

# **Capital Markets Day**

Chairman's remarks

Operational and Strategic Update

Financial Update

Business Leaders

Wednesday, 16<sup>th</sup> November 2016

## **Overview**

#### John Dawson

Director, Investor Relations, Rolls-Royce

## **Introductory remarks**

Good morning ladies and gentlemen, and welcome to Rolls-Royce's Capital Markets Day for 2016. My name is John Dawson, the Director of Investor Relations at Rolls-Royce, and it is my pleasure to be the Master of Ceremonies for today. We have a pretty busy schedule, so hopefully enough to keep you all engaged here, but also online for those of you joining us through the internet.

All the materials from today's presentations and the breakouts will be available, either live or later on today as downloads from our website or accessible on the website. If you miss anything during the course of today, you will find it later on and you will be able to access it at your leisure.

## **Agenda**

We have a busy day, and we are going to try and stick to a fairly packed agenda. Our Chairman is going to welcome you in a couple of minutes and then hand over to Warren, who will go through an operational and strategic update. He will then hand over to David, who will take you through a financial update and some thoughts on IFRS 15, the *topic du jour*.

We are then going to have a break, and then hand over to a session with our business leaders and different members of their team, who will take you through some fairly thoughtful, presentations and discussions on what they are doing to implement our strategic priorities during the course of this year and onwards.

That will cover us through, including lunch, until about 14.00, when we will all come back into this room and we will have a plenary question and answer session and then hopefully be wrapping up at around 15.00. So, a fairly busy day, lots to get on with, so without further ado I will hand over to the Chairman, thank you.

## Welcome

Ian Davis

Chairman, Rolls-Royce

#### Reflections on the last 12 months

Thank you John, and good morning everyone. 12 months ago, I was in front of a number of you at a particularly difficult time for the company. At that point, I highlighted some of the priorities and focuses of what we were going to do during the next 12 months and beyond. Since then, I am very, very pleased to report that both I and the Board are very satisfied with the progress we have made. I say 'very satisfied' with some caution because there is nothing to be very satisfied about in terms of our absolute performance, and we are very aware of that as a Board and a company. However, what we have achieved and what we have managed to get going under Warren's leadership is something that we feel very good about.

It has been a difficult environment, as you know as well as I do. Some of our markets, for example in marine and in the business jet area have been extremely challenging. Internally we have also had an awful lot on our plate. We highlighted this last year. A number of new

product introductions, which in the Civil Aerospace industry, is a very challenging thing, and a huge ramp-up in production, which is something we anticipated and which is going to be the seed corn for our future prosperity. A tough individual and external environment, but the progress has, in my and the Board's judgment, been real, and I hope you get a better sense of that over today and in the discussions that follow.

## Highlights of the last 12 months

## Top-level management restructuring

Let me just give some highlights. Firstly, the top-level management restructuring has gone very well. This is never a pleasant thing to do, it is never an easy thing to do, but we have made real progress on restructuring the top management, from which will come subsequent restructurings.

## Transformation programme

The transformation programme, which Warren has talked about and will talk about later today, as will the management team, is really under way. This is a multi-year journey – you know that as well as I do – but this is really picking up momentum. If it needed confirming, it has absolutely confirmed the opportunities that we have to improve our efficiencies, reduce our costs and, most importantly, to improve the speed and responsiveness with which we do things. So real progress there.

## **Appointments**

Thirdly, appointments. Warren talked about his plans for a new team. I think we have that in place. It is for Warren to talk about this. Getting together a new team – and we have recruited a number of people externally as well as internally – is something that has happened within a year. We are very excited as a Board and as a Chairman about the potential for that new team.

## Strategy, and systems and controls

Finally, and less glamorously, and this is very much work in progress, there has been real progress on the development of our strategy. You will hear more about that in the months ahead and next year. Also, on the crucial, if rather mundane topic, of systems and controls, a huge task for the company but again very real progress there.

## **Ongoing priorities**

Over the last 12 months, there has been very real progress; the Board and I are very aware of it. We know there is an awful lot more to do, and we will talk about that, but I do want to hopefully give you this sense of momentum that I and the Board share.

Let me be clear about our priorities. They are the same as last year. The overwhelming priority for the company is financial and operational performance improvement. They are very, very closely linked in this company: finance and operations are the twin pillars. There are lots of other things we could be worrying about as a Board but we are not. This is our laser-like focus, financial and operational performance. At the same time, we know we need to improve our speed and responsiveness. Again, that is linked: time is a very important factor of cost and performance. I just want to emphasise to you, our investors, the owners of our company, that this is what we really are going to be focusing on over the next couple of years in particular.

So we have made real progress; a lot more to do. Our hope is that over today and in future you will get a better understanding of what we need to do, what we plan to do. This day is part of our continuing effort that I committed to last year to improve transparency and improve communications. I know that some of the messages we have been delivering in recent times have not been as good as they should be and as they will be, but I hope you will not confuse that with any lack of desire on our part to be open with you, to improve the understanding of our company, of the problems, the risks, as well as the enormous opportunities. Today is all about that.

I hope, we all hope as a management team and as a Board, that you will leave understanding the company better, knowing some of the people on the management team better, and appreciating the upsides and the huge value creation potential, which I absolutely know, and I think many of you know, exists in the company.

With those words of introduction, I will hand over to Warren and will look forward to seeing more of you over the forthcoming eight hours.

# **Operational and Strategic Update**

Warren East

Chief Executive, Rolls-Royce

## **Introductory remarks**

Thank you very much Ian. Good morning everybody, and thank you for joining us today. For those of you who were here last evening, thank you for joining us last evening as well. I hope you enjoyed both the formal presentation bit and the discussions that we had around the table.

I am going to just outline where we are as far as today is concerned. I will start by talking about the progress that we have made over the last 12 months, and go into a little bit more detail than Ian just covered, and talk a little bit about going forward in the next 12 months. David is then going to give us an update on the actual business for this year, and a little bit about the direction of travel going into 2017. One of the things that we talked about 12 months ago was additional disclosure. We produced a little more disclosure in February, and we are going to produce a little bit more disclosure today.

After the break, the breakout sessions will be an opportunity, as Ian said, to meet some of the people who are actually doing the work, rather than the people like me who just talk about it. I hope those breakout sessions will be informative. We will be using material from what is going on in the businesses to bring to life some of what I talk about when I talk about transformation and improving our performance.

# Delivered on a clear commitment over the last year

A year ago, we presented a slide like this, and I hope over the last 12 months we have delivered on the commitments that we made in that slide, there or thereabouts. A year ago, I stood in front of you and talked about some serious challenges that we had, some serious challenges around cost, fixed cost and product cost. I talked about challenges in terms of information flow within the business, the systems that we have to work with that information, and how it was really very challenging for the management to get their hands on information.

I talked about some of the behaviours within the business and all the changes and improvements that we need to make there.

As Ian said, if you step back from it, there has actually been some quite good progress, I am pleased to report. Now, it has taken longer than I expected to make some of the progress that we have made, and I cannot hide my slight twinge of disappointment around that. However, if I step back from it and think realistically, then I am pretty pleased with the progress that we have locked in and made. I am very pleased with the platform we have developed within the business for further improvement. We have a lot of further improvement to go.

Last year, from those challenges, we extracted some priorities, things to focus on, and they became the goals for 2016. In February, I presented this slide and talked about how we were going to strengthen our focus on some key priorities around engineering excellence, operational excellence and concentrating on the aftermarket, allowing the business model to perform, and then transformation. Then, as Ian just alluded to, building trust with our external stakeholders. Those external stakeholders are the investment community but also our customers, our suppliers, our other industry partners; and actually moving inside the company to internal stakeholders as well, we need to improve trust.

I am just going to reprise on those goals for 2016, and the progress that we have made since then.

#### **Transformation**

Early wins on the structure

Let us start with the transformation; I realise that was the middle bit on the slide and maybe logically I should have started at the left-hand end, but we will start off with the transformation. A year ago, I talked about this concept of organisational hardware and organisational software, where the hardware is like the structure of the organisation and the software is what people are doing. We made some good progress: early wins on the structure. The good news is that, as I said in February, we are on track for delivering at the top end of expectations for 2016 in terms of the financial impact of that. We have made good progress since July.

Injecting more simplicity into everything we do

However, now the focus is switching very much on to the organisational software, the things that we do to sustain these improvements. The key issues are indicated on the right-hand side of the slide, the key things that we need to change. There is a theme that runs through the changes that we are making, and the theme is about injecting more simplicity into everything we do. I will come back to some of that in a moment.

Reduction in the management population

Graphically, the big hardware change that we made early on in the year was to say we are changing the divisional structure of the business: we are removing a layer of management and we are targeting a reduction of 20% in the management population. Now, we have created a good platform for structural change in that. We have reduced the management population. We have not reduced the management population by 20% - we are still aiming to go a bit further. So there is a bit more work to be done on that.

## Software benefits of hardware change

The important thing is that this hardware change has actually started to yield some software benefits as well, so we have got a clearer line of sight from the centre of the business out to what is actually going on with customers, and how we translate from customer engagement through to eventually money in the P&L. We have stronger accountability as a result of that clearer line of sight, and we are already starting to achieve a big reduction in the number of interactions that are going on - committees and so on. There is still a lot of complexity, and there is still work to be done on responsiveness, because we believe that world-class products deserve a world-class operation, but I am pleased with the progress that is happening.

