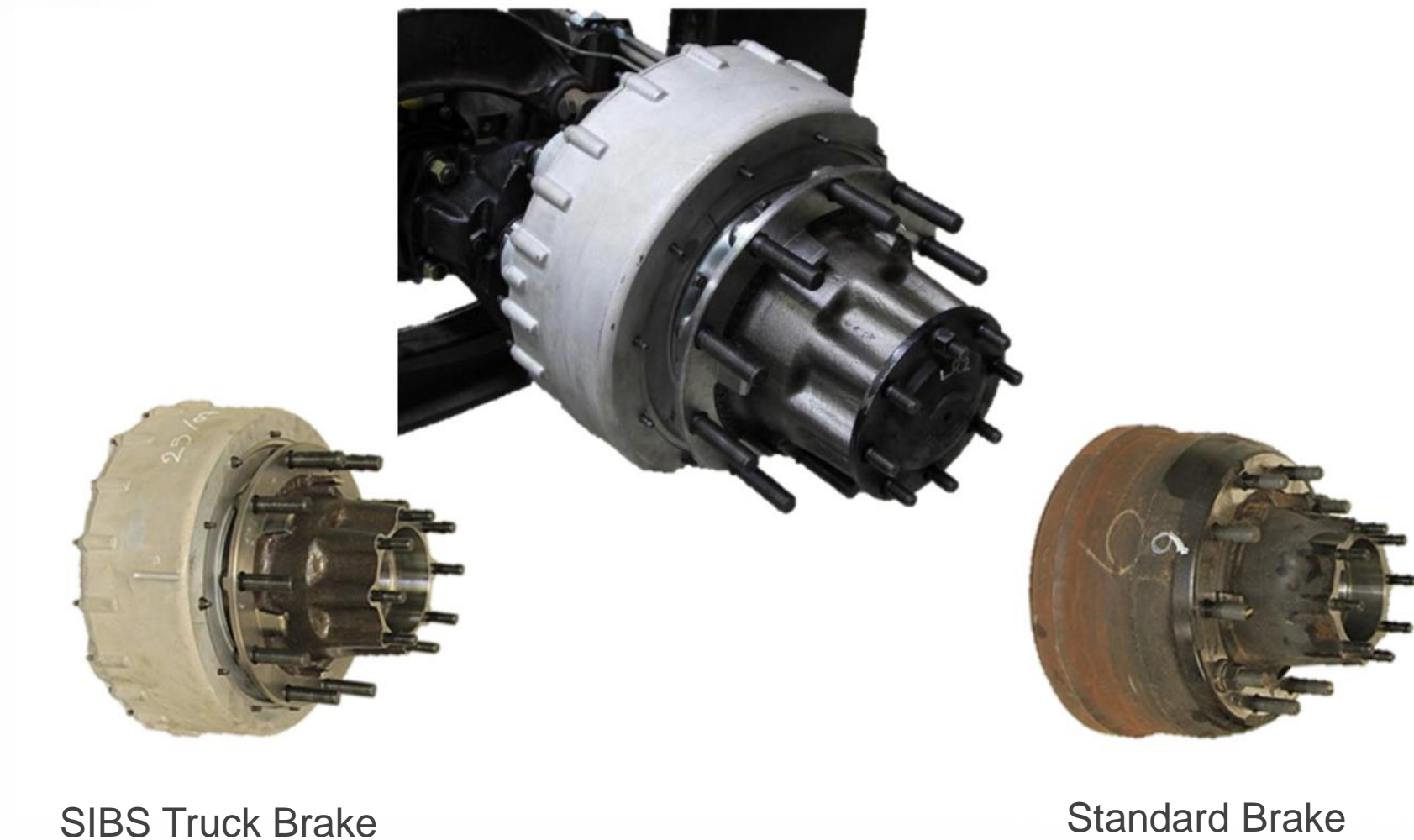
### › Safety and Environmental Benefits:

- Total elimination of brake noise and dust emissions
- Provides consistent safer braking at all times
- Avoids need for regular checking and adjustment





