

Slide 1 - Title slide

Thanks John.

Good morning all and welcome to our 2017 investor seminar.

Firstly, I'd like to acknowledge the traditional custodians of this land- the Gadigal people - as well as the traditional owners of the Pilbara region in which we operate.

Rio Tinto is in a strong position.

Our value over volume strategy is working.

And...as we look ahead...we are doing everything we can to make our business even stronger.

We will do this by delivering on our promises.

Today is about our promise to drive productivity from mine through to market.

This is vital to our plans to deliver superior value for our shareholders over the short....Medium...and long term. It will improve our ROCE and TSR.

So, today you'll hear more from the team on how we are stepping up our productivity, with a five billion dollar target over the next 5 years.

You will have seen this morning the announcement of Simon Thompson as our new Chairman. I have known Simon for many years and I look forward to working with him as we continue to pursue our strategy of delivering superior returns to our shareholders.

Let me introduce the team, you all know Chris Lynch, Steve Macintosh (head of G&I), Rob Atkinson (head of productivity), Chris Salisbury (head of iron ore) and last but not least, Alf Barrios (head of aluminium).

Slides 2&3 - Cautionary statements

Now, let me start with safety.

Slide 4 - Safety and health come first

Safety is a core value and always comes first at Rio Tinto. We all know that a safe operation is a well run operation.

As you can see our safety performance continues to improve and our Critical Risk Management programme is now being rolled out across the business.

However I am very sad to tell you that we lost a colleague in a tragic incident at our Kennecott operation in October. Albert Lozano, died following injuries he suffered after SO₂ exposure.

I happened to be visiting Kennecott at the time and saw for myself just how deeply this terrible accident was felt by Albert's family, friends, colleagues and everyone at Rio Tinto.

We will do everything possible to ensure it never happens again.

Safety is our number one priority and all our employees and contractors must return home safely at the end of each and every day.

Slide 5 - Cash focus with capital discipline delivers strong shareholder returns

Moving on.

When I started this job nearly 18 months ago, we outlined our approach to deliver superior value for our shareholders.

Our strategy has not changed, it is built on:

- a portfolio of world class assets
- maximising cash through a value -over-volume approach
- building a high performance culture across the business... and

- maintaining discipline when allocating capital.

So our value proposition is clear and we are delivering on our commitments.

This year, we have announced more than 8 billion dollars of cash returns to our shareholders.

We have momentum.

And we have no intention of slowing down.

Now to the market outlook.

Slide 6 - Global macro indicators remain supportive

Over the last few weeks I have been in Japan and China as part of our regular meetings with customers, suppliers and partners.

These meetings deepen our understanding of market trends and customers' future needs.

It is clear from our discussions that the industry fundamentals are sound and the global growth momentum is healthy.

We are optimistic about China in the medium to long term but we could see a slowdown over the next six months. In particular... construction, infrastructure and automotive demand growth may weaken.

Last month's Party Congress reconfirmed the focus on environmental performance, starting with the steel industry. This is already resulting in high premiums for our products, for example our Pilbara Blend.

Longer term the One Belt One Road Initiative will create further opportunities in the infrastructure and construction space. We are also well placed to benefit from the growth of EVs with our copper and aluminium offering.

Slide 7 - Our product quality delivers strategic competitive advantage in significant markets

We are well positioned to outperform in this environment on the back of

Our world class assets.

Producing the right products... and

Our strong customer relationships - only two weeks ago we celebrated the 30 year anniversary of the first iron ore joint venture between Australia and China in the presence of SASAC.

Finally...as part of our drive to maximize opportunities with our customers and suppliers...we've just appointed Simon Trott as chief commercial officer, based out of Singapore.

Simon is here in the room, please say hello during the break.

Slide 8 - World-class high-margin assets with attractive growth options

Now let me tell you more about our assets. They are of the highest quality, they can be expanded and are set up for decades of premium production.

- Our WA iron ore business delivers industry leading margins. It is ideally placed to serve the needs of our customers and we have multiple growth options at low capital intensity.
- Our position in bauxite provides attractive growth options which we can trigger when there is market demand.
- Our first-quartile smelters in Canada are the most profitable and energy efficient in the industry, with attractive brownfield options.
- In Copper we have large, high-quality, expandable resources, with Oyu Tolgoi one of the best growth stories in the industry today.
- and we have a portfolio of specialty businesses which are highly cash generative

It is important to highlight that we continue to reshape our portfolio to make sure we use capital effectively.

With the successful completion of the Coal & Allied

sale earlier this year, Rio Tinto has announced or completed around eight billion dollars of divestments since 2012.

We will continue to exit any assets or projects that do not fit our strategy.

So let's talk about shareholder returns.

Slide 9 - We returned 40 per cent of cash generated to shareholders

This slide illustrates why asset quality, attractive products and financial strength matter.

They allow us to maintain a balanced allocation of capital between capex....debt reductions....and shareholder returns returns....very high shareholder returns in fact. As I've already mentioned, we announced eight billion dollars of cash returns in 2017.

Consistently returning cash to shareholders is a sign of discipline and strength....and we lead the pack.

As you can see from the slide, in the first half of this year we gave forty per cent of cash generated back to our shareholders. And that's before the 3 billion dollars return we announced at our interims in August and the 2.5 billion dollars of share buybacks disclosed in September. These returns in the first half account for almost half the cash returns paid out by our peer

group.

Slide 10 - High-return growth

Generating cash also allows us to invest in growth. Our portfolio is the best in the sector and provides us with a clear competitive advantage. We've been building on this by investing through the cycle.

When we make capital allocation decisions, we ensure that we only pick the best options available to us. We hold a watching brief for M&A. We have the capacity to add attractive assets but will do so only at the right value.

Quality growth projects such as Amrun and OT will deliver IRRs in excess of 20 per cent. The OT underground project is 18 months into a five year construction programme and remains on track.

And we continue to evaluate exciting medium to long term growth opportunities in Iron Ore...Aluminium...Lithium...and Copper through a lens of at least a 15 per cent IRR.

Slide 11 - Productivity will further enhance our ROCE and TSR

Moving now to the key focus of this session:
Productivity

You will get more detail from the team but let me set the scene.

We have achieved the highest ROCE every year for the past five years, providing the platform for superior shareholder returns.

But we can and will do much better.

Our target of additional cumulative free cash flow of \$5 billion with an exit rate of \$1.5 billion in 2021 will add three per cent of additional return on capital.

So, our productivity programme will put us even further out in front.

Slide 12 - Delivering \$5 billion of free cash flow from productivity

This year we have been working hard to drive productivity in every part of the business from mine through to market. We have been looking at best practice outside our industry and building our technical and commercial capability.

For us...productivity is about making processes more efficient. We can deliver more material at the same cost...or the same material at lower cost.

Today, we will explain how we will achieve our 5 billion dollar target.

Now...let me hand over to Chris

Slide 13 - Chris Lynch title slide

Thanks JS

Slide 14 - Disciplined capital allocation

This slide is at the core of everything we do.

We are focused on cash, right throughout the business.

We are working hard to generate additional cash, by improving both our operational, and commercial outcomes.

Once we have generated the cash, we will continue to be consistent in our allocation of capital.

Having spent sustaining capex to ensure the integrity of the business, our next call on cash is our expected dividends to shareholders.

We then have an iterative cycle of managing the balance sheet, pursuing value-accretive growth options, and considering further returns.

In the first half of the year, we had a very balanced outcome across each of these categories.

The \$6.3 billion of operating cash flow generated was fairly evenly spread across –

- total capex spend of \$1.8 billion,
- further strengthening the balance sheet by \$2.0 billion; and
- returns to shareholders of \$2.5 billion.

We will continue to be disciplined in this area.