## What is the financial impact?

What does that leave us with in terms of financial impact? At the half year, I said for 2016 we are going to deliver at the top end of the expected £30–50m benefit: we certainly are. Since July, we have had further progress on that and so now we are expecting the run-rate going out at the end of 2017 to be much closer to the £200m end of the range, in other words the top end of the range, by the time we have rolled through 2017 as well.

Obviously, these savings are essential to improve the performance of our business. They are also in some ways delivering in terms of additional resource, and we have plenty of areas in which to apply that additional resource. So that is transformation.

## Three success factors

I now want to talk about the three success factors that we have been focusing on: engineering, operational excellence, leveraging the aftermarket and letting the business model work.

## Engineering

To start with, on engineering excellence, I think you are going to see some examples in the breakout sessions. What we have tried to do is take these three themes and use examples from across our different businesses. It is not as easy as 'the example you see is the only example of engineering excellence'. Clearly, there are examples of engineering excellence in bits of the business that we are using to demonstrate operational excellence as well, but we have been focusing on that.

The operational excellence piece is a lot about our manufacturing transformation: getting higher margins, lower costs. It is about delivering reliability and repeatability in what we do. We have made good progress over the last 12 months. I would not want to claim a huge amount of credit for this, because a lot of this is work that has been in progress, not just over the last 12 months but over multiple years, where we have made huge strides in the improvement of the quality of our products. That is translating into better reliability and operational excellence.

I will talk a bit about capturing better value in the aftermarket and developing new value-added services. I would encourage you in the breakout particularly around the Civil Aerospace piece, to look at that leverage in the aftermarket examples and the progress that we have made there. However, really the emphasis has been on the changing the mindset, on focusing on what we absolutely need to do and getting people inside the business to say, 'I am coming to work today and this is what I have to do: can I do it in a simpler way, am I

doing it fast enough? If I can think of a simpler way of doing it, then let us start doing it in a simpler way.' Then making sure that as a business we are only asking people to do what it is necessary for them to do. There are a few examples there where we have made good progress.

#### Operational excellence

In July, I said progress is going to be the sum of lots of little improvements, and that is the graphic we used. To talk about a few examples of this, operational improvement: I used this slide in July but the number that I had in July was a different number because we have further progress since then.

This example is about reducing the time it takes us to assemble a Trent 1000 engine. I visited Singapore where we assemble our Trent 1000s in February. I have to say, wandering around the final assembly there, there was not a huge amount of activity. There was not a huge amount of activity because it took us a long time to assemble an engine, so everything took a long time to go through. You had a real sense of the fact that this thing could go quite a bit faster.

When I visited a few weeks ago, and I had a group of people with me a few weeks ago, it was a hive of activity. You could feel the increased tempo that is relating to a 30%, or getting on for 30%, improvement in the cycle time. By the way, in July the number there was 24%, not 27%, but we intend to go further.

When you attend the breakout session, please talk to the folk who are driving this in detail, and understand how we have done that and the lessons that we are taking from that and moving around to other locations. There is more work to do, but I am really pleased too when going and meeting the people who are actually doing this about the level of engagement we have amongst our people, to really make these improvements happen and to in fact exceed the goal that we are setting.

#### Execution in the aftermarket

That example was about building engines in the first place. Of course, we also have to worry about the aftermarket and execution in the aftermarket. Here is an example that hit the newspaper headlines a bit in the summer because, as you are probably all aware, ANA had some issues with some of our turbine blades. Basically, these blades were not lasting as long as the design life and we need to change them. We have redesigned the blade and we will be introducing the new design in due course, and the aerospace people can fill you in on the detail.

Meanwhile, we have to keep our customers flying their aeroplanes, because the punters who want to fly from A to B are not going to sit there and wait because we do not have some turbine blades working properly. We have to come up with a replacement programme that does not interfere with our airline's operations and so on.

When we looked at the task involved, it was going to take a long time, such a long time in fact that it would create some operational challenges and would also create quite a huge cost for us. The behaviour that drove this improvement was a behaviour that said, 'No, I am not going to tolerate the status quo, how long it takes; we need to work hard to come up with a dramatic improvement.' A dramatic improvement materialised, and the leadership in that

part of the business said, 'No, I am still not satisfied; that is still not enough: we need to make a bigger improvement.' Over a couple of iterations, the team worked out an alternative way of changing these blades that resulted in an 80% reduction in the time that it took.

We could extol the virtues of the engineering analysis that went into what we actually need to do, and that was clearly part of it, but the thing that gave me most encouragement was the change in mindset that said, 'No, I am not going to be happy with the status quo; I want something a lot better.' That mindset was there, and that is what drove that improvement.

Clearly, that was a real life service example. Since the aftermarket is such an important part of our business, it is worth noting that these improvements that we talk about are not just in getting engines out of the door, because the engines spend 25 years or so in active service and we need to look after our customers and make money out of that throughout the 25 years.

Another example from the aftermarket: we pointed out at the half-year that our fleet is gradually getting older. That means that there are going to be more aircraft transitions. If an aircraft is on the ground for 12 months instead of three months, then we are clearly going to forego a lot of aftermarket revenue. The team in the breakout session, talk to them about creating a team to work with the leasing companies, to work with the airlines who are retiring aeroplanes, to work with the airlines who are going to buy second-hand aeroplanes. We can minimise the time that that aircraft is on the ground, and therefore minimise the aftermarket revenue that we forego with that transition. That is an example of how we are working on that aftermarket. There are other examples from our defence group, and they are going to talk about how they are working the aftermarket more as well.

Enough of anecdotes around the three priorities. Progress on focusing around the three success factors: I would encourage you to use the breakouts to explore the detail on that, and point out that it is not just civil aero applications where we are making the progress.

## Rebuilding trust

#### Disclosure

I would now like to switch to the third goal here, which is around rebuilding trust. So additional disclosures: the ways in which we decided about getting more trust was to be more open and share more information with you, and then actually make sure that we deliver on what we say we are going to deliver. I think we have made good progress on disclosure. You will see some more details on disclosure in David's presentation today. Another example in July: we talked about for IFRS 15; we are talking again today in more depth about IFRS 15. We are bringing executives from within the company so that you can talk and exchange information freely with these people. I hope that is a good indication of good additional disclosure. We put this slide up: we are actually going to fill in some of the blanks in this slide in David's presentation later today. So that is more disclosure.

# Delivering what we said we are going to deliver

In terms of delivering on what we said we are going to deliver, this morning we confirmed our expectations as far as 2016 is concerned: that is delivering in line. We have talked about transformation programme. The transformation programme is delivering and, as I said, it looks like it is going to deliver at the top end of expectations.

## Operational excellence

On operational excellence, this is a graph that you are familiar with hopefully; in the bottom corner there, showing the ramp-up of our large civil engines. You have all told us, dealing with that volume ramp is a big challenge. We did not actually need you to tell us that; we know it is quite a big challenge. The good news is that, if I look at the run-rates coming out of our facilities today, then the run-rates support that ramp-up. 12 months ago the run-rate that we achieved in Q4/15 supported the volume requirements for 2016. As we are going at the moment, a little bit more than halfway through Q4/16, the run-rates support the volume that we need to do for 2017. So I am very pleased with the way that the business has actually been delivering on the commitments.

## Legacy issues

Those of you in the UK may have seen the Panorama programme a week or two ago. That is a reminder that we do have some legacy issues. As far as the investigation is concerned, we are fully cooperating. We cannot talk about the detail of that investigation. Within the business, I can assure you that the huge changes that we set in progress a couple of years ago around this are happening, and behaviour is changing. We have an absolute standard of zero tolerance to any misconduct here. So in spite of the legacy issues, we just have to accept that, and we are dealing with them.

## Looking ahead

So now let us look ahead. As Ian said, one of the first things we have been doing is rebuilding the leadership team. I talked about some of this a year ago and we have talked throughout the year. Two key appointments we have been able to announce: Simon Kirby is joining us as Chief Operating Officer, and Stephen Daintiff is joining us as Chief Financial Officer. Simon and Stephen are in the room; they are just over here. Simon and Stephen are not the only appointments. Ben Story joined us as our new Head of Strategic Marketing about a month ago. Andreas Schnell will join us as the new President of Rolls-Royce Power Systems. And he will be joining us at the beginning of December, and he will be taking over with effect from the beginning of January.

If I take those four external appointments and combine them with the promotions that we made, then the leadership team that I was talking about in aspirational terms a year ago where I was looking for a blend of about a third of new people, and about a third of people from within Rolls-Royce promoted, and a third of people that representing continuity, then I think we are just about there, so we have got a team, a leadership team.

One of the first things the leadership team need to start working on however is looking forward at our vision and our strategy. We know we have made progress on the operational performance, we know we still have a long way to go on improving operational performance. A year ago I said we were going to make those improvements in operational performance and then we were going to get on to updating strategic priorities and so on. As I said, it is taking a little bit longer than planned, and so the really eagle eyed ones of you in the room will notice that in the bottom arrow in the right-hand corner, we have sort of slipped into 17 in which reflects a little bit of a slip. The purpose of talking this morning about this is to say that we certainly have not forgotten that we need to attend to looking forwards.

When we do look forwards we will see it is a very long-term business. The operational improvements we are making are improving the platform, and the platform on which we can build, but we now have to think about the next several decades. A new engine that is going out of the door today is going to be flying in 25 years. That is actually 2040, which sounds like a heck of a long way into the future. I would be delighted if I am alive in 2040. We do need to think quite long term here.