# SIBS brake fitted to an Iveco Acco axle



SIBS Truck Brake

Standard Brake

# Customer benefits – financial

- › Dramatically reduced brake wear - Brake pad/drum replacement interval typically extended from 6 months to more than 2 years.
- › Reduced tyre wear - Currently demonstrating 50% extra tyre life
- › Improved vehicle availability
- › Potential to reduce operating costs by up to \$15,000 per truck per year.
- › Customer payback on initial investment < 2 years

Minor Service (500 hours)	Major Service (up to 5,000 hours plus*)
<ul style="list-style-type: none"> <li>- Change SIBS oil</li> <li>- Check fluid levels</li> <li>- Check brake pad wear</li> <li>- General system inspection</li> </ul>	<ul style="list-style-type: none"> <li>- Full system inspection</li> <li>- Change brake pads and rotor if required</li> </ul> <p>* Depending of severity of service</p>

# Fleet testing at the City of Swan

- › Trucks operating in normal collection service:
- › Swan 1 at 850 hours + 220 hours (24/7 test track)
- › Swan 2 at 650 hours
- › SIBS oil changed at 500 hours
- › No major maintenance or repairs required
- › Average brake pad wear on Swan 2 is 0.04mm at 550 hours (6mm wear limit)



Note: At this rate of wear, the brake is likely to outlast the truck!

# Customer's Endorsement



## Media Release

October 15, 2012

### Landmark brakes trial a success

A landmark trial of a new heavy vehicle braking system has proven a great success for the City of Swan.

City Mayor, Charlie Zannino, said he was very pleased with the results from the first six months of testing.

"The trial included fitting two City waste and recycling vehicles with the Sealed Integrated Braking System (SIBS) with the aim of improving the safety and lifespan, and hence operating costs, of the truck brakes," he said.

The SIBS system is a fully-enclosed, single rotor, high-speed wet brake which has been used extensively over the past 10 years in commercial applications within the Australian mining industry.

"This has been used in other industries, but has never previously been tested in waste management vehicles," Mayor Zannino said.

"The first six months of testing has received overwhelmingly positive feedback from both our fleet manager and our drivers operating the trial waste management vehicles.

"While the prime advantages are the significantly lower brake wear and improved safety, the testing has highlighted a number of other benefits with the new SIBS system, notably more control and confidence in the braking system.

"There's also the added bonus of no brake squeak, which is always a welcome relief for both drivers and residents."

The trial has been so successful, the City is investigating the possibility of extending the use of the SIBS across other vehicles in the City fleet.

"After six months of the trial, the brake pads show very low rates of wear, which should result in greatly reduced brake service down time and costs for the vehicles," Mayor Zannino said.

"The results indicated only minimal wear whereas a standard truck would be close to or past its wear limit at this point.

"This indicates brake service intervals well beyond the two year interval the City is targeting.

"Along with fuel costs, the brake system is the major operating cost for the waste management vehicles so this type of technology is important to the City to help it minimise the overall operating costs of its fleet."

ENDS

**The City of Swan is evaluating 2 trucks fitted with SIBS**  
**Its Mayor Mr Charlie Zannino stated in a press release last week:**

## Extract –

The trial has been so successful, the City is investigating the possibility of extending the use of the SIBS across other vehicles in the City fleet.

After six months of the trial, the brake pads show very low rates of wear, which should result in greatly reduced brake service down time and costs for the vehicles.