Slide 15 - Strong balance sheet enables high cash returns to shareholders

At the end of the first half, we reduced net debt by \$2.0 billion to \$7.6 billion, representing net debt to EBITDA of 0.4 times.

We believe that having a strong balance is a major competitive advantage and is essential in a cyclical business.

It provides us with what we like to refer to as the 3 R's – Robustness, Returns and Readiness.

Robustness – against volatility, in the commodity markets in which we operate, but also in the global macro and geo-political space.

Returns – a strong balance sheet provides an ability to make returns through the cycle.

And a **Readiness** to take advantage of opportunities should they arise.

Our strong balance sheet has enabled us to continue to invest in value accretive growth and to make sector leading returns to our shareholders.

In this calendar year, we will return \$6.3 billion.

This is made up of \$4.2 billion in dividends and \$2.1 billion in share buybacks.

In regard to dividends, we paid \$2.2 billion in April for the 2016 final, declared in February this year, and \$2.0 billion as an interim dividend for 2017, which was declared in August, and paid in September.

The interim dividend of \$1.10 per share, was a record high interim dividend, which is a great example of the value of our capital returns policy.

In addition to these dividends, we will also spend \$2.1 billion in share buybacks.

We are on track to complete the \$1.5 billion on-market buyback in RT Plc later this month.

And following the completion of the Coal and Allied transaction in September, we announced that \$2.5 billion of proceeds would be returned to shareholders. Including 700 million Australian dollars of Rio Tinto Ltd off-market buy-back.

We completed the off-market buyback a couple of weeks ago, increasing it to 750 million Australian dollars following strong demand.

So in total, \$6.3 billion in cash returns to shareholders within 2017.

In 2018, we will commence and complete the remaining \$1.9 billion of on-market buyback in Rio Tinto Plc.

We are delivering the highest returns in the sector and we are committed to continuing to provide superior returns to shareholders through the cycle.

Slide 16 – Sustaining capital and compelling growth

We will continue to invest in value accretive growth projects as these provide the basis for future shareholder returns.

Capex for 2017 is now expected to come in below our \$5 billion guidance and will be less than \$4.5 billion.

This is partly due to the timing of spend, some of which will move into future periods.

Capex guidance for 2018 remains at around \$5.5 billion and we will spend around \$6 billion in each of 2019 and 2020.

In each of these years, the expectation is that sustaining capital will be around \$2.0 - \$2.5 billion per annum.

In 2018 and 2019, we will continue to spend capex on the Amrun project and at Oyu Tolgoi. Both of these projects are highly value accretive, with IRRs in excess of 20 per cent.

In the iron ore business, we will need to spend around \$3 billion on sustaining capex over the next three years, including increased spend on rail maintenance.

We will also spend \$2.2 billion on replacement mines over the same period.

Starting in 2019 we expect to see spend coming through for the Koodaideri sustaining mine.

Chris Salisbury will discuss this further.

When we make capital allocation decisions, we will ensure that we only fund the best projects.

Slide 17 – On track to deliver additional cash in 2017 and 2018

In addition to generating value through the completion of our highly value accretive growth projects, we are also focussed on the productivity of our existing assets.

Increasing the value of our \$50 billion installed asset base provides low risk, high returns for our shareholders.

In each of 2017 and 2018 we should generate around \$300 million dollars of additional free cash from our productivity programme.

This is likely to be reasonably evenly divided between volumes and costs and spread equally across the product groups.

We will report our first round of results by product group in February.

The contribution is relatively modest over this period.

This is due to two main factors.

- We are not counting any productivity tonnes in iron ore until we have completed AutoHaul.
- We are experiencing rising input costs, particularly in our Aluminium business, which affects the net improvement expected in 2018. We will work very hard to reduce the impact of these however they are obviously external to the business, heavily linked to market conditions and therefore may be volatile throughout the period.

Chris and Alf will discuss all of these issues later on.

As you will see shortly, we are taking a hard line on measuring productivity. There will no be easy runs here.

Slide 18 – Rigorous measurement of productivity gains

This slide shows the rigour behind the program and how we will be measuring and reporting progress going forward.

The key measurement is Rio Tinto's share of free cash flow.

It starts with the volume variance and cash cost variance that are pre-tax measures. These are the same metrics that we have used for the last decade and that you are all familiar with.

It will be adjusted to show Rio Tinto's share, after tax.

We will report our first set of actuals for 2017 in the full year results in February.

Let me explain how this will work. It will all be based around actual outcomes.

Firstly, the volume variance will be calculated using actual prices. Benefits from value added products, will be reflected in actual revenues achieved.

There is no rebasing of prices.

In regards to volumes, tonnes attributable from growth capex will be excluded. For example, the additional export tonnes from Amrun will not be included in the volume variance.

Also, as I have just mentioned, we will not take volume benefits in iron ore until after AutoHaul is completed.

The cash cost variance will exclude the effects of inflation, energy costs, and exchange rates.

All other costs will be taken on the chin, for example the current headwinds on input prices for coke, pitch and caustic, will not be forgiven.

We will continue to derive the cash cost variance as we have for the last decade as the starting point.

We will not be adjusting for grade declines. We see this as a fundamental, ongoing challenge for our industry, and we need to overcome declining grades before we can count value added. This differs from most of our peers.

It raises the bar for our productivity agenda.

There will also be savings in capital expenditure which we can avoid, for example, the replacement rate for

trucks will be slower as we get better utilisation and longer lives. We are not counting that cash avoided in our \$5 billion cumulative target.

The indicative 2017 and 2018 productivity benefits we have shown today are based on consensus pricing.

In regards to assets, we are excluding from the metrics any assets that are scheduled for closure in the next 5 years, for example, Argyle.

These assets are more focussed on the path to closure, rather than productivity outcomes.

The programme is based on our current portfolio of assets.

Slide 19 – Delivering \$1.5 billion additional free cash flow each year from 2021

Our \$5 billion productivity program will deliver an additional \$1.5 billion of sustainable cash flow per annum from 2021.

In other words the exit rate is an annual improvement of \$1.5 billion.

Aluminium and Iron ore together account for two thirds of the additional \$1.5 billion exit rate.

The additional free cash flow is generated across the value chain.

The bulk of this comes from operating our mines more efficiently, however there is also a benefit from optimising our mine plans and improvements in processing recoveries.

Both Chris and Alf will talk further about some of the key initiatives that we are pursuing in their product groups.

The remaining \$500 million is split between Copper and Diamonds and Energy and Minerals.

Our team in Growth and Innovation will take a group wide overview and will assist our products groups to best utilise the ideas across the group.

With that, I'll hand over to Steve who will provide an overview of this very important role that G&I will play.

Slide 20 - G&I Title slide

Thank you, Chris. Good morning everyone.

I am very pleased to be here to talk about the role of the Growth and Innovation organisation or “G&I” as we like to call it.

Although we are here to showcase productivity advances I could not resist showing this wonderful picture from the depths of shaft 2 at Oyu Tolgoi.

Today, Rob Atkinson and I will do a tag team to update you.

Slide 21 - G&I enabling value across asset lifecycle

As discussed last year, G&I’s primary role is to help grow & improve Rio Tinto.

Our activities span the entire asset life cycle from exploration through to closure, ensuring we achieve speed, quality and consistency in execution, by applying innovation and technical expertise to increase productivity and value.

G&I is accountable for delivering high quality growth options by finding new ore bodies. We then study them against a consistent set of criteria to ensure we only invest in the best opportunities using the most

optimal technical solution whether proven technology or new innovation.

And when we do invest, we want our capital projects to be delivered on time, on budget and ready for a seamless handover to operations. This is something we have been very proud to achieve since the formation of the Rio Tinto Projects organisation in 2014.

So that's the 'grow' aspect of our role to grow and improve Rio Tinto.

However, today we will focus on the 'improve' piece. Specifically our productivity initiatives where dedicated automation, productivity and technical teams are working to support our operating assets to optimise their performance.