#### Framework

The framework that we will be using is this. We will be thinking about long-term trends in the industries in which we operate, and the presentation that you had over dinner from Paul Stein last night, that was no sort of coincidence. We do need to take account of the technology changes which are happening in the world. By the way, I come from the technology space, and I have seen lots of companies wither on the vine through not embracing new technologies in time, and I have also seen lots of companies wither on the vine because they enthusiastically invest in all sorts of fancy new technologies that you know no hope and the market does not want them just yet. It is a challenge, and it is a balance, but that is an area in which we need to focus.

If you recall the matrix that we talked about, with market attractiveness and competitiveness, we need to review that in a little bit more depth, and we must not forget the effects of the transformation program that we are having on our business. We need to continue to drive the improvements, continue to improve the performance of our business, but take into account that we are going to do that when we make our plans. We need to consider all of that in the context of the capital that we have available to allocate, and how we are going to allocate that capital, and how we are going to allocate the capabilities that we have around the business.

#### Reminder

Each part of our business does actually have attractive growth opportunities. Yes, there is some investment required in all of these sectors, and there is certainly are some steps forward which are evolutionary steps, and there are some steps forward that are perhaps a little bit more revolutionary, a bit more radical. We need to think about all of that, think about the competitive opportunities, and the competitive threats.

Paul presented these slides probably a lot better than I can when he talked about them last night, and he explained both of these pictures. If I just take the top one here where the two sort of internal boxes applying digital to what we do internally. I think there is significant scope in box one in terms of digital services and systems outward looking to our customers. Some people are a little bit sceptical about the fourth box: the internet of things. My only comment on that would be I used to work in communications in the late 80s and early 90s, and there was a thing around called ISDN. The sort of cynical amongst us used to talk about ISDN standing for 'It Still Does Nothing', and it still did nothing for a long period of time.

Then sufficient infrastructure became available, and it was not actually ISDN, but the whole world that we enjoy today of the internet, smart phones, connectivity, and so on is a realisation of the dream that was ISDN. The new technologies that we talk about today, the glimpses that we see, things like Paul talked about last night and the hype around the Internet of Things, I would caution people being over cynical about the Internet of Things,

because people have been plenty cynical before about these sorts of technologies that offer great hope. The actual manifestation tends to be a little bit different from the number you had first thought of, but the reality and the impact on society comes through sooner than you think.

Paul talked through the second slide on the bottom of this chart as well, and all I am saying this morning is that we will pay attention to these technology trends. It is a similar story that he outlined behind the enabling technologies in these boxes; technology reaching tipping points. So I will remind those of you who were at dinner last night, those slides that he showed about the tipping points. I will remind you of the Bill Gates comment about things always taking longer; not as much happening in the five years that people expect, but a lot more happening in the ten years. That is the sort of time horizons, of course, in which our business operates on, much longer time horizons. We really need to pay attention to that scenario that we will achieve significantly more focus.

As far as our current portfolio is concerned I have no radical news for you on this, this morning. I will point out that about 80% of our activity sits in the top right hand box. We think it is playing into markets that are quite attractive and we think we have got a pretty competitive position. We will be casting a critical eye across all quadrants. I will also remind you that the transformation activity that we are doing is lifting our performance in all of those boxes.

The cost challenge remains; we have started, we made progress, and we will make further progress beyond the 200 million, of that I am sure. There is a lot more to do. We will have to spend some money. There is some systems enablement activity, there is investment, some of the technology investments I just talked about, and this will all cost, but we have not lost sight of the fact that we have ... other cost challenge.

If I put that together, and this chart has a rather sort of nebulous vertical axis of goodness. I am not sure how otherwise to describe it, but that is what we came up with. Here we are at level one, and how do we get to level two at the other side. Clearly the cost activities, there is a lot of focus and creating greater efficiency within the business. When we get into growth and mix, we are talking about the mix of products and the challenges of product cost, and getting a greater proportion of products so they are competitively costive within the mix of what we do, and taking advantage of the growth that is available in all parts of our business. A lot of that is unlocking the order book that already exists in our civil air space business, and making sure that as we unlock that and deliver those engines, then we make significant progress on the costs. Experience tells us that we can make progress on those costs, and we have plans to make progress, and right now we are tracking those plans pretty well.

If you look forward to a world of twice the installed base and large civil engines, then I think you will see quite a transformational effect on the cost base. If you add all those three things and you move up the nebulous vertical axis of goodness from where we are to a much better place.

#### Summary

It has been a year of pretty good progress really on the transformation program. I would not be doing my job properly if I was not a little bit dissatisfied with the speed and I was not

continually trying to push and encourage us to do even better, but I am actually quite pleased with the progress that we have made on operating performance.

I have talked a little bit about the fact that we have not forgotten moving forwards. We have laid out some areas in which we are going to apply our efforts looking forwards, and there will be more updates on that in 2017 as we go. For now, I will hand over to David to talk about financial progress, and looking forward – a little glimpse of the IFRS 15 update. David.

# **Financial Update**

## David Smith

Chief Financial Officer, Rolls-Royce

## **Introductory remarks**

Good morning everyone. There are a few things I would like to cover in the course of the next 30 minutes or so. Firstly, as we are nearing the end of the year, I will provide a brief update on 2016 performance and set out some of the market developments that may play into 2017. It is also time we gave you an update on our transformation program. In addition, as Warren has already said, I will give you some additional revenue and cash flow disclosures as we set out last year. As some of you will no doubt be pleased to hear, these will include revenue and trading cash flow direction and analysis through to 2020 for our Civil Aerospace business, as well as near term directional guidance. I should emphasise this directional guidance will reflect our current accounting.

We are also going to use today to walk you through the assessment of the differences between our current accounting and IFRS 15 for the 2015 financial year; unlikely future trends in order to help you think further about how to model the impacts of IFRS 15 moving forwards. I will talk to you about the key figures in this session and then we will be running more detailed workshops as part of the breakouts, the first of which will also be webcast live.

#### 2016

Turning first to 2016; around this time last year we set out the main headwinds we saw affecting our business in 2016. The majority of them were in the Civil Aerospace business. As we have moved through this year, they have mostly materialised around the levels we forecast. In addition, there have been a number of other developments which have mostly netted off with other changes, and these include some foreign exchange benefits in civil which we expect will at least offset some of the incremental market operational engineering and program costs we have incurred this year. At a group level, we expect to outturn therefore broadly in line with overall expectations, despite some of those mixed market conditions affecting some of our businesses.

Cash flow

For cash flow, we maintain our range of minus £100 million to minus £300 million.

**Transformation** 

On transformation, our legacy programs are largely complete now providing the benefits we expected. As Warren has touched on, we have made further progress on the additional transformation, and you will hear about this in our breakouts.

#### Savings

We previously told you that we expect to bank up to £50 million of savings in 2016, and I believe we will exit the year at an annualised run rate higher than this implies at around £120 million. We are working through the potential benefits for 2017 right now, and we will not announce these until we have passed a key review stage where we can review them as banked and sustainable. The majority of our identified savings to date have come from our management restructuring activity together with a number of efficiency savings particularly in

engineering and purchasing. Making these savings has been essential to help offset the investments we have made to support our manufacturing and engineering activities as we ramp up production in the new facilities around the world.

#### Transformation in finance

I just want to actually touch on transformation in finance as well. All business areas have made transformation commitments, and within group finance we have also sought to deliver meaningful savings, as well as making solid progress and improving and simplifying our reporting and forecasting processes. One example: we recently consolidated four of our UK defined benefit schemes, simplifying both the administration governance. We will now have only ten trustees whereas before we needed 40.

We will also benefit from scale, reduce advisory costs, more efficient asset management to generate annual savings of £2 million to £3 million a year. We have also taken a number of actions to control the future costs of benefits accrual in consultation with our employees. The overall impact on pension costs charged through the P&L will be around £5 million a year.

In addition, you will have seen that last week we signed an agreement with Legal & General to take over our Vickers defined benefit scheme with over 10,000 members, and this will remove risk from Rolls-Royce, and also reduce our global pension liabilities by around 6%. On a technical point, we will therefore have to recognise a settlement charge of about £300 million due to the rules under IAS 19 to discount liabilities using AA bonds as a reference, and we will exclude that from our underlying results. In other words, the surplus for that scheme that is on our balance sheet will no longer be there.

## **Current market developments**

Turning to current market developments, the picture is mixed. In Civil Aerospace, we have seen a slow year for new orders as expected, but deferrals and cancelations have also been very modest, and with a substantial backlog of orders, we feel well protected for the next few years. At the same time, the outlook for our aftermarket business has remained solid. Looking at our large engines, parking levels are stable; we have seen a handful of older Trent powered planes such as the Airbus A340s being removed from service along with some of our more legacy RB211 fleets. At the same time, we have had good success now with our Trent 800 transitions on the 777 with 11 year to date, compared to one last year.

From an OE point of view, the underlying business jet market has continued to weaken, and as a result when taken with the loss of some key platforms, we continue to expect revenues to fall over the next few years on an OE basis.

#### Defence and Power Systems

Turning to defence, the market looks okay, roughly in line with our expectations. In power systems, the picture remains mixed. We are not immune to the weakness in end markets such as industrial or oil and gas, but we also continue to do well in some of our strongest areas such as power generation and marine, and believe therefore we are gaining some market share.

#### Marine

Within our marine business, there is really no sign of recovery in offshore markets, and our order intake remains very weak, particularly now also in services. You will hear from the

team later about the efforts they are putting into cost management and seeking opportunities in adjacent markets, but we must therefore remain very cautious about 2017 as the prospects for the year and expect revenues to be lower next year.

