



# Rolls-Royce

## **Rolls-Royce 2014 Investor Briefing**

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Speakers:

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## Strategy

John Rishton

*Chief Executive Officer, Rolls-Royce*

### Overview of morning

#### *Opening comments*

Thank you very much indeed for joining us today; it really is terrific to see so many people here to come and listen to what we have to say about Rolls-Royce. I sometimes wonder when I issue these invitations whether many people are that interested or whether people are going to turn up, so it really is really terrific to see so many people here and I know we have many people joining us listening in on the phone lines and we also have the whole presentation on WebEx. So thank you very much indeed.

First of all let me introduce my colleagues on the podium here; I think you probably know most of them, but just to make sure. First of all, Mark Morris, who's our CFO; Tony Wood who's president of our aerospace division; Colin Smith, who's our engineering director; and Lawrie Haynes on the far right who's president of our marine and industrial power systems business. Tony and Mark are here to make presentations and Colin and Lawrie and the rest of the team to answer questions a little later.

Please remember that while today is not a trading update and while we are not issuing any new guidance, we will be talking about the future and our view of the group's prospects. This includes our current assumptions that of course can change, and therefore any forward-looking statements should be considered in that light.

#### *Introduction*

The purpose of today is to start to address some of the issues that many of you have raised about Rolls-Royce. Rolls-Royce is a complicated business. We understand that you need help understanding it and we know that we need to give you more help so that you can understand us better and do your jobs better and help us do our jobs better. The purpose of today is to start that. And I say the word start because I know, you know, we all know, that we're not going to answer everybody's questions in a single investor day meeting, but I believe that we can make a good start today.

With that in mind, we have already planned another day for our second investor day meeting this year. So a date for your diaries will be 21<sup>st</sup> October, when we will have a meeting in Norway in our marine centre in Ålesund, where we will focus primarily on our marine business. Next year we will have another two sessions, one of which will focus on our aerospace business, and then I think everybody will be pleased to learn that we will take you all to Friedrichshafen and talk about our high-speed reciprocating business, Rolls Royce Power Systems, formerly Tognum, out in Germany. We are going to make a start today; we have got plans for the future to help you get more familiar with the company.

## Strategy

### *Overview*

Today I am going to discuss something around strategy. Mark will talk about capital allocation and guidance and Tony and Mark will talk about Total Care Accounting. We will take a break after Mark Morris has talked about capital allocation and guidance, about 20 minutes, we will come back, talk about Total Care, and then we will run a Q&A session up until lunch time.

A couple of headlines from this morning which you'll all no doubt have read, but are worth saying. First of all we have said that we have no plans for any material M&A at present. Secondly we said that we would return the proceeds from the sale of our energy division by way of a share buyback, and Mark will talk a little more about that later on. Thirdly, we confirmed the guidance that we had issued to the market.

Now I'm going to take you through a number of slides that talk about our strategy, but I thought before I do that I would just start by saying how I would reflect on our business with a few points. Concentrate on what we are good at and where we add value. Concentrate on supporting our customers through the lifecycle of the product. Invest in technology. Concentrate on growth markets with barriers to entry. Create a portfolio of products that have some common and some complementary characteristics. Execute effectively and efficiently. I would say we have got plenty of opportunity in the future.

### *Evolution, not revolution*

Evolution not revolution. We have started to use some new words to describe our strategy and we have changed them for a number of reasons; to try to simplify it so that the organisation understands it but it does not change what we are trying to do, just how we talk about it. We talk about our strategy now really around customer innovation and profitable growth.

### *Innovation and the customer*

Customer: the heart of the business. Understanding intimately what our customers' needs and requirements are is essential for any business. We have to absolutely be clear on what our customers want, what they need and how we can help them.

The company has built its strength on innovation. The position that we have today has been earned because of the technology, the way that we do things. We are terrific at innovation. The great trick is to make sure that the innovation we do is what customers want. It is to link those two things closer together. If we innovate to provide customers with what they want, it will be successful. If we just innovate for the sake of doing something new, it is unlikely to be. So the important link between the two is that they are connected and that is why understanding our customers is so important.

### *Profitable growth*

Profitable growth, both words being important; it is not just about profit, it is not about growth, it is about growing profitably. It is absolutely essential. So nothing particularly new, just a different way of expressing our strategy compared to the past.

And what a past: in the last decade order book has gone from nearly £19 billion to nearly £72 billion, up nearly four times. Revenue has increased nearly three times from £5 billion to £15

billion, and profit is up about six times, from 0.3 to 0.6. What intrigues me a little bit is if I went back to 2003 and looked at our position there, I suspect that most people would not have believed that that was possible, and what I would suggest is that we have a stronger portfolio and stronger position today because of the work that has been done, so that we should look forward to the future with greater confidence than we would have done in 2003.

## **Who we are**

### *Group*

Who are we? Rolls-Royce is a complex power systems and services group. That is what we have done, that is what we do, and that is what we will do. We have always done it; we are doing it; we will do it. We have not changed. If I go back to our original memorandum of understanding, it is to provide power for vehicles for use on land or water or in the air. And that was in the memorandum in 1904. That is still what we do today; it is what we have done, what we do, what we will continue to do. We are not changing.

### *Power*

The power comes from three sources: gas turbines, reciprocating engines, and to a small extent, nuclear. That is where our power comes from, and again, if you went back in history of the company, the very first engine that Rolls-Royce produced was of course the reciprocating engine. So whilst we all think of Rolls-Royce as being gas turbines, actually if you look at the history and what we've done and where we've been, reciprocating engines and gas turbines have been a common theme for many, many years, nuclear since the middle of the 1950s.

### *Systems and services*

We do not just do power; we have a number of other products, lift fan, for example, and the joint strike fighter. In marine, we probably have the best portfolio of systems products – whether that's propellers, thrusters, water jets, winches, deck equipment, direct positioning systems, ship design– of anyone in that market.

And of course, services. Services run across the whole of the group and are very, very important to us. Look after the product through its life cycle, provide those services.

### *Divisions and businesses*

From an organisational perspective, we have divided ourselves into two: an aerospace division, and marine and industrial power systems. And underneath those we have the businesses of civil aerospace, defence aerospace, Rolls-Royce Power Systems, formerly Tognum, marine and our nuclear businesses.

If I look across at some of the connections between aerospace and marine, there are many. So in the marine business, we learn a lot from our aerodynamics in terms of how we could improve the propellers. We designed and invented a contra-rotating propeller, but that was based on our knowledge of aerodynamics. In our aerospace division we learnt from cavitation in the marine industry about how to improve our aerofuel pumps. We learn a lot across the two, between bearings and seals from marine to aerospace. We learn about composite materials and bonding processes between the two.

Underneath this, we have an infrastructure which supports both. The advanced manufacturing research centres, the way that we analyse, the methods that we use, the

processes, the production systems; all of those are common across the group. So whilst we organise ourselves in this way, there are strong links between the two. And we foster those strong links by moving people across the organisation to bring learning and different thinking from aero to marine or to industrial power systems and back the other way. This is not just two separate businesses completely separated; they are together.

### **Strong growth and better revenue balance**

I have already said we have grown revenue a lot. If I look at 2003, our marine and industrial power systems business was 27% of the total revenue. Not small. It has grown since then. I would say we have got a better balance in revenue, but we have grown our revenue hugely and got a better balance.

If I look at profit, it is the same story. Back in 2003, small profits, mostly aerospace, were 16%; 30% today. Over that period of time not only have we grown the profits, but the margins have almost doubled and in every single business unit the margins have gone up. So I would suggest that we have done well in terms of growing the business and improving the business's financial performance. We have been pretty good owners of those businesses.

### **Balanced revenue by product and type**

In terms of where the revenue comes from, as you would expect it is mostly gas turbines; reciprocating engines about 19%, marine equipment, 11% and nuclear relatively small at 4%. Nuclear is an important business for strategic reasons, I think, within Rolls-Royce. Lots of growth opportunity on the civil side of nuclear as we look forward in terms of the UK civil bill, but for strategic reasons it is very important. In the last couple of days, the Chinese premier was discussing nuclear and we were involved in those discussions. It has a bigger impact for the group than the size of the revenue.

Marine equipment is very important; if you look at it in terms of OE and aftermarket – again no surprise for you, you are familiar with this – it is roughly 50:50. But the marine industrial power systems part is relatively small compared to the aerospace. We are learning from aerospace into here to grow this business, and in fact Lawrie and his team in the marine business sold their first equivalent to Total Care package to one of our customers about three or four months ago. Again, we learn across the business.

### **Growth and balance driven by portfolio approach**

Now, if I look at our civil gas turbine business and our reciprocating businesses and just look at what I call some of the characteristics of those businesses, it was quite interesting. First of all I would say that the return on capital employed is about the same, and this is not just ours; we have looked around the industry, we have looked at the market and we have created this assessment in conjunction with some outside help.

So we have got a common, similar return on capital employed, but the characteristics are very different which is, again, no particular surprise to anyone. The barriers to entry in this market are very high; investment high, time to earn cash high, no surprises. Different in this one, shorter, and when I come to look around the industry, it comes as no particular surprise to me, and I suspect nor to you, that there are no pure-play civil businesses when you look at these kind of characteristics.

So, let me pause for a second there. I have tried to give you an overview of where we have been, what we have been doing and why and to give you some indications of the characteristics of the business. I guess what I am saying is we are doing what we have always done, because there has been quite a lot of speculation or feeling in the market that we are diversifying or doing something different. And we are not. We are doing more of what we have always done.

## **Our five priorities**

### *Overview*

Let me move on and talk about our priorities. Again, these should all be familiar to you. I will be astonished if you were surprised by any of these. The top two – fix the basics, the four Cs – everybody in the organisation is familiar with them. I think most people here will be familiar with them and culture. I have called those the bedrock. In some ways they are not strategic, but if we do not get them right delivering the strategic investment choices is more challenging. The bottom three – wide-body gas turbines, narrow-body and medium-speed reciprocating – I think I have talked to all investors, I think I have talked to everybody about this list being the list of priorities that we have. Let's just run through them.

### **Fix the basics: 4Cs**

Four Cs: customer, concentration, cost and cash. Let's just run through those.

#### *Customer*

On-time delivery to customer; in the past, when we were making very few engines, this was not a particularly important matter. It was always sort of important but it was not a hugely important issue. As our volumes have increased as a consequence of our success, it becomes really important. We are improving across the business, and as I have said to many of you, last year for the first time ever in civil large engines we were 100% up on time all through the year. In the other businesses it has improved through the year, so these are year-end numbers but the story is the same whatever numbers I use.

[BREAK IN AUDIO]

Just over there it shows the four things that we worry about: quality, delivery, responsiveness and reliability, and we are improving in all of those. In fact, we won an award from Airbus, and Boeing have really been complimentary most recently about our quality which is a terrific improvement. Delivery, I am showing you is improving. Our responsiveness to issues has improved, and our reliability as Tony will talk about is also improving. So we are making very, very good progress in terms of satisfying our customers which means that we can focus on what I would regard as more important discussions for Rolls-Royce: how can we do more to help you? How can we win more business? Clearly if you are not satisfied then winning more business is a problem. So that is really good.

Internal plan delivery; what I have said to many people is the only good news that I can find in these kind of numbers is that they are improving, but none of them are acceptable. Changing this is very hard. It drives back into our supply chain, it drives back into the way that we manufacture; everything about it is hard to change. But it is heading in the right direction and continues to head in the right direction. So when some of you say, 'Well, why aren't you making more progress on cost and cash?' I am afraid this is one of the reasons.

We have got to fix this to make some progress on cost and cash. And we are fixing it, but as we fix this and drive this towards 100% what we've also then got to do is narrow the gap between the plan and the delivery because the only way we get to the delivery to the customer on time when you've got these kind of numbers is by having a big buffer of material, time and everything else you can think of. You cannot do it any other way.

Again, to give you some encouragement and give me some encouragement, we are making progress. So on our 2700 we've improved our lead time by about 19% in the last year, so we're about 19 days compared to 20-odd and we're targeting to get to 15. We are making progress, but there is a lot more work to do.

#### *Concentration*

Concentration is something that I feel very strongly about, and making sure – as I said at the start – that we concentrate on what we are good at and where we add value. That is what this is about. We have got out of some businesses for a variety of reasons that you are familiar with, whether it's to do with scale or not, core competency, and we are focussing on businesses where we have core competency and what we are good at. Our business is complicated enough without being distracted. Do not get distracted; focus on what you are good at.