It's a broad remit, with specialised technical expertise at its core supported by rapidly evolving 21st century IT systems and tools.

Having a centralised technical capability across a networked Rio Tinto enables us to drive superior value in a way that would not be possible on a smaller scale or if we were operating in silos.

In this endeavour, we collaborate with Rio Tinto's product groups complementing their deep operational experience with our technical skills and global reach.

Slide 22 - Our focus builds on leadership in data, tech, automation

Our industry leading technical capability has come through a decade long commitment to innovation and automation, transforming what was historically a very conservative company into a more curious, agile and inventive organisation.

We have not been standing still. Each advance in our safety or productivity journey has merely represented the next challenge to be conquered.

Almost 10 years ago saw our first driverless truck loaded with ore in the Pilbara, which was then quickly followed by the development of our autonomous haulage system.

Our cutting-edge remote operations centre in Perth was subsequently opened in 2010 and today provides a fully integrated system view, controlling 86 trucks and 6 drills from more than 1500 kilometres away and these numbers will continue to rise in the coming years.

Of course being an early leader in mining automation is but a transient victory. Others are following fast and are vocal as to their own achievements. So we must maintain our momentum and continue to drive forward.

In the past few years, we have expanded beyond haulage to autonomous drills and right now, we are focussed on delivering our flagship AutoHaul rail implementation that Chris Salisbury will speak to later this morning.

In addition to automation, both new and retrofit, we have increasingly focussed our efforts on predictive analytics and on the much greater use of data and data science.

The creation of our proprietary Mine Automation System (known as MAS) and the related visualisation capability (RTVis™) allow us to combine myriad streams of data to deliver operational insights in real time to step up our productivity performance.

These systems have been the result of a decade long collaboration with the University of Sydney, delivering us a world-class fusion database, with artificial intelligence and machine learning capabilities embedded.

You will see examples of MAS and RTVIs in action during Rob Atkinson's speech. There is huge potential for us to amplify the benefits from these systems as we move forward to improve the efficiency of all key mining activities.

We want to be able to apply the techniques the processing industry has been using for decades to improve efficiency.

Our Aluminium business in Canada has a long history of cutting-edge smelter productivity, which Alf Barrios will touch upon, and we are using this experience to inform the way we share best practice and to change mindsets across the company.

Slide 23 - Driving Rio Tinto mine to market productivity

We have a clear strategy to improve productivity from Mine to Market and to deliver the \$5 billion cumulative target. Chris Salisbury and Alf Barrios will each provide more details during their presentations.

We are unapologetically refocussing on the basics to ensure we are safely replicating best practice across all

of our sites. We are also partnering more effectively with our key suppliers and OEMs.

On the prior slide I shared some of our track record in automation, data science and technology, all of which are critical components of redesigning our future.

Of course, the need to evolve our business and embrace advances in technology is never ending. It requires a constant reinvention of what we are doing today to deliver the operations of the future.

This ensures our performance is not only maintained but is continuously enhanced.

However, the processes and underlying technologies are only one part of the solution to deliver on our \$5 billion cumulative target.

It is our people who are ultimately the key to delivery. We need a highly capable workforce, with strong technical expertise to support our operations to deliver superior value.

Slide 24 - Delivering \$1.5bn additional cash flow each year from 2021

As Chris Lynch mentioned, improving productivity and increasing the value we generate from our installed asset base is the best value we can create for shareholders at this time.

The \$5 billion cumulative target is explicitly baked into operating plans and will be driven in a disciplined way that builds on the hard won progress of the past few years in resetting our cost base.

These initiatives will be achieved through replicating best practice, partnering with our suppliers, applying data science and technology and increasing automation.

We have identified five priority areas across the value chain that will deliver the most value with little or no extra capital required:

- The first area relates to optimised mine planning where we are delivering more valuable pathways to optimise the use of our ore bodies. This is an essential competency to leverage both ore body knowledge and productivity efforts further down the value chain.

- The second is improving equipment and fleet utilisation, by doing more with the same equipment or doing the same with less equipment. Specifically we are looking to work our existing fleet harder and smarter.
- The next area is processing recovery where we are looking to extract more value and recover more from the ore that we have already mined by making better use of the wealth of information we capture about that material. This will help us further improve the control and performance of our processing plants. This philosophy extends to how we also operate our refineries and smelter fleet.
- The fourth priority is to improve the efficiency of our energy systems, rail networks and ports.
- The final opportunity is our approach to capacity optimisation where we leverage our capability to switch off or run assets part time or even shut down excess pits and sites to maximise value.

Many of these initiatives are already delivering or starting to deliver productivity benefits.

I will now hand over to Rob Atkinson, our head of Productivity and Technical support to take you through a number of tangible examples:

Slide 25 - Truck and dig unit payload increases

Thanks Steve and good morning everyone, I'm very pleased to be able to share some of the progress we've made in our productivity programme.

A key element of our programme is making sure the basics are done extremely well and that our assets are being worked as safely and as hard as possible. We have done a lot of work on the basics over the years but we are now raising the bar above what we considered to be good in the past. With modern engineering, data analytics, improved maintenance practices, technology systems underpinned by our technical expertise we have all the ingredients to deliver the required step up in productivity.

This first example is one that costs virtually nothing. It is one of the biggest improvement opportunities anywhere in our system, and that is safely maximising payload. Payload is what a truck carries on each and every loaded trip it makes.

Today across Rio Tinto we have significant capital deployed in dig units and trucks and about 20% of our workforce focus on this area.

On a typical day our trucks will perform nearly 25,000 hauls carrying between 200 and 300 tonnes of ore and waste depending on the truck size.

Over the last 18 months we've been working very closely with our truck, loading equipment and tyre suppliers to safely increase the load carried on each trip whilst at the same time we have conducted extensive field trials to improve loading accuracy.

As a result, during 2017 we have increased our average load by 6% on a like for like indexed basis and have plans to increase this by a further 10% as our loading accuracy improves. With our current fleet, this means we have the opportunity to mine over 150 million tonnes more annually or mine the same tonnes with less equipment.

Slide 26 - Truck change over to increase operating hours

With almost 15% of our workforce and hundreds of millions of dollars in operating costs tied up in trucks, having them usefully working is key and we call this effective utilisation.

It's very important to recognise we measure this in calendar hours, not simply available hours and this is a tough measure which means that planning, mining,

maintenance and processing teams must work in harmony to achieve our goals. It's no longer acceptable for our trucks to be performing useful work for only 65% or the equivalent of 8 months of the year. We would not be happy to do this with a processing or manufacturing plant so why have we accepted this in the mining industry?

All things being equal the more the trucks are working efficiently the more waste and ore we can move, and in turn, we can work our downstream fixed plant harder.

To drive this metric we have been working the whole of the mining cycle from planning to changeovers to maintenance.

Our mine at Oyu Tolgoi is currently sustainably achieving annual effective utilisation rates well in excess of 75%. This is world class performance in our industry. Across Rio Tinto we have seen an increase of ~7% on an indexed basis in 2017. We are aiming for all of our sites to achieve 75% and at our autonomous sites we are targeting levels much higher than this.

The main picture shows how we have streamlined the 150-200 changeovers each day at OT with a simple platform.

Drivers walk straight in and out of the cab without having to ascend or descend the stairs on the trucks, greatly reducing the safety risk and stripping precious minutes from each changeover which really improves productivity. Our other sites are expected to replicate this.

Another factor I'd like to highlight is Mean Time Between Failure and this refers to the number of hours a truck runs before suffering a breakdown. Breakdowns are unplanned and cause issues in the mine, cost money and can significantly impact the load and haul cycle. We must minimise them. Our Kennecott site is sustainably achieving results of +140 hrs between breakdowns which is world class and we are replicating this work across the Group.