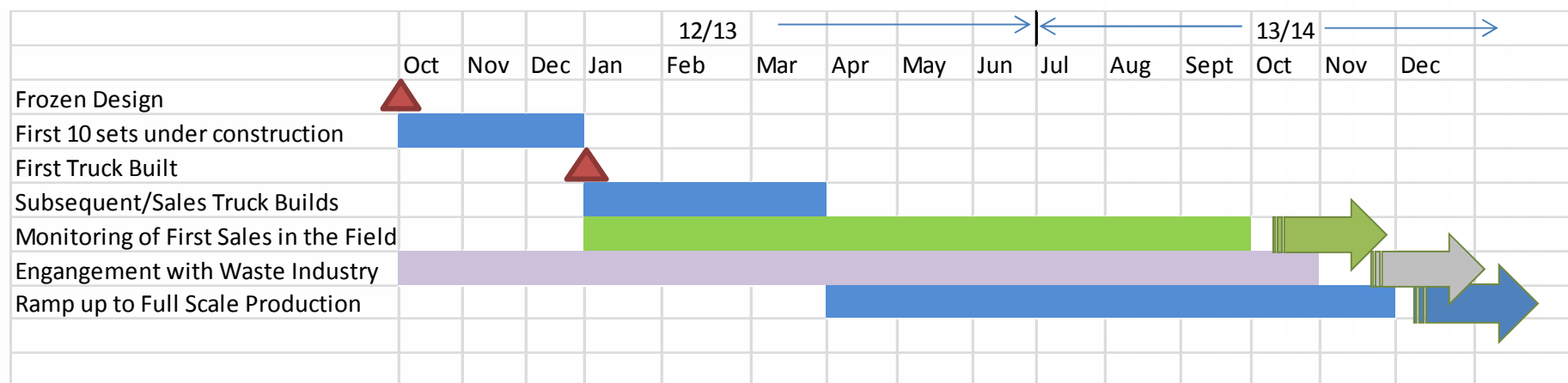
The results indicated only minimal wear whereas a standard truck would be close to or past its wear limit at this point. ...."



# Company Competitive Advantages

- › Significant **product development investment** – time and capital
- › Comprehensively **patented technology for 10 years**
- › **No existing competition**
- › Braking technology **extensively proven** in commercial application
- › ABT known as a **reliable supplier in mining sector** that provides quality, timely and reliable support
- › **Brakes designed to be retro-fitted**, significantly increasing the immediate potential market
- › Compelling proposition for Original Equipment take-up
- › **Seamless compatibility** with modern anti-skid systems (ABS)

# Garbage Truck Brake Roll - Out



- › Initial brake sets will “seed” the market and refine retro-fit installation procedure
- › Company is in close contact with major prospective customers
- › Commercial discussions have commenced
- › Vendor base is gearing up for full scale production

# Further Applications

- › Penetration into the garbage truck market provides an entry point into other “**frequently stopping vehicles**”
- › **Buses** – similar drivetrain to waste vehicles and can be easily adapted
- › **Logging and similar heavy haulage trucks** – with high brake demands
- › **Military vehicles** – used in harsh conditions and need low thermal signature

**Buses**



**Logging**



**Military**



# Established Presence in Mining Sector

## Australia:

- › Growing market share – currently 25%
- › Product improvement driving growth
- › SIBS® technology now standard in many vehicles, across many mining sites
  - › Olympic Dam, Xstrata Zinc – George Fisher, BHP – Nickel West
- › SIBS® II currently ABT's standard product offering for Landcruisers in Australia
- › Developed SIBS® II for Toyota Hilux and expanding to other similar vehicles
- › Compatible with ANCAP 5 safety rated vehicles