#### *Cost*

We are attacking cost across the organisation everywhere all the time. I have said to many of you when I first started talking about this it took a while for the organisation to get its head around it, and that was in my view because we sort of had record revenue, record profits, record order book, record share price; 'We are a successful company, what are you talking about?' We are making progress on that. If you went anywhere in our organisation now, people have got the cost message. They understand it is important. We are making progress.

We have got about 600 engineers focussing on cost reduction, about 400 on original equipment, looking at our existing products, driving costs down in our existing products. And they are making good progress. What we are finding is we are offsetting the escalation that we are getting through the supply chain with the cost reductions that these guys are generating. We have got a couple of hundred engineers working on the aftermarket, and they are actually driving costs down in absolute terms. We have got a lot of people working on this; it is really important to us.

Low-cost country sourcing we are about 20% at the moment, on average. It is slightly higher in the marine and industrial power systems business and in the aerospace business. We are targeting 40% by 2020 and 20% lower footprint by 2020. We have opened a lot of new plants and a lot more capacity as a consequence of the growth and we are driving performance in those plants as we had planned.

So, let me give you an example: in Sunderland, we used to have one man looking after a machine. We have now got one man looking after three machines. For our fan disks, we have reduced the lead time from 60 days to ten days in the new plant. The new plant in Sunderland has about double the productivity of the old plant, and that is consistent with many of the manufacturing facilities that we have created. So that is fantastic. It is exactly what we wanted to do. It is why we have been investing money in new facilities. But what

we are going to have to do is now close out the old and tired estate, because that is clearly a cost that we are carrying at the moment. So over the coming years, we think we will take out 20% of our footprint. We have got many new products in our advanced manufacturing research centres, whether that's around additive layer manufacturing, whether it is metal injection, moulding, many new projects coming to help our productivity.

Our total logistics costs for Rolls are about £300 million. I think we can reduce that by 20%. To give you an example, in our large engine business we found when we are looking at the detail of it is that many of our inbound components are visiting three or four warehouses and being handled 12 to 14 times. That is nonsense and we need to change that. We can do; there is lots of opportunity in the logistics costs. We will continue to improve inventory turns, we need to reduce our time to market of new products and adopt automotive industry practices, which is a long way ahead of us. We have reduced our indirect headcount. Business process optimisation, this is the sort of transaction processing stuff, again there is big opportunity for us there in terms of transforming what we do. Whether that is outsourcing, offshoring, making more efficient, rationalising, there is lots of opportunity and we are working hard in that. So across the business there are opportunities frankly everywhere and we are making progress on those opportunities.

#### *Cash*

We have got to drive our capex down, and we are talking about 4% rather than the current 4.9% in the three to five year time period. In terms of research and development, I think I have said to everybody who has asked me that I would expect it to ease as a percentage of revenue but nothing more than that. It is our lifeblood; it is what we do. It is really important to the future of the group. And we are driving inventory turn rates as you saw. Last year we went from 3 to 3.4 turns, from 3 and 12 to 3.4, which is the biggest increase we have had as an organisation and we improved across many of the divisions. We are driving further improvements in inventory turns this year; we will increase it again.

#### **Culture**

There is a quote that I like. I am not certain where I came from, but I have seen it many times. It is somewhere from the US, and reads: 'Culture eats strategy for breakfast.' The culture in Rolls-Royce – I have sort of referred to it – which is, 'We're a really successful company, why do we have to worry about cost?' Well, we have to worry about cost. We are getting it. We are changing the culture in the company. Traditionally we have been great at innovation and we need to retain that culture. We need to become more business-orientated, a more business-focussed culture, one that understands our customers and our cost, and we are making progress on that.

We are changing the way that people think about the business, act and behave. Culture's just about behaviours, what is important. Clearly we have got some ethics issues that you are all aware of with the SFO. We are working hard on those. We have got a new code of conduct. We have got something that we call the passbook, which describes what is or what is not acceptable in terms of behaviours, what is important around here. We the management team have spent a lot of time in the organisation because those kind of unethical behaviours are completely unacceptable to me and to the board, and we will not tolerate them. We have hired Lord Gold, who is helping us make sure that we have the right



policies and procedures in place and who has been a terrific help over the last year. We are addressing this issue. It is a serious issue and we are taking care of it.

### **Wide body civil GTs**

#### *Wide body aircraft deliveries to 2023*

Okay, wide-bodies. This is an external wide-body forecast. I think if I pick most wide-body forecasts for the next decade they would be something pretty similar to this. The headline number that gets me is that in the last decade about 2,000 deliveries, in the next decade 4,000 deliveries, so a huge growth in this market. It is an important market, and you may ask, 'Well, what about cancellations?' Yes, there will be cancellations and there will be new orders, but the scale of the change, the scale of delivery is significant. And I would suggest that this is not a bubble; it is driven by real demand.

So what is happening in the airline industry to create this? Well, I would suggest two things really. First of all the huge increase in fuel prices, which means that fuel for wide-bodied aircraft carriers is now the most significant cost item that they have to deal with, whereas historically it was always labour. So what they are looking at is replacing their old kit with new kit and some capacity expansion because of the cost of fuel, and the new kit is much more fuel-efficient than the old stuff. So fuel drives part of the change.

The second one of course is our emerging markets and the huge demand for growth there. I am sure if any of you go on holiday anywhere, you will be meeting Chinese people. Four or five years ago, you would not have met them on holiday. You will now, because they are travelling more and more and more and more. Huge growth in China, as an example, but it is across the emerging markets a huge demand for travel and huge growth potential. So I do not think it is a bubble; I think it is real and I think we will see this kind of growth.

#### *Projected Trent deliveries to 2023*

So what does that mean for us? Pretty similar, really; in the last decade we delivered about 1,600 Trent engines. We think in the next decade we are going to deliver about 4,000. So that is consistent with us having about 50% of the market, consistent with the growth of the wide-body aircraft. So let me talk a little bit about this chart. This chart attempts to show the trajectory of our Trent deliveries, from where we are today here in 2014 to where we will be in the future.

A few observations about this: growth in 2015, and starts picking up in 2016 and 2017. You know why: XWB ramp-up. So we are the only engine on the A350; the A350 enters service at the end of this year, there is a slow ramp-up in 2015, it really starts growing in 2016. The 1,000 comes in in 2017, more ramp-up, more volume. That is what is driving those changes. So that is the first observation that I would make.

The second observation I would make is that within this ramp-up, there will be ups and downs, and there will be ups and downs because things happen. So the A350 programme is going really, really well, certainly from the engine perspective, and with everything I hear from Airbus I have a great level of confidence. However, if there was a slippage, that would shift. As the ramp-up happens through the year, you get more volume of XWBs in the fourth quarter than the first or second quarter, so it moves to the right.

If we were looking at this chart five, six or seven years ago we would not have the kind of number of Trent 700s in the A330. Everyone would have thought the Trent 700s and the A330 would have finished production because the 787 was coming. The 787 was delayed, as you all know, therefore we still have Trent 700s being delivered. The A330 is going well. This changes year to year. We were more optimistic last year than we are at the moment about sales of A380s, in terms of volumes. We will see how this plays out.

Over this period of time we will get some volatility. We will still get to this. The volatility I am talking about is around the ramp-ups and short-term changes. It is not about the long-term direction of growth. Put a different way, we have sustainable growth in our business but that does not mean it will be consistent year on year. This is where we will end up, because that is the volume of wide-bodied aircraft. We are the only engine on the A350 and one of two on the 787. We are also one of two on the A380. We are the primary seller on the A330. The direction of travel is clear; the exact route to get there will have some bumps on it, I am sure.

I have talked a little about cash and some of the work we are doing on costs. If all of you are interested in cash conversion, I can tell you that as we get through that peak I would be looking for a change in the levels and rate of cash conversion. Of course this is dependent on whether we have another huge programme at that point in time.

#### *Rolls-Royce wide body installed thrust*

Let us look at installed thrust. If we look at this chart, which many of you have seen before, we see huge growth in thrust over this period. I have a couple of observations of which you are well aware. The longevity of these programmes is where the real value lies in Rolls-Royce. This light blue is the Trent 700 and the A330, still there in 2023. Whilst the RB211 is going down, there will still be RB211s in 2023. We have got nothing in the XWB today. This projection says it will be about 34% at that point in time. As I was saying earlier, if we look back to 2003 and the platforms and the positions we had then, and you look at where we are today, we are in a very different place. This is mainly due to the XWB and the Trent 1000 in particular, in terms of value growth, coupled with the success with the Trent 700. We are going to get lots of growth. The relationship revenue-wise from OE to aftermarket is about 4:1, as I think you are familiar with. That is four for the aftermarket, one for OE. In addition, thrust is not a bad proxy for revenue.

#### *Future Products*

I have said a couple of times R&D is essential for the company. We are great at innovation. We are great at the technical side. In February we announced two new products and whilst we are not a marketing company, the names of the products are quite marketable; Advance and UltraFan sound quite impressive to me.

We are investing in new technology and we have to do that. Some people I meet think you can stop and start, but you cannot in this game. There is a constant requirement to maintain, what we term internally as being match fit. You have got to keep training and keep the capabilities. You cannot afford to lose it. Most of the capabilities are people, our people. You do not lay them off and bring them back. Even if you could do that, they would only remember what they had in the past. They need to be constantly learning and constantly developing.

These two new engines have a variety of new technologies. These include composite fan cases and fan blades, to advanced ceramic matrix composites and lean burn technology. In the UltraFan, we will have power gearboxes. This drives fuel efficiency, which is what the carriers crave. We will continue to invest in new technology. We will not get behind. We will stay in front.

### **Narrow body civil GTs**

#### *Narrow body deliveries to 2023*

About seven or eight years ago Rolls was faced with a difficult decision. Four new engines were required which turned out to be the Trent 900, the Trent 1000 and the XWB for the A380, 787 and A350. There was also one called the Neo for the A320 family. Rolls looked at this and realised we only had resources to do three of the four. We chose to do the big three, not the fourth. We did not have the resources, the capability or the capacity to do the Neo.

Fast forward to a couple of years ago, we exited our joint venture, IAE. We exited it because in all joint ventures you need to have alignment between the partners. We were only on the old engine and not on the new engine, and the other partners were on the old and the new, so we no longer had alignment. We had to get out of the IAE. The decision was taken earlier than that. Getting out of IAE was a consequence of the earlier decision. That is how we have ended up in the position we are in, in the narrow body market.

If we look at the narrow body market, we see it is huge. Again, you are all familiar with that. There has been significant growth. It is about 71% of the volume and about 50% of the value. To clarify, wide body and narrow body are both approximately 50 in value, with more volume in the narrow body. We are going to get back in this market but it is not an issue for today or tomorrow because I do not think anybody here would expect a new narrow body aircraft before the middle of the next decade at the earliest.

From my perspective it is a great opportunity for us. It is a great future growth opportunity for us because if I am not in it today I am in it a little bit. It also brings other things like customer intimacy. If we are only talking wide body, that is just part of it. If you are talking about the whole of it, the wide and the narrow, you are much more intimate with your customer. It is a great volume market. Technology goes up and down, to the wide, to the large and from the small to the large. It is a good place to be and, by the way, it is what we do. Why would we not want to be in that market? It is not a decision for today or tomorrow but is something we are going to do. We have got to get back in that market.

### **Medium Speed Reciprocating Engines**

I have a couple of slides I am going to skip through. We put them in the deck to try and help you understand a bit about this market. I recognise people are less familiar with these markets than others. Low speed, two stroke engines are different technology to high and medium speed engines. Big, cathedral engines are mostly used in the merchant vessels. For high speed, this is the Tognum business that we have bought. These include power systems, a wide range of applications, marine and land power and off-road vehicles. About a third of our revenue there is marine related, about a third is off-road and about a third is power generation. This is good business. As I said earlier, we are going to take you over there next year and we will give you a deep dive into that business.

What we have done in medium speed is quite small. Marine and land power is quite common technology for high speed, but having Rolls-Royce powered systems is really helping us in our medium speed capability. It provides power to all marine segments. That is a list of some of the characteristics of those engines.

#### *Medium-speed market*

Let me talk a little bit about the industry. A number of people have said, 'Why would you want to be in this type of business? It has not grown and it has not done anything in this part of the world.' Certainly it was growing and now it is not, as a consequence of the global financial crisis. If you stand back and look at it you will see that the industry grows at about GDP over a long period of time. It is not just me that thinks that. If you talk to other providers, they would agree. There are a number of other drivers but GDP is the most significant. It is a pretty big market, at £35 billion to 2003. It is a growth market. The growth may have been a little bit more volatile recently than it was in the past.