In short we are targeting to lift our effective utilisation by over 10% and this could equate to a further 280 Mt of potential capacity simply by improving what we are doing now with the equipment we have now.

Slide 27 - Processing plant throughput: Increasing rates

Our processing focus, as with our trucks and dig units is to safely work our plants for more hours and at higher

rates, whilst recovering more product from every tonne of ore we feed into them.

For example as Alf will later discuss, Andoom volumes being processed have grown steadily since original commissioning and are now twice the nameplate capacity. This has been achieved simply by focusing on the bottleneck within the plant and working to improve everything from equipment reliability to process control. We're successfully transferring this know-how across our global operations.

At East Weipa, we've seen a 15% increase in year to date processing rates over 2016. At Gove records are also being broken.

Core to the progress being made at Gove has been a focus on increasing conveyor reliability. While simple equipment, conveyors are the arteries of our operations worldwide and their reliability is essential to enable the full utilisation of our processing facilities.

We've made strong progress at Oyu Tolgoi also. Use of advanced process control and a hard-nosed focus on the bottleneck have been the key ingredients here.

In the Pilbara, as we work to lift volumes down the rail line we are focused on reducing costs by reviewing the

number of days higher cost plants are being operated and aligning maintenance practices accordingly.

Our goal is to ultimately target and learn from the performance being achieved by our aluminium smelters in Canada as they operate at utilisation rates of 99% of calendar hours.

Slide 28 – MAS Video

Moving beyond the basics and as I hope you will have seen, an area full of opportunity still, I want to give you a flavour of how we are working to redesign our future through applying data, technology and automation.

Over several years Rio Tinto has developed a proprietary mining platform which Steve mentioned earlier, it's called MAS - the Mine Automation System.

It's in place at 98% of our sites today and allows us to extract the next level of value not only from the automation we have been progressively pursuing but also from the insights it provides across many domains.

In this short extract you will see a visual expression of data that has been combined from disparate sources into the one system to give us an integrated view.

Detailed data about the ore body is used to improve planning and resource recovery.

Data generated by our autonomous drills, feed into ore body modelling.

By combining these two types of data, we have a better understanding of what grade is where before we mine.

Real time data from equipment allows us to optimise the speed of the trucks and to reduce queuing.

The wealth of data supports powerful analytical tools. As the number of sensors on equipment grows, so does the opportunity.

MAS provides interoperability across data from disparate sources and is a powerful resource to drive productivity improvements from mine to market.

Importantly it is a single global architecture which enables quicker and easier replication.

As you can see, MAS provides us with a key competitive advantage and helps us maintain the edge as the leading operator in our industry and will be

important in helping drive a fundamental change to the way mining has been performed in the past.

I'll now hand back to Steve

Slide 29 - Innovating for productive growth options

Thanks Rob.

All of the examples we have shared today relate to our existing operations. However, we also recognise that productivity can be impacted by decisions made well before an operation produces its first tonne of product. How we take a discovery from the exploration phase through to design and construction is critical for the long-term productivity of any mine.

We apply innovation in ore body knowledge and early mine and resource planning to ensure we remove uncertainty and so convert the maximum amount of the orebody into saleable product whilst not compromising future options.

We apply digital twin techniques in early mine and plant design. This is where we design and optimise using virtual reality to ensure optimal capex, opex, safety and productivity outcomes.

Our Koodaideri and Jadar studies are two such examples where we are applying our expertise in automation and leading data techniques to design the smart mine of the future before we build it.

We are also increasingly innovating in how we construct our capital projects. Today we apply lean in construction techniques to ensure that we minimise capex, and deliver the operating mine or processing facility on budget, on schedule or better.

Slide 30 - Chith export facility video

At our Amrun Bauxite Project we have applied techniques from the oil and gas industry to prefabricate and install modules of the export wharf off site. This has allowed for safer and more streamlined assembly on site.

This short video animation shows footage of that construction, which is the first of its type in the world. It has been done safer, faster and more cost effectively than by traditional construction methods.

This modularised approach has eliminated more than 300,000 high-risk work hours on site, which would largely have been conducted over water. This approach

has provided a massive boost to construction productivity.

The export wharf you see is about 1km long and is comprised of 7 jackets and 6 topside modules that were built and pre-fabricated in China.

So productivity is not just about trucks and shovels. It starts from exploration and continues through to the study of our ore bodies; through construction; operation of our assets and today ultimately extends through to closure.

Slide 31 - Leading data platform to enable productivity journey

Clearly it is what we do going forward that will set us apart from our competitors. Our ability to innovate and redesign our business today will deliver continuing success well into the future.

At the start of this year we integrated our global IT teams into G&I and in so doing brought together all of our technical, data, automation, IT and Cyber specialists under the one roof.

We are already seeing the benefits of this integration.

In what is a rapidly evolving and increasingly digital world, we need a stable, yet flexible and scalable IT backbone.

We are currently simplifying our operating environment, building a foundational, integrated data platform designed for agility to give us true freedom to operate.

There has been a lot of hype in the market around data platforms. The reality is this market is embryonic and is evolving rapidly.

Our strategy is to be platform agnostic, such that we can plug & play applications rapidly, whether they are developed in house or by 3rd parties.

We do not envisage at this time being aligned with any one technology supplier but rather we will partner with those who we can work with to add value.

We see the growing volumes of data being generated across our businesses as a critical asset that will drive future operational performance.

As such we will be focussed on maintaining control over that critically important asset base and will look to leverage it into everything we do.

Slide 32 - Leveraging technical excellence to drive value

Underpinning our productivity programme is strong technical capability centred on the core disciplines of geoscience, mining, processing, infrastructure and asset management.

This technical expertise is fundamental to our business. It helps us to manage risk and to ensure that our operations are supported to sustainably deliver superior value.

We focus on critical roles in our core disciplines to ensure we have industry leading talent and are building long-term capability through our graduate programmes and technical career pathways.

We will concentrate our technical expertise in Centres of Excellence in strategic locations to foster talent development, leverage critical mass and enhance the value provided to our assets.

We also partner with universities and suppliers to accelerate improvements by looking at best practice outside our industry and bringing in niche expertise.

These partnerships are focussed and strategic, with clear deliverables, milestones and co-commitments to value creation.

We want to drive innovation through everything we do. Our success will come from building a high-performance culture where each and every employee challenge themselves to improve every shift and every day, across every location.

Slide 33 - Driving Rio Tinto mine to market productivity

In summary, our strategy for delivering our mine to market productivity target is clear.

We will leverage best practice, supplier relationships, automation and data to support the product groups to deliver superior value.

Our approach will be group-wide, disciplined and methodical, optimising all parts of the value chain and applying the technical expertise for which we are known.

In this way we will deliver the \$5 billion cumulative target by 2021 and in that time we will also deliver an operating philosophy and mindset fit for the future.

We are challenging all parts of our business to rise to levels of performance not seen across our industry before.

With a more integrated approach to improving productivity across the entire value chain – from the orebodies through to our customers – we believe we can crystallise value from opportunities the mining industry has not been able to grasp before and to put us even further in front of our competitors.

Thank you, we will now take a 20 min break.

Slide 34 – Title Slide Iron Ore

Thank you John and welcome everyone.

At this event last year I was relatively new to the iron ore business, which had begun its transition from its growth to run phase. My original mandate was very clear and remains today - to deliver optimal value from our fully integrated system.

The value opportunities are many and varied and, as I have found, are being unleashed by our people. They continue to drive real value and are an immense source of innovation and inspiration.

Slide 35 – Strong business foundations and clear strategy

Together we are challenging the way we optimise our business –

- Across 16 mines, 1700 kilometres of rail and four independent ports;
- With five highly - valued products and over 100 customers globally;
- In other robust partnerships - for example with communities, governments and suppliers;
- And by leveraging best practice, rapidly improving technology, data analytics and automation.

