

**Slide 1 – Capital Markets Day****Slide 2 – Cautionary statements****Slide 3 – Supporting statements****Slide 4 – J-S Jacques chief executive**

Good morning all. I am delighted to welcome you to our 2016 capital markets day.

I would like to start by acknowledging the traditional custodians of this land- the Gadigal people.

**Slide 5 – Consistent delivery of value**

Today, we will show you the direction we are setting for the future.

We will talk about the key global trends that will impact and shape our industry in the coming decades. And, how we plan to make the most of them.

Having a long term perspective is absolutely critical and our decisions will always keep this in mind. Our strategy plays to our strengths: world class assets, a strong balance sheet and operating excellence

Our focus on generating cash together with our relentless capital discipline, means you can expect us to deliver superior shareholder returns through the cycle and invest for the long term. For us, it is all about delivery day-in and day-out. But there is no room for complacency.

We are looking across the Group at how we can step-up our performance, and we have the right team in place to do it.

With me today we have some of our executive - Chris Lynch, chief financial officer, Chris Salisbury, chief executive of Iron Ore, Alf Barrios, chief executive of Aluminium, and Steve McIntosh, group executive, Growth & Innovation. This team has extensive knowledge of the industry, and the experience to deliver our strategy

I'm going to talk to you about our operating environment and our strategy, followed by Chris Lynch, who will cover our financials. Chris, Alf and Steve will discuss the direction of their businesses and we will have plenty of time for Q and A.

**Slide 6 – We are well positioned to deliver sustainable returns**

Let's start with the trends that we believe will shape our industry in the coming decades:

- Productivity & Margins,
- Maturing China,
- Resilience,
- and uncertain Growth.

Starting with productivity and margins. Over the last decade, mining productivity declined significantly as companies chased the marginal tonne at any cost. Put bluntly, mining has lagged far behind most other industries – such as the airlines, automotive and oil & gas.

We see this as an opportunity. Technology and optimising the value chain have a big part to play in increasing our productivity. Disruptive technologies have transformed some industries and manufacturing processes. Technology will define the mining industry in many ways. Automation, big data, and analytics are already improving yields. But, we think there is much, much more to come.

Moving on to the next trend - a maturing China. There is no doubt in my mind, China will remain a key strategic player for the mining industry in years to come. Given the pace of industrialisation and urbanisation, China's demand for commodities will continue, albeit at a slower rate. At some point India, the ASEAN countries and Africa will pick up the baton, but not in the short term.

The pace of SoE reform, the cost structure of the domestic mining industry, and China's increasing global influence is a key source of change. But we remain cautiously optimistic and our strong product offering and long term customer relationships give us a strong position in the Chinese market

Moving on to the next trend – Resilience. A key challenge today, is managing volatility and the pace of change. This includes dealing with economic shocks, geopolitical events, and other social issues. The mining companies that win in this environment will maintain strong balance sheets and operate tier 1 assets, as we do.

This will ensure resilience in the tough times and the ability to make the most of opportunities. As complexity and volatility increase, the industry must partner much more effectively with customers, governments, communities, and employees. We believe, partnering excellence will be a make or break for the sector.

The fourth trend is uncertain growth. China's rapid development created unprecedented growth across the industry over the past decade. The next stimulus for growth is not as obvious, and hope is not a strategy. There are few high quality assets left, and many of the future greenfield tier 1 assets will be in tougher jurisdictions and harder to find.

There will be strong competition for the best assets. We have a clear growth strategy, and have the capability to find and develop new assets and commodities, which will be essential to meet the changing needs of society and provide attractive returns.

### **Slide 7 – Strategy will deliver value through the cycle**

So, how will we make the most of these trends and create value for our shareholders.

It is clear: we will focus on what we call the 4Ps. Portfolio, Performance, People and Partners.

Portfolio, is about world class assets, Performance, is about safety and operating excellence, People, is about commercial and technical capability, and what we mean by Partners is customers, investors, governments and communities.

We believe consistently focusing on these areas will deliver superior and sustainable cash flow over the short, medium and long term. We will use that cash to maintain our balance sheet strength, deliver superior shareholder returns, and provide compelling growth

**Slide 8 – World-class assets at the core of our business**

Looking at the first P, our portfolio of world class assets is at the heart of our strategy.

They are multi-decade, expandable, high quality assets, which comprise more than 90% of our EBITDA:

- The Pilbara delivers industry leading margins.
- We have an exceptional position in Bauxite, with margins of 48% and attractive growth options.
- Our Canadian smelting operations are the most profitable in the industry, and amongst the greenest in the world.
- And Oyu Tolgoi, is perhaps the most exciting copper asset available.

A strong balance sheet, combined with our Tier 1 assets delivers attractive and less volatile returns throughout the cycle, and provides material opportunities for the long-term.

**Slide 9 – Industry-leading growth of >2% ...**

We are also developing our portfolio of world class assets, an opportunity that others do not have. We are investing through the cycle.

We have three compelling projects already underway, all brownfield, multi-decade, and with highly attractive returns. With these projects we will deliver copper equivalent growth of more than two percent each year over the next decade.

**Slide 10 - ...with optionality of a broader portfolio**

As well as growing our world-class assets, we continue to refine our portfolio to ensure the most effective use of our capital. Over the past three years we have divested more than \$5 billion of assets, including \$1.3 billion in 2016, and we have exited projects that do not fit our strategy.

But we retain the flexibility of a broader portfolio. Some of our assets may be smaller, but they are valuable and highly cash generative. A good example is our borates business in the US, and our market leading TiO<sub>2</sub> business. Given the uncertain growth of the future, we are happy to keep this broader perspective, and to look at new commodities.

With a long-term focus we continue to invest in exploration, to provide for our future. Looking at 8 commodities in 17 countries – We have a unique capability in the sector, which allows us to deliver superior value for decades to come.

But don't be fooled, we will exit any assets or projects that do not fit the bill. I will now talk about how we will maximise the value of our world class portfolio by focussing on the second P, Performance.

**Slide 11 - Safety comes first**

Safety is our first priority. Our ambition is simple: everyone at Rio Tinto must return home safely, every day. There are no compromises.

Whilst we have fewer injuries, people continue to die at our operations. Tragically, in June, a colleague was killed at our Paraburdoo operation in the Pilbara.

Clearly we need to do more. Critical Risk Management is part of our solution. It ensures that every worker identifies the key risks before starting each job and puts the right protections in place. We have deployed CRM across all of Rio Tinto. That's 65 sites in less than 12 months. In October, we reached a critical milestone of 1 million verifications. We believe CRM will move us a step closer towards our goal of zero fatalities.

**Slide 12 - We will deliver \$5 billion of free cash flow in productivity improvements over five years**

We are well on track to meet our target of \$2 billion of cash cost savings by the end of 2017. A culture of cost efficiency is now fully embedded throughout our business. And we are doing more than looking at costs. We are taking advantage of every opportunity to generate value, from mine right through to market.

Increasing the productivity of our \$50 billion asset base is the highest return available to us. It will deliver an additional \$5 billion of free cash flow over the next 5 years. This is in addition to our existing \$2 billion cash cost target and is separate from our 2% annualised growth.

Last but not least, this additional \$5 billion of free cash is not dependent on price recovery. The productivity improvements drive sustainable increases in cash flow and are consistent with our continuous improvement culture. Work has already started on thousands projects across the company and these will be discussed further by the team.

**Slide 13 - Protecting our licence to operate**

The third 'P' is about partnership. As a global company the environment in which we operate is becoming more complex. We now need to partner with a range of stakeholders to obtain and maintain our licence to operate.