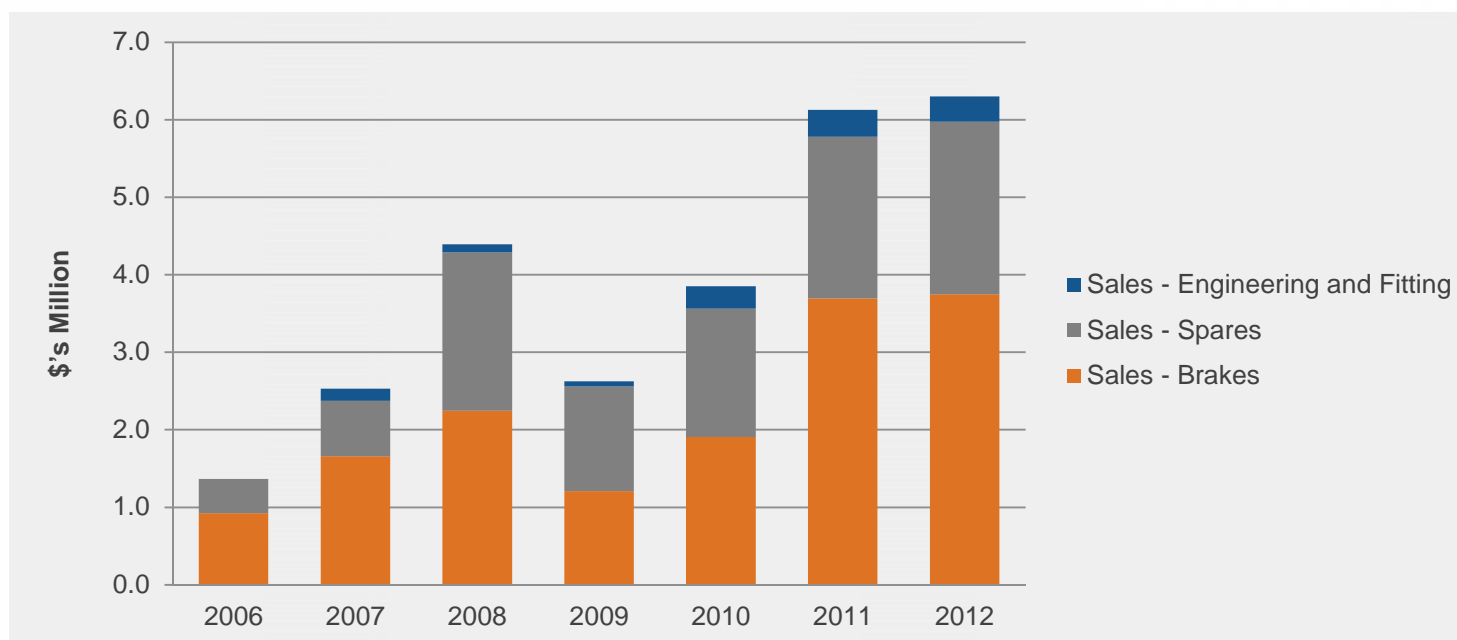
## Export:

- › Representing 25% of total sales (average over last 3 years)
- › Strong foothold in South Africa and Canada
- › Expansion into new markets (e.g. USA, Central/West Africa, South America)



# Significant Growth in Mining Sales

- › Proven success in the mining industry
- › \$1.33 million profit contribution in FY12
- › Over 400% growth in brake sales over the past 6 years



# Mining Sales Drivers

## Queensland Govt issues warning on 'runaway' mining trucks

APN Newsdesk | 24th October 2012 2:30 PM

THE number of "truck runaways" have forced the Queensland Government to release a warning to mine workers to pay more attention to their vehicles.

In the six months from April to September this year, four heavy rigid trucks took off on their own, three at a surface mine and one on the surface of an underground mine.

"Fortunately, there were no injuries but the potential consequence of an unplanned movement of a truck or a failure to stop a vehicle could have been a fatality or a serious injury," according to the safety alert.

The Department of Mines blamed the mistakes on poor driver training leading to trucks put into the wrong gear, poorly maintained brakes and "operator complacency".

It suggested more brake testing, better training and keeping track of brake maintenance.



To whom it may concern

Xstrata Zinc George Fisher Mine is continually focussed on achieving an injury free, safe work environment for all employees and contractors, In this continuous effort to improve Safety all light vehicles used in the underground environment at George Fisher Mine MUST be fitted with the following safety system which will be enforced from 01/09/2011 -:

"Advanced Braking Technology's (ABT)– Light Vehicle SIBS II, Fail Safe Wheel End Wet Braking System" (or similar).