#### *Portfolio pull-through*

Why engines? As I have said, we have got a terrific equipment systems base. We do a lot of other things very well. Whether it is electronics, the complex deck machinery, the propulsion systems or the vessel design, we have a very good portfolio. We are relatively weak at engines.

Engines, for many decisions in the industry, are the heart of the vessel. Rather like the narrow body, it drives a certain level of customer intimacy. With earlier customer engagement you get other opportunities to pull in the other equipment. The engine tends to be at the heart of the vessel and this helps the pull-through of the other equipment. It helps to be in the discussion early on with the operator, the vessel owner or the shipyard if the engine is the prime decision being made. If you have the engine equipment to offer them, it can help you sell the other equipment. That is it in a nutshell. The engine also happens to be where most of the aftermarket lies, as you would expect.

#### *Marine revenue strong in by product type*

If I look at our traditional marine business rather than our MIPS business, taking out submarines and power systems, this is how the revenue breaks down. Almost 90% is related to marine equipment where we have a terrific portfolio.

Medium speed engines is actually the weaker part in our portfolio. Medium speed engines in terms of marine sales are interesting to us because it completes the portfolio. It is also a powerful driver for the rest of the equipment. It is a virtuous circle. I can make it a lot more complicated than that, but that is it in a nut shell. It completes a virtuous circle and help drive pull-through. In addition, it is a growth market and it is something we understand and know. With the help of the people in power systems we are well placed in the medium speed reciprocating business.

Interestingly, in high speed reciprocating business, in our Power Systems business, we are finding that we are selling marine equipment off the back of their marine sales. Therefore the pull-through is real. It does happen. It is early days and there is a lot more to do, but we are already doing that.

## **Priorities**

Those are our priorities. First, it is the basics, the 4 C's, then culture, wide body, narrow body and medium speed reciprocating engines. As I said at the start, concentrate on what we are good at and where we can earn value. Concentrate on looking after the product with the life cycle of the product. Invest in technology. Build a portfolio of products that have common and complimentary characteristics. Execute efficiently and effectively and be in growth markets with barriers to entry. That is what we are doing. That is where we are. That is the strategy. And that is my final slide. Strong position in growth markets and concentrate on what we do, and we will see significant growth opportunities.

Now I am going to hand over to Mark who is going to talk about our capital allocation and guidance. Thanks very much.

## **Financial Framework**

Mark Morris

*Chief Financial Officer, Rolls-Royce*

### **Introduction**

Thank you John and good morning everyone. John has talked to you about our strategy, our business model and our market opportunities. What I want to do in this session is link how we think about strategy and opportunities to our internal decision making processes and financial discipline. I am going to talk a little bit about our capital allocation drivers and finally, our future financial guidance framework.

### **Strategy: Evolution not Revolution**

As John said, our strategy has evolved. Over the last decade we have invested, we have acquired and we have disposed of things. That said, fundamentally, our DNA is the same. We are a high-technology, complex power systems and services company. That informs everything that we do.

*Customer + innovation = profitable growth*

On the left there, you will see the three lenses we look through when we think about strategy: customer, innovations and profitable growth as John has talked about. Basically, customer plus innovation equals profitable growth, where we get it right. When we understand our customers we get the right innovation. When we do not understand our customers, of course we do not always get it right. That informs the decisions about why we may dispose of or get out of certain things.

So where are we today? As we look forward, what are we focussed on in terms of delivering shareholder value? There are six things. Let me just go through each of them. It is important.

*Delivering shareholder value*

Execute on organic growth programmes. Again, we see ourselves as a growth business first and foremost. We see great opportunities and this is predominantly around our Trent programmes. At the moment they are absorbing a lot of time and effort as we ramp-up and make sure we deliver our commitments to our customers. We have a huge order book giving us that great visibility.

Exit non-core and underperforming businesses. Of course, we have been doing this steadily. We have seen more recently the sale of our energy business. Prior to that, we exited some of our low carbon businesses and our recent joint venture on the RTM322.

Closest to my heart as CFO is driving financial performance; the 4 Cs, and in particular, cost and cash, are things we are relentlessly focussed on. And of course we are strongly focussed on closing the margin gap on our competitors, as we have told you before.

Integrating Rolls-Royce power systems. The big acquisition for us was Tognum. I am encouraged that we have been management controlled for about eighteen months and we are in the process of integration. There will be more to do when we become the 100% owners and we see more opportunities coming from that.

We have reorganised ourselves into two clear, strategic pillars. We are a power systems company that takes itself to the markets through two main platforms, gas turbines and reciprocating engines. Again, John has talked to you at length on those.

Finally, disciplined M&A; we have been a significant acquirer in the past and we have moved the company in. We will continue to look at M&A. It does not always have to be large M&A, or product and company bolt-ons. We do this because it informs who we are and ensures we stay ahead of the game, particularly around our technology and products.

### **Our decision framework**

#### *Where we invest*

I have put this chart up here because I just want you to understand how the Rolls-Royce mindset works. This is how we look at things when we are trying to evaluate where we invest. That is the strategic framework, which is on the left hand side. Again, I think John has given you the insights into where we see the opportunities.

In the middle we have technology, product and route to market. This is where we see ourselves. Again, high-technology is our lifeblood. This is where we invest. Barriers to entry keep us where are. They keep us match fit. It is important we stay match fit, looking at opportunities for product and where the growth markets are. Ultimately they manifest themselves in those two things at the bottom, first organic growth, R&D or spending on capex; second, M&A to acquire technology, products or route to market.

#### *How we invest*

Let me now focus on the bit on the right hand side, which is sort of how we think about and decide about investing. This is our financial framework, and we look at that again through what I call three main filters: growth metrics, capital efficiency, and financial strength. I put up a few of the main sort of KPIs and metrics that we look at, and this gives us the discipline. As you would expect, a lot of focus around the cost and cash side and driving financial performance, and again, how we focus on closing the margins with our competition.

But both those sides need to be balanced with those three criteria in the middle, and they will drive different behaviours and different thought processes, depending on whether it is strategic or financial in nature; short- versus long-term and of course, growth versus profitability. I have put those two up there because quite often when you are growing it is quite difficult to grow profitability. I am not saying you cannot, but it is sometimes a trade-off.

All of the time, what we are thinking about is how do we maximise long-term value creation for us and our shareholders. Importantly, whenever we look at any form of investment, one of the minimum requirements that we have an eye on are that it exceeds our WACC, and of course we expect it to be considerably higher than that. WACC, I carry a number of about 9% around in my head, post-tax. Clearly there is an element of subjectivity around some of the assumptions, and we are all familiar that there is generally a range, if I was to go to the markets and ask what I thought, or what you thought our WACC was.

### **Importance of credit rating**

#### *Considerations*

Underpinning our financial framework, there are really two key drivers: credit rating, and capital allocation discipline and thought process, which I am going to come onto in a minute.

Now, the reason I say credit rating is that it is not a negative constraint, but it is an important consideration for us in our business. You are familiar with us, and the type of business we are. It is important that we have a good credit rating. We are a long cycle business, capital intensive, sometimes decades to realise some of our investments. We enter long-term contracts with governments and customers, sometimes as long as twenty years; we commit to aircraft programmes for people like Boeing and Airbus that will run for many, many years. We need to make sure they have the confidence in us that we will be around to fulfil our obligations and processes over that period.

It provides access to long-term finance for the debt capital markets, which is far more in keeping with our investment cycles, but importantly, the reason I mention it, recognising that this is more about equity rather than debt today is that the credit rating starts to define the architecture and capital structure that we can live within around the various ratios the rating agencies look at. And you are all familiar: net debt to EBITDA, funds from operations EBITDA, leverage and liquidity ratios, and the like.

#### *Criteria and current rating*

So where do we sit in this? We are very clear we want to maintain the investment grade rating, and we target a range between A- and A+. That is a generic range, of course; the equivalent for Moody's would be A3 to A1, and similarly when we look between S&P, Moody's and Fitch, that is the sort of thing that we are thinking about. Of course, we recognise it is not our gift to give, it is one we need to earn and convince our rating agencies of, but it is very focussed on our agenda, on how we look at things. Currently, we are A with S&P, and A3 with Moody's.

### **Disciplined approach to capital allocation**

So I will now turn to capital allocation. We think about capital allocation at two levels: at the group level, and those four things down the side that I want to come to talk about in a minute, and the divisional level, which is once we have thought through the group level, how do we allocate the capital within our businesses? How do they all compete for capital in terms of where we see opportunities? It varies through the cycle, and depending on what the dynamics of the markets are. So let me just start at the group level and go through.

*Capex and R&D spend*

As I have said before, first and foremost we see ourselves as a growth business, so when we look at our capital allocation, we look at it sequentially, starting at the top, which is what is most dear to our heart: investing in our own business, organic growth, R&D, the lifeblood of what we do. The reason there are high barriers to entry in this business is because of the technology and the superiority of that technology that keeps us where we are. The important part is that in order to stay where we are, we need to keep investing to stay match fit, and stay ahead of the game. Obviously, when you do R&D, it generally generates capex which is an enabler, and of course that is a part that again moves through the cycle.

Let me just talk a little bit about R&D. It is currently around 4.9%, as John said; at best, it might ease as we grow over time, but we are not ashamed to say that it is a vital part of our business. It is a growing concern that we continue to invest heavily, but as revenues grow we do see the opportunity for some easing, although in absolute terms we expect it to continue to grow.

R&D takes a number of forms: research and technology, which is much more generic; R&D on new programmes; and product upgrades, as well as cost reductions, of course. John mentioned to you the 600 engineers that we talk about, 400 of them OE and 200 on the aftermarket, and again, this is another way in which we grind out costs and improve reliability. It is very, very important to us.

On the capex side, we typically run between about 3% and 5% through the cycle. We are currently around five, and we said we are going to drive towards four as we go forward over the next three to five years. And again, when I think about capex, and look back over what we have got, we have done a lot of growth for capacity requirements; we have underinvested historically in IT, and we have been catching up on that, it is very important enabler in our business; but a large part of it is around the maintenance of the estate, as I call it. John referenced to you the drive and opportunities that we see in rationalising our footprint. We have got a number of old factories that we are getting out of, a lot of work to bring down and sweat harder the footprint as we go forward, which will drive efficiencies and drive costs out.

We are very disciplined in our approach in how we look at both R&D and capex, much more dynamic and intelligent decision making around scale and themes that we can bring together, and there are some really exciting things that we are doing there that we are looking into.

*Sustainable dividend policy*

Of course, once we have a look at our growth business, we understand that it is important that we reward our shareholders. As you know, we are committed to a progressive dividend policy with underlying growth. We have returned over £1.65 billion to shareholders over the last five years. Now, C Shares we have maintained – I know that it is a relatively complex dynamic – it is maintained predominantly for some tax advantages and obviously for some optionality it provides to investors in terms of receiving a capital or income distribution return, and we plan to carry on with that.

*Disciplined M&A policy*

As we go through investing in our business, creating a regular return to our shareholders, we also have opportunities elsewhere to invest. We have a disciplined approach to M&A, and this is wherever we are in the cycle, we think about this. So when I talk about M&A, let me be



clear: it can also mean partnerships. It can mean joint ventures. It can mean small acquisitions, or capex acquisitions as I call them, or it can be larger ones. It can be in relation to either technology, product, or routes to market. That middle column there is the sort of focus that you might expect us to look at. I do not think any of them will be a surprise to you; they are just ongoing parts as we keep recognising the need for technology and products, or routes to market.

I want to focus a little bit more on the criteria side. As I said, we define ourselves as a complex power systems and services company. That defines where we have our strategic fit. It is not around diversification, it is all around power systems. We are relentless when we look at the synergies that we can quantify them and commit to them, both on the cost and revenue side. We have a number of targets that we look at and of course there are additional ones to these, but these are the ones that we target: return on invested capital to be greater than our WACC within three years, and obviously at minimum the IRR would exceed WACC. Generally, we focus long-term much more on IRR than WACC, because they sort of compare each other. WACC is more of a transient, whereas return on invested capital is in a given year. And of course we think about integration capabilities. How much have we got on our plate at any one time? Can we accommodate? Some deals are resource intensive on the human capital side, some can be more research intensive on the financial capital side, and we have to balance that. We have to think about the sequencing of things that are going on because things change over time.

#### *Returns of capital*

I have talked about the importance of having a strong and efficient balance sheet, and one of the reasons that we start to define ourselves through our rating is that is important for providing those confidences that I relayed to you earlier on. So that is a sort of key part for us, but obviously within that you can see that when we have either surplus cash, or cash that has come from a discrete source such as a sale, we were certainly thinking about capital to shareholders, and of course that is exactly what we have done in what we announced this morning.