#### Nuclear

Finally, the nuclear business continues to focus on delivery against our long-term contracts within the submarine business, and build out the capability within the civil nuclear business. We are pleased with some of the market developments, but they will not have an immediate effect on results.

## Looking forward

Looking forward, we will probably provide our first detailed view on 2017 at our full year's presentation in February. Warren and I think it is only fair that Stephen and Simon, assuming they are on-board by then, have a chance to review our plans before they are finally approved.

#### **New disclosures**

Moving now to some of our new disclosures. The next slides are intended to help you understand how we see the Civil Aerospace business developing over the next few years. The first covers revenue, and is prepared, as I said, on the basis of current accounting.

The arrows themselves signal the direction of change year on year, and the key message here is that we expect overall OE revenues to grow year on year through to the end of the decade. This is underpinned by our order backlog of large engines. Whilst the absolute value of our linked and other sales should continue to rise as we deliver more Trent 1000 and 900 engines, the more fundamental revenue driver comes from unlinked sales with the XWB engine in particular the significant contributor. Of course, these come with a negative cash flow based on current projections by 2020. Broadly we are expecting to deliver the same number of XWBs as our total large engine deliveries last year.

It is a different picture across our other engine programmes with deliveries of the V2500 modules dropping off quite sharply after 2017, although we are currently enjoying a bit of an uplift to revenues because of issues elsewhere in the A320 supply chain. I have already mentioned the weakness with the business jet OE market which will be compounded by a number of new airframes entering into service replacing our BR710 powered predecessors. Consequently, OE revenues from our business jets will continue to decline over the next few years.

We still regard the top end of the business jet sector as strategically important and are targeting opportunities there to regain our market share over time.

#### Aftermarket

Turning now to the aftermarket. We expect revenues to grow modestly at first and most significantly as revenues from the installed base of the newer engine programmes' bill. We are anticipating a slowdown in revenues from some of our mature large engine products like the Trent 500. However, the important thing to note is that we continue to see double digit growth in our new Trent aftermarket revenues and flying hours.

Aftermarket revenues from regional aircraft will decline year-over-year over the next few years as aircraft that we power are replaced by larger cabin alternatives, while the V2500 and business jets should remain reasonably stable.

Turning now to cash flow, again, this slide is on a current accounting basis for all years. As before, the arrows reflect year-on-year changes with an upward arrow indicating an improvement from this factor on the year before. There is quite a lot going on, on this slide, and I do not propose to take you through it arrow by arrow. The main areas, I would encourage you to focus on are the developments of profit, the movement in contractual aftermarket rights or the CARs additions, and the movements in the TotalCare net asset.

#### Profit

Taking these in turn, on profit, we are expecting modest improvements as we move through the next few years. Those will accelerate as we get closer to the end of the decade. This reflects the growth in the large engine aftermarket plus the production efficiencies from increased volumes and the benefits of our transformation programme.

Offsetting these will be reductions in our business jet and V2500 OE sales and reductions in our regional aftermarket.

#### **CARs**

Let me perhaps use the CARs additions line to explain a little bit more how we are using the arrows in this chart. As you know, CARs additions represent the aggregate cash loss in the year from unlinked OE contacts. In 2015, our CARs additions were £161 million. As we move through 2016 and 2017, our engine deliveries of unlinked contracts will grow and the aggregate cash loss, therefore, rises year on year. This is illustrated by the downward arrow within 2016 and 2017, i.e. indicating the total cash losses or CARs additions are increasing and therefore negative for cash flow.

In 2018 we have an upward arrow to show an improvement on 2017, although we are still actually increasing our volumes at that point. We are managing down the average loss per engine, are expecting therefore that the total value of cash losses from unlinked engines to be lower than the year before. This does not mean that the CARs balance has peaked but that the rates of growth has slowed.

## **TotalCare**

Finally, let us look at the TotalCare net asset. We expect this to peak in the next few quarters and then start to decrease as previously pulled forward profits on linked sales are unwound against linked aftermarket contracts.

## IFRS 15

Now, I am now going to move into IFRS 15. Before I go into detail on the numbers, I think it is worth reminding you that the implementation, firstly, is still a year off. However, given its likely significance, there are underlying results, I think it is appropriate that we keep you informed of our progress.

Overall revenue recognition will now be linked more to the actual timing of cost incurred in providing goods and services rather than smooth over the lifetime in service contracts. For fear of repeating myself, although I think it is important that I do, the one clear and firm

constant is that it does not change the cash flow profile, and therefore the embedded value of the business.

Let us quickly recap on the high level principles we shared back in July. Firstly, the CARs concept would no longer be applied to our contracting arrangements. We would recognise any cash loss upfront on engine sale at the point of sale.

We would no longer do link accounting and pull forward some of the profit from our aftermarket contracts on the sale of the engine. For the aftermarket itself, the timing of revenue recognition and offsetting concessions would change to an input or cost basis, with the consequences having very different profit and loss timing effects.

I would probably describe the direction of the standard as a painful but welcome step on the journey to increase transparency, for our OE revenue at least. By removing our CARs and linked accounting, some of the accounting fog will be lifted. Our accounting for a portion of the aftermarkets profits goes away and any loss we make on engine sales will be more apparent. Therefore, as we ramp up our large engine production over the next few years, a switch to IFRS 15 is going to have a negative effect on our OE revenue and profit, relative to today's accounting. This will continue until we have made progress on our programme of cost reduction and have traded through the launch pricing of our new engines.

On the aftermarket side, I am afraid it is not quite so straight-forward. In fact, for business jets and even for our large engines, in a way, it lacks some logic and leads to some counterintuitive outcomes, both of which I will explain later.

IFRS 15 defines the timing of revenue and profit recognition during the course of a contract. It does not change the overall level of profit from the contract itself. Of course, as I said, it has no impact on contract cash flows at all.

Over the next few hours, we will have a couple of chances to explain these changes to you. I will share the high level principles and outcomes now, and then in the break-out later, Andrew Dickinson, the Civil Aerospace CFO, and myself will give you a more in-depth analysis and answer any questions you may have. However, before I do that, let me first explain the legend on the right-hand side of this slide which you will see used again on the subsequent pages with the numbers.

Where you see a fully-coloured block on the right, this is intended to show you where we have already disclosed the principles. The quantification of the impact has been largely available to you from our prior results. For example, where CARs additions represent the cash loss we incurred from our unlinked engine sales.

The second half-coloured block is where the principle has also been clear. However, not all the financial information has been available before now or was only partially clear from our statements. A good example would be catch-up adjustments.

The uncoloured block represents a new disclosure as we have developed the detailed understanding of implementation of the principle. For instance, the quantification of the impact of the change from recognising the long-term contract revenue on a flying hour basis to a short visit basis or the impact on the business jet aftermarket.

## Civil business

Before we go through the numbers as well, let me just explain which parts of our civil business are affected by this change. Looking first to OE, the elements that are cash positive today, such as business jets and V2500 modules as well as profitable spare engine sales, are within civil large engine revenue. These will be largely unaffected by IFRS 15. Where we will see the difference is in our negative cash margin in stored engines. Unlike with current accounting where we capitalise those cash losses either as a CAR or by linking with an aftermarket contract, under IFRS 15 we will recognise the cash loss when we sell the engine.

Our range of cash losses today on engines is typically in a broadly £1 million to £2 million range. However, we expect this to reduce quite dramatically over the next few years as we execute on the programme of cost reduction and benefits from pricing on some of our new programmes.

#### Aftermarket

Turning to the aftermarket, it is a pay-as-you-go long-term service contract, that is the most affected by IFRS 15. A time and materials-based business, and royalties on the V2500 for instance will be the same as today. Overall, around half of the civil OE business and about a third of the aftermarket revenues are unaffected by this change.

#### Civil OE effects

Turning to the civil OE effects, the total effect on 2015 full-year results would have been around £700 million pounds for OE. OE is most significantly affected because of the removal of linked accounting and the removal of the CARs.

All of the changes here affect both revenue and profit apart from amortisation of CARs which only affects profit. That is because on the current accounting, when we amortise the CARs, it flows through cost of sales, not revenue.

While we can no longer capitalise losses and pull-forward profit from the aftermarket under linked accounting, we will not also have the unwind of this on the aftermarket revenue in the future, which is a positive that you will see on the next slide.

All the items apart from the treatment of guarantees are actually highlighted in our 2015 year-end results. The new item is the change in timing recognition of some of our performance guarantees, particularly on early Trent 1000s where we now have to recognise the net present value of any expected payments of, for instance, the fuel guarantees.

When we make the engine sale under current GAAP, these are generally included as part of our aftermarket cost.

Turning now to aftermarket accounting, here the changes are more complex. The change to an input approach has a marked effect. We will explain details more about this in the breakouts.

Basically, when we remove the effects of linked accounting, we will not be pulling ahead aftermarket profit or capitalising cash losses. This means we will recognise all of the aftermarket profit during the aftermarket contract and not take some of it upfront. Therefore, we will no longer have a large long-term contract debtor comprising capitalised cash losses and pulled forward aftermarket profit which we need to unwind against our profitable

aftermarket cash flows. The £268 million benefit on the slide is the positive effect that we would have seen for this in 2015.

In 2015, we also had the effect of our change, if you remember, on provisioning against contract risk which gave us a £189 million benefit in 2015 profits. However, because there is no linking under IFRS 15, our positive long-term contract balance would actually have been a lot smaller and so we would have needed a far lower risk provision. Our change in provisioning method would have only been worth £33 million so we would have seen £136 million less benefit in 2015, than we actually reported.