# Mining – Growth Drivers/Opportunities

## **Growth set to continue**

- › Ongoing industrialisation of emerging economies led by China and India
- › Strong growth in new mine development
- › Expansion into surface mines with safety and productivity focus

## **Increased Focus on Safety Regulations**

- › WHS Act (Jan 12') and pending MHS Act (Jan 13') - greater focus on responsibility of mine holders/operators to ensure worker safety
- › “Uncontrolled vehicle movements” are a major problem for mine operators - results in fatalities and injuries on site
- › SIBS® brakes significantly improve safety for mine operators with a three-in-one service, park and fail-safe emergency brake

## **Growing Emphasis on Productivity**

- › Sector productivity has declined 50 per cent since 2001 (PWC Report 2012) – many companies have renewed focus on improving mine productivity
- › SIBS® brakes increase productivity by reducing brake overhaul and therefore vehicle downtime on site

# Robust Commercial Model

## Attractive business:

- › High margins similar to mining products
- › Highly scalable cost base with efficient fulfilment model

## Business model supports high long term RoI:

- › Benefits of offshore outsourced manufacturing
- › Low cost fulfilment model
- › Low capital intensity





# Strong Board and Management Team



**Mr David Humann**  
**Chairman**

- › Chartered Accountant, Certified Practising Accountant , FAICD
- › Former MD of Price Waterhouse, Asia Pacific Region and Member of the World Board of Price Waterhouse
- › Chairman Mincor Resources NL and Director India Resource Ltd



**Mr Ken Johnsen**  
**Executive Director and CEO**

- › Over 31 years experience in the development and licensing of advanced technology for the automotive industry
- › Senior management roles in both Australia and the USA with Orbital Corporation Ltd and served on the Orbital board for 13 years



**Mr David Slack**  
**Non-Executive Director**

- › Managing Partner and Chief Investment Officer, Investment Manager for Karara Capital Limited
- › Co-founder and Joint Managing Director of Portfolio Partners, which had \$5.3 billion in funds under management when it was sold to Norwich Union in 1998



**Professor Malcolm Richmond**  
**Non-Executive Director**

- › Metallurgist by profession – 26 years with CRA/Rio Tinto Group
- › Director of Water Resources Group Ltd, Argonaut Resources NL, Strike Resources Limited and Cuervo Resources Inc
- › Until recently visiting Professor of Business and Engineering at the University of Western Australia;
- › Former Vice Chairman of the Australian Mineral Industries Research Association