But I do not want anyone out there to think that we have run out of ideas: it is about balance sheet efficiency, and the fact that we have had some discrete proceeds from a sale that as we currently sit here today will put cash onto the balance sheet that when I look at our organic investment opportunities, the human capital, that we just have not got enough people at the moment to go and spend some of that.

So again, we are committed to ensuring that we have a strong but efficient balance sheet, and what I would say is that it is something that we will review at the board regularly. So we have announced a £1 billion share buyback. We think about a number of things in terms of how we return capital to shareholders; we think about the make-up of our register, the type of shareholder, the level of our share price, the ability to defray dilution from any disposal, and of course, some of the tax structuring opportunities.

#### *In summary*

To summarise, capex 3%–5% over the cycle, driving to 4% over the next three to five years. Net R&D around 4.9% currently; we have said you can expect it to ease as revenues grow over time slightly. We will continue with our progressive dividend policy in line with

underlying growth. We will focus on medium-term M&A, and again some of the targets around that. And we have announced a £1 billion share buyback in relation to the sale of the energy proceeds.

### **Future guidance framework**

#### *What we will give*

So that covers the capital allocation portion; so let us just turn to future guidance framework. Just to be clear, we are not giving any medium-term outlook guidance today. So what I am going to talk about today is the framework and what we will give it, how we will give it, and when we will give it going forward.

So if you just look at this chart I have put up, in year, next year, and medium-term, looking at the next three to five years. The left-hand column, you are all familiar with: it is what we currently give already, so the stuff we give at the group and segment level, and a few of the other criteria around things like capex and R&D spend and charge, and so forth.

We provided for next year revenue and profit guidance, and if you look at the medium-term that is what we are going to be giving as we go forward. Of course, most of you are familiar with that when we talk about guidance we have typically in the past used words like modest, strong, good, and the like. We are going to go away from that and move into percentage ranges, or absolute ranges, or numbers, and they are listed up there for you. So that is how we are going to give it.

#### *When we will give*

This is when we will give it. In year, we will provide it regularly at the prelims and interims, and at the IMS's. In relation to the following year, we will give you that at the November IMS. Normally – I am going to come back and say something else in a moment, but just follow my train of thought for a second – annual budget cycle normally finishes around the end of October, early November, so in time for the November IMS we will give you an update on the following year. And ditto when we have gone through our annual ten-year planning cycle which typically ends around the end of September, October time, we will provide you with the medium-term outlook which will be our sort of best view at the time that we will update annually.

Now, in relation to the medium-term outlook, this time around when we get to our October day – which I think is 21<sup>st</sup> October in Norway – if we are ready then, which we should be, we will provide that to you in October. But normally, it will be the November IMS.

### **Summary**

So, to summarise, we are clear on our strategy: a complex power systems and services company. We are clear on our priorities going forward. We have a disciplined approach to capital allocation; I think you have seen some of that in action in some of what we announced this morning. We are going to give more guidance going forward.

[BREAK IN AUDIO]

## TotalCare

Tony Wood

*President – Aerospace, Rolls-Royce*

### Agenda

So, John has spoken very much about our strategic opportunities and how we see the evolution of the company – the evolution, not revolution, over the long-term. And Mark has talked about how we decide and think about capital allocation, and the disciplined processes that we apply right the way across the business. But this morning, I am going to talk about TotalCare. I know certainly I spoke to some of you in Paris last year about the aerospace business. I am going to try and unpick for you, in more detail than I think we have shared before, the economics and the strategy behind TotalCare, and then I am going to be followed by Mark, who will do the really interesting bit on unpicking and clarifying some of the accounting, in direct response to some of the questions many of you have raised over recent months.

So what is it that we are trying to do with TotalCare? Well, it is very much about trying to maximise the value that we create for customers, and you will see that in terms of how TotalCare has evolved, the market has voted very positively on that, but also how it works for us as a business and how it works for you as shareholders in terms of creating and releasing the embedded value that we create from that growing installed base of products that John spent quite a bit of time on this morning, explaining how we see that evolving. And this very much underpins our confidence in how we see earnings and ultimately cash flow coming out of the business, from the services business model that we have been working at for a large number of years now.

### Group business model

So I would like to start by going back to the overall group, and then working specifically into the TotalCare piece of it. We are, as you have heard several times already, a high technology, complex power systems and services company, and we have products that have very long in-service lives in all of the divisions in which we operate. They are measured in decades rather than in years. And we have very strong positions in all of those products, and the growing markets in which they are positioned.

The company is being built around two very strong but connected pillars. We allocate capital obviously both to technology and to develop products, and then we build the services opportunity on the back of those products as we build and install base around the world, and that is true in every one of the markets that you see on the slide. We support those customers and those products through life, in terms of both the opportunity and the commitment that we make when we put products out there in the market. That can be done either through long-term service agreements, of which TotalCare is clearly a very familiar and very well-known brand within the market, but equally in aerospace, Mission Care, Corporate Care, for the military and the corporate business aircraft sectors also very well-known and very successful.

Equally, it is not just about long-term service agreements. We equally have a very important business, and for some customers the time and materials model still works, and generates

significant value. Half of the group's revenue, and a very strong contribution to both earnings and cash, came from our services business model and our services sales in 2013, where the slide shows some of the numbers there.

### *Aerospace*

So my focus today is going to be on aerospace, and it is going to be on TotalCare. 90% of our Trent fleet is now covered by our TotalCare long-term service agreement style contracts. That very much speaks to the value that exists for customers from the way in which we have packaged that service offering for them. But also, as John mentioned earlier on, the opportunity that the group has from what we know about doing this to start to build further on some of that opportunity in Lawrie's business in marine and industrial power, building capability and a similar approach to that business model. It is very telling and appropriate that we have just gained our first opportunity on a marine vessel, on a TotalCare style construct. LTSAs already represent about 45% of the total services revenue across the group, so it is becoming an increasingly important part of services.

### **Typical program life cycle**

#### *Services revenue is at least four times net OE selling price*

Just to start with, a very basic look at just how significant services is for a typical gas turbine now through life. At constant economics, the services revenue annuity stream is worth more than four times the OE net selling price. That is a fairly conservative view relative to other numbers you may see out there in the market, but a very significant multiple obviously of the benefit of getting an installed product out there in service. We invest, obviously, prior to that, for between five and seven years, to arm the initial program, creating the product.

We invest about £1 billion of R&D every time we launch a new product, and £0.5 billion of capex for a complete new engine and setting up the infrastructure and the supply chains to deliver them. Entry into service occurs around about seven years after the launch of the programme, and those products then are out there in service around the world for some twenty years or more.

It is interesting; if you were just to compare where we sit at the moment with the various engine programmes, we literally have the Trent XWB on the A350, right at the left hand end of the chart in front of you there, just about to enter service at the end of this year, fair and very good progress so far on that programme. The Trent 700, in a 1995 EIS, so already some 20 years into its life, but still selling well, and a big part of our delivery order board this year and into next. And the RB211s, very much, if you take the 535 on the Boeing 757, 1983, so already some 30 years into its service life. And those aircraft will continue to fly for quite some time yet as you have seen on some of the earlier slides today. First tier operators are typically contracting for between 10–15 year, but there is always a second tier opportunity, and we are typically contracting for between five and seven years for the second tier operator of those aircraft.

#### *Value from both TotalCare and Time & Materials*

Just to try and put into perspective the value that both TotalCare and Time & Materials solutions create, we offer TotalCare packages on a full-term basis for the full life of the engine. We also offer them on a term basis. As you get towards the end of the anticipated life of the platform, we start to look at tailored solutions with some of the airlines that are

operating older assets, and that is very true of the approach that we are taking and how we are keeping flying and keeping those products competitive on some of the older RB211 powered aircraft that are out there.

Both TotalCare and Time & Materials solutions are important to us, in terms of that relationship with the airlines of keeping efficient and profitable aircraft flying for them around the world. But what is important here is that we have defined terms in our OE contracts, under which Rolls-Royce sells and the operator buys spare parts, either from Rolls-Royce, or from a Rolls-Royce approved vendor. That is irrespective of whether the contracting terms are TotalCare or the time and materials support model that you see there.

### **Embedded services value driven by thrust**

#### *Installed thrust doubles by 2023*

So this is the value creation. This is the embedded value story, that whilst the installed base will grow by about 50% over the next decade, and the direction of travel is clear despite the sort of perturbations that can happen on any individual programme, that by 2023 the installed base is 50% bigger. Behind that, Rolls-Royce sees a doubling of thrust in the same period, and that really is the engine room of growth for us in terms of how the Trent engine's success, the light blue in the middle of the slide, is far more than off-setting the reduction in the older RB211 fleet.

Obviously the thrust is very much driving that opportunity. There is confidence behind that chart underpinned by the £60 billion order book that we have in aerospace, civil aerospace, of which some 30 billion is related to the Trent XWB. The speed at which this grows, the cadence is changing in terms of how we are ramping up production. It has taken us 18 years in the company to deliver the first 2000 Trent engines; we will deliver the next 2000 over the next five years.

The factories are largely in place. We have made significant strides, significant investments around the world, in Singapore, in the United Kingdom, in Crosspointe in North America, but we will be continuing to go through the process of transitioning from older facilities to fully load the new facilities as we move work through onto new processes, and also to accommodate the growth that is coming through. So, there will be a process of investment and upgrade that continues over the next two or three years, as we work our way up to peak capacity.

This is the largest expansion in the wide body aircraft fleet of the world in history, and obviously that is a very big part of the Rolls-Royce civil aerospace story. Thrust is a very good proxy for services revenue, and of our order book, we only take about 29% of the total order book, because we only take seven years, a fairly modest portion, despite those contracts being between ten and 15 years typically when we contract them.

The RB211 – an interesting statistic – is 20% of the installed base in 2013, but only 13% of the thrust. That is largely because the older aircraft are starting to be used less, or are being used on freighter operations. The light blue Trent fleet, very much the installed base, is driving thrust and the thrust is a very good proxy for us.

## **Global Service Capability**

A lot of what Mark and I are going to focus on will be about the large engine business, and what sits behind this. I would like to start by just reflecting on the fact that services for Rolls-Royce and supporting our large and growing installed base is nothing new. This is a world-leading capability that we have spent the last twenty years investing in. I have been with the company for some 15 years in various divisions, and this has been a consistent enduring theme, of how we position ourselves to take the services opportunity that is represented by our installed base. It has taken 20 years to develop, it is very hard to replicate, and we are uniquely positioned as the original equipment designer and manufacturer of these products to support them, and we see services on what I describe as a four centre model.

### *Support centres*

So the big piece of the activity, where most of our people and cost is based, is in our Service Delivery Centres, the overall centres that are supporting these products around the world. Some 8,000 people, Rolls-Royce or joint venture employees, and in addition to that, we have independent shops, licensed shops, around the world, also supporting our products. So that is where the real work gets done of overhauling and repairing engines.

We have Operations Centres, three of them around the world in the United States, the United Kingdom and Germany that are monitoring the fleet. That is where the engine health monitoring and the management of very large volumes of data, some 22 million engine health monitoring reports that we are dealing with every year, and around 5,000 overhauls that are being supported in the overhaul bases as those engines are pulled off-wing.

We also have Data Centres, something we have been focussing on a lot for the last few years or so: having one version of the truth, where all of the data associated with our products, configurations, the data that we are extracting every day from products and services is collected, which is all necessary to optimise both the performance of the product but also the cost base that we require to support it.

And then we have the Business Centres, and that is where a lot of the capability and some of the things Mark is going to talk about happens, where we manage the contracts and the very detailed work that goes on, which sits behind each and every one of these TotalCare contracts.

And a very large and dispersed number of Line Maintenance and On-Wing Care Centres, the very small dots, as you would expect at all the major airports and air hubs around the world. So it is a scalable infrastructure, it is a very significant capability, and it is a scalable business model to address the growth that I showed you on the previous chart, with the growing installed thrust.

## **Deep knowledge of our engines as OEM**

This chart is my best attempt to try and just get a layer underneath what we are actually doing in services, and doing in Rolls-Royce. There are three points at which we get a very deep and detailed understanding of the products that we have in service around the world. It is a unique and unparalleled piece of capability which supports those products through life.