The level of other catch-up adjustments such as life cycle cost improvements would also have been far lower for the same reason, because in part this is driven by the removal of the linked accounting.

Finally, through the change from output to input, from flying hours to cost activity profit recognition, this has an important effect driven by both programme and portfolio maturity. For instance, the relative position of the Trent 700 and XWB. Andrew is actually going to cover this in more detail later on.

In addition, what is perhaps more counterintuitive is the change – the new standard will bring full profit recognition on our business jet fleet. Again, remember these are profit and not cash effects.

However because business jets are flown far less than wide-bodies, the first overhaul often happens after the expiry of the first contract period - which on average is around 10 years. And the way the market works is the customer expects to carry the value of hours flown into future contracts. Therefore for IFRS 15 purposes we really have to look at business jets over the life of the engines, otherwise we'd have a very different profit recognition pattern from one contract to the next.

The result of this is that under IFRS 15, the timing of when we can recognise revenues from these business contracts is actually going to be deferred for many years. This compares to today where we are recognising revenue and profit as we collect the corporate care payments on a pay-as-you-go basis. It is worth noting that the estimate of the impact in 2015 of around £120 million is particularly high. We expect this will reduce over time as the average age of the fleet increases over the next few years.

#### Civil Aerospace

Let us turn next to the balance sheet for Civil Aerospace. We performed a restatement as of the end of 2015 for illustration purposes only. Of course, by the time we do the actual transition adjustment to the opening, 2017 reserves will have moved on another year and have a slightly different mix of contracts, so the magnitudes of the actual transition impact are likely to be different from what we are showing today.

The main changes are no CARs, so no CARs balance. The debtor balances within TotalCare assets, which represent linked profits reported ahead of cash, will no longer be there as there is no linking under IFRS 15. Then thirdly, the transition from flying hours to a cost basis means that we will actually be receiving cash revenues ahead of when we perform overhauls. That is the trigger for the ability to recognise revenue and margin under IFRS 15. As a result,

the balance sheet will actually show a creditor for receiving cash received from customers ahead of recognising the profit.

We have shown all of this information pre-tax. Clearly, when we do the actual transition, we will have to work through the very detailed country-by-country tax adjustments to our assets and effective tax rate. However, very approximately, if you use your normal affected tax rate, in other words, 20% to 25% for the tax rate, that should give you a good guide.

#### How IFRS 15 would have affected 2015

I have talked about how estimates on IFRS 15 would have affected 2015. What I would like to do now is explain how the direction changes over time. However, I am going to do this using a build to show the effects.

The horizontal y-axis here represents the difference between current profit as recognised under current GAAP and IFRS 15 for each year. Once again, very obviously, I will remind you that cash flows, the blue line here, over the life of the contract, are completely unchanged. Hence, that blue arrow is flat.

Initially, the gap between current GAAP and IFRS 15 for OE accounting is large. As I have just pointed out, about £700 million. As we reduce the unit cost of our engines and move up through the bands of launch pricing on some of the engines, we will expect this GAAP to close as we have forecast over the last few years. As a result, the gap will close, slowly at first as we ramp up production, but more quickly as key programmes such as the XWB 84K mature. Thereafter, with a mix of high and medium volume engines and inevitable various variations in price for different fleet operators, we would expect the trend line to stabilise.

For those of you who are looking at the size of the arrow on the curve, I should point out that the overall revenues and profits over the whole lifetime of the business will be the same under both accounting methods. However, for OE, IFRS 15 will never actually catch up with current GAAP because of the effect we would have seen under the current GAAP for linked accounting.

Conversely, because of the way we currently report aftermarket revenues for linked engines, effectively suppressing the cash aftermarket margin by the unwinding of previously pulled ahead profit, overall, IFRS 15 aftermarket revenues will be higher.

Aftermarket forecasting is going to be more challenging, I am afraid, as it will be quite hard to predict when engines are being serviced and how much of the expected contracted cost is incurred. However, as we will explain later, the basic difference should close as overall engine programmes mature. This reflects the fact that we catch up in profit terms around the time of the second service on most engines. The more mature the fleet, the higher cumulative profits you will be recognising and therefore, the higher the reported margins.

However, we have a relatively small and young fleet today as the average age of our Trents is only around seven to eight years. This is reflected in our low overall TotalCare creditor balance today.

The significant growth in our market share over the next few years means it is going to take some significant time for our average age to mature. The service revenue is likely to lag behind current GAAP for many years.

Our focus, so far, has been on Civil. It is where the most significant differences are. There will be some effects on our other businesses, although a great deal smaller. In Defence, for instance, the OE impacts are likely to be de minimis in the near term. There will be changes in the aftermarket for Defence as we do have some long-term mission care contracts with a flying hour element to them, but of course, how they are serviced is completely different. Our MissionCare is less than 30% of Defence Aero services revenue, so the effect actually will be quite small.

We are still evaluating the other businesses as well. All have some long-term contracts in them. However, we are not expecting major changes.

We have covered the main adjustments to 2015. In the workshops later we will spend some time contrasting current GAAP and IFRS 15 in a bit more detail, as well as trying to help you think about the modelling moving forward. We will give you as much directional guidance as we can. However, please bear with us. Views on the actual outturn in 2018 when we implement IFRS 15 are highly subjective and not something that we can be definitive about yet.

We spent a lot of time over the past few months working on some of the more detailed principles in the interpretation of IFRS 15 and how this would have applied to our 2015 results. Looking forward, we will be providing some similar adjustments for our 2016 results around the half-year. Then February 2018, when we represent our 2017 results, we will then provide them under both sets of accounting standards.

## Non-cash adjustments

I used this slide earlier. Sorry, I am just going to keep it short now. There are likely to be some big non-cash adjustments that we have just seen, particularly on OE and some recent aftermarket profit under the new standard. However, of course, cash flows are unchanged. The impact of IFRS 15 is really just a timing difference on how we recognise the returns over the whole life of the product. In the end, we will make the same cash flow and the same profit on each engine regardless of the accounting.

## Summary

Let me briefly wrap up.

We expect to deliver 2016 broadly in line with our original expectations despite some mixed market conditions affecting some parts of the business and some of those will play into next year. We have made good progress with our transformation programme and increased our bank annualised savings to around £120 million. When we adopt the new standard from 2018, it will initially have a negative effect on our reported earnings. However, the most important thing to take away is that fundamentally, the net present value of the business has not changed because there are no changes to cash flows.

Thank you very much. I am now going to hand back to John. Thank you.

John Dawson: Thank you, David. That brings the two opening presentations to a close.

## **Business Leaders**

Warren East

Chief Executive, Rolls-Royce

#### **Breakout introduction**

Hopefully, everyone is refreshed and we will move on now. I will just introduce what is going in the breakouts.

We had three themes about engineering excellence, operational excellence, aftermarket excellence, all a little bit nebulous and intangible. What we are going to try and do is bring some of that to life with examples from the business.

As I described in my presentation this morning, we cannot do it perfectly because we would be here all day with examples everywhere. However, you will see a cross-section of what is going on in the businesses, and a cross-section of activities aimed at these three themes.

The ones we have got set out in the rooms – in engineering excellence, we are going to have power systems and nuclear; operational excellence is Civil Aerospace and Marine; aftermarket is Civil Aerospace and Defence. Underlying all of that, as David promised you in his talk, then we have got a detailed deep dive on our interpretations of IFRS 15 and the difference that is going to make.

Before we start on all that, all of our business presidents are here to give a quick introduction on what is going on in their businesses. We will start with Civil Aerospace and Eric Schulz is going to kick-off.

# Civil Aerospace

## Eric Schulz

President, Civil Aerospace, Rolls-Royce

#### **Market environment**

Thanks, Warren. Good morning. I am really pleased to be here today. My name is Eric Schulz and I am the president of Civil Aerospace. I have spent my entire career in aerospace from airlines and air framers and suppliers, in various organisations around the world. I joined Rolls-Royce in 2010. I became president of what was at the time, Civil Large Engines in 2013. In January 2016, Warren asked me to make the reunification of the small engine and the large engine and the supply chain within combined Civil Aerospace.

Today, I will show you a little bit of our view of the market environment and what does this mean for Rolls-Royce. I will also give you a snapshot of our priorities as a business. I will introduce the two workshops that you will be in with our Civil Aerospace representatives, and then I will conclude with a very short brief summary.

If I start with the market environment, these are the basic slides we are always contemplating. If I look at orders and delivery, the business is a little bit uncertain today. For the first time since a long, long time, we have had less orders than deliveries within a year on either airframe or engines, as it goes together normally. Clearly, this is the first year.

It does not mean that we are anxious about the future of the market. It is just one year and you can argue that we caught a lot of orders in the previous years and that may be just a natural kind of a pause in the system, waiting [for] new orders in the future. However, nevertheless, we see a rebalance compared to the start of the decade.

We believe, in terms of business, that we are quite insulated from it because, as you know, we have a very, very massive order book and we have not seen that many cancellations. We have seen a little bit of postponement but not something that we are really anxious about. Again, we are putting a lot of attention looking at this. It may not be anything. It might be a first sign of a slowdown. We do not know yet, but we are watching this.

Air traffic, which is very important because this is clearly the end-customer flying the airplane, is somewhere on the same lines. I mean, if you look at the western world, it is kind of slow. It is 1% growth over the year. Of course, there is always that real imbalance between Asia-Pac and, namely, China and India, versus the rest of the world.