These foundations are very robust.

And, as you've heard, we seek to maximise free cash flow through the cycle – with volume as an outcome. For example:

- Silvergrass was the next best development sequence, providing high quality ore to support the Pilbara Blend, important for value to customers and our business.

- Hope Downs 4 will soon reach its production commitment and we will pause mining and plant operations over Xmas, with several million dollars in operating savings.
- And, being agile in response to peak lump premiums, we captured the value attached to an extra 1.3Mt of lump over the last quarter.

It's an interesting time in the business, as well as in the iron ore and steel markets, which is where I'd like to start today.

Slide 36 – Attractive margins and pollution controls supporting a sustained focus on productivity

Steel mill profitability remains well above long-term average levels, with current realised mill margins ranging between \$US90 -135/t. Meanwhile, steel inventories are at historically low levels, providing further support to steel prices, and iron ore demand, in the near term.

As far as downstream steel demand is concerned, although China's property sector activity is expected to decelerate cyclically into 2018, infrastructure investment and automotive and machinery sales have held up well to date.

Concurrently, with the onset of the winter season and while capacity restrictions on sinter plants and blast furnaces are implemented, the requirement to maximise productivity from the remaining capacity is likely to continue, and therefore maintain support for higher grade feed and lump premiums.

Meanwhile, Chinese iron ore port stockpiles are predominantly comprised of lower quality ores.

Despite absolute volume fluctuations, the proportion of high quality ore in the stockpiles has remained consistent and range-bound.

Slide 37 – Demand for quality iron ore remains strong, with the high/low spread continuing

The benchmark 62% Fe iron ore price declined from ~\$75/t on a CFR basis in mid-September to ~\$70/t at present.

In contrast to recent years when the iron ore forward curve tended to remain backwardated even at the bottom of the price cycle, the futures market is currently pointing to a stable pricing environment.

As a direct result of robust steel demand and attractive steel mill margins, iron ore consumers are chasing productivity and favouring higher grade feed sources.

This is resulting in elevated premia for high-grade/low-impurity ores.

Measured in absolute dollars-per-tonne, we are achieving ~\$30/t more for our Pilbara Blend fines than lower-grade suppliers and our Pilbara Blend lump achieves a premium of ~\$6.5/t.

In percentage terms, lower-grade products are currently selling at more than 40% discounts to the 62% Fe benchmark, which is a significant deterioration compared to the approximate 30% average discount during the first three quarters of the year.

In our view, there is clear evidence of structural change in the iron ore market.

Slide 38 – Our Pilbara Blend remains the product of choice

China's environmental agenda, and the productivity drive by steel mills, continues to be good news for Rio Tinto's Pilbara Blend. It remains the product of

choice, as a reliable and consistent product, and ideally positioned as the baseload blast furnace burden.

The consistency of our Pilbara Blend fines makes our cargoes fungible. As a result, it is the most liquid physical iron ore product in the market, both on a seaborne basis and at China's ports. On spot, it continues to achieve healthy premiums over the index despite the iron ore market swinging into contango from an almost permanent backwardation.

Demand for Pilbara Blend remains robust.

And our other products are also very well regarded.

For example, our Hamersley Iron Yandicoogina product has the ideal chemical composition for Asian sinter blends. Its low impurities make it particularly attractive to our quality sensitive customers in China, Japan, Korea and Taiwan.

Despite being lower in iron content, its relatively low phosphorus and alumina content, sees it valued relative to higher grade 62% ores.

And our technical marketing team continues to be very closely connected to our customers to help maximise

product use – for example, sintering and blast furnace operations, and optimising hot metal quality.

Slide 39 – Capital for high-quality asset options to maintain Pilbara Blend and the broader portfolio

With new mines and equipment of recent years, we have had the benefit of lower sustaining capital. However, this spend will increase going forward as equipment ages, and we ensure that our large asset base is protected.

This includes not only mobile equipment, but replacement of, for instance, ageing fixed infrastructure like the stackers at Paraburdoo.

Over the next three years, we expect sustaining capital to be around \$3 billion.

The majority of prospective brownfield replacement mine options remain quite a way below an installed capital intensity of \$30/t. They also continue the trend of being highly value accretive.

New projects in development like Yandi Pocket and Billiard South, for example, will benefit greatly from insitu processing plant and infrastructure and will utilise the existing Yandi automated truck fleet.

Around \$2.0 billion is allocated for replacement mine capital over the next three years, the majority of which is still to be approved, and includes some spend on Koodaideri.

Koodaideri is being studied as our next major replacement mine – also a low cost option that would underpin Pilbara Blend flagship product. Phase 1 would require capital of about \$2.2 billion, with first ore available around 2021.

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 current focus is to better understand the orebody and how best to integrate technology and automation. Koodaideri will be a full representation of our Mine of the Future, and we are currently assessing around 100 innovation opportunities for inclusion in the scope.

Slide 40 – Focused on sustaining our competitive advantage

The success of our recognised high value products is a significant contributor to our EBITDA margin. As is

our low cost position, with more than \$1.5 billion of cumulative operating cost savings delivered since 2012 to June of this year.

Pilbara cash unit costs were reduced to \$13.8 per tonne in 2017 first half, compared with \$14.3 per tonne in 2016 first half.

With a flattening in Pilbara cash unit costs, we are increasing scrutiny of each and every one of our cost components. Right now we have aggregated over 3500 employee ideas in our productivity pipeline, many of which also deliver cost benefits.

With respect to the Western Australian inflationary environment, it remains relatively flat leading into 2018. Typical project inputs like earthworks and concrete remain well below the levels we saw earlier in the decade. Similarly, labour costs remain fairly steady, both internally and externally.

There may be some very gradual increase, depending on overall civil construction activities.

We are however experiencing cyclic maintenance costs associated with second and third generation changeouts of heavy mobile equipment. However

these costs are being mitigated by renewed maintenance tactics.

A few of you have asked about strip ratio – it remains flat across the next few years. But work index is increasing, with our effective flat haul growing by around 10%, adding to load and haul cost headwinds.

Slide 41 – Productivity options to continue to deliver cash benefits

The iron ore business has developed strong sector leadership position across many elements of the productivity agenda. For example,

- In best practice – choosing from a number of high quality, low cost mining options, rather than necessarily building higher cost greenfield mines. And seeking the efficiencies of plant and mining equipment;
- With partnering – across the range of fleet automation, including retrofit;
- In data and technology – with the fully integrated system view of the Operations Centre and systems programming and modelling; and
- With automation – Increasing utilisation, efficiency and safety with automated trucks, drills and AutoHaul trains.

It is a coordinated package of initiatives that is delivering improvements to the business – ultimately, as cash benefits.

We will grow the productivity benefit to deliver around \$500M of additional free cash flow each year, from 2021.

Slide 42 – Priority is to optimise infrastructure capacity and flexibility

We are intensely focused on optimising our full system infrastructure - 360Mt/a nameplate, with flex either side of that, dependent on the value proposition.

The rampup of Silvergrass, plus mine and productivity creep, enables mine capacity of around 360Mt/a, with a similar nameplate for our four ports.

We have been rail - constrained for much of this year, a bottleneck we need to eliminate completely.

While 2017 maintenance work has reduced some restrictions, ongoing work is required in 2018 to improve overall asset condition and prepare for future optimum productivity, including the increased tonnes from AutoHaul and other productivity increases.

We want to increase rail capacity to be greater than both port and mines, which will enable the system to have extra sprint capacity, value dependent. This requires improved rail maintenance; a range of productivity improvements; extra rolling stock; and of course, the full operation of AutoHaul.

We expect to spend about \$200M of capital in 2018 to support rail productivity improvements, which I'll cover in more detail shortly.

Mine capacity will continue to focus on high quality, low capital brownfield mine developments, and productivity gains, ahead of the Koodaideri replacement option.