These partnerships are relevant at all stages of our business model – from exploration, through to operations, through to closure. We see this as a make or break for the industry. Partnership is vital for long-term success. Let's be clear – it's about managing risk in the short term, and securing access to new resources in the medium and long term.

**Slide 14 - Developing our people and capabilities**

The fourth 'P' is really about People – which means building our distinctive capabilities to deliver a step-up in performance. We are building our capabilities in a number of key areas: particularly commercial and technical, including specific centres of excellence, such as our commercial hub in Singapore.

Excellent commercial capability is as linked to our cash performance, as operational excellence. It goes without saying that we must get full value for our products to deliver quality results.

Technical excellence is also important to us – especially for the reasons I explained earlier. We must be ahead of the curve here and not behind it. Our strategy and success will not be delivered without the full involvement of our people.

**Slide 15 – Focusing on value over Volume**

Let me wrap up with how we run this business. Every decision we make will always prioritise value over volume.

Let's look at the Pilbara. We are optimising the entire system to deliver the best value outcome, based on the combination of three things:

- revenues;
- operating costs; and
- capex.

Silvergrass is not the lowest operating cost mine, but it enables the blending of high Phosphorus material from other mines, creating additional margin. We will seek to maximise free cash flow through the cycle – and volume is an outcome. Be it higher or lower. From iron ore to borates, aluminium to zircon, the principle will be the same – value over volume.

**Slide 16 – Consistent delivery of value**

Before I pass over to Chris, I would like to say - in the five months since I became CEO I have travelled across the Group. And everywhere, I have met really impressive people.

And that is why recent events related to Simandou have been very challenging. We cannot say any more than our public statements, as it is now with the relevant authorities.

But what you need to know is the following. I take integrity and our code of conduct very seriously. For me, it is absolutely non-negotiable. We must do the right thing wherever we operate.

Now let me summarise. There are a number of global trends that will impact the mining industry in the coming decades. We as Rio Tinto are ready to make the most of them. We have a strategy and plan in place to not only survive, but to thrive. It is about value. It is about performance. It is about long term perspective. It is about superior returns.

And with that I will now pass over to Chris.

**Slide 17 – Chris Lynch, chief financial officer****Slide 18 - Generating significant returns for shareholders**

Thanks J-S. This is a business which is generating significant cash, and which is being disciplined about how that cash is allocated. Our tier one assets are a very strong foundation and along with our early and very deliberate work on our cost base, we have been able to protect our margins and deliver strong cash flows.

These strong cash flows, combined with continued portfolio management, have allowed us to deliver over \$15 billion of returns to shareholders, in the past three and a half years. At the same time we have been able to continue to strengthen our balance sheet, as well as investing in growth.

**Slide 19 - Our capital allocation framework**

Most of you will have seen our capital allocation framework before. Rigorous management of cash, remains at the core of what we do. And we will continue to be consistent in our allocation of capital.

The first call on operating cash flow is essential sustaining capital to ensure the integrity of the business. We anticipate sustaining capex staying at around \$2 billion for the next three years.

Our next call on cash is our expectation of ordinary dividends to shareholders. We then have an iterative cycle of managing the balance sheet, pursuing value accretive growth options, and considering further returns to shareholders.

The business has been successful in generating cash and we have been disciplined in applying this capital allocation framework. This has allowed us to deliver on our commitments to shareholders, maintain the strongest balance sheet in the sector and invest in our growth projects. Based on Q3 average pricing this business generates operating cash flow of around \$10 billion in 2017. This is a robust business and we look forward with confidence.

**Slide 20 - Disciplined capital allocation to the most compelling projects**

We continue to have the capacity to maintain our assets and invest in growth. For 2016, capex is coming in lower than anticipated and is now expected to be less than \$3.5 billion. This reduction is partly due to deferral and timing of spending, but we also continue to find ways of achieving the same outcome at lower cost. We are maintaining our capital expenditure guidance through to 2018 and, as you can see from the chart our capex for the next three years is between five and five and a half billion dollars.

Our approved capital projects of Silvergrass, Amrun and OT, continue to progress well. These high-value growth projects are some of the very few that are being undertaken in the industry today.

In order to replace the natural depletion of the Pilbara assets, we will need to continue to invest. Chris Salisbury will talk later about the low cost project options we have for replacement mines with capital intensities of between \$5 and \$20/t of annual capacity.

**Slide 21 - Best in sector balance sheet is a competitive advantage**

As you know maintaining and enhancing the strength of the balance sheet has been a top priority and a major competitive advantage. At the end of the first half we had reduced net debt to \$12.9 billion. This is almost \$10 billion below the same period in 2013.

Since then we have realised over a further \$600 million of disposals, including the completion of Mount Pleasant and overnight announcement of the sale of the Lochaber smelter in Scotland.

A strong balance sheet is fundamental to the business. It provides:

- ROBUSTNESS against volatility
- the ability to provide cash RETURNS through the cycle
- and a READINESS to take advantage of opportunities should they arise.

Our net gearing ratio stood at 23 per cent at the end of June, remaining in the lower end of our guidance of between 20 and 30 per cent. In the current environment, with considerable uncertainty on product prices, exchange rates, interest rates and geo-politics. It is sensible to be at or even below, the bottom of this range.

### **Slide 22 – Near-term maturities greatly reduced**

Gross debt is also important. During the first half we reduced our gross debt by \$6 billion, successfully completing two bond buy-back programmes totalling \$4.5 billion, and retiring debt of \$1.5 billion. We have since completed a further bond buy-back of \$3 billion in the second half.

Our first intention is to manage the net debt target – but it is inefficient to run too much cash on the balance sheet, especially in the current interest rate environment. These bond repurchases used our existing cash and did not change net debt – but they have delivered a notable improvement in our gross debt and our debt maturity profile.

By the end of the year these actions will have reduced gross debt by \$9 billion on a proforma basis. And we have improved our maturity profile, with our average maturity increasing from 8 years to over 11 years, and the total amount maturing within the next three years reducing to under \$1.5 billion.

There is a weighted average cost of debt of 4.1 per cent. In the first half we drew down the \$4.1 billion of project finance for the OT underground. Given that we fully consolidate this project, 100 per cent of this debt is captured on our balance sheet. This is currently offset with the cash received, which will be used as the project is developed. The first repayment of the project finance will not become due until 2021, with interest capitalised until then.

### **Slide 23 - Delivering superior shareholder returns**

At the full year results in February we adopted a new shareholder returns policy. This policy is designed to ensure long term superior cash returns to shareholders. Under the new policy, total shareholder returns, including the ordinary dividend, and other forms of cash returns, will be between 40 and 60 per cent of underlying earnings, through the cycle.

When we adopted this new policy, as an interim measure we announced a minimum dividend for 2016 of 110 US cents per share, to be weighted to the final dividend. At the half year we paid an interim dividend of 45 cents per share.

In February, the Board will review the outcome for 2016 and determine the final returns to shareholders based upon our capital allocation framework. Our new policy makes very clear commitments on the balance of capital allocation, so that shareholder interests are always at the centre of everything we do.

With that I will handover to Chris Salisbury.

**Slide 24 – Chris Salisbury – Delivering optimal value**

Thank you Chris and welcome everyone. I acknowledge the traditional custodians of this land- the Gadigal people; as well as the traditional owners of the Pilbara region in which we operate.

I would also like to acknowledge, with this years' celebrations of the 50th anniversary of our first Pilbara shipment as a backdrop, the vision, spirit and hard work of many who have gone before - the 'groundbreakers'.

I have worked in Rio Tinto for nearly 30 years, across many product groups. Most recently, I led our coal business, and its significant cost and productivity transformation work; I was then chief executive of Copper and Coal during the leadership transition.