The load factors are doing fantastically well. I remember my time, I would have dreamed about load factor of these levels - 80% plus. We believe the long-term fundamentals are still around the 5% CAGR overall. However, clearly also something to watch.

If we focus on parked aircraft, we had a difficult year in 2015, which was, I would call it, based on two very specific things into our customer base. One was Malaysia [Airlines], that started to stop 13 777 Trent-powered, and also the bankruptcy of Transaero, which parked quite a lot of airplanes. These were the two main events.

Since then situation has recovered, I mean, when I look at 2016, we have done 24 Trent-powered transitions as compared to ten last year at the same period. Clearly, we have accelerated. As you probably know – we have been quite public with this – we have set up

new structures within Civil Aerospace to serve our customer and be more flexible and adaptive. Of course, our target is always to be better than the competition. If there is a 777 or if there is an A330 to be parked, I would prefer to see a Proctor or GE aircraft being parked as compared to mine. What we are doing, we accelerate the transition. We would try to get very, very close to the customers and get that motion moving.

Now, there is a point of caution I want to give everybody, as we will reach 50% of market share in the future - within the next three or four years, we should expect to have more aircrafts parked because this just a sign of maturity. Again, this is why it is very, very important for us to work on transitions mainly with the leasing companies such that we ease the Trent-powered transition and we protect our market.

In business jets, these charts represent the projected number of billionaires around the world. You probably know that probably better than I do. We expect that number to continue to grow especially in emerging countries.

I believe that when I speak to airframers, Gulf Stream, Bombardier or Embraer, I always get the same signal, which is the next year and the last year, and this year and the next year, look a bit difficult but the long-term growth in the business seems to be quite sustained largely because of these people who will be future customers of global corporate jets.

One of the key things as well, which is always of notice, that when we talk about this market, the corporate business, the large cabin - which is clearly the niche where we play - the large cabin is expecting to grow much faster than the rest of the corporate jet business, which gives us more opportunities.

So this is a little bit of view of the environment. Warren described the chart on the left, and this shows that we are pretty strong on the market where we are especially well-positioned on wide-body, but also well-positioned on narrow body. The brand on the corporate jet is really, really strong; I have to say that every time we go to people like Gulfstream, our brand means something for that niche of the market.

We continue to innovate in aftermarket. You could see the growth in aftermarket on the right-hand side. In 2015, we had about 3,500 engines in the world flying. Within ten years, we will nearly double that number. This means we are doing a lot on aftermarket; we are doing a lot on the network, to prepare and to serve these engines because all of these engines will require maintenance. Clearly, the use of big data which connects to the presentation that Paul has made yesterday, is really important because we count on a level of efficiency which is given by managing bigger data, EHM solutions and being more interactive with the airlines.

## **Key priorities**

If I go to the key priorities for the business – so if we had an elevator conversation today and you asked me what were my big priorities in the business, clearly the first one is ramp-up in capacity. We have a massive order book. We have to grow our capacity, especially on the large engines. It is a growth of about 20% year-over-year. We have done 20% last year. We are doing 20% this year; we will have to do 20% next year, until a point where we reach a peak of about 600 large engines a year. Clearly, this is all about capacity; this is all about efficiency; this is all about having the supply chain the right size, either internally or externally.

The second big thing we have in front of us is what we call NPI, New Product Introduction. As you know, we have three programmes in parallel; that is unprecedented in Rolls-Royce. We have three big programmes which are very, very close to each other: the Trent 7000, the Trent 1000-TEN and the Trent XWB-97K. These are the ones that we can start now to see. I hope, within weeks, you will hear more about where we are and we will be able to be a bit more public about this. You will see that – I think the bulk of the effort has been made, but there is still a lot of effort to get to entry into service.

The third one which is also very, very important are the fleet issues when we have one; the ability of the organisation to be flexible, to be agile, to propose new solutions, to use data, to be able to serve the customers and really be as close as we can be as Warren explained what we have done in the Trent 1000. I think coming from the airline industry, I can say that people understand that these are technological products. Sometimes, you have something you get surprised by. I think the reaction, and the reactivity that the system has, is the way you keep the customer with you or not. This is really, really important for us and again, we will show you a little bit more examples in the breakout sessions today.

Transformation in our system, as it has been presented this morning by Warren and David, is not just about restructuring. Yes, we have reduced by more than 20% the level of overhead in Civil, despite the fact that we are growing. However, on top of this, it is more about changing the way we do business: changing the pace, changing the actions, changing the accountabilities. Not having three people believing to be in charge who can make 180 degree [changes in] directions, but having one pilot on board and only one pilot in command at any time who is making decisions: consulting others, but making decisions. That is what the Transformation programme is.

For Civil, it is also a roadmap that identifies where best practices are in our whole business, which includes procurement, includes manufacturing, includes engineering, includes production, includes aftermarket. Where are these pockets of best practices around the world? How do we get these views and these methods and these tools and processes back into our business so that we improve efficiency? The Transformation programme grows over the next three years. We have a clear roadmap on that. I think it will deliver. It is delivering and it will continue to deliver.

Last but not the least, in an organisation and a business like ours, it is all about technology. We sell technology - sometimes, we forget - we believe we sell only products, but that is not the case. We sell technology. We sell fuel burn. We sell SFC. We serve reliability. All of these values that we serve are coming through technology. The reinvestment in the programme and you all know about the Advance programme, you all know about the UltraFan, this is preparing the 2025 deliveries from Rolls-Royce and it is absolutely important.

The world has changed a little bit. Boeing and Airbus, just to take these two, I think they have been impacted and hit in their reputation but also in their financial numbers, of delays for airplanes. The problem that they have now, they are asking for a demonstration of technology. It is no longer a world where you can show a nice PowerPoint. You need to show products.

## **Operational excellence**

If I go back to what we will present to you in the breakout room, so we will have a session on operational excellence. Mike Mosley is the VP in charge of all of operations in Civil. He will walk you through what we are doing to meet our operational targets, ramp-up and quality, in particular. I will not go into any detail - you will have the session with Mike...and you will have an opportunity for questions. Likewise, on aftermarket, Dominic Horwood, who is the VP in charge of customers and aftermarket, will walk you through what we are doing in the fleet to serve the customer better and get closer. I will not go there, in order to save a little bit of time.

## **Summary**

In summary, this is where we are. We have a massive ramp-up – unprecedented for Rolls-Royce, but we are on it; we know what we have to do. You will see good pockets of examples of how we move the needle. The Transformation programme, which we call 'Fly' in Civil Aerospace, also delivers well. You will see in both aftermarket and operation presentations examples of things that we are transforming. Addressing the in-flight issues is absolutely key to preserve our reputation and keep the customer with us. That is a big, big focus for us.

The long-term outlook of our business looks very, very positive - we are moving the needle. This company, by 2020, will have beaten GE on the large engines. This is something sometimes we forget, but we should not because the customers and the market does not. We will have beaten GE by 2020 in terms of market share and in terms of engine deliveries. With that, thank you very much.

# **Defence Aerospace**

Chris Cholerton

President, Defence Aerospace, Rolls-Royce

#### **Business overview**

Good morning, everyone. I am Chris Cholerton, President of the Defence Aerospace business. I am going to start today with just a short overview of the business, giving some context on the market and then focusing on our three strategic priorities, in what I think is an exciting time for the Defence business.

We operate in all four segments of the market: transport and patrol, where we are the market leader, particularly focused on tactical transport in combat, in trainers and in helicopters. In our core markets of combat and transport and patrol, we have strong positions, and it is 80% of the revenue in the business. We also have a large and mature installed fleet of some 16,000 military engines. Actually, on top of that, you could add 15,000 civil helicopter engines that the business produce and support. It drives a strong focus on maximising value from that aftermarket. That is the breakout session which you will see later, which I will describe shortly.

If we look at the market environment, Defence spending: it was a very hot topic last night at dinner and conversation, particularly in light of the US election. I thinking the forecast will show that Defence spending over the next five or ten years is growing at a compound annual growth rate of just under 1%. However, there are some differences around the world in that. Broadly flat in UK and US and Europe; growing in the Middle East, which is 17% of our revenue. Growing even more strongly in four countries I would pick up there, which we have given some particular focus to. In South Korea, Turkey, India and Japan, that grows close to 3%.

## **US** elections

I was asked many times last night about the impact of the US elections. Clearly, we are seeing some very positive intent. I think we just need to see how that converts into policy and action, but clearly some positive mood music. It will have to include repealing the Budget Control Act, of course, which is currently in place till 2021.

#### Market environment

I think also, now, the environment of our market is very competitive. There are few new platforms. That gives intense competition when there is a new platform. We are seeing affordability at the heart of every customer decision. Some regulatory pressure coming on the Single Source Regulatory Office in the UK. We are seeing pricing pressures. That has caused us to drive significant and aggressive cost reductions in recent years through our business. You have seen that that has been successful in actually protecting some very attractive returns through that period. We continue to drive cost base reduction to sustain returns in the level of 15% to 17% return on sales.

## Strategic priorities

Our strategic priorities are in combat. We need to secure a new combat position, perpetuate our capability in military engine design. In transport and patrol, it is about defending that

market leading position and growing when those new opportunities arise. In services, to continue to innovate to maximise that value from the aftermarket.