We collate the design information for the 18,000 or so components that go into every one of the Trent engines. This includes all of the detailed design data and performance data that we derive from owning and developing the intellectual property behind the design. Our understanding also comes from the validation processes. These include testing engines on wing through test aircraft. We have four A350 test aircraft flying around the world today. We also have test bed engines running in many continents. Both are validating the product; however, we increasingly do validation using supercomputers to actually model the performance of the product. We reliably use computers and validate models at lower cost. That is a very big part of how we create data and the knowledge of the product from that validation process.

We also have the data we collect every day from engines in service. We are literally building terrabytes of data as we extract the data from the engine-health monitoring and engine control systems.

### **Airline perspective**

#### *Selecting the appropriate support model*

If we look at this through the lens of the airline, where does the conversation start? How will I support the engine on the airframe that I have selected? These are some of the typical operating costs for a power plant in service. An airline has to choose how to manage the list of items which you see on the left-hand side there. You clearly need to invest to maintain both the performance and also the availability and reliability of these engines through service.

#### *Balancing risk, capability and cost*

It is a balance of three things; the first is risk, the second is capability – just how much infrastructure and capability the airline has – and the third, ultimately, is cost and cost efficiency. TotalCare has become the model of choice for customers. That is really because it underpins. It transfers risk to Rolls-Royce because we guarantee the availability of the aircraft. We also have very predictable costs for the airline, through a dollar-per-hour revenue stream coming to Rolls-Royce from them. Rolls-Royce is taking and is best placed to manage the risk, through a focus on the reliability and the maintenance cost footprint as we look at these engines on a fleet basis worldwide.

### **TotalCare – value from risk management**

#### *Predictable engine service costs through risk transfer to Rolls-Royce*

What is in a TotalCare contract? I think we have perhaps not shared this level of detail before. There is a core TotalCare offering. All contracts have the same foundation for core services. First are the engine overhaul costs. Second are the reliability improvements that we are always working through and seeking to insert in the end-service fleet. Third is engine health monitoring; if you have a TotalCare package you are getting both trend monitoring and a very proactive approach to life management and the logistics issues that an airline has to manage to keep aircraft available whilst aircraft are going through the hangar for maintenance. Fourthly, we provide a fleet optimisation and logistics service: that is the fleet management part of the package. Finally, we provide a through-life warranty: when you sign with Rolls-Royce for ten to 15 years, that is a through-life warranty on that product. That is opposed to the normal warranties you would get in a time and material world, which actually lapse quite quickly. That means it reverts back to those cost risks being borne by the airline.

Therefore, it is absolutely a lower-risk package for the airline, with very predictable costs. We support full-service carriers right through to low-cost airlines. However, there is still an option for those airlines that have large maintenance businesses – the Lufthansas and Singapore Airlines – to participate in the maintenance activity: the labour associated with the overhaul.

TotalCare® is one unified price of contract. Beyond the items you see with a tick in the core packages, there are many upsell opportunities as well. These include things like life-limited parts or even spare engine support services. We can sell these things as a Time & Materials package, as the operator, the airline, still needs them. However, we can also incorporate those within a dollar-per-hour rate. Increasingly we are seeing some of those items transition to within the TotalCare® package.

I think the reason for showing you that is we have a very good track record at being able to manage the risk and deliver on those cost assumptions. Furthermore, as the fleet matures and our portfolio matures we get better at this every time. Now, with 20 years' experience on fleets like the Trent 700, this is really the heart of the capability and the confidence we have in being able to manage and get it right on our cost assumptions.

## **Revenue drivers**

### *Hours flown*

Looking at the revenue and the cost side of the equation very simply, what underpins our confidence in revenue? The main underpinning is global RPK, revenue passenger kilometres: the global fleet is being pushed at about a 4.5% increase in revenue passenger kilometres. Moreover, every airline around the world is working very hard on their load factors and their aircraft utilisation.

We would expect to see an engine on a wide-bodied aircraft run around 4,000 hours per year. However, we have arrangements and contractual thresholds in there for minimum utilisation. There are, therefore, quite a few protections around that. Should those change, it is a relatively easy and straightforward conversation for us to adjust the pricing model around that. That includes changes in the way in which the airline uses the aircraft change: the route structures, the stage lengths, the D-rate for the operations they are using it on.

### *Rate per hour*

The rate per hour is very much about the harshness of the model. It has very precise pricing, based on a unique knowledge of the usage impact on an engine's life. Again, this knowledge of the wear mechanisms and how the engines perform in service is a unique piece of our intellectual property.

## **Cost drivers**

### *Number of shop visits*

The rate per hour is obviously inherently related to our understanding of cost. The most powerful determinant of cost in a service and support contract under TotalCare is time on wing. That is probably the simplest way you can think about cost. It is extending that time on wing which delays the maintenance event and the cost to do the overhaul. I will come back to this later when discussing the engineering focus on improving this. Cost is otherwise well aligned with our pricing approach and is very much based on usage.



*Cost per shop visit*

The other driver of cost is the cost per shop visit. To calculate this cost, first we must determine the workscope for every one of those engines that come into the overhaul shop. That is what the work is that actually has to be done. This includes a very close focus on the reuse of parts: that is, serviceable used parts. We also invest quite heavily in repair technology; it is an important part of driving cost out. The cost per shop visit also includes the replacement policy: that is an OE part being fitted into an engine.

From a labour perspective, that is the productivity drive within our overhaul shops and the joint-venture relationships around the world.

**Time on wing: engine life***Deep design knowledge enables optimisation of engine life*

I would like to go one level lower. What is behind time on wing? What really gives us and hopefully you the confidence of what we know here?

Every engine has many parts in it. However, about 15–20 of those parts are the critical life-limited parts. They are mapped onto this chart. This shows the probability of the engine being removed as a result of that part reaching its life limit, versus the time on wing. What we are obviously trying to do is move these red lines to the right-hand side here. For it is the statistical probability distribution of the life characteristics of each of those critical parts. This ultimately drives the decision on when to remove the engine for overhaul. That is obviously the point at which time on wing is considered.

When you take all of these components in aggregate, you end up with a probabilistic line combining those component characteristics to determine the whole engine life. It is improving those individual component lines, changing the angle of those redlines which you saw on the first chart that has given us a very powerful point of leverage in extending time on wing. We have made those improvements through experience in service, through upgrades and through improvements that we can insert into the fleet. It is the unique, deep design knowledge and in-service experience that we have which enables us to do this.

Furthermore, it is not just theory. We have doubled the time on wing on engines like the Trent 700 and Trent 800 since they entered service. That is real. Additionally, we have upgraded and improved the fuel burn and the overall reliability of those products in the same period. The Trent 700 is a very good example to pick; 92% of the Trent 700 engines that we deliver from new are only removed from wing at the point at which we expect it to be removed as a result of reaching a life-limited part overhaul condition.

It is a very predictable and planned approach to maintenance that enables us to have confidence in the TotalCare commitment that we are making for customers. It benefits the airline and it obviously has a big benefit to us in cost and competitiveness.

**Cost focus***Driving value through cost reduction*

The cost focus is broader than just time on wing; it also includes improving inspection criteria. We have saved £11 million on the top example there, the Trent 700, through changes to the inspection criteria. This is the result of being able to reinstall a part on some

12,000 refurbishments that we see over the next few years. There is obviously an accounting opportunity and a cost opportunity from having the confidence to do that.

To improve engine health monitoring, we started working in early 2000 with a biotech company. We looked at algorithms to try and predict the onset of a cardiac arrest in a cardiac patient by monitoring various vital signs on a human. We bought the industrial rights to some of those algorithms in 2009 and the very latest versions of the Trent XWB and the Trent 1000 have those algorithms within the control systems. That gives us an even better capability to predict and avoid in-service disruption and the expensive in-service events for an unplanned removal. An engine removal incident is somewhere between \$500,000 and \$1 million every time it happens.

A very significant area for cost reduction is shown at the bottom: repair technology. That is a roughly £200,000 component. It is a bearing housing on one of our engines. We invested some £14 million in a repair technique. That is a big investment in repair technology to find a way to repair that unique component. It delivered a saving of some £56 million by avoiding the need to replace that component at shop visit on some 350 engine overhauls.

So it is real and it is a big focus. At the start John mentioned we have 400 engineers on original equipment cost reduction and 200 on services. This is the power of some of the opportunities we identify to take cost out of our service package lines.

### **Summary**

I hope that has given you a clearer view of the embedded value within our business model. I hope it has also given a clearer view of our focus on continuing to reliably deliver this for customers and for you, as investors. That is how we look at and create value: the economics of the model, and for me the most important part of the business model.

This now just leaves me with the chance to pass over to Mark to talk about what he sold as the most interesting part of this: the accounting bit.

## **TotalCare<sup>®</sup> Accounting**

Mark Morris

*Chief Financial Officer, Rolls-Royce*

### **Agenda**

I am going to talk about three things here; we are going to build up as we go along. I am going to talk about the commercial arrangements and how the accounting principles relate to them. I am going to talk about the accounting mechanics and we are going to build up slowly. Finally, I am going to talk a little bit about the portfolio dynamics as we start overlaying various programmes and where we are in the cycle. So, here goes.

### **Our commercial arrangements**

Before we start it is important to remind ourselves of the commercial arrangements we have in this business. We deal with three types of customer. The first is airlines; that would include freighter operators and VIP aircraft for high-net-worth individuals. The second is lessors. You are all familiar with them; they can be bank-style lessors, financial lessors or operating lessors such as ILFC, AerCap, CIT, and the like. Finally, of course, there are airframers such as Boeing, Airbus, Embraer and so forth.

On the aftermarket side there are two types of contract. You are all very familiar with the first one: Time & Materials, or T&M as it is often referred to in the trade. The second is TotalCare, which is what we are going to spend our time on, particularly around the accounting.

Let me just talk a little bit about those two, just for a second, because it is quite important. Under Time & Materials, the airline takes the risk of time on wing and the risk of the shop visit. They do the worksopes and put engines into shops, whether their own shop or another's. Under TotalCare there is a risk transfer. We take those risks and we provide them with services. Arguably, we are the logical risk taker, on the grounds that we build the engines, we have more data and information than anybody else, we have the scale of economies around us, the spare engines and the networks to sweat our assets properly. We can share some of those benefits with our customers to incentivise them to go down the TotalCare path.

Tony talked about this and it is very important to understand because this is just basic maths. Our business model is fundamentally a very simple one. As you grow your install base you drive an annuity which runs for about 25, 30, 40 years, depending on the type of product we are talking about. Tony made it very clear to you that we generally generate about 20% of our revenue on the OE and about 80% on the aftermarket. We make much better margins in the aftermarket; you are all familiar with that fact.

The reason I lay this out is because it is important. This is going to drive the accounting: the different types of arrangements. Importantly, only the airline enters into either T&M or TotalCare. Lessors and airframers do not. They may be involved in us selling engines to them, but they do not operate them.

### **Linking commercial arrangements to accounting**

Let us start with the accounting principles. When we start thinking about the accounting, we basically go through a flow diagram process of asking ourselves some basic questions. I am going to build this flow chart up.

*Is there a TotalCare agreement?*

The first question we ask is: when a new piece of engine business is done, when we have sold some new engines to someone, is there a TotalCare contract accompanying it? If the answer is no, which can be so for any of those customer cases, then we know that the aftermarket is Time & Materials by default.

On the right there is an orange box that says, 'Contractual Aftermarket Rights.' I am just going to explain this. Those of you who are the more pointy heads and follow this stuff would normally see that as a recoverable engine cost. You are aware we have been having discussions with the FRC about our accounting. They conclude that our accounting is correct in terms of how we look for it. However, they made a good suggestion to us. That was, 'We do not understand why you call it a recoverable engine cost. Ultimately, it is a contractual aftermarket right. That is what allows you to create the intangible asset.' We agreed with them, they are right. It is a much better explanation. When we sell an engine, there is a requirement for the airlines to buy spare parts from us to keep their warranties and guarantees in place.

I am going to explain a bit more about that later, so just park that one for a moment. However, contractual aftermarket rights exist to the extent there is a loss on the sale of original equipment. Of course, we do not always lose money when we sell original equipment. However, when we do we create something called an aftermarket right, formerly known as a recoverable engine cost.

*Was the TotalCare agreement negotiated with the same counterparty as the OE?*

Let us move on to the next step. If there is a TotalCare agreement, the next question we ask ourselves is: is it negotiated with the same party? Let me take a simple example: lessor buys an aircraft and he leases it to an airline. He has entered into a deal with us to determine the commercial terms of the original equipment. However, the airline is going to negotiate the TotalCare contract with us. Therefore, we have two contracts: the TotalCare contract with an airline, original piece of equipment with a lessor. If he has taken a TotalCare contract, we now have two pieces. On the aftermarket we call it an unlinked TotalCare contract. Just bear with me; I am going to build these all up. Just remember the boxes. Again, with unlinked TotalCare, if there is any loss on the OE we generate an aftermarket right.