In the five months that I have been in iron ore, what has struck me is the continuing 'groundbreaker' theme - yes, with past employees and partners, but importantly also with today's work, continuing to innovate and improve.

The business is at the tail-end of its recent expansion phases - one of Rio Tinto's largest project investments, indeed Australia's largest mining investment. I will now lead the business from the growth to the run phase.

My clear mandate is to deliver optimal value from our integrated system. That value will be delivered by challenging our development options and capacity, as well as by driving even higher results in revenue, productivity and cost performance. This challenge is familiar to me, and I see many value opportunities.

**Slide 25 – Delivering optimal value from one of the world's best businesses**

I believe we must look beyond how we are often described - as the world's best iron ore business. Our people; resources, our scale and assets; our value chain; our products; and customers and partners, each support this.

But we also have considerable financial strength, demonstrated by our solid EBITDA margin throughout the market cycles. This overall performance matches us with some of the best businesses in the world.

Today I will share how we will continue to deliver optimal business value. I will cover the foundation of our business; workforce engagement and an uncompromising commitment to safety; our high quality resources, product and asset position on which the business is built; and the commitment to Licence to Operate and managing stakeholder engagement.

I will then cover mine to market productivity. How we drive productivity, cost and revenue initiatives; and the importance of technology and automation; and I'll also talk through our development sequence - a disciplined approach to decisions around sustaining and optimising the system, the assets and the product.



**Slide 26 – Safety effort targeting fatality elimination and injury prevention**

It pains me to say that in June of this year, we had a fatal incident at Paraburdoo. Lee Buzzard - a talented maintainer - was working on a drill rig during nightshift. He was crushed when a hydraulic arm unexpectedly pinned his body against the machine. This young aboriginal man was very much loved by family, friends and workmates, and was a most respected employee.

We are now implementing the learnings from this incident, so that the same or similar accident can never, ever happen again. Which is also the basis for Rio Tinto adopting the Critical Risk Management toolkit - with the right accountabilities, full assessment of the risks, and putting effective critical controls in place. Each risk, for each job, each shift, of each day. Our CRM roll-out is being completed with rigour and at the right pace. I have high expectations of all leaders in this regard; implementing the system as part of our culture, and ensuring that we maintain the quality of field verifications – with over 260,000 completed year to date. We must eliminate fatalities and serious injuries. It is the starting point to building a truly great business.

**Slide 27 - Major trends influencing the iron ore market**

We see a number of longer term trends influencing the iron ore market. China's crude steel production and profit margins have been solid during 2016; driven by renewed stimulus in the form of looser credit and monetary policy, new infrastructure targets and property sector improvement. Crude steel production averaged an annualised rate of around 830Mt/a so far in 2016 – which is in line with last year. China's net steel exports have remained steady at around 100Mt/a, with around half directed to developing Asian countries.

As China enters into the next economic growth phase, we will see an acceleration in the replacement cycle of the already installed steel base. Over the next 20 years this will lead to increased scrap steel generation, which will increase scrap usage in the steel making process, although starting from current low levels.

Environmental restrictions imposed in China have seen increasing limits placed on sintering capacity, leading mills to favour direct charge material such as lump. We are also seeing an increased appetite to eliminate inefficient capacity, to ultimately improve utilisation rates and increase steel mill profitability.

Both of these trends will put increasing pressure on low-grade product pricing, as will increased issues surrounding the disposal of waste. We are well placed to adapt to these changes.

The importance of paper markets has increased markedly, particularly over the last few years with the explosion of volumes changing hands on the Dalian Exchange. On some days they see 900Mt of iron ore traded, equivalent to China's total iron ore imports in 2015. It's not only through speculation. While iron ore can often be traded on paper markets as proxy for China's economy, we have increasingly seen market participants using paper markets to manage price risk as volatility becomes more pervasive in commodity markets.

Now turning to supply.....

**Slide 28 – Supply continues to moderate**

Over the past three years, we have seen the market absorb around 300 million tonnes of new seaborne supply from existing low-cost producers and new entrants. This has been achieved by exits of higher cost production, which has brought the market into a broadly balanced position.

These exits have come from three main sources: First, the China domestic supply, where we've seen around 160 million tonnes come out of the market- from its peak of around 400 million tonnes in 2013 to around 240 million tonnes of supply on an annual basis today. The availability of concentrate for pelletising or blending is further reduced.

Second, non-traditional supply regions such as Russia, Malaysia, Iran, Mexico and Indonesia have halved their supply into the seaborne market to around 80 million tonnes.

And third, traditional regions like Australia, Brazil and South Africa have also seen reductions, from reduced supply and exits from juniors. The impact of the exit of Samarco has also reduced the availability of pellet in the market.

We expect further supply coming on from low-cost producers and new entrants over the next couple of years. That said, we have clearly seen a moderation in the pace of supply increases, as producers take longer than envisaged to add capacity. We believe we will see further exits offsetting new supply as the significant input cost deflation we experienced in 2015, particularly in oil and exchanges rates, begins to reverse, and capital scarcity leads to reduced reinvestment in sustaining production.

**Slide 29 - ....but we remain well- placed with five highly-valued products.....**

We have a product suite that caters to all major Asian steel markets, the flag ship of which is the Pilbara Blend. Our Pilbara Blend fines is the most traded iron ore product in the world and forms the base load of many sinter blends in Asia due to its consistent quality. It's the US dollar of the iron ore world.

And our Pilbara Blend lump is a direct charge product which saves our customers time, money and energy by removing the need for sintering. It's a "natural pellet" and is the largest globally traded lump product.

Our Hamersley Iron Yandicoogina product has the ideal chemical composition for Asian sinter blends. With its low impurities, it has low gangue, making it particularly attractive to our Japanese, Korean and Taiwanese customers. After sintering, this product is high in iron and low in impurities making it very attractive sinter feed for steel mills.

Lastly, our Robe Valley products are a good niche product in our portfolio which are highly valued by a wide range of customers, from large to small steel mills across the markets we serve.

**Slide 30 - ....including the industry benchmark product Pilbara Blend**

Our Pilbara Blend product is the most consistent in the market. We blend from multiple mines which, along with optimised mine plans, averages out individual mine variation to create this consistent single quality product.

Our fully controlled port and infrastructure gives scale and capacity to blend efficiently at our ports, reducing rehandling, which is a significant competitive advantage. Customers can rely on our Pilbara Blend consistency in managing their blast furnace mix – with each ship, they know exactly what they're receiving. It also saves working capital, as instead of buying multiple cargoes to blend themselves, they can buy a pre-blended cargo direct from Rio Tinto.

This consistency, along with the fact it is the largest traded iron ore product on the market, ensures our Pilbara Blend Fines cargoes are liquid and fungible. Our technical marketing team provides expertise to help our customers get the most from our products during sintering and blast furnace operation, optimizing steel quality, lowering costs, and improving their returns and satisfaction.

The premium nature of our product is recognised by Platts, who adjust every fixed price sale by a brand adjustment – the only product in the market which has this adjustment. This is recognition that our product is not a generic 62% iron product, but one which is worth more. Pilbara Blend lump is a big driver of value for Rio Tinto, delivering an additional \$10/t year to date to the end of September. Given we produce over 80Mt, around a quarter of our production, this premia is worth over \$800m.

**Slide 31 - We have substantial resources sustaining future production.....**

Our Mineral Resources and Ore Reserves endowment is very strong. Managing this base efficiently forms the basis of creating a development sequence which, in turn, maximises the value of our assets and maintains the required delivery of customer product. Through sequencing and blending we are able to optimise our resource base; our infrastructure and system throughput; and to reduce stockpiling requirements. Given the significance to our business and to our customers, our focus continues to be on our premium Pilbara Blend products.