And while port infrastructure is rated at 360Mt/a, we will fully test this as rail capacity improves.

At the third quarter results, we maintained our 2017 market guidance of around 330Mt, weather permitting.

And for 2018 our guidance is in a range of 330- 340Mt, which particularly reflects the continued rail maintenance effort that we need to undertake during the year.

Let me now turn to some specific improvement initiatives.

Slide 43 – Significant improvements achieved across our mines.....

At the mines, we are uncovering and replicating leading practice, including how we use our haul fleet and plant, and how best to reduce capital and operating costs. By the end of October, through better truck utilisation, we have managed to park - up around 40 trucks. By way of example, this has enabled labour savings alone of more than US\$13M. And we will achieve further improvements as we replicate best practice and extend our AHS fleet – both new and retrofit.

We are now successfully operating the first Komatsu AHS truck retrofit in the world, and we will fine tune the retrofit process ahead of expanding to selected fleets, based on value.

Working with suppliers, we have also removed constraints in our truck fleets. Fitting better tyres and lighter trays to our 240 tonne trucks enables an extra 20 tonnes of ore or waste per load. The benefit is around 35Mt of additional annual capacity, and we will now replicate this work across the 300 tonne truck fleet.

Optimising HME performance also extends into work on major components.

For example, our 300 tonne haul trucks have traditionally had a wheel motor life of 35,000hrs. Complemented by a smaller mid-life service at 25,000hrs, this work now all occurs at 50,000 hours. Wheel motors are changed twice instead of three times over a truck life cycle, with corresponding savings of around US\$700, 000 per truck.

We've also had big gains with fixed plant. Take Yandi, for example, where improvements have delivered significantly lower costs, higher yield and volume capability.

This is being replicated across the mine system.

Slide 44 – ...with other productivity improvements continuing to deliver results

Automating our drills has both increased the number of hours the machine operates, as well as the metres the drill achieves – fewer machines to achieve desired results.

You teach an automated drill once, and every automated drill copies it precisely, with benefits such as optimal drill impact on ground, resulting in less wear-and-tear per operating hour.

We now have six drills operating from the OC in Perth and we will be extending this significantly.

And, as we continue our automation programme, we are also considering the automation of other heavy mobile equipment.

Not all of our success stems from optimising equipment and payloads, or indeed automation.

We have also improved integrated mine planning.

Trade-offs between mines are rapidly determined and integrated mine plans are produced that maximise quality and business value.

With Pilbara Blend, the implementation of this new planning system across 8 mining hubs continues to reduce ex-pit total material moved, while still achieving the desired throughput and product quality targets.

Slide 45 – Along with AutoHaul™, there are many levers to optimise rail circuit capacity and improve flexibility

Moving now to rail.

At a high level there are three key factors that drive rail capacity - the number of trains; the tonnes per train; and the rate at which the trains can cycle through the mine to port system.

We have regularly discussed the first part of this equation, where we add consists; add ore cars to trains; and increase the payload per ore car.

And, as the schematic shows, there are also many other levers that can assist in optimising the mine to port cycle.

AutoHaul, which I'll talk more to shortly, will improve rail circuit capacity, for example due to no need for driver changes.

It will also enhance the improvement work we are already doing on train spacing – the front of one train to front of the following train. Better spacing enables either more trains to run, or extra time for maintenance; our current train spacing is around

16kms, with an aim through study work to push that below the 10km mark

As we test the need for more trains and extra volume per car, we are refocusing our maintenance campaign. This includes, for example, better predictive ability from instrumented ore-cars and track-monitoring equipment and adding more efficient integrated track machines to our maintenance fleet.

Eliminating brake cars is also in scope. These are attached to a train during dumping to maintain braking pressure, and by replacing them with locomotives, it will reduce shunting in the yards and improve cycle times.

Slide 46 – AutoHaul making strong progress..

A real step change in the productivity of rail operations and in safety controls will be provided by AutoHaul®.

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.

More than one million kilometres have now been completed in the autonomous mode this year - with a

driver monitoring the system - which equates to around 60% of all production kilometres. A further 20% of kilometres have been completed in a driver assist AutoHaul mode, which prompts the driver on improved driving techniques.

The world's first unmanned heavy haul mainline run of 100 kilometres was completed in September. The AutoHaul system performed as designed, with no issues, and the safety regulator provided positive feedback.

AutoHaul is delivering a 6% speed improvement, in addition to the benefit of removing the average three 20 minute stoppages required for driver changeover in 40 - hour normal cycles.

Preparation for final regulatory approval is well progressed, after which we will commence removal of drivers from the trains.

I expect AutoHaul usage to progressively expand, and for it to be fully implemented by the end of 2018.

Slide 47 –with rail productivity and improved track condition the keys to unlocking value

The greatest potential for rail system capacity increases lies in reducing lost time through each train cycle - in the yards; on the track; and during loading and dumping.

At the mines, train loading times have been lowered, and at the ports, we have significantly reduced the amount of time it takes to both place the train across the dumpers, as well as to actually dump the train.

Our maintenance campaign in the second quarter was successful in reducing travel times. This campaign continues to be clearly focused on optimising track conditions and remains fundamental to our business success.

We must ensure that the maintenance pace is not lost in 2018, which will ensure our ability to leverage all the productivity initiatives we have underway.

And of course maintenance tactics extends to overall rail fleet reliability, where we have significantly improved unscheduled losses.

Slide 48 – Improving the capability of our port assets

Turning briefly to port infrastructure.

We continue to hold the view that port infrastructure capacity is at nameplate of 360Mt/a, which we look forward to fully testing, as rail capacity loads up the port.

And, if necessary, we will study options for low capital debottlenecking.

We are improving our maintenance efficiency, which in turn enables extra available operating time.

And even at CD1C, our oldest dumper from the original Robe Valley circuit, we have reduced dump cycle time by 14%.

With rail sprint capacity, and on the basis of value, I look forward to really seeing what our full suite of our dumpers, stackers, reclaimers and shiploaders can do.

Slide 49 - Technology, innovation and people enabling an agile, market-driven organisation

Our next horizon moves from single components in the value chain, to full system interconnectivity – across

planning; drill and blast; load and haul; processing; and shipping.

We will optimise value via real time data and better programming at the Ops Centre; through the better spacing of trains and via the design of Koodaideri as the intelligent mine.

We will continue to lead on innovation projects. Now that we have undertaken the first Komatsu AHS retrofit, we will increase the rate of retrofit; we will use more machine to machine control loops; and better predictive analytics to move maintenance from breakdown into the planned domain.

And our workforce will be digitally enabled with in-field devices that give them real time business context and insights, allowing them to manage their work effectively, by having access to business systems through mobile solutions.

Through our pioneering digital skills initiative we will upskill current employees, and prepare future employees for the digital transformation.

Each day, I want my team members to continue the trend of how improvements can be made to their area of the business; where an employee is not only

accountable, but is authorised and coached to make a difference, and recognised for it.

The result is an innovation culture that will make our business more agile, support creative thinking and collaboration, and use data to drive value.

Slide 50 – Strong foundations, clear strategy and key initiatives will continue to realise optimal value

As I introduced, the iron ore business has a very clear value delivery model – strong foundations, and decision- making and a range of key activities that prioritise value over volume.

And we are clear on what needs to be done to contribute at least \$500M of additional cash flow each year from 2021.

We have a product suite that caters to all major Asian steel markets. Our Pilbara Blends are particularly suited to evolving market developments and are supported by a robust Mineral Resources and Ore Reserves position.

We have strong relationships with our customers and we are supported by strong community and joint venture partners, as well as by equipment, technology

and development partners.

Our exclusive use and fully integrated mine, rail and port system runs with real-time coordination and decision-making capability from our Operations Centre. We have multiple, low capital intensity options to both flex and maximize the system.