*Were the TotalCare agreement and the OE negotiated as a single package?*

If it is negotiated with the same party we have to go down the next level of filter, which is: was it negotiated at the same time? It is quite possible for an airline to buy its aircraft and device that it is not going to make a decision about whether it goes T&M or TotalCare. One year into the contract, it may decide it actually wants to go TotalCare because it likes what it sees. You then have two contracts that were effectively entered into at a different time. We therefore again treat them as unlinked. They were not done at the same time, hence the unlinking. Finally, once again, if there a loss on the OE we have an aftermarket right.

*Yes to all the above; a linked contract*

Finally, there is the case where we have a TotalCare agreement, it is with the same airline and it was done at the same time. Airline X comes and says, 'I want to buy some aircraft. At the same time I want to enter a 15-year TotalCare agreement with you, Rolls-Royce.' We refer to that as a linked contract, and they are the ones most of you are familiar with.

*Summary*

Three things are important. Firstly, contractual aftermarket rights, formerly known as recoverable engine costs. Secondly, unlinked contracts, either different counterparties or not negotiated at the same time. Thirdly, linked contracts: same counterparty, negotiated same time. So far, so good.

### **Contractual aftermarket rights**

Here we have a very, very simple example of contractual aftermarket rights. It is illustrative; I do not want you to think for a second that we are always losing money on OE. However, this is an example where we do. It might be launch phasing, in which learning curve is high and with the launch conditions and so forth. In this simple example we have a unit cost of a Phantom engine. It costs us \$5 million. The customer has a net selling price of \$4 million and so we make a \$1 million loss in this example.

This is now where the accounting starts to come in. IAS38 covers something referred to as intangible assets. This says, 'Look, businesses are generally in business for giving away their

products below their cost. You must be doing it for a reason. You think you are going to make some money somewhere else.' That is correct: we are.

Therefore, they look at it and they say, 'Can you value it?' The answer is yes. We can value it to a certain extent. However, we cannot value it with a high degree of accuracy. This is because, under something like T&M, we do not know exactly the flying patterns that they are going to operate. However, we do know it is definitely in excess of the size of the loss on an MPV basis.

When you are sure it is bigger than the loss but not sure you can value it down to the level of a dollar, we are only allowed to take the loss element. So, effectively, we sell it at cost. That is how we account for it. We create an intangible asset on the balance sheet and we amortise it over 15 years. In this case the intangible asset would be \$1 million. That is what we do with customer aftermarket rights where there are OE losses.

### **Unlinked TotalCare**

Let us remind ourselves of what unlinked TotalCare is. Unlinked TotalCare is different counterparties for OE and TotalCare or where OE and TotalCare contracts were negotiated at different times. We cannot link them under IAS11, which is all about construction-style accounting. They fail the test by not being negotiated together. Clearly, two independent parties cannot be one and if you are doing it at different times you cannot negotiate it at the same time.

If we have an unlinked TotalCare contract it is governed by revenue recognition under IAS18. The revenue and the costs are going to be recognised in line with flying hours. That covers everything there as we have talked about the aftermarket right.

#### *Single-engine example*

Let us just do an example on unlinked to make sure we are all clear. In this simple example it is a single engine. It has a ten-year contract: ten-year life, ten-year length. It flies for 4,000 hours a year. To put it in perspective, those are the sort of numbers which Tony was talking about. It has 40,000 in total and \$10 million dollars of revenue over the ten years. In our simple example that is driven by an engine flying hour rate of \$250. We have assumed a cost rate of \$150 in this. Therefore, we have assumed a margin of \$100, or 40%, in this particular example.

What happens at one year on? We have started the contract, we have a ten-year contract; it is running 4,000 hours a year. At the end of one year, he has done 4,000 hours. 4,000 times \$250 gives you \$1 million. You can do the maths for the rest. We end up with our 0.4 margin, based on the \$1 million of revenue we have.

Just to be clear, if he only flew 3,000 hours we actually book the actual hours he has flown. However, remember that he has entered into a contract to say he is going to fly 4,000. If he puts that right the following year, nothing really changes. However, to the extent he does not, we have to make adjustments. I will talk about those adjustments in a moment. However, for the moment let us assume he is doing what he says.

#### *Single-engine example: cash vs. margin recognised*

This is the graph that unfolds for a single engine when we look at an unlinked. We start at zero. There are three curves here: cash revenue, cash costs and the margin. Let us take

them each in turn, starting with the costs. Remember we are just talking about an aftermarket contract.

On unlinked, there are no costs on day one. On the cost side we have not built an engine, we have done nothing. We have not turned any spanners. Nothing has happened. We do not do a lot. In this simple example we have assumed we do nothing. However, in reality we do small, minor checks. The big things happen around four or five years; that is the second overhaul. There is then a second overhaul around eight or nine years. These things can be quite lumpy, anywhere between about \$3–5 million on a big engine.

The revenue line is nice and simple. It is a straight line. He is flying 4,000 hours a year at \$250 per hour. It is just a straight line which keeps going up. Of course, we also account for the margin, which is an output of the cost and revenue recognition. In this case it is 40% and just runs along here.

*Single-engine example: net cash vs. margin recognised*

Let us move to the next graph. This may be a bit of surprise to some of you. You normally always think about debtors and TCAs. When we do an unlinked TCA deal, generally we never have a debtor, although you can do down here in the smaller parts.

What have we got on this list? We have the net cash position, which is the black line. We also have the margin, which is just transferred from the other graph. We build up a creditor position because we are collecting cash every month at \$250 times the hours flown each month. We are not turning any spanners until we get to about year four or five, when we do a big overhaul. In this case, obviously, at that point we generate a small debtor position. Just remember that when we talk about creditor and debtor it just means whether profit is ahead of cash or vice versa. Of course, they end up together, mathematically, at the end.

### **Linked TotalCare**

That was unlinked. So we have done aftermarket rights and unlinked. Now we go into linked. Let us just remind ourselves what linked is.

Linked is negotiated at the same time and it has to be with the same airline. He has bought the OE and he is doing the aftermarket. The definition around linked is all driven by IAS11 construction contracts. There are three criteria that you have to satisfy and they are written up there. The contracts must be negotiated as a single package. The contracts must be closely interrelated. Finally, the contracts must perform concurrently. That is the language that we look through.

*Single-engine example*

Let us go on for an example in this one. This is the starting point, before we start overlaying the accounting dynamics of margin adjustment. We start with the OE on the left. This simple example is again a single-engine example. In the example the list price is \$10 million. If we take off some concessions, the discount, we get a net selling price of \$4 million in this example. We assumed a cost of \$5 million and negative OE of -\$1 million.

A TotalCare ten-year contract will generate \$8 million of revenue. There are no concessions here, but obviously we have our costs. We have assumed them to be \$4 million. Once again, you can do the maths. We get a 25% blended margin in this example. Of course, the previous one was 40% for illustrative purposes; here it is 25%.

Under the rules of linked accounting we treat everything as one. Therefore, we have to look at smoothing the margins. This is what happens. You can see that obviously we are making no margin on the OE, or a loss on the OE. However, we are making a good margin on the aftermarket. We balance the two. We do not balance it on the cost side. This is because, if you think about it, on the cost side it is actual cost on the OE – that is, our unit cost. However, on the aftermarket it is our best estimate.

Hopefully you can trust me that I have done the maths right here. I have evened them up to get you to 25%. As you can see in the output here, we still have the physical cash loss of \$1 million, but we have created a profit of \$1.7 million. Therefore, we have profit ahead of cash at 2.7, which is our friend the debtor. I will talk about that. Of course, the maths must also create a corresponding creditor on the other side to create it flat at the end. This is, again, a simple example; it is just to get the point across on how it works.

*Single-engine example: cash vs. margin recognised*

Let us just take some lines. You remember on the unlinked example we started at zero in both cases. In this one we do not. The reason the cash cost line starts off below zero is that it is our unit cost of the engine. This is just purely the cost side. We have incurred costs in building the engines; it is a linked contract. We do not really turn any spanners until we get to about here and then the same thing happens again. At the front, this is the net revenue we have seen, that \$4 million we talked about. This is the margin take. Again, we are recognising revenue and costs in line with flying hours. In this example it is 25% margin realisation.

*Single-engine example: net cash vs. margin recognised*

So, our friend the debtor; as you can see here, I have just transferred the 25% margin straight line. Then this is the net cash position. What you are seeing here is the unit cost of the engine followed by some of the cash we have from the front end. Then, as time goes on, we are generating cash every month, we are invoicing for cash. We do some work on the overhauls, meaning you get this saw-tooth, before we arrive back where we started.

That is linked and those are single engine examples.

**What can change the forecast margin?**

In the simple world we have just gone through we have assumed that the assumptions we made at day one are right through the entire ten-year period. I wish that were always the case. It would make our lives a lot easier.

Let us think about something. We have entered into a contract for ten years. In that contract an airline has told they are going to do x flying hours, y stage length and various other criteria that will affect both the cost and what we charge as the revenue per flying hour. We have made assumptions about cost and reliability going forward on our engine programmes. Where we have a mature programme we have a lot more empirical data to support it. Where we have a new programme, we have algorithms and architecture that tell us how we think it should behave. Then, of course, we have the performance risk, as I will call it. That is the risk that our customers may not actually do their part of the bargain over the next ten years.

### *Revenue forecast*

What can change in these things? Let us talk about each one, beginning with the revenue forecast. The revenue forecast can only be changed by the customer. If he tells us he is doing 4,000 hours and only does 3,000, that will adjust the revenue forecast. Obviously, whenever you change the revenue forecast it creates a corresponding change in the cost forecast. Clearly if you burn fewer hours, you will do less on the engine and it will therefore be a longer time period before you have your overhaul.

### *Cost and reliability forecast*

The cost and reliability forecast is down to us. We look at our programmes, we look at what they are doing and decide a best estimate of what we think is happening. Importantly, we factor a number of things in when we look over a ten-year period. Our best estimate makes some assumptions about improvement we are going to make in engineering or experiences that we are getting through. We include something called an estimation risk at the early point of any programme. Whilst we have given our best estimate, we put an element of cautiousness over it which sort of says, 'We might not be exactly right.' That unwinds over time, all other things being equal. Of course, we could go two years into the contract and actually find that our experience is getting better or worse. Then we make an adjustment. That is called estimation risk. I will come on to those a little bit more in a minute.

### *Asset recoverability*

Asset recoverability is about performance of the contract. In very simple terms, if I put it into banking speak, when you look at a triple-A counterparty versus a triple-C counterparty, generally you either give a bigger NPV up front to discount cash flows or you create more of a reserve for a riskier counterparty. We do not take as much margin on a higher-risk transaction as on a lower-risk transaction. This is predominantly driven by the counterparty risk and the fleet fit. The fleet fit is important. It asks: how essential are the aircraft that we are providing to the fleet. Is it not the feeder traffic, but the mainstream traffic? That creates a valuation allowance. That again unwinds over time. Counterparty risk tends to reduce as time increases and so that unwinds over time as well.

### *Summary from experience*

Let me put this in perspective by talking about our experience on costs and assumptions. If I look back, on average, if I look at in-year civil profits the impact of adjustments for cost have been around  $\pm 4\%$ . A 1% change on our portfolio in cost assumptions has an in-year impact of about £30 million.

### **Process overview**

Let me come onto the next slide. There are some important points to recognise here. This shows the governance around this. Before every balance sheet date we do a process review of every contract we have and we update the revenue and cost forecasts. If there are some changes, we revise the margin. This is because the margin is an output of those two, and obviously the debtor and creditor are an output of the margin versus the cash. If there is a change, it is going to impact the current year. It is also going to impact the prior years. In very simple terms, if I have been taking 12% for the first three years and all of a sudden I should be taking 13% through life, I need to catch up 1% on the previous three years.



Under the rules, we do not restate our accounts. We make an in-year adjustment. We refer to this as a true-up or a catch-up. In summary: the in-year impact can have a multiple impact, depending on how mature your portfolio. At the moment, as I said, it is about £30 million per 1% move. That includes the prior and in-year adjustment. Obviously, if you make a change it will also have a future margin impact. However, that is a non-balance sheet item at that stage.