Our Mineral Resources position continues to support sustaining production and growth options. Our Ore Reserves are being maintained in line with mine production. And we are maintaining evaluation drilling and resource development programs at the right pace.

**Slide 32 - ....and a fully integrated asset network...**

After 50 years of operation, we still operate our original assets at Tom Price and Dampier. With Silvergrass we will have 16 mines, 1700 kilometres of rail, 4 ports and extensive related infrastructure. All are fully owned or managed by Rio Tinto for our exclusive use, which offers unique optionality. And, in this context, we are supported by strong joint venture partners. It is a system designed to seamlessly deliver Rio Tinto product to around 100 customers globally.

And it runs with real-time coordination and decision-making capability from our Operations Centre, located 1500 kilometres away in Perth. As some of you have seen from previous visits, our Pilbara business offers serious competitive advantage, particularly unimpeded

control and seamless logistics.

### **Slide 33 - Maximising cash flow and sustaining our competitive advantage**

It is essential we continue to focus on improving revenue, increasing productivity and removing costs from the business. Our EBITDA performance reflects our low-cost position against our peers, as well as the success of our recognised high value products.

This financial strength is evident throughout the iron ore market cycles, and strong performance compared to our peers. Since 2012, we have delivered almost \$1.2 billion of cumulative operating cost savings. We currently have a strong pipeline of over 1000 initiatives to continue this work, focused on sustainable cash improvements.

For example, in cost savings - system maintenance shut intervals & alignment; and component life extension for HME fleet; in productivity - increases through more effective utilisation of trucks; increased payloads; and ore car dumper cycle time reductions; or with revenue improvements - market to mine optimisation; physical & financial market capability; and contracting excellence.

In the case of our camp accommodation, earlier this year we signed a 10 year integrated facilities management agreement with Sodexo. This has more than \$75M cash benefits over 2016 and 2017 alone, with the standards of service and food maintained at very high levels.

Examples like these, and more, have helped reduce Pilbara cash unit costs to \$14.30 per tonne in 2016 first half, compared with \$16.20 per tonne in 2015 first half.

### **Slide 34 - Replicating best practice drives greater value.....**

Pulling the right value levers is one thing. Pulling them to extract maximum value is another. And yet another is how we can replicate best practice across our entire system. Take the effective utilisation of our 370 mine haul trucks, of which around 20% are automated. Our Pilbara manned truck utilisation rates are not yet optimised, with variability existing between our best and least performing sites.

Our automated truck fleet has a distinct productivity advantage as well as lower operating costs. The automation advantage has helped reduce fleet size, which means lower capital expenditure, and led to a 15% reduction in load/ haul costs.

We are also considering the optimal size of our automated truck fleet, including continued new buys, and an evaluation of a manned to autonomous conversion for existing fleet. We see a similar picture with effective utilisation rates across our plants - some perform better than others, but with more than 30% of our material being beneficiated, small improvements make a big difference.

More disciplined execution of maintenance to improve reliability and recovery of the wet plant, and maximum availability of the conveyor system, are each examples where best practice can be replicated.

**Slide 35 – .....as does productivity and technology**

And in rail operations - at the mines, train loading times have reduced by 6%, while at the ports, our ore car dumpers have improved cycle time by 6% this year and reduced variability by 46%. The continued pursuit of technology is critical to our efforts.

AutoHaul® - the automation of our trains - will deliver a step change in the safety controls and productivity of our rail operations. Ultimately, empty trains will depart from the coastal yards without a driver on board and complete the full cycle to the mines, through the loading process, and back to the coastal yards without manual intervention.

The system delivers multiple safety benefits, for example - automatic responses to level crossing operations; compliance with track speed limits and there are considerable productivity benefits - no train stops for driver changeovers; no waiting for drivers at yards or mines; and importantly, higher and less variable train speed control.

Good progress has been made in recent months with development and testing. 99% of the planned territory track is AutoHaul® enabled; over 700 production trains have moved more than 18Mt of ore; and trains have travelled over 250,000 kilometres in AutoHaul mode, with a driver in attendance.

Just last week, regulatory approval was received to implement attended driverless mode. The benefits from AutoHaul are already accruing. I expect AutoHaul usage to progressively expand in 2017, and for it to be fully implemented by the end of 2018.

**Slide 36 - Installed infrastructure offers high-value optionality**

The iron ore business commenced its significant growth programme in late 2009, with over \$14 billion of mine and infrastructure now having been spent. We have increased production by more than 50%, with high value optionality for further productivity driven growth, where warranted.

To maintain mine value options post Silvergrass, we have a range of low capital cost brownfield developments being evaluated in conjunction with the Koodaideri greenfields development. The latter continues to be successfully pushed out from its original development date in favour of brownfields.

In rail, we have increasing confidence in AutoHaul, and we will continue to expand its use through 2017 and 2018. Rail system capacity will be further augmented through low capital investment options - for example, an extra consist and wagons, and a range of other productivity improvements.

Port infrastructure is fully completed at a capacity of 360Mt/a, with the potential for further optimisation, as rail capacity loads up the port.

We will continue to decide at what rate to operate the system, based on the optimal return of value. At the third quarter results, we updated our market guidance to be between 325-330Mt for 2016, weather permitting. And for 2017 our guidance is in a range of 330- 340Mt

**Slide 37 – Sustaining best value production**

Since 2012, we have deliberately followed a disciplined, value accretive, low cost brownfields

approach to the expansion of our Pilbara operations. This has been assisted by the further cooling in the Western Australian construction market, and capital savings in areas such as heavy equipment, civil construction and crushing technology.

Our project execution model also continues to become more efficient. Consequently there has been dramatic reduction in the overall growth programme capital intensity. This is most evident in the reduction in mine capital intensity, which has reduced significantly from a high of about \$100/t of installed capacity in 2010.

By 2015 we had delivered growth capacity for ~40Mt/a of diverse brownfields mine options, at an average of around \$9 per tonne. Most recently, our efforts have been concentrated on the Nammuldi Incremental tonnes, now fully commissioned. With an average capital intensity of around \$19 per tonne and a specific focus on retrieving high grade, low phosphorus ore, this continues to deliver significant value into the Pilbara Blend. And they are positioned as an important precursor to the main development of the Silvergrass mine.

### **Slide 38 - Silvergrass on-track to deliver world-class investment returns**

The balance of the full Silvergrass mine development comprises the installation of a satellite crusher and overland conveyor; increased autonomous mining capacity; and the expansion of the Nammuldi non-process infrastructure.

This will enable Silvergrass production to be raised from the Nammuldi 10 Mt/a road train option, to around 20 Mt/a and, with a conveyor replacing road trains, significantly reducing operating costs.

First ore from this next 10 million tonne tranche remains on track for the second half of 2017. We carried out many studies to defer the investment in Silvergrass, significantly reducing the capital spend from original estimates - for example, through mine plan optimisation and productivity improvements in the Brockman region, resulting in reduced mining equipment requirements; and through innovative design and construction approaches.

Silvergrass is a world-class investment- the final capital allocation for the full project, approved this July, brought overall capital intensity to around \$29/ta.

### **Slide 39 – High-quality, low-cost options available to offset depletion**

As with all resource industries, we face the challenge of sustaining production due to depleting mines. In this regard, we are fortunate to have multiple high quality, low cost options available to sustain existing production levels. Mines like West Angelas Deposit F and Yandi Oxbow, which are presently in development.

Indeed, over the next few years, it is expected that all mine developments – except a possible new mine at Koodaideri - will be brownfield replacement mines, with a capital intensity between \$5/t and \$20/t of installed capacity.