#### Combat

Starting with combat, on the right-hand side, let me just touch briefly on a couple of our existing programmes. Clearly, the innovative lifts system on the F-35B joint strike fighter, a hugely valuable programme to us, and one which is now ramping up and growing. Our output of that will double over the next three years. The Typhoon with the EJ200 engine in which we have a share via EuroJet, clearly, still running active campaigns currently in the Middle East, but other opportunities in Europe and later in Asia.

However, our primary focus in the combat sector is to secure new opportunities. We are delighted to be part of the UK-French or the Anglo-French FCAS programme, a  $\[ \in \] 2$  billion investment in the development of an unmanned combat vehicle in its formative stages. We are also pursuing opportunities to power the indigenous fighter aircraft which are being planned in a number of countries – Turkey, India, Japan, in particular, with intense activity currently in Turkey. In each of those markets, technology transfer and localisation of manufacture are highly valued.

## Transport and patrol

In transport and patrol, our priority is to defend our market-leading position and grow via new applications when they arise. An example being the future vertical lift programme of the US Army, which is starting to get some traction. To this end, we are investing heavily in both product technology, to show we have a competitive product when those competitions arise, and also in our operational capability, to ensure we have competitive facilities from which to deliver those products.

## Technology

In technology, we are investing both in increasing the scope on our existing products. An example shown there in the bottom-left is an infrared suppressor for the V22 and also for the C130, adding some scope to our supply. We have just received, albeit a bit small, our first contracts so far for that technology. We are also investing in component and system-level technology for the next generation of engine in this segment.

## Operational footprint

A big and significant investment is in Indianapolis in our operational footprint, where we are completely revitalising that operational footprint. We are going to halve the footprint there and repurpose the remaining footprint and also invest in new manufacturing technology, so significantly reducing our operating cost in that facility and driving our productivity. It is another example of the continued drive we have in the business on reducing our cost base which is critical to that future competitiveness.

## Aftermarket

On aftermarket, this is the breakout session you are going to see which will be led by Paul Craig, my Director of Services. It is a hugely important area for us. It is something I think we do very well. It is something we are continuing to innovate to release and maximise more value.

A few takeaways I will bring out before the breakout session. Enhancing value at lower cost. What we are doing here is seeking to upsell our level of services with customers. We have roughly a third of our aftermarket revenue is from time and material, about a third is on fixed price repairs and about a third, roughly, is on long-term service agreements. Again, we can realise our value by upselling those who are to yet on the full long-term service agreement.

Also, driving a lower cost. This has been a successful area for us in recent years and we continue to push it hard via investing in new repair technology and also in the use of data – of operational data and that data we have via being the OEM – to have more optimised and intelligent workscapes at MROs to drive down the cost.

It is important to us, with such a mature fleet, that we work to extend the life of those fleets in service. Examples here that Paul shared are around inserting technology kits to old engines which transform their capability and their performance and, therefore, extends their life in service to the customer's benefit and our benefit. We have opened service centres in the UK and the US, Saudi Arabia and I guess next year, in India to that end.

## **Summary**

I think strong positions in our core markets of transport, patrol and combat. We are investing in technology to protect those positions, and in our operational capability to drive competitiveness. A real focus on delivering further aftermarket value from that very large and mature installed base. As I said, I think that continued drive on cost base with those strong positions will give returns in the 15% to 17% return on sales through that period of investment and with that pricing pressure already strived. I think there are some exciting times and exciting opportunities in the Defence world. Thank you.

# **Power Systems**

Marcus Wassenberg

Chief Financial Officer, Rolls-Royce Power Systems AG, Rolls-Royce

## **Introductory remarks**

A very good morning to you. I am Marcus Wassenberg, the CFO of Rolls-Royce Power Systems. I am very grateful to introduce my company to you. We were founded in 1907 by Wilhelm Maybach, one of the pioneers of the diesel engine. I think this is why our company is still thinking 'engines' first. May it be the Bergen engines for medium speed or the 1600, 2000 or 4000 Series for high speed. However, we are thinking engines first. Then, we are thinking about the market and how we address the market. That leads to a broad portfolio of applications that we address in the marketplace.

You can see that we are rooted in Governmental and Marine, which accounts for around about 45% of our business. That is a business that is long-cycle. When I talk about long-cycled business, I mean 9-15 months; completely different from Aero, obviously. And Power Gen, which is a business that is bringing high volume. We are in applications of rail, mining, oil and gas, and agriculture, which around about account for 20% of our business in injection systems.

It is that portfolio that makes it easy for us to bring in a revenue stream that is more or less stable within a certain corridor. Even when David alluded to the problems we see in the oil and gas market, it will not shake us as much as in part of our peer groups. On the other hand, it comes with a certain level of complexity due to the increasing number of regulations on a global scale because, obviously, we have to maintain the technological leadership in all of those applications and adjust it to the increasing number of emission regulations.

## Marketplace positioning

If we then see the market, we are addressing the market or the global market is around about £17 billion. It is growing faster than the GDP, driven by megatrends such as urbanisation, mobility, higher energy demands. If you were to look at the market and split it, it is basically centred around Power Gen, which is close to almost 50% of the market. If you were to combine Governmental and Marine, it would then give you the same share of market size for Governmental and Marine, real mining, oil and gas and C&A.

If you were to look at how we are positioned in the marketplace, then we are in a top three level where IP content is very, very important, such as Naval and Defence, Yacht business, or mission-critical applications in the Power Gen area where reliability is important and performance is very important. On the other hand, you can see that these are areas of growth which are interesting for us because we have a meaningful footprint already, particularly in the Power Gen application.

That translates into very simple strategy. Our core, basically, is the Naval and the Defence business. This is where our DNA comes from; this is very strong. Secondly, this is where we are benchmarked vs the peer group; we need to maintain this position by all means because this does not load the factory alone. We need to grow in high volume Power Gen applications which are very strong in mission-critical applications such as applications for data centre or

hospitals. We need to grow in applications like continuous Power Gen and standby Power Gen.

We need to grow our service offerings: service is already a very significant part of our business; we need to grow it. We do it not only by increasing the fleet, obviously, in Naval and Governmental Power Gen, but we have to selectively invest into industrial applications that are service-intensive and grow our business over there.

## Strategic priorities

Then if you ask for our strategic priorities, it is: a) delivering on our Transformation programme and I will come to that in a second, b) secondly, we need to maintain the leadership and technology that has characterised our business for 100 years. It is crucially important for us. That means that we have to invest in hybrid solutions. You saw the hybrid train in the beginning of the presentation. We need to invest in gas. We need to invest in systems - that is very important to us. We need to replace our existing product range with successor products that really fulfil customers' needs.

We need to pursue additional growth opportunities, and that very much alludes to the things that Paul has said yesterday. We have to increase our digital offering and harvest the knowhow that is available in the Group for us as well as partner up with strategic partnerships as we just did with Yuchai in China there in the second area to offer system competence to our customers.

#### **Transformation**

Talking about the Transformation, this picture is just a very simple expression of the four modules that actually form our programme, our RRPS 2018 'Shaping Our Future'. And it is not only a cost programme. It is very much driven by the fact that we have to shape our markets, our revenue stream, the composition of our revenue stream, the composition of our product, because we need to take out complexity of the business in order to cope with the magnitude of applications. However, not every application do we need to be full-range. Therefore, this is very important to us and from thereon, actually, we are then streamlining the whole organisation by taking cost out, partnering up with other elements of the Group to offer shared service solutions. We try to speed up decision-making by bringing decisions closer to the business, closer to the market and, therefore, improve flexibility and resilience.

At the same time, we need to shape our ambitions in the sales & service department that sounds a little bit technical maybe, but basically, what we are trying to do here if, for example, we are taking down lead times for great engine overhauls by half. Actually, we have achieved that already and we are sure that this will bring us more orders in the years to come in the service department.

Then, shaping edge is about China. I just talked about the joint venture that we just announced with Yuchai, which is about the Series 4000, lowering our cost base on the one hand; on the other hand, bringing in more market access for us in a very important market and leverage the opportunities that digital brings in industry, that 4.0 brings with it. Actually, it is a huge opportunity for us at Rolls-Royce Power Systems because we can leverage from the experienced that our colleagues in Aero and Marine have. Leveraging digital opportunities in manufacturing and service offering is very important to us.

If I am now taking those elements and transform it into R&D: Peter Pelemis, our Director for Product Strategy will talk about that in the breakout session. The priorities that this brings along for R&D – and I put it in my non-engineering, more simple terms is basically: focus on customer requirements, i.e., in improved lifecycle cost situation; focus on investments for the lead applications, lead applications are Governmental Navy, on the one hand, and Power Gen on the other hand; invest in new growth areas such as gas, system and hybrid; and offer new services based on digital and system integration offerings.

With that, I hope I was able to talk about the broad and diverse market positioning that Rolls-Royce Power Systems has. I made clear to you the clear strategic direction that we are following, that the Transformation programme that we initiated is well underway and first results are already achieved. The increased focus that we have from limiting, shrinking, focusing on the product portfolio and the discipline that it brings now in the programme that Peter will elaborate on in the breakout session. With that, I thank you very much and hand over to Mikael and Marine.

## **Marine**

#### Mikael Makinen

President, Marine, Rolls-Royce

## **Introductory remarks**

Thank you. My name is Mikael Makinen. I am heading the Marine business. I have been with the company for two and a half years.

Marine, well, we all know what has happened to the oil price. We all know what is happening to the day rates and so on. However, we have to remember a few things. I have been in the business my whole life. It is a cyclical business. It will come back. It will change. It will be an other type of business. However, when it comes back, it will be, again, a very, very interesting business.