### **TotalCare accounting summary**

Let us just remind ourselves of what we have gone through. For unlinked TotalCare we recognise revenue and accrue costs in line with flying hours. The same applies for linked contracts, but we equalise the margin. That is again done under the construction contract of IAS11. We factor in what we call estimation risk and valuation allowance. What that of course does is basically suppress the margin at the front end: it is an element of cautiousness or prudence, if you will.

We have talked about the relevant standards here. They are: IAS18 for revenue recognition, IAS38 for tangible assets and IAS11 for construction contracts. We have renamed RECs to contractual aftermarket rights. Finally, we have agreed our accounting treatment with the FRC.

### **Linked TotalCare programme**

This was for single engines. I am now going to start making it a little more complicated. With a single engine it was quite easy to show the picture; however, as you know, we deliver many engines over many years. The ramp-up rates vary, the volumes of the programmes can vary. We have eight programmes in our civil large engine business just at the moment. However, I am just going to talk about one programme at the moment. This is a generic programme. It could be something like the Trent 800. It is just to give you an example of what happens.

#### *OE and aftermarket profit*

Here I have taken the profit take and divided it between the OE piece, which is the red dotted line and the aftermarket profit. I have then added the two together with the green line here. Remember we are talking about a linked contract, so it has an equal margin.

You can see what you would expect. Profit is taken and it has been equalled out. Deliveries eventually fall away to nothing down here. However, the aftermarket just keeps growing because, of course, the engines are installed. They keep driving for their useful life. That is a typical profile of what we see in terms of profit.

#### *Net cash vs. margin recognised*

Here I have taken the combined line, the green line that we had there and compared that with the net cash line. With a linked contract, as we all know, we have a rising debtor position at the beginning of a programme. There is a point when we get peak net debtor and then debtor is decreasing as we go over time.

#### *Debtor position*

Let us again refresh ourselves because sometimes people panic around debtor positions. I am going to tell you that debtor positions can rise or sink for various reasons. However, let us get the maths right. You all understand our business model: we install engines and grow

an annuity. There is a 4:1 ratio in revenue and better margins. It is given maths that if we make better margins on the aftermarket than we do on the OE, we are always going to have a debtor. We are building up a base. As we are in a growth phase, of course we will have a growing debtor position. Obviously, however, the cash will eventually start to catch up

### **Unlinked TotalCare programme**

#### *Net cash vs. margin recognised*

This is a corresponding unlinked example. It is a fairly boring chart because the two variables track each other far more closely. This is just the aftermarket. However, this is the sort of thing we would see on a programme where they are close together

### **Drivers of the TotalCare<sup>®</sup> net debtor**

Let us move on to drivers of net debtor. They are also drivers of creditor as well, for that matter. Obviously if you get a ramp-up in OE, with linked contracts you are going to drive up the debtor. As shop visits take place we will also increase the debtor because of course we are retiring the creditor. When we talk about a debtor, we tend to talk about a net debtor, which is the gross debtor and the gross creditor positions coming together. With shop visits we reduce the creditor, and that has a habit of increasing the debtor.

Let us look at what happens when a contract outlook improves. We talked about margin take. We could be taking 20% and actually, based on our cost progress, margin improvement and reliability, we actually think it should be 21%. That 1% increase increases the margin and helps to increase the debtor because it is just the difference between revenue and cost being accrued.

On the other side, obviously as we do flying hours we get the cash in. That retires down the debtor. Interestingly, if we worsen the contract outlook we have the reverse, obviously. That results in the debtor reducing.

Valuation allowance changes can result in a rise or fall in the debtor, depending on where we are. In steady state, valuation allowances come down over time as time reduces counterparty risk.

### **Overview: the complexity of eight programmes**

Let me just take you back to John's chart. However, before we go on to this let us remind ourselves. I have just given you one programme. We have eight programmes, all at different points in the maturity cycle. If you start laying those all over each other you can see that the modelling gets very, very complicated. There are many, many moving parts and thousands of engines all at different points in their life cycle. This comes on top of customers who are changing their flying patterns and habits and us working away diligently to improve reliability and cost. All of those things keep going in as we update. Are we getting the maths right? The answer is yes; however, the important point is understanding where we are in the cycle and that drives the cash position.

### **Projected Trent deliveries**

John was quite clear in his chart. We can tell you where we are. We are seeing some big ramp-ups, certainly as we get into the 2016/2017 period. Of course, this is not just XWBs. Trent 700s and Trent 1000s continue, along with various others that are going here.

However, you can see the revenue is rising. Generally, therefore, there will be an increasing debtor as we go forward.

Of course, the number of things that talk about the total debtor, when we look at the entire portfolio driven by what is linked versus what is unlinked, the differential margin between the two. Of course, as we get round to these sort of areas we get the benefit of volume. Learning curve also gets out of the way on some of the new programmes, such as the 1000 and the XWB. Volume is our friend; we are rationalising the footprint. All of these things are going to improve cost and cash and obviously margins too.

### **Status of TotalCare contracts**

So that is just what is coming. This is a picture of where we are today. To me it is an embedded value chart of where we are. These are our eight programmes, showing their various points in terms of relative scale and contribution in size. This is just on TotalCare. It does not include T&M. It does not include non-contracted business or speculative business. This is our position as we stand today just on our existing TotalCare contracts.

As you can see at the end, the RB211 programmes, together these guys combine at around 35–40% on TCA. This part is still very T&M weighted. As we go across these are much more on TCA. As we go forward they are in the high 80s to 90%. Across the fleet we are at about 70%. The dark blue is just saying where we are in terms of what we have banked and what is to come. This excludes speculative business and of course negotiations of TCAs beyond their initial term. However, the point here is that there is a huge amount of embedded value from the better margins.

### **Concluding remarks on accounting for TotalCare**

Let us summarise where I think we are. In a relatively short space of time we have tried to understand the principles of the accounting. We then moved into the complexities as we build up single-engine into programmes to running multiple programmes over each other at multiple different points in their life cycle. There are lots of moving parts driving where we are going. I hope I have also explained why we are confident that what we are doing is the right thing.

Earnings are ahead of cash, whilst OE is growing. You can see it growing. In some respects we are sowing more than we are harvesting at the moment. However, we obviously see the strong annuity that is driven off that installed base. There is significant value embedded in the aftermarket. As John and I have iterated before, we are strongly focussed on cost reduction and improving reliability.

The last point, as I finish off here, is that the accounting follows the commercial substance of the transaction. That is why I talked about the various contracts at the beginning. Finally, our treatment has been agreed with the FRC.

That is the end of the accounting session. I am now going to hand over to John. Thank you.

## Summary remarks

John Rishton

*Chief Executive Officer, Rolls-Royce*

Thank you, Mark. That was very helpful and clear.

Let me wrap things up. I expect you are expecting me to give the usual wrap that you would turn off for, because you know what I am going to say. Excuse me if I do something different. I am going to tell you what I feel, rather than a recap of the business. What I feel is privileged to lead this organisation: great people, wonderful products, terrific company. It is a company that has done extraordinary things over many years. I am in awe of the people who did this in the past. They focussed on the long term, not the short term. They recognised the long-term success that this business could have, and it is a long-term business.

I am thoughtful about the growing pains that we are having and we will have, the growing pains that are a consequence of the success that we have, not of the failure; the growing pains that we will experience, whether it is transforming the operational performance or the financial performance. We are going to feel those, but it is a consequence of success. I am confident that we have sustainable growth, but that does not mean year after year consistent growth; it means long-term sustainable growth, and I hope you are excited about the future of this great company.

Thanks very much indeed for coming today. We are going to take questions now.

## Q&A

**Nick Cunningham (Agency Partners):** I have two slightly different questions, one going back to the early part of the morning. I think you said that unit cost reductions are effectively offsetting increased input costs. I was wondering if you could give us something behind that as to what is happening to both gross numbers, if you like, and how you see that playing out over the near to medium term.

Secondly, coming back to the more recent part, I believe that Trent XWB sales are going to be unlinked, perhaps all of them. I am wondering if you could possibly explain why that is contractually and also, looking forward, Trent 1000, 900 and remaining 700 contracts, are those all going to be linked, all going to be unlinked? What sort of proportionality are we looking at within each programme? Thank you very much.

**John Rishton:** I am going to pass a couple of those questions to Mark, but if I just give a couple of comments first. What I said was we had about 400 engineers working on our existing products, they were finding ways to reduce cost and that was offsetting the escalation that we were seeing as part of the passage of time. As you know, in our purchasing and through into our sales we have escalation clauses, so they are finding ways to offset that escalation.

You are right about XWB. They will be unlinked contracts, in simple terms, and Mark will be more specific, I am sure, because we are selling it essentially to Airbus and then on, because we are the only engine on the aircraft.

Mark, maybe you want to make a couple of comments about both those questions and the Trent 1000.

**Mark Morris:** Let us start with the linking/unlinking. XWB is unlinked because it is single source and it is done through Airbus. We have two separate contracts because we are negotiating with Airbus, but doing the aftermarket contracts with the airlines, so it does not pass the IAS 11 test. On the 1000 and 700, the majority are linked. We do have some unlinked; we have customers who have gone to T&M and change their minds further down the road, so you can have both but the majority are linked.

On the cost side, we have talked about this before, Nick, there is an array of activities that are ongoing. It is a journey we are on. We are in the foothills of where we think we can get to on cost, but a lot of activity, be it low-cost country sourcing, designing for cheaper, renegotiating our supply contracts, and some of that coming through as well. So, whilst some are meeting headwinds, there is other activity that will continue to drive those costs down and, of course, some of that we are talking about is included in our guidance for this year as well.

**Rob Stallard (RBC):** First of all, staying with the TotalCare accounting, the estimation risk that you take on the contracts, I was wondering if you could give us an idea of what sort of percentage we are talking about here and how the profile is expected to develop on this going forward.

The second question is on the RB211. You have said that the thrust profile is a proxy for revenue, but I was wondering if you could give us an idea of whether that is also a proxy for profitability as well.

**John Rishton:** Mark, I am going to throw both of those at you, because you are the accounting man for this.

**Mark Morris:** On estimation risk, I think I gave you some insights into our experiences, which have been pretty good. We recognise that there has always been a small error bar around what it happening. Like I said, 1% is about 30 million in-year in terms of where we are in the portfolio and the impact to date we have seen is about plus or minus 4% on in-year profits within Civil. We are not going to reveal what the current estimation risk is that we are holding at the moment, but within those bands you can see, as we track through, what our experiences are to date. What I would say is when I look back to the CFO and talk to the businesses and say, 'How confident are we about our cost modelling?', from what I am seeing, we are tracking pretty good and, generally, the curve has been one of it coming down through improved reliability and some of the things that Tony talked about.

Your question I think was about thrust, a good proxy for value. In the rawest sense, absolutely it is. Clearly, bigger value off bigger thrust engines, but then you have to be a little bit more explicit about what is happening within any engine programme. For example, if I took RB211, it is about 20% of thrust and I think this year is somewhere around 14-15% of revenues. Why is that? That will just reflect the flying patterns, potentially, of the airlines. In the RB211s there are a lot of freighters. They do not tend to fly quite as many hours and, of course, because it is the longer point in the cycle, there is an element of us trying to make sure we incentivise people to stay on, so we can be sometimes reducing our margin as a way of making sure that we keep the fleet flying for longer. That is what I call efficient frontier

analysis, which is how do we keep it running for longer whilst still making margin. That is the driver. So, first order yes, second order not necessarily.

**John Rishton:** I think the question was more about is the thrust also a proxy for profit as well as revenue. Just to be difficult and help the questioner out.

**Mark Morris:** The short answer is yes, again, it is, but depending on where we are in the programmes and where we are in the cycle, that will vary.

**David Perry (JP Morgan):** Tony, if you had one company, Civil Aerospace, could you give us a feel for roughly what percentage of the profit is coming from the three segments you talk about, for example, in the annual report? If we were to think about large engines, medium engines and small engines, can you tell us roughly what profit contribution, say, in 2013, each make to the business?

**John Rishton:** David, thank you for deciding who will answer the question, but I am going to impose a slightly different view and suggest that Mark starts off with that and then maybe Tony has something else to comment.

**Mark Morris:** We do not break out sublevels; we give it at the civil division level and civil and defence is what we give within Aero. We are not going to start breaking out our various programmes.

**David Perry:** If I may ask a follow-up, I think your communication around IAE has been very confusing. I think you sought to rectify it with a slide today where you have added a dotted piece for IAE to show it is still part of the business, although it is not your official thrust, which is a change from your previous slide, so thank you for that. Clearly, it is still contributing revenue and a lot of profit, but it is extremely hard to know the outlook for that and before I even begin to think about TotalCare on the Trent it would be quite nice to know what is going on with IAE today and in the future, please.