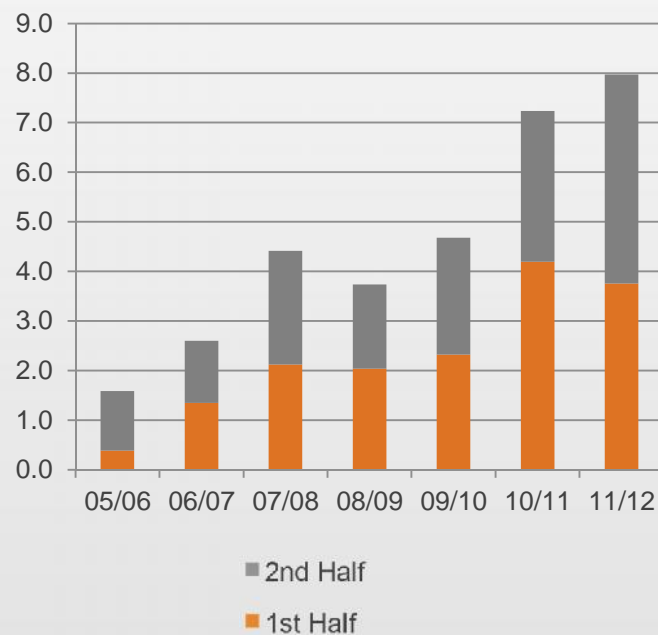
# Major Shareholders

	Number of Shares	% of Issued Shares
1 Windpac Pty Ltd	73,399,750	6.64
2 Dasi Investments Pty Ltd	46,794,746	4.23
3 Mr Richard Palmer & Mrs Tracey-Ann Palmer <<Palmer Family Retire A/C>	32,500,000	2.94
4 M/S Tracey-Ann Palmer	25,144,893	2.27
5 M/S Richard Andrew Palmer	24,334,036	2.20
6 Annapurna Pty Ltd	24,000,000	2.17
7 Fitel Nominees Limited	23,000,000	2.08
8 Mr Dale Albert Monson & Mrs Dagmar Erna Monson <Dale Monson S/F NO2 A/C>	22,639,843	2.05
9 Myall Resources Pty Ltd <Myall Group Super Fund A/C>	20,759,500	1.88
10 Claymore Capital Pty Ltd	19,591,302	1.77
11 Mr Peter Rodney Bower	19,500,000	1.76
12 Windpac Pty Ltd <The David Earl Slack Superannuation A/C>	17,500,000	1.58
13 Pershing Australia Nominees Pty Ltd <Blue Ocean Equities A/C>	16,000,000	1.45
14 Mr Jim Sumpter & Mrs Dale Elizabeth Sumpter	15,200,093	1.37
15 Knarf Investments Pty Ltd <Terrigal A/C>	15,145,980	1.37
16 Windpac Pty Ltd <The Slack Family A/C>	14,900,000	1.35
17 Mr David Humann & Mrs Anne Humann <David & Anne Humann S/F A/C>	13,378,323	1.21
18 Mondal Investments Pty Ltd	12,273,927	1.11
19 Galvale Pty Ltd	12,000,000	1.09
20 R E Jones Properties Pty Ltd <Greenhill Property A/C>	10,829,399	0.98
<b>Total Top 20 holders of ordinary shares</b>	<b>458,891,792</b>	<b>41.51</b>
<b>Total Remaining Holders of ordinary shares</b>	<b>646,613,097</b>	<b>58.49</b>
<b>Total Issued Capital</b>	<b>1,105,504,889</b>	<b>100.00</b>