Our brownfield mine developments will continue to be easy add-ons that benefit greatly from in-situ infrastructure. For example, West Angelas Deposit F will utilise existing processing plant and infrastructure, while Yandi Oxbow will utilise existing facilities, including the Yandi automated truck fleet.

Both have capital intensities less than \$10/t, and both deliver superior investment returns,

with internal rates of return in excess of 100%.

One option for our next major greenfield replacement mine is Koodaideri, which could underpin Pilbara Blend product and continued low cost operations, Koodaideri Phase 1 development would require capital of about \$2.2 billion. Spend would include a 40 Mtpa dry crushing and screening plant, non-process infrastructure, product stockyards, rail loop and load-out and a 170 kilometre rail link to the main line.

Our present view is first ore to be available around 2021. However, we continue feasibility study work at this stage, with particular scrutiny of options that extend brownfields capacity, further reductions in capital, and staged capacity, potentially up to ~70Mtpa.

#### **Slide 40 – Sustaining best value production**

Like any other world-class production platform, the Pilbara requires ongoing investment to sustain operations, either sustaining capital or replacement mine capital. Sustaining capital ensures the system and its individual asset components are able to function as designed.

For example, replacement trucks and major upgrades to maintain structural integrity. We expect this to be around \$2.2 billion over the next 3 years. From a current low base, we expect sustaining maintenance capital in the five to ten year view to trend slightly upwards as we move away from our most recent expansions.

Replacement mine capital is required to maintain existing production levels as mineral reserves are depleted. This will around \$1.0 billion over the next three years, most of which is unapproved.

#### **Slide 41 - A workforce of fully- engaged employees**

We are operating one of the biggest global mining businesses, across which a fundamental step- change in improvement activity is being undertaken. As I have said, we are currently tracking and actioning over 1000 improvement initiatives and capturing sustainable cash improvements. Importantly, it is a platform to more fully unleash the human capability and asset potential of the business.

The key to which is the direct and full engagement of our employees. While safety remains our absolute priority, the incessant pursuit of incremental value is a clear business focus. Each employee has great insight into how value can be added to the business. But to properly contribute, they need roadblocks removed; strong leadership; empowerment to move the business along; and to be recognised for their contribution. This is even more important, as our business continues a necessary transformation, which itself will demand new skills, talent and diversity.

#### **Slide 42 - Highly-valued partners and sustainable local and regional investment remain a priority**

The way we interact externally is a model that stretches across communities, JV partners, governments, contractors and suppliers. And it covers, for example, initiatives in education, health, environment, culture; regional sustainability; as well as targeted indigenous employment.

We make the procurement of local goods and services a priority, for example, and we

directly employ from many parts of the state, including more than 1000 employees flying directly from regional centres.

And in the last decade alone we have paid more than \$13 billion in royalties to the State Government, and committed around \$300 million to Pilbara community initiatives. We work closely with all partners to make a positive and lasting difference.

Which is why we were surprised by the unilateral attitude of the WA Nationals. They are pursuing a large new tax that, based on our current production guidance, would increase our cost base by more than A\$1.5 billion each year. It is unfair and discriminatory and completely at odds with the contractual partnership of the State Agreements; to encouraging investment; and with the protection of regional jobs. This tax is a massive business risk and we continue to vigorously oppose it, with a robust campaign strategy, including many personal interactions with key stakeholders; media interviews; employee involvement; and in advertising.

This tax is bad for our business, for Western Australia, Australia and the mining industry in general.

#### **Slide 43 – Delivering optimal value from one of the world's best businesses**

The success of our business over 50 years has been remarkable and can be matched with some of the best blue - chip businesses in the world. We have robust vision and strategy that is based around extracting optimal value. High quality cash flows are delivered throughout the cycle.

The people who work for us are our greatest assets, and their safety and well-being must be ensured each and every day.

We have very strong mineral resources and an exclusive, integrated asset base, from which we deliver products that are highly valued by our customers.

Through more than 1000 initiatives, we will focus even more strongly on sustainable productivity improvements- costs, volume and revenue.

Our continued investment in technology and innovation will assist this optimisation. And we will be disciplined in deciding about sustaining and optimising the system, the assets and the product. We will place value ahead of volume.

There is always opportunity for further improvement and I look forward to sharing this with you in the future. We will now have a short break and we will see you back here in 15 minutes



**Slide 44 – Break****Slide 45 – Alf Barrios, chief executive Aluminium****Slide 46 - Leading performance through the cycle**

Welcome back. It is great to be here in Sydney.

Today I want to take you through the following on our Aluminium business.

First, I want to emphasize, how both the quality of our asset position and our distinctive performance management system allows us to differentiate ourselves from our competitors and deliver superior results.

Second, I will recap on how we are delivering on the promises we made, how we are on track to exceed the cost targets we set and how we have delivered an industry leading ramp-up at Kitimat.

Finally, I will highlight how we are on track to deliver Amrun, on time and on budget, and to develop a pathway for value-driven growth.

**Slide 47 - Safety is a fundamental business priority**

But before we start, let me reiterate that safety is fundamental at Rio Tinto – and this is no exception for the aluminium group. We are relentless in our efforts to ensure the safety of our people in the workplace.

We continue to move in the right direction for recordable injuries and are very focused on the implementation of CRM and our goal of zero fatalities.

**Slide 48 – China’s bauxite import demand growing rapidly**

The fundamentals of the bauxite market continue to be robust driven primarily by continued growth in aluminium demand and alumina production in China.

Market fundamentals for aluminium remain strong, driven by increased intensity of use in the transport, construction and power segments. Aluminium demand in China has seen a steady 13% annual growth rate in the last 10 years and is expected to continue growing at about 3% over the next 15 years.

Chinese alumina production has seen annual growth average 19% over the last 10 years, driven by its desire to be self-sufficient, which is expected to continue. To sustain this growth, China will increasingly rely on imported bauxite, particularly as the quality of its own bauxite declines. Imports have grown on average 18% per year, over the last 10 years and industry analysts expect growth of up to 7% per year over the next 15 years. This would lead to an increase in imports of around 100mt by 2030.

**Slide 49 - Aluminium gradually moving back to balance**

Aluminium demand is expected to remain strong and see growth of 3% per year over the next 15 years. The market is moving back to balance after 8 years working through excess inventory and capacity overhang from the global financial crisis.

Stocks are down to 11 weeks from a high of 16 weeks in 2009.

While China continues to add smelting capacity, the trend back to a balanced industry position remains on track, with stocks returning to historical levels within the next few years.

#### **Slide 50 - Strategy for outperformance through the cycle**

Our aluminium strategy remains focused on the two pillars of global leadership in bauxite and low first quartile smelting assets.

The strategy is underpinned by a distinctive performance delivery model and capability, and a single global commercial organisation that ensures maximisation of value from mine to market.

It is the combination of these elements that positions the business to achieve on our goal of consistently delivering leading performance through the cycle, creating sustainable value and cash returns.

#### **Slide 51 – Consistently increasing shareholder value**

We continue to transform our Aluminium business, building on the platform set over the last few years.

In bauxite, we have increased our exports by 28 per cent since 2014. This has been achieved through low-capital creep projects at Weipa and increased exports from Gove, following the curtailment of the refinery in 2014.

The development of Amrun is an important milestone which will deliver greater than 20% returns. Evidence of a clear focus on value over volume. Amrun is on track to deliver bauxite in the first half of 2019.

Our alumina business, plays a key role in ensuring competitive security of supply to our smelters. In 2015, we stabilized the production platform and this year, we have transformed the assets into cash positive businesses. This transformation momentum will continue unabated in 2017.

In smelting, we are firmly positioned in the low first quartile of the cost curve. The industry leading ramp-up of Kitimat has further entrenched that position, with the smelter already in the lowest decile of the cost curve.