## **Hurtigruten cruise vessel**

The first slide here is a Hurtigruten cruise vessel. Nothing happens on the offshore market in Norway right now - very, very few projects. But at the same time, our offshore people managed to get an order for Hurtigruten. We have designed the ship; we have done all the propulsion systems it, the whole bridge, communications systems, some very exciting future possibilities of using batteries and so on. That knowledge that we have in offshore, it is not so that it disappears and it cannot be used anywhere. We just have to find out an application for it.

#### Market

Let us have a look at the market. Yes, I have here a few slides. If we first look at the dotted line on the left-hand side, Clarkson in March – what they said how the market will go down. It will come up later. Six months later, Clarkson is more pessimistic. That is typical in a market, where you do not really know what is happening, where is it going. If we look at the light blue curve. That is the Douglas-Westwood exploration and production spending in offshore. Again, same type of curve, then coming back.

Do I believe that these curves are right? At least the history is right, yes. However, I do not think that we will tomorrow see a big upturn in the market. However, it will come back. I think it will be a slow kind of a U-turn, coming back, let us say, one year later than this. Exploration and production will start coming back about one year before you will start to see big orders, because we have to remember there are a lot of idle vessels out there right now that will be firstly deployed before the market turns back.

How was our performance? It is very similar. You can see revenue, profit going down. That created, in my opinion, both an opportunity and the need to do a transformation. Yes, you can say that we are behind the curve. However, I think we are taking very, very decisive actions here. You will hear about it in the breakout session later what we have done, going from two and a half years ago, we had 27 operational sites. Now, we are going down, you will see later, to very, very few – so a big transformation had to happen.

## **Strategy**

Our strategy. As I said earlier, we are very, very good at solutions, very good at complicated solutions, applications, designs for customers. Lets use it in Wind Power, in Navy, in other

types of applications now when offshore is down. I think we have to protect our unique offering. Do not let that go.

The second thing is Paul Stein talked about digitalisation and 4.0. We talked about Marine 4.0; I think this is a huge opportunity. I think Marine is a very conservative market. However, I feel that this downturn has led to the fact that we will see Marine being in the forefront of something called Marine 4.0, digitalisation, reduced group, how you transfer that data from ship to shore, how you analyse the data, what you do with the data and so on.

I think this is very, very big. During my whole lifetime, I have not seen this big a change. In some literature, it said that the previous change was when the container came about 50 years ago. There is a big, big change that is happening in the Marine market. I think because of our unique position, then we have the knowledge within the Group, whether it is Defence or it is Civil or it is Nuclear or Power Systems. I think we can be one of the forerunners here if we do it right.

The third one, becoming shipshape. We call our transformation programme Shipshape. Shipshape, because it will never stop. Every time a ship goes out to sea, it has to be shipshape. It is not a one-time programme. We have to drive efficiency. It will never end. We have to take a big boost now and then, but then, we have to continue with it.

The next one is winning the customer engagement - very important. Do not forget to focus on customers during the big transformation. Do not turn inwards.

Marine, I think that we will talk about this in the breakout session more. I will not go into all the details here. However, as you can see here, it is very much in line with what Paul Stein said yesterday. This is what is happening in Marine. If we do it right, we have very, very exciting projects and development going on here. It is a long-term. It will not create a huge revenue in 2017 or 2018. However, I think that if we do it right, it will be a winning concept.

What will we look like in Marine? Going from 27 production sites, what will we be? We will have our Naval business based in US, based in UK. We will have innovation, namely Norway, Finland and Singapore - those will be our innovation hubs. Those will also be our hubs where we produce very complicated products. Then, new capabilities: Eastern Europe, where we are already moving some of the high-end engineering. We have a big set-up in India where we will move the rest of the engineering. We have a very good facility in Vietnam, which will be our production site for those more commoditised products or components. Then, of course, you need route to the market, and that is very much focused on Asia which is the biggest market for Marine.

I think that we have responded well to the market challenges, not losing what was good in the company. We continue to lower the fixed cost base. I think that that is a must. I do not think that we were as flexible as we could have been. In a cyclical market, you have to take it down to a certain level and then you can always take care of the better market conditions.

And focused investment; I also want to focus investment on those products that will create a future, not just spreading the investments all over. That means that some of the products will not have as much investments. Some of the products we will maybe stop over time, use them as cash cows and then they are phased out.

With these words, thank you very much. Now, it is over to Harry.

## Nuclear

## Harry Holt

President, Nuclear, Rolls-Royce

## **Introductory remarks**

Thank you, Mikael. Good morning, everyone. I am Harry Holt. I am President of the Nuclear business. I will give you a very brief overview of the business before leaving you with some of the key messages that I want you to take away from the breakout sessions that we have later on.

#### **Nuclear business**

The Nuclear business addresses both the Defence and the Civil markets. In Defence, we are the sole supplier of the nuclear steam-raising plant for all the Royal Navy submarines. We have been doing that for nigh on 60 years. In the Civil market, we provide safety-critical instrumentation and control systems and a range of other products and services, from engineering support, through the licensing process, through to the supply of high-value components and systems on the Nuclear island, and all the way through to service support during the operational life of a reactor across many of the world's civil nuclear power plants. We have been doing that for 10-20 years, so a slightly more recent journey in the Civil side of our business compared to Defence.

The revenue split is 80% in the Defence business, 20% in the Civil business. As you can see, we are split roughly 40% OE and 60% services across both sides of the business. Both sides have grown strongly over the last six to seven years - as a sector, we have trebled in size since 2009.

#### **Submarine**

Our Submarines business – and you will hear more about this later on – we design, we manufacture and we provide through life service support as a technical authority for the nuclear reactors on the Royal Navy's fleet of submarines. At the moment, that fleet consists of four Vanguard class deterrent missile submarines, providing the UK's continuous at-sea deterrent and seven hunter-killer or attack submarines currently, four of the old Trafalgar class boats and three of the brand new Astute boats.

Now, both these submarines provide a strategic capability for the nation. The Vanguard class of submarines is obviously our ultimate guarantee of security. However, the other boats – the attack boats – also provide a range of strategic defence for the nation, including the anonymity of the deterrent, keeping open our sea lines of communication, strategic national intelligence gathering and support to covert operations.

The reason for mentioning that is it gives this business strategic relevance at the very highest levels. It has resulted in a largely customer-funded business model that is very predictable and stable, offering attractive financial returns. Of course, it provides the bedrock on which we can grow our civil nuclear ambitions.

## Civil nuclear market

Everyone is aware of the world's increasing demand for energy. You all heard Paul talk last night about electricity being great stuff, I think you said. Most forecasters predict that the world's demand for electivity will increase by well over 60% in the next 20 or so years.

How that electricity is actually generated depends on a number of things. It depends, clearly, on the relative economics of the energy technologies. It depends on the make-up of the power market. It depends increasingly on government legislations around emission control and energy security. However, one thing everyone is agreed on is that low-carbon electricity will form an increasing proportion of that energy mix. All respected forecasters expect nuclear energy generation to be a stalwart within that sector, providing safe, secure, reliable, continuous, carbon-free base load power. That results in a market of about £80 billion per annum across the next 20 or so years.

That market covers the entire lifecycle from uranium mining all the way through to the civil construction of the power plant and the operation of that power plant. We, as a company, have capabilities that address about 25% of that overall market. In big chunks, the things that we do not do are obviously uranium mining, fuel processing and fuel fabrication. We are not involved in the civil side of the construction of a nuclear power plant. Obviously, we are not involved in the actual operation of that power plant throughout its 60 to 80-year lifecycle.

We have an addressable market of some £20 billion per annum. Then, there is some other genuine constraints that we have to work within that bring that target market down to about £5.5 billion per annum. One of those constraints is a geopolitical one. We clearly cannot do business with countries that do not have a nuclear cooperation agreement with the UK. That rules out, for example, India. Many of our utility customers have in-house capability, in particular engineering, which is not necessarily fixed in stone, but provides in the short term at least a little bit of a constraint on the available target market size for our business.

We address that market in three major areas. First of all, in new build, where our geographic focus is here in the UK, supporting the UK's ambitious new build programme. Secondly, in through-life service support where the geographic focus is in North America and Western Europe, which has over 50% of the world's current operating nuclear reactors. Then, the final area is modernisation and upgrade projects retrofitting, in particular, safety-critical control systems where the geographic focus is again in Western Europe and North America and, at the moment, a particular project that we are running in Finland.

## Key messages

As we go into the breakout sessions - and my session on engineering excellence - there are a number of key messages that I want you to takeaway. First of all, our Defence capability. Of course, some of this is classified so I am slightly restricted in what I can and cannot say, but it is a genuinely unique national capability that we have. We have nigh on 60 years of experience in designing, manufacturing and providing through-life service support for nuclear reactors that have powered the Royal Navy's fleet of submarines successfully for the last several decades.

That does provide a strategic relevance at the highest levels. It does result in a largely customer-funded business model that is predictable, stable and offers pretty attractive financial returns. Of course, it gives us a bedrock of capability and credibility that we can leverage for growth in the civil nuclear market.

That market in the civil application of nuclear power is very substantial. It is growing. If you look at it across all phases of lifecycle, it is pretty resilient. We have grown capabilities over the last few years to address that, particularly a new build and in through-life service support

and in major modernisation projects. That offers us attractive opportunities for organic growth. We believe we have created the platform for further optionality around growth options in this civil market beyond that. Thank you.