# Company Financial Performance

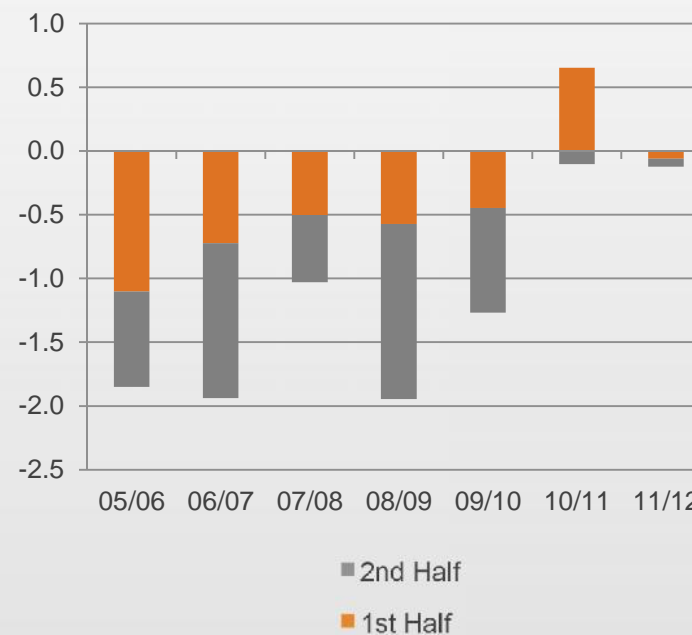
## Revenue

\$ millions



## Profit After Tax

\$ millions



# FY12 Profit and Loss

	2012	2011
	\$'000	\$'000
Revenues from trading activities	6,299	6,631
Revenues from other activities	1,669	607
<b>Total Revenue</b>	<b>7,968</b>	<b>7,238</b>
Cost of sales	(2,461)	(2,179)
Adjustment to prior period cost of sales	-	141
Amortisation of IP	(199)	(199)
Bad and doubtful debts	60	(2)
Borrowing costs	(73)	(33)
Computer related expenses	(52)	(48)
Consulting fees	(640)	(433)
Consumables and minor equipment	(370)	(319)
Depreciation expense	(220)	(166)
Employee expenses	(3,931)	(3,030)
Insurance	(100)	(85)
Legal fees	(277)	(138)
Marketing and advertising expenses	(68)	(51)
Patents	(40)	(92)
Property expenses	(331)	(370)
Share options cost	(22)	(36)
Telephone and other communication	(37)	(39)
Travel and accommodation	(213)	(215)
Other expenses	(369)	(284)
Overheads capitalised as development and pre-production activities	1,252	583
<b>Total Expenses</b>	<b>(8,091)</b>	<b>(6,995)</b>
<b>Profit / (Loss) before Tax</b>	<b>(123)</b>	<b>243</b>
Income tax credit	-	307
<b>Profit / (Loss) after Tax</b>	<b>(123)</b>	<b>550</b>

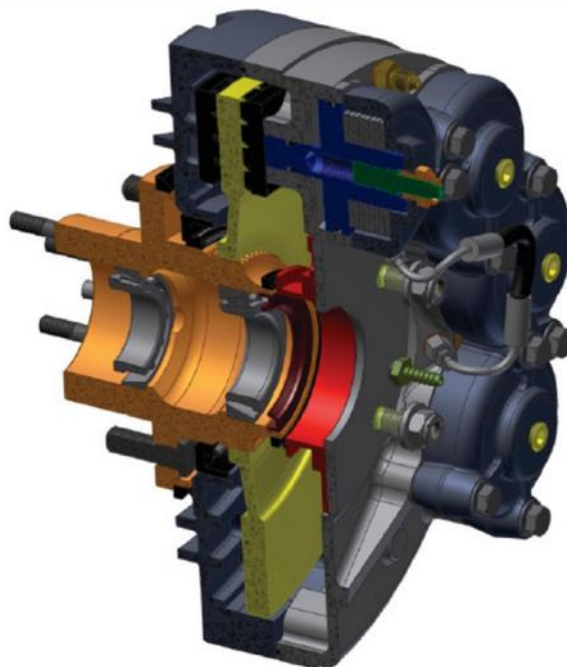


# Balance Sheet

	2012	2011
	\$'000	\$'000
<b>Current Assets</b>		
Cash and Cash equivalents	2,925	2,737
Trade and other Receivables	797	1,194
Inventories	2,225	1,773
Other current assets	839	56
<b>Total current assets</b>	<b>6,786</b>	<b>5,760</b>
<b>Non Current Assets</b>		
Trade and other Receivables	31	30
Property, plant and equipment	1,162	734
Intangibles	3,625	2,572
<b>Total non-current assets</b>	<b>4,818</b>	<b>3,336</b>
<b>Total Assets</b>	<b>11,604</b>	<b>9,096</b>
<b>Current Liabilities</b>		
Trade and other Payables	848	985
Interest bearing liabilities	89	102
Provisions	223	179
Share Application funds held in trust	294	-
Deferred Income	23	-
<b>Total current liabilities</b>	<b>1,477</b>	<b>1,266</b>
<b>Total non-current liabilities</b>	<b>479</b>	<b>133</b>
<b>Total Liabilities</b>	<b>1,956</b>	<b>1,399</b>
<b>NET ASSETS</b>	<b>9,648</b>	<b>7,697</b>
<b>Equity</b>		
Issued Capital	45,153	43,115
Foreign Currency Reserve	(238)	(252)
Other Reserves	730	708
Accumulated losses	(35,997)	(35,874)
<b>TOTAL EQUITY</b>	<b>9,648</b>	<b>7,697</b>

# Current Outlook and Priorities

- › Main focus for FY13 is the **commercial roll out of the SIBS® Truck Brake**
  - All indicators suggest that there will be a strong demand
  - A progressive and controlled launch is planned
- › **Mining sales** will continue to play an important role in the Company's future, however external factors in mining make precise forecasts difficult
- › Mining sales currently soft with an improving pipeline
- › **SIBS® Truck Brake** sales are expected to provide a more reliable and consistent sales pattern
- › **Export sales** in mining will continue to grow through expansion into other countries, such as USA, Central/West Africa, South America



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