The announcement of the Lochaber smelter divestment overnight is further evidence of the portfolio evolution necessary to deliver on our strategy.

Overall, we have delivered cost and productivity improvements of over \$1.4 billion since 2013, and will continue to drive further initiatives with unrelenting focus.

#### **Slide 52 - On track to exceed \$1.4 billion of cost improvements**

We have consistently exceeded our cost reduction targets over the last 4 years, and expect very strong delivery again this year. This consistency of delivery is underpinned by a distinctive performance management system, which alongside portfolio quality, is key to delivering our strategy.

Our performance management system, involves a clear framework for assessing the full potential of our assets, and developing and rigorously tracking a pipeline of improvement initiatives.

Cost is one dimension, but the process encompasses all levers, from productivity through to commercial excellence across the full supply chain. The system is an embedded part of our performance culture, and is key to the consistent outperformance versus our peers.

This is reflected in EBITDA margin, with the gap with the closest competitor exceeding 15%, and we expect this to continue to grow.

### **Slide 53 - Leading bauxite resource and market positions**

Our strategy in bauxite is to concentrate on value-accretive, market-paced growth. We have the largest bauxite resources and reserves in the industry, with interests in four of the world's largest mines, all attractively positioned on the industry cost curve.

The size, geographic location, quality of our assets and strong technical-marketing support, give us a clear and sustainable competitive advantage.

Our customers value this. The proximity of our Australian mines to China and the high alumina content of our bauxite – particularly at Cape York and Gove – helps to underpin our competitive advantage.

The size, spread and quality of our resource position, means that our growth pipeline is the most attractive in the industry, with multiple development pathways available, in both the Pacific and Atlantic regions.

In parallel with the development of Amrun, we are moving from option rich to option ready in terms of optimising the next sequence of growth projects. When the market is ready, we will be well-positioned to supply that demand with projects that will deliver attractive returns. Again, value over volume.

Rio Tinto has been exporting bauxite to China since 2004 and we are the largest single supplier of bauxite into China. In 2016, we expect to deliver over 23 million tonnes of bauxite, representing around one third of Chinese imports. We have reached this position by successfully developing the seaborne bauxite market, alongside customers who have built or adapted refining capacity to use our product.

### **Slide 54 - Amrun on track for first bauxite in H1 19**

Amrun will be a first quartile bauxite mine, with a 40 plus year life. It will also deliver infrastructure that can be leveraged for future brownfield expansions.

We are on track to ship first bauxite in the first half of 2019, coinciding with the depletion of the East Weipa mine. Overall the project is 25% complete and all major project milestones for 2016 are on track, including the delivery of site access and infrastructure.

Amrun is a great example of how Rio Tinto, partners with local stakeholders to deliver value. More than 550 Australian businesses have been engaged to date, directly and indirectly via contractors and over 50 Indigenous staff are employed to work on the project.

In summary, we are confident that Amrun will be executed successfully on time and on budget, to deliver a step-change in our bauxite export business.

#### **Slide 55 - 250+ bauxite improvement initiatives underway**

Amrun is clearly a major step forward, but I don't want to leave you with the impression that this is all we're doing. Courtesy of our performance management system I have visibility on the improvement activity we have going on in the business.

It gives me a clear picture of where we are headed. Over the entire business we have over 1200 initiatives in progress, some larger and some smaller.

In Bauxite, we have over 250 ongoing improvement initiatives. I'll share with you just one example, that we are implementing to increase production and reduce costs at our existing mines. All ultimately to generate more cash. At both East Weipa and Gove, we will increase our production through low cost creep. This will deliver an uplift of 5% in production in 2017, over and above the 9% increase we will deliver in 2016.

To enable this, we are focusing our efforts on system bottlenecks, such as the East Weipa processing plant and Gove's conveyor system, where we are increasing throughput rates by 15% and 11% respectively. This production creep will deliver additional revenue of \$100m per annum, over 2016 and 2017 for very modest incremental cost.

#### **Slide 56 - Transforming alumina business**

In 2015, it was critical to stabilise the operational performance of our refineries. The consistency of operational delivery, that we now see, has set in place a strong platform from which to transform our alumina business in 2016.

I am proud to talk about the achievements of our teams in this area, which have delivered a material step-up in performance. There has been a sustainable reduction of unit cash costs by 23%, sustaining capital compression of more than 40% and improvements in working capital of 16%.

But the work does not stop here and positive momentum continues to build as we move into 2017. This momentum will enable all of our refineries to be both, EBITDA and free cash flow positive in 2017.

#### **Slide 57 - 500+ alumina improvement initiatives underway**

The intensive transformation activity means we have a very full pipeline of over 500 improvement initiatives underway in our Alumina refineries.

We have improvement activities in place across our entire supply chain, such as, the optimization of vessel scheduling by allowing wider berthing windows for our vessels, and restructuring our caustic supply to deliver both cost and working capital benefits.

Labour productivity is also in focus, particularly around contractors. Work on footprint consolidation and rate reductions in this area will deliver savings of more than 40% over 2015 levels. These are just a few examples of the initiatives, that we are working on, to return the alumina business to profitability.

**Slide 58 - Improving our smelting cost position**

In smelting, we are firmly positioned in the low first quartile of the cost curve. Our low-cost, low-carbon power position is a significant and sustainable competitive advantage, given it is the most important cost differentiator for a smelter.

Our energy profile, is unique in the industry, with 80 per cent of our power mix from low-carbon sources and for our Canadian managed smelters, 100% is self-generated, long-life hydro power with first decile costs.

We have done a tremendous amount of work, in improving the competitiveness of our smelting portfolio. Our continued focus on costs and productivity, and the overall simplification of this business, has enabled us to reduce our fixed costs per tonne by over 35% since 2013 while at the same time creeping the production of the business by 1% per annum at high returns and very low cost.

With Kitimat now successfully ramped up, the foundation is set to firmly entrench the portfolio into the low first quartile of the cost curve. Where there is not a clear pathway to this, we will look to further reshape the portfolio, as we have clearly demonstrated in the past.

The divestment of Lochaber and the ancillary service businesses over the past 2 years have reduced the workforce by over 1500 employees and further simplified the business which enables the ongoing push for productivity.

As I have said before, I will not accept any of our smelters losing cash. In 2016 all of our smelters will be free cash flow positive. And I am confident that the strength of our performance management system means that every one of our smelters will be free cash flow positive in 2017.

**Slide 59 - 500+ aluminium improvement initiatives underway**

Let me now share with you some of the initiatives we have in our smelting business, where there is also over 500 improvement initiatives underway. One example, is our work to increase the proportion of value added products in our mix by five per cent in 2017.

This initiative highlights collaboration between our commercial and operational teams, working with our customers to deliver value. It results in satisfied customers and better margin for our business, and is expected to generate an incremental \$30 million in 2017.

I would also like to highlight, what we have been doing to improve our cost and working capital position. In Canada, for instance, we will deliver \$40m of benefit through external spend reduction, mainly through productivity gains in contractors, light mobile equipment and the management of our warehouse system.

**Slide 60 - Leading performance through the cycle**

To summarise, safety remains our primary focus and we will continue to drive a culture that ensures each and every one of our people, goes home safely at the end of each day.

With that as our baseline, we remain intensely focused on driving superior returns and value out of our every one of our businesses.

This requires both a high quality portfolio and a highly disciplined performance management system that fully addresses all available levers, from cost reduction to productivity to commercial excellence across the full supply chain.

Amrun is an exceptional project, with attractive returns which will bolster future cash flow in our high margin bauxite operations.

We will also be option ready, for the next phase of bauxite growth as the market develops.