Our continued investment in technology and innovation will assist us to further optimise the system.

And we have 11500 employees driving thousands of initiatives focused on sustainable productivity and cost improvements.

We will be disciplined about putting value ahead of volume.

Thank you and I will now hand over to Alf.

Slide 51 - Aluminium title slide

Today I want to take you through the following 3 topics on our Aluminium business:

First, I want to emphasize how the quality of our assets combined with our focus on performance allows us to deliver superior margins and cash returns.

Second, I will set out the mine to market productivity improvements that we are targeting over the next 5 years and where these gains will be achieved. These will ensure that we continue to deliver superior margins.

And finally, I want to set out the opportunities that we see for growth. The high quality and expandable nature of our portfolio means we are very well positioned to capitalise on market growth, and to generate attractive returns. Our focus in advancing these options will remain on value over volume.

Slide 52 – Strong global aluminium demand with Chinese production at a turning point

We remain very positive about Aluminium demand. We see growth of around 4 per cent per year over the next 5 years and expect this trend to continue over the next 15 years.

This is underpinned especially by the growth in the transport sector, with the uptake in electric vehicles offering further potential upside.

The fundamentals of the supply side of the industry are now looking increasingly favourable. China is pursuing

strict enforcement of cuts to illegal capacity. Close to 1.5 million tonnes of illegal production have been removed from the market in 2017, with a full year impact of 3.6 million tonnes.

We remain cautious about the short-term impacts of pollution controls in the sensitive areas around Beijing during the winter months. These cuts are expected to remove an additional 600 thousand tonnes from the market on an annualized basis.

In the short term the illegal capacity cuts in particular are driving market tightness, and this is expected to result in balanced inventory levels of 7 to 8 weeks before the end of this decade, much earlier than we previously expected.

The curtailed illegal capacity is likely to be restarted, as it was all built over the past five years, but timing remains uncertain. More significantly, over the medium to longer term we expect that China is likely to be broadly balanced in aluminium with implications for rest of world supply.

This is a turning point for the aluminium industry for which we are uniquely positioned with our hydro-powered Canadian smelters.

On bauxite, we expect the market fundamentals to remain robust given the continued strong growth in aluminium demand. Chinese growth in alumina production will remain a major driver of seaborne demand. The trend remains clear that China will increasingly rely on imported bauxite, particularly as the quality of its own reserves declines and costs increase. The strict enforcement of illegal capacity in Shanxi and Henan has removed 10 million tonnes from the market, representing 10 per cent of capacity, reinforcing this theme.

Slide 53 – We will maintain our low cost position

The same reforms in China have also tightened raw material markets with caustic up 44 per cent, coke 73 per cent and pitch 98 per cent since the start of 2016. We expect these prices to remain elevated going into 2018.

We have incurred cost increases in raw materials of around 150 million US dollars in 2017 against 2016 levels which represents around 15 per cent of the Aluminium LME price uplift. Of course how this plays out in the future will heavily depend on the Chinese cuts.

These factors, together with increasing energy costs, as reforms of the Chinese power sector continue, are raising the cost curve. We are well placed given our owned hydro-power, balanced alumina position and 90 per cent integrated anode position. We also calcine 55 per cent of our own coke in the Atlantic.

This together with the significant productivity improvements achieved in the past few years, and ongoing portfolio refinement, has further consolidated our competitive position low in the first quartile of a steepening cost curve.

Slide 54 – We continue to widen the gap over our competitors

We have delivered cost improvements of over 1.7 billion US dollars since 2012 and will continue to drive further initiatives with unrelenting focus.

These continuous improvements are reflected in our consistent outperformance versus industry peers, with the EBITDA margin gap with our closest competitor now exceeding 16 percentage points.

Slide 55 – Productivity options to continue to deliver cash benefits

Our deep pipeline of productivity opportunities build on the platform set over the last few years. This is built on 4 pillars: sharing of best practices, partnering with suppliers, leveraging data and technology and automating our processes.

By leveraging best practice from across Rio Tinto, and with support from Growth and Innovation, we are continuously replenishing this pipeline, which gives us confidence in our ability to deliver additional free cash flow of approximately 500 million US dollars per year by 2021.

These initiatives are all inspired by the same principle: how can we extract more value from our assets by doing things better and smarter. I will now take you through some examples of these initiatives to demonstrate in practice how we drive performance to increase value. I will also highlight what is next in our productivity journey.

Slide 56 – Increasing returns on bauxite and alumina

Our bauxite mines have a strong track record of productivity over the past 10 years. At Weipa, we have increased production by 6 per cent per annum and by 8 per cent per annum at Gove. This has been achieved with virtually no capital investment, just by leveraging

best practice from other mines, optimising mine plans and optimising existing infrastructure.

At our Andoom mine in Weipa we have crept production from 14 million tonnes in 2012 to 18 million tonnes this year, through enhancements in the beneficiation plant and rail system.

At Gove, the mine was producing 8 million tonnes at the time of refinery curtailment in early 2014. The successful ramp-up of bauxite exports to 11 million tonnes has been driven by productivity improvements.

This includes a 2 million tonne increase in 2017 through an ongoing focus on the reliability of the overland conveyor system, drawing on Rio Tinto's expertise.

Amrun will be a step-change in our bauxite business with the project on track for first shipment in first half 2019.

We continue to develop options for further creep and growth projects in Cape York and at CBG in Guinea to capture market growth.

In our alumina refineries, we have successfully increased production by 10 per cent since 2011 by

continuous operational improvements. We have also reduced our refinery labour by more than 20 per cent since 2015. These actions have lowered our position on the cost curve and led to an increase in margins.

Slide 57 – Asset performance drives next phase of productivity

The creation of the Bauxite Integrated Operations Centre at Weipa in 2017, that will coordinate Weipa, Amrun and Gove operations, together with systems enhancements across these mines, are enabling a major step-up in asset productivity.

This state-of-the-art facility, leveraging learnings from Iron ore, monitors performance of the entire Bauxite system. This allows us to operate as a global business with 24/7 monitoring of all safety, production and quality aspects, enabling real-time decision making, optimization across the operations, and dynamic asset health management to unlock full potential.

The Operations Centre is also enhancing our integrated processes across the value chain to optimise bauxite mix to allow for best delivery of value-in-use to our customers, internally and externally, in turn maximizing margins. These processes, which involve our sales, technical marketing and operational teams,

lead to a frequent optimisation of our mine plans based on our customer needs and willingness to pay, where we prioritize value over volume.

Another example of how we are debottlenecking our Weipa operations is the dynamic payload management on our haul truck fleet. We are equipping our entire fleet with strain gauges to allow for real-time measurement of truck payload. This constant monitoring, together with the trailer capacity increase across the entire Weipa fleet, will help us increase our payload by 11 per cent over the next 12 months.

We will further drive value next year by debottlenecking our rail system, optimizing speeds, which have increased from 60 to 65 kilometres per hour throughout this year, and increasing payload by 5 per cent per wagon, leveraging best practice from Iron ore.

Another example we are exploring as we face longer hauling distances at Andoom is the introduction of road trains which allow for an increase of payload, higher average speeds, and better tyre performance. These road trains have been successfully deployed across some of our coal and salt operations and we will now pilot them with a view also to investigating automation.

And at Gove, we have put in place an ambitious program to upgrade drives, chutes and belt speeds, leveraging Rio Tinto's asset management capabilities with G&I. Through this program we will continue to increase the overland rate.

Slide 58 – Smelters creeping at 1% per annum, double industry average

Our smelters also have a best-in-class track record of production creep. On average, we have increased our smelting metal production by 1 per cent per annum over the last 10 years; this is double the industry average.

Our proprietary technology with our industry know-how and leading operating practices have allowed us to push the boundaries of performance. This is reflected in some of our core Canadian smelters, Grande-Baie, Laterriere and Alma, as shown in this chart.