**John Rishton:** Mark, do you want to make any comments on that?

**Mark Morris:** Yes. We have said that as we go forward it gets progressively more and more difficult to make relative impacts of old versus new. We have been clear in terms of the guidance we have given in the past about the contribution it has made and the numbers that you have. It will continue to contribute certainly for the foreseeable future, so over the next decade, but it will decline over time. However, we are not going to break out forward guidance going out for one piece of the programme; it just becomes part of the portfolio eventually, which is where we are.

**John Rishton:** Tony, do you have anything to add?

**Tony Wood:** Yes. It is real value. We sell engines still on the V2500 to Pratt & Whitney, we sell spare parts, and we have 5,000 engines at the point at which we exited IAE that generate a dollar per flying hour going forward. That is what the shaded line on that graph represents.

**John Rishton:** To finish on a positive note on that question, I would remind everybody that the value that generally was assumed by the market for our IAE business was a little lower than we realised and that again is the installed value, the value of the installed base within this business, which is a large part of the value of the company. That is why we spent so

much time explaining why we think the thrust is going to grow. That is a huge value of this organisation.

**Rami Myerson (Investec):** I have three questions. At the beginning of your presentation you talked about taking out costs, but then you presented the slide with the ramp up in the Trent engines, which presents a number of headwinds to profitability. You also talked about closing the margin gap. Is it right to think that that is something that is probably going to happen towards the back end of this decade, it is not going to happen over the next few years?

The second question is on medium speed reciprocating engines. Given that you have announced this morning you do not plan on making significant M&A, how should we think about the R&D profile in the Marine business? Are we going to see a big ramp up?

Finally, a short question on the ROIC over WACC comment on Tognum: can you update us where we are in that process given we are about three years since the acquisition?

**John Rishton:** I will take a run at the first couple and ask Mark on the third and maybe any further comments he has on the other ones.

In terms of the ramp up, I used the term 'growing pains' when I talked about it and Mark has spent some time explaining linked and unlinked and we have just, I hope, clarified around the XWB in terms of the fact that that is unlinked. So, there is a whole raft of things going on in that mix, which is why I talk about growing pains in terms of operational performance and financial performance. How do we address those issues? How do we address the consequences of our success? How do we drive through to the, if you like, promised land out in the future when we have strong growth and more stability? An issue for all companies that are growing at a significant rate is how do you keep pace with that, because it is not just the points that you made, it is also some of the other points that I made earlier in terms of the investment in new capacity. If I look back at some of the margin progression from 2003 to 2013, a large part of that was on the back of the revenue growth, but it was also on the back of the fact that we under-invested, if I can be slightly critical, in the infrastructure of the business. We have to catch that up now, which is one of the growing pains that we are going through.

In October, as Mark has said, we will give you our view about the medium term outlook in the format that he has talked about, which I believe will help address some of your questions. Clearly, as Mark has also explained in terms of guidance, we are going to be giving more in the future than we have in the past, which will help you and, I hope, help manage expectations. However, your point is the right one and it is one that we are reflecting on, which is why I have made the points that I have, why we have talked in the way that we have, which is: we are grappling with the growing pains of the current because of the success that we have had to get to the future where we have this sustainable growth and a more steady-state position.

In terms of medium speed, if I look at the total business, as Mark and I have both said, what we expect on research and development cost is, at most, an easing of that as a percentage of revenue and we can rebalance where we spend our money. If I break it down, our Civil spend runs what, Mark, about 5% or so net?

**Mark Morris:** Yes.

**John Rishton:** Marine has been much lower than that, about 2.5%.

**Mark Morris:** Yes, 2%-ish.

**John Rishton:** However, our new acquisition Rolls-Royce Power Systems has been running about 7%. What I would say is in our medium speed a lot of the investment, understanding, knowledge, technology, capability is within that Rolls-Royce Power Systems, where they have been investing a lot of money, whether it is to address emissions concerns, more power, etc. One of the big advantages we have with owning that business is that we can use that knowledge, experience and wisdom to help us grow the medium speed and invest organically, whether that is in new products with more power, more fuel efficiency, different fuel types, all of which we are doing. So, you should not expect some huge increase in R&D as a consequence of organic growth in the medium speed business. It is part of the total and it is really a question of how we balance that total across the whole business.

Mark, I do not know if you can put in some perspective. The Marine R&D is very, very small relative to, for example, the Civil business. Even if we were to double the Marine R&D, frankly, it is still relatively small in terms of sums of money.

**Mark Morris:** Yes, they are around 30-40 million currently.

**John Rishton:** Do you want to talk a little bit about return on invested capital and WACC?

**Mark Morris:** If I have to, yes. I thought I would get this question. Let us just remind ourselves on Tognum. We only took management control just over a year ago and will only take 100% ownership probably at the end of Q3, Q4 this year. Again, that is subject to regulatory approval and it is just whatever their caseload is on how stuff goes through. Obviously, when we have 100% control we can really start to grind out some of the efficiencies. That does not mean that we have not been doing stuff. Like I said, we are encouraged by what we have seen. We are excited by the business. John has talked about some of the cross-selling opportunities that we are having already, certainly in our Naval Marine business and the high yacht end and so forth. So there are things going on already, we have not been resting on our laurels. It is worth saying that obviously it has been a relatively tough market, I think, for that part of the market, but we see good prospects going forward. We are certainly encouraged from where we are at the moment. We have not reached the end of my test yet, as it were, and we will be grinding stuff out as soon as we get going.

**John Rishton:** What I would say is when we were doing a joint venture and before the squeeze-out we were looking at revenue opportunities, as we always said when we announced the deal. Now we are going to own 100% of it, we are going to get the revenue opportunities and we will be able to manage those more directly. I talked a little bit about some of those revenue opportunities when I was talking about medium speed, the pull through of working that way. In addition, now we have the opportunity to get cost synergies, which we did not really have in the past, because we are going to own 100% of the business.

**Rami Myerson:** Just to clarify, at the moment ROIC from Tognum is not higher than WACC.

**Mark Morris:** No.



**John Rishton:** Let us have a question from outside of the room.

**Moderator:** We have two questions from Toby Kram from Dabroes. 'Cash conversion is low, you indicated, until the inflexion point in 2018, but what about absolute free cash flow growth given the revenue growth that should be coming on the steeper ramp of the Trents?'

The second question is: 'R&D declines as a percentage of revenues. Is that true even with the narrow body push?'

**John Rishton:** Mark, do you want to talk a little bit about cash conversion?

**Mark Morris:** Yes. Obviously, that was referred to in relation to the civil wide body part of the programme. Of course, across all our other businesses I would say that when we talk about our Marine and Energy at the moment, until that goes, and our Power Systems and nuclear businesses, generally they are much more what I call traditional industrial businesses in that when you look at the revenue and the percentage you get on profit and the cash conversion they are far more in sync. There are obviously movements on cash conversion.

In the Civil business and particularly most acutely in the civil wide body part of the business, we do get much bigger swings just because the investment cycles are far longer and far deeper. In terms of cash conversion on that part, again as John alluded to, we see that coming out at the 2018 period. However, there is ongoing activity across all the other parts of the business for the Group that are driving cash. We are not going to give medium-term guidance today, but obviously directionally, as we have said before, we are very focused on driving both cost and cash.

On the R&D question, we have said currently it is 4.9%; it will ease gradually over time as revenues grow. I do not think it will be linear; it is a function of activity. However, when we think about R&D it is predominantly people. It is our 18,000 engineers and what they are doing plus some hardware. When we normally look out over the radar in terms of what we can do from our human capital, we end up with what we call an R&D wedge, which is, today, below capacity balance, which has all of Colin's engineers working on various programmes, be it in Civil or any other parts of the business. They are fully consumed, but as we look forward, obviously if nothing else happens they will run out of things to do and those wedges are what we are filling up with potential new programmes, which will include narrow body, which realistically, if we say it is middle of the next decade, would start in the 2018/2019 period. However, let us just remember that is MPI, the R&D. The research and technology part of that is very generic and can apply to multiple programmes and the R&T line, of course, in terms of what we are doing there, continues.

I do not know if Colin would like to mention anything on R&D.

**Colin Smith (Director, Engineering and Technology, Rolls-Royce plc):** Only that, broadly, the research and technology programmes that we are doing for the big engines flow down to the small and middle of the market engines as well, so it is not duplication, you just decide to which product you point that technology.

**John Rishton:** When I was talking about cash conversion I pointed at 2018 and there were a couple of things I said, delivering the cost and the benefits that we get through that, driving through the changes that I talked about when I talked about cost; and I said that as we start to stabilise we will see an improvement in cash conversion. I also said assuming no new

major programmes, which, in some ways, you could say the narrow body potentially is. The issue there is are we spending it on our existing programmes or new programmes similar to our existing programmes and is it additional or is it substitution? So, the point that I would make – and I make it whenever I speak to you because I know that cash conversion is a critical point – is as we are growing and investing for growth, in simple terms that clearly uses up cash. As we get to a steadier state the cash conversion will improve. The challenge there is how much can we grow in the future and where are you spending that cash versus reducing the growth relative to the cash spend? That is the only point that I would add.

**Charles Armitage (UBS):** I have two questions. First of all, accounting for long-term contracts or TotalCare. I understand that a conservative company, when accounting for long-term contracts, would start with lower profits or lower margin recognition and end up with higher margin recognition. Normally, I would call the difference of that contingency. Is that what you call estimation risk or is there a contingency in there as well?

**Mark Morris:** No, we do not refer to it as contingency. It is a cautious best estimate of what we put aside to recognise that there will be a small error bar. If I just separate the two out – valuation allowance is different – estimation risk will vary depending on our experience. So, clearly, with a very mature programme like an RB211, frankly, the estimation risk is very small and of course it is slightly larger that we allow for on a new programme, like XWB or 1000. We track the behavioural characteristics, the architecture, the similarities, how it will respond and that is what Colin and his team along with the people in Civil will work out carefully and follow with various algorithms that we use. I guess contingency is one word, if you want to use it; it is not a word that we would use. Contingency does not exist in accounting.

**Charles Armitage:** To follow that one on, the 25% illustrative margin on a linked contract, orders of magnitude are we talking 1%, 2%, 3%, 4%, 5% estimation risk on the XWB, for instance, or is it half your margin?

**Mark Morris:** No, it is certainly not 'half your margin'. It is a number of percentage points, but I am not going into the details.

**Charles Armitage:** Okay. The second question is on medium speed diesel. Now you have said there are no material acquisitions planned, medium speed diesel is 7% of two billion, which I make 140 million, so it is less than 1% of your overall business yet it is the fifth of your five priorities, so what is the strategy? Number five of your five priorities seems to be quite important, but less than 1% of your overall sales does not seem very important at all.

**John Rishton:** As I have tried to explain during the course of the meeting, the reason I am concentrating on it is it completes the portfolio in many ways and will help us drive sales and revenue across the Marine business. It also creates opportunities in land power as well. We see it as a growth market and we see it as an opportunity. That is why it is there.

**Charles Armitage:** At 3% GDP-type growth it is going to take an awfully long time for that to become organically a particularly meaningful thing though, so how big do you see medium speed diesel in 2020 or a number of years out?

**John Rishton:** If you look at how you can address these issues, there are three ways: you have organic growth and we are doing that, as I have said; you have partnerships and we

have had a partnership in the past with Hyundai as it happens to be; or you can do mergers and acquisitions of varying sizes. You can look at any of those in terms of how you can address that gap in our portfolio. I guess all I am saying is the reason that it is important for us is that it is where we are weaker. The numbers you are quoting at me saying it is only a small part is exactly why it is important, because it completes the circle of the product offering that we have and we have the capability to do well in that area. That is why it is important.

**Charles Armitage:** If I could just follow on with one more, I think you have said in the past 65% of an offshore marine vessel is your components.

**John Rishton:** It can be up to, is what we said.

**Charles Armitage:** How much of that is the engine?

**John Rishton:** How much is the engine, Lawrie, do you know?

**Lawrie Haynes (President, Marine and Industrial Power Systems, Rolls-Royce plc):** £1 million.

**John Rishton:** How much percentage, do you know?

**Lawrie Haynes:** In percentage terms it is a very small percentage, but it is the pull through that is very important from that engine that builds up to 65%. It is the depth machinery, for example, it is the supply systems on the ship design that we pull through, it is designing the auxiliary systems, it is designing the stabiliser systems. That engine pulls through quite a lot of contact.

**John Rishton:** It