Our business is extremely resilient and with a strong track record, for delivery of sector leading performance through the cycle, which will continue to create sustainable value and returns for Rio Tinto shareholders.

Thank you and now over to you, Steve.

### **Slide 61 – Steve McIntosh – group executive, Growth & Innovation**

Good morning - it is my pleasure to be here today to talk about the role that the newly formed Growth & Innovation organisation will play going forward.

### **Slide 62 - Adding value through the asset lifecycle**

G&I has been formed to deliver better management of our assets through the full lifecycle, ensuring we achieve speed, quality and consistency in execution, applying innovation and technical expertise to increase productivity and value.

To achieve this G&I is accountable for finding through our exploration team; evaluating and developing through our major capital projects team; optimising by the productivity and technical excellence teams and ultimately closing our assets, again done by the projects team.

We do this in collaboration with Rio Tinto's Product Groups & Business Units, complementing their deep operational experience with our technical skills and global reach. Our involvement spans the entire value chain from orebody to market. So in G&I we talk about our breadth compared to the depth of the operating Product Groups.

We are particularly focussed on bringing what we call horizontal accountabilities to life which includes delivering Technical Excellence globally. We are also accountable for providing Technical Assurance and targeted Technical Support. We apply our knowledge and experience at the relevant points along the asset life cycle to ensure that we are managing risk effectively and generating maximum cash.

All of this feeds into the Productivity agenda that J-S set out earlier. For the purpose of clarity, while the Oyu Tolgoi underground project is in development, G&I is accountable for the existing operation as well as the project.

### **Slide 63 - Safety is our first priority**

Let me start with safety. G&I's safety performance is, today, one of the best in the Group. It has continued to improve this year, with good performances from Exploration and at OT. We have also seen an improving trend across our Major Capital Projects. Exploration has achieved a four-fold reduction in AIFR since 2011 which has been driven by a relentless

focus on contractor performance and on risk management.

OT has one of the best safety performances in the company. The Capital Projects environment has inherent challenges and the nature of remote construction projects like Amrun in far north Queensland and the OT underground in Mongolia bring significant safety complexity. We are tackling these challenges head on through the rigorous application of our safety standards and procedures focussed both on our employee and contractor workforces. We are progressively implementing CRM which J-S, Chris and Alf have each spoken of.

#### **Slide 64 - Find, evaluate and develop assets**

A critical component of our future success lies in building a pipeline of high quality growth options. This will ensure we are able to deliver sustainable and profitable growth well into the future.

In exploration we have a long track record of discovery success. Our rigorous prioritisation process with well-defined stage-gates ensures we deliver new discoveries in a cost effective manner. We source the pipeline of early opportunities from our extensive greenfield and brownfield exploration portfolios.

We work closely with all our operations to ensure our ore body knowledge is at the right level to support optimal decision making at every stage. Once we have a discovery that aligns to the company's strategy, we then look to progress that through to evaluation. Evaluation is about "doing the right project", where we balance the business objectives of investment returns, with technical & resource certainty and stakeholder requirements to manage overall project risk.

In project execution and delivery we leverage our proven, standardised Major Capital Projects approach. The Evaluation and Investment committees provide strong governance and well defined stage gates for ongoing investment decisions. And our independent Technical Evaluation Group reviews every investment proposal to ensure the integrity of the decision making processes is of the highest technical quality.

#### **Slide 65 - Declining industry investment and success**

Finding quality greenfield resources is getting harder. This chart shows the number of discoveries, excluding bulk commodities, made across the industry since 1996, along with estimated worldwide exploration expenditure. As you can see, there is a good historic correlation between spend and discovery rates through until about 2005.

We then see this unprecedented step-up in global expenditure, but without a commensurate increase in new discoveries. I should acknowledge that there will be some backfilling of discoveries in the later years as projects under evaluation today come to book. However, based on our internal analysis, we expect this will add only a minor uplift and we see no evidence of a large number of new high quality greenfield discoveries being announced anytime soon.

My view is that during the past decade the exploration industry got "busy being busy", but it was clearly not "busy being successful". This will feed into the elusive growth issue that J-S mentioned in his speech.

In contrast, Rio Tinto achieved solid discovery performance during this same period while

maintaining a relatively level spend.

### **Slide 66 - Extensive and successful exploration programme**

The exploration group is presently exploring for 8 different commodities across 17 countries. In 2016 our total-spend on drilling and exploration related activities will be around US\$180m, which is a slight increase from 2015.

In recent years we have “rotated” our spend to focus more on projects in the OECD and Peru in line with our increasing focus on copper exploration. We have the ability to flex our jurisdictional emphasis in line with the economic cycles and to where we see the best opportunities for discovery success.

We are still exploring in the developing world and continue to build strong relationships there. It is important to note that non-OECD countries are likely to generate a disproportionate number of future world-class mineral deposits due to a lack of historic exploration activity. Over the past decade we have focussed our efforts on exploring for brownfield options in and around our existing operations.

In Australia this work has been dominated by a focus on the bulk commodities. We have had significant success particularly in the Pilbara, in the Hunter Valley and in Queensland. This work has delivered significant uplifts in our resource bases in iron ore, bauxite and coal which could support many decades of future production.

In more recent times we have renewed our focus on greenfield projects and on copper specifically. However, this is not at the exclusion of all other commodities.

We pride ourselves on continuing to develop world leading technology and delivering innovations to our explorers. We invest about 5 percent of our annual exploration spend in R&D to not only improve our effectiveness and to drive down our operating costs, but to enhance our ability to assess a range of new commodities using new methods and technologies.

### **Slide 67 - Unique capability to make new discoveries**

Rio Tinto has a 70 year track record of exploration success and a number of those discoveries were the foundations to many of our most significant businesses today. In fact, the majority of Rio Tinto’s core mining operations were discovered and developed by the company.

This includes discoveries like Mount Tom Price which formed the basis for our world class iron ore business in the Pilbara; Argyle the foundation of our global diamonds business and the discovery of bauxite at Weipa which founded Rio Tinto’s original aluminium business.

After lean years in the 80’s and early 90’s a new exploration strategy was rolled out, delivering in a short space of time a significant uplift in the rate of discovery globally. That same exploration strategy with just a few minor tweaks continues to this day. 2002 saw the discovery of the Resolution Copper deposit which as you know is a very significant copper resource located in Arizona that we are progressing through evaluation. And in 2009 the Jadar lithium resource in Serbia was formally announced as a discovery. Both of these projects are examples of Exploration’s ability to deliver Tier 1 resource options for the Group.



Importantly, I want to emphasise that we treat exploration like a business. We actively divest discoveries that are not Tier 1, are not on strategy or do not otherwise fit with the Group's priorities. We recycle this cash back to fund our ongoing exploration programmes.

In the past decade we have spent around US\$1.7b on greenfield exploration and in turn generated US\$2.2b from divestments of discoveries that the company decided did not meet our investment criteria. This means we have delivered the discoveries made during this period for free to the Group. I know of no other company that comes close to matching this achievement.

#### **Slide 68 – Incubating new sources of value for the group**

J-S noted earlier that we wish to retain flexibility within our broader portfolio. Work we have done on Megatrends to support our new strategy has identified potential to capture value outside our core portfolio with a focus on new and emerging commodities.

As such we are building an “incubator strategy” focussed on building a portfolio of valuable and highly cash generative businesses. This is an exciting concept that leverages a number of Rio Tinto's unique capabilities.

G&I will have a key role to play in the generation of these opportunities. These new businesses would be hosted within the Energy and Minerals Product Group. Jadar, along with other opportunities that we have in the exploration portfolio, would naturally fit into such a business model, and I'll speak more on that now.