By increasing amperage, we have successfully raised production at these smelters, leveraging the industry-leading expertise and innovation of our technology team. We have modified cell designs and process control – progressively increasing anode size;

and adjusted cell lining and yoke design to enable higher heat dissipation; and optimised our process control to squeeze the anode-cathode distance, thereby increasing productivity.

We also have a strong portfolio of technology innovation embedded in our pipeline of continuous improvement opportunities which will drive the next wave of our productivity journey. We will therefore continue to creep our Canadian asset base – whether through optimisation of our cell designs, innovation around technology components, or process intelligence and data analytics which I will expand on shortly.

Beyond creep we continue to ready our brownfield growth options - Alma expansion or AP60 expansion to full-scale. These offer potential to grow our Canadian smelting base dependent on market needs. This brownfield optionality - coupled with the attractive growth and premium potential within the North American market - is unrivalled by our competitors.

Of course in assessing these opportunities our focus will always be on value over volume.

Slide 59 – Technology, process intelligence and expertise underpin our competitive advantage

Technology is in our DNA – our industry leading AP technology is the engine that drives the efficiency and performance of our assets. The skills and expertise of our people deliver the innovation that continuously improves our performance. This builds upon a strong base of technical skills, long-standing partnerships with customers and suppliers on technology, and product development.

This technological expertise will continue to differentiate us from our competitors. For example, our MIREA system provides immediate, non-destructive, on-line measurement of anode resistivity. This quality assurance ensures homogeneity and is the first key step in tracing anode characterization for process control in the cell.

Our integrated casthouse management system automates the production allocation to optimise the process. We plan to improve the utilization rate of our casting assets by more than 5 per cent in 2018. This in turn will allow us to creep the volume of our higher margin value added products by more than 100

thousand tonnes, resulting in a margin uplift of more than 20 million US dollars per annum.

Slide 60 – Analytics and integrated operations drive the next wave of productivity

Data analytics represents a large opportunity for our business. As new sensor technologies are developed, we are able to capture an immense amount of data that is very powerful in optimising the way we run the business.

Let me give you some examples.

By monitoring anode performance through wireless sensors, we have developed an algorithm which allows us to detect and predict anode spikes, which can then be treated proactively. We expect this to result in a saving of more than 10 million US dollars per year. This also provides significant environmental benefits through reduced emissions.

Automation is another lever. A good example is our improved anode change process. Through automation, we will minimise human exposure to hazards and remove variability. This translates to opex savings of about 10 million US dollars per year per site deployed, through increased current efficiency by virtue of

process stability, and significantly reduced risk of injuries to our workforce. This is currently being piloted at Alma.

Finally, we continue to leverage an integrated operations centre for our smelters. Established in the Saguenay progressively from 2015, as of today the centre monitors over 3000 pots within 8 sites across the Atlantic Operations on a 24/7 basis – collecting real-time cell operational data such as amperage, pot stability, temperature and energy to detect pot deviation with complex algorithms to enable rapid and pre-emptive correction. This also enables us to replicate opportunities across the entire system, and to ensure we optimise value across the entire supply chain - from the water levels in our dams to the delivery of product to our customers.

Slide 61 – Enhancing margins through VAP

Commercial excellence plays a key role in our mine to market productivity agenda. In 2017 we have continued to increase the proportion of value added products in our product mix. VAP currently represents 57 per cent of our total sales volumes and supports margin extension by adding an average of 217 US dollars per tonne premium over and above remelt.

In the next 5 years we plan to further grow our margins not only by increasing our VAP to over 70 per cent of our portfolio, but also by constantly shifting towards higher margin products. Our VAP volume growth will be achieved partly through our ongoing casthouse productivity initiatives and partly through considering additional VAP investments in Canada.

Our technical services and product development team work in partnership with our customers and end-users to develop value in use from our product offerings. This is increasingly evident in the automotive industry where expanded aluminium application and material substitution to support vehicle light-weighting.

Environmental and safety standards create an opportunity for product development. As an example, we have developed the Aural high performance alloys for automotive structural applications. These offer excellent mechanical properties to satisfy safety requirements; while creating productivity enhancements for our customers by allowing integration of multiple parts into one casting.

We are uniquely positioned to service the demand growth of sophisticated applications, and the escalating environmental expectations of discerning

customers. Our technical services and product development capabilities differentiate us in the market, as does the low CO₂ footprint of our RenewAl aluminium product, and our proximity to growth markets.

These shifts in VAP will contribute 300 million US dollars of cumulative free cash flow by 2021.

Slide 62 – Strong outlook, value delivery through productivity and growth options

To summarise, we are very positive about the outlook for the industry with a strong demand outlook continuing to strengthen longer term as electric vehicles demand takes hold. On the supply side, we are at a turning point given the reforms in China, which is positive for the medium to longer term though we remain cautious about the impact of winter cuts in the short term.

We have world class assets in bauxite and smelting that are well positioned in the first quartile of the cost curve.

Our hydro-powered Canadian smelting assets are in the first decile of the cost curve, which is expected to

steepen in light of increases in raw materials prices and Chinese power tariff reforms.

We will continue to drive near term value from productivity and commercial excellence. The next wave of our productivity journey will be underpinned by leveraging know-how across Rio Tinto and the competitive advantage of our technology, data analytics and integrated operations. VAP and portfolio optimization will protect and enhance margins. This will drive superior returns and value delivery across the portfolio.

The quality of our portfolio means we have a series of growth opportunities in both our Canadian Aluminium and Bauxite assets as market demand unfolds. We continue to move these opportunities from Option Rich to Option Ready. Of course our focus will always be on value over volume.

Finally, our delivery will remain strong, and despite the impact of headwinds from increases in raw material costs we expect to deliver 500 million US dollars of additional free cash flow per annum from 2021 through a range of productivity and commercial initiatives.

Thank you and now back to J-S.

Slide 63 – JS title slide

Slide 64 – Achieving \$1.5 billion of productivity improvements a year from 2021

Thank you Alf.

Let me sum up.

By delivering the initiatives set out here, we will remain ahead of our peers in providing superior cash returns to shareholders.

Alf, Chris, Steve and Rob have outlined some of the initiatives they are taking. And of course, Arnaud and Bold have similar programmes in their product groups.

All leading to \$1.5 billion of sustainable, additional free cash flow by 2021.

Slide 65 - A track record of sector-leading delivery

We have established a track record of delivering against the targets we set and we are committed to maintaining the momentum.

Over the past four years we have:

- Reduced our costs by over 8 billion dollars
- achieved almost 8 billion dollars of divestments
- Reduced net debt by \$14.5 billion...and
- delivered a forty per cent increase in cash returns to our shareholders

And we are well positioned to continue this sector leading performance.

Our strong balance sheet makes us resilient against any volatility and supports superior cash returns to our shareholders through the cycle.

Slide 66 – Maintaining a disciplined and consistent strategy

It is all about having the right strategy, and executing it with excellence.

To remind you ... we will deliver this by focusing on our 4Ps:

Portfolio... performance... People...Partners

- Portfolio is about world-class assets
- Performance is about operating and commercial

excellence

- People is about developing industry-leading capabilities

- and Partners is about long term relationships with our customers...suppliers....investors...governments and communities.

Our value-creation model is delivering superior cash which we are using to...

- maintain our balance sheet strength

- provide quality growth....and...

- deliver the best shareholder returns in the sector

To summarise our plan.

Every decision we make prioritises value over volume.

This morning we've told you what we are doing. But... I promise.... there will be more. Because our success comes from continuously challenging ourselves... everyday...every shift... in every location.

That is what we've been doing. And all the evidence

shows it's working.

With world class assets, highly competitive products, and the best balance sheet in the industry.....we have an unrivalled platform for the future.

And now let me take some of your questions