#### **Slide 69 - Jadar is a significant lithium-borate resource discovered by Rio Tinto**

I have already mentioned our discovery of the Jadar lithium-borate resource, which makes for an interesting case study. Rio Tinto first visited Serbia in 1998 looking for borates. Over the next few years exploration progressed and the first drillhole into the Jadar deposit was completed in 2004.

This find is more than just a future source of high grade boron and lithium, it included the discovery of a new mineral called jadarite. Serbia's Jadar basin is today, the only place in the world where this mineral has been found. This is a geologically rare event as it is not normal to find hundreds of millions of tonnes of a mineral never previously recorded.

Since formally being announced in 2009 the project has continued to progress through the evaluation phase. We are well advanced on delivering a pre-feasibility study by the end of 2017. We're excited by the potential we see today.

This discovery aligns very neatly with the incubator concept focussing on a new commodity, in the case of lithium, and on new markets. Jadar is a great example of the value our unique exploration capability brings to the company. This world class capability gives us confidence we will continue to build a superior pipeline of Tier 1 growth options into the future.

**Slide 70 - Evaluating our projects**

Once we have a discovery or a brownfield project that meets the Group's investment requirements we commence our formal evaluation process. During this stage we manage risk by balancing key objectives including delivering the required investment returns, which as you know are set at an IRR of greater than 15%.

Our goal is to minimise uncertainty associated with the resource and to develop the optimal technical solutions using proven methods or new innovation to bring the project to market. To give some examples of ongoing technical innovation: At Jadar, we are piloting processes that will enable production of both saleable borate and lithium products from the newly discovered mineral jadarite.

At OT, we have drawn upon our experience in block caving to employ the latest techniques in the mine design, to enhance productivity and safety through design.

To maximise value we also go beyond the technical solution, carefully reviewing capital intensity and project timing to ensure we optimise all aspects of each project and both Amrun and Silvergrass have benefited from these reviews.

During evaluation we also work with a broad range of stakeholders to protect and enhance our licence to operate. The enduring relationships we build during exploration and evaluation are essential to set any future project and operation up for success.

Finally, our Technical Audit & Assurance group plays a critical role in reviewing project progress to ensure we deliver rigorous technical assurance.

**Slide 71 - Track record for delivering high quality assets**

In 2015 we formed a central major capital projects team consolidating all previous project execution teams. Rio Tinto Projects is now housed within G&I.

This world class team of experienced and mobile project experts is mandated to deliver all projects with a capital spend greater than \$250m going forward. The leadership of this team has managed over \$25 billion of major capital projects since 2012.

Today we use standardised project management systems and processes globally. Key projects currently in execution include the OT underground, Amrun, Holden, Silvergrass, AutoHaul and various sustaining projects in the Pilbara.

The team is focussed on ensuring these projects are executed safely and efficiently, on time and on budget and ready for a seamless handover to operations upon completion. We also complement our technical excellence with commercial excellence achieving cash generation and schedule optimisation through ongoing capital intensity reviews. This is supported through the use of LEAN methodologies in Construction.

**Slide 72 - Delivering value through technical excellence**

We take an end to end approach to technical excellence leveraging both our in-house capabilities and those of external partners. We continue to build strength in the geosciences, mining, processing, infrastructure and asset management areas with a focus on replicating best practice across our entire asset base.

We are evolving our innovation and automation strategies to ensure we are capitalising on the success we've had in the Pilbara and bringing these learnings to other parts of the Group.

A world class underground capability is a critical enabler for the successful growth of our business, and for managing our technical risk in operations. We have established a centre of excellence for underground to support not only OT but future Rio Tinto underground mine developments.

Our Asset Management team is implementing global processes that use data analytics to enable predictive maintenance planning. This work will have an important impact on overall operational productivity.

Our in-house orebody visualisation software, RTVis™ is now implemented at most of our sites globally. This technology improves the efficiency of all key mining activities. This platform scales very efficiently; from helping a single operator in the field make better real time decisions, through to supporting expert teams in our corporate offices working on longer term issues such as mine planning.

Enhancing and capitalising on our technology platforms will be critical to future value delivery.

### **Slide 73 – Driving productivity across the value chain**

G&I is well placed to help drive Productivity centrally across the entire business. As we've heard this morning, we are single-mindedly focused on value over volume. Our role is to co-ordinate the initiatives to achieve the productivity targets that JS outlined.

We are very focussed on driving incremental returns from our \$50 billion asset base, returning Rio Tinto to a position where we deliver consistently high levels of operating performance.

G&I is positioned to both support and challenge the business: to identify best practices that must be replicated, and at pace across our business; to identify latent capacity through standardisation of systems and processes; and to support the business to utilise that latent capacity to deliver productivity gains.

Our focus within the first 12 months will be on rapid replication of best practice across the business focussed on haulage and processing

We are refreshing our global metrics and broadening their application, taking a value chain approach, and ensuring that we eliminate critical bottlenecks. The value chain approach is critical, because as the gaps to best performance in the metrics in this slide show, there is considerable opportunity to release latent capacity.

We are bringing together the best technical, operational and commercial capability to work through these challenges. We have the support of the whole business to coordinate and to drive this effort centrally. We believe we have a unique platform to help us deliver this step-up in performance.

The size of the prize is significant and G&I will play a critical role in delivering the additional \$5 billion of free cash flow in the next 5 years.

**Slide 74 - Closing our assets like we build our assets**

G&I houses the necessary technical and projects capabilities to effectively and efficiently close assets and to rehabilitate sites. Closure is an increasing challenge for the sector, and doing it well is critical to the mining industry's future privilege to operate.

We approach closure like any other project, taking it through all of the evaluation stages as previously outlined. Minimising cost whilst delivering on rehabilitation and stakeholder commitments is critical.

We have seen good results through the application of technical innovation in areas such as water and waste product treatment. G&I has a unique technical capability that we can leverage to support these closure projects.

As an example the Projects team is completing the Holden rehabilitation project in the US. Holden is a legacy copper mine located in Washington State. Its rehabilitation has focused on cleaning up historic waste dumps and tailings; removal of old mine buildings and construction of an onsite water treatment plant. This project recently won the American Exploration & Mining Association 2015 Environmental Excellence Award.

**Slide 75 – Conclusions**

For G&I our priorities are clear. Safety is, of course, number one. G&I has been formed so we can manage our assets better through the entire lifecycle, extracting optimal value at each juncture from exploration through to closure.

J-S has set a clear vision for the company and in G&I we are excited to bring together people from across the company with exceptional operational and technical skills to deliver on this vision. Thank you

**Slide 76 – J-S Jacques, chief executive****Slide 77 - Value proposition**

Thank you Steve. During the downturn, we decided to continue exploration and retained a skill that once gone, is almost impossible to replace.

And that makes it clear why having a long term perspective is absolutely critical. Our decisions will always focus on the long term and value over volume.

Our strategy centres on our key strengths: world class assets, a strong balance sheet and operating excellence.

Our focus is on generating cash. We will deliver our \$2 billion of cash cost savings and improve our free cash flow by a further \$5 billion through mine-to-market productivity.

Increasing the productivity of our asset base provides a powerful, low risk cash returns.

And together with our relentless capital discipline, this means you can expect us to deliver superior shareholder returns through the cycle

AND invest for the long term.

For us, it is all about delivery in every corner of the business day in and day out; with safety our number one priority.

And now, are there any questions.

[Q&A session]

**J-S JACQUES concluding remarks**

Thank you for your questions.

Before we close I would just like to restate our strategy centres on our key strengths: World class assets a strong balance sheet and operating excellence.

Our focus is on generating cash and together with our relentless capital discipline, this means you can expect us to deliver superior shareholder returns through the cycle and invest for the long term.

For us, it is all about delivery in every corner of the business day in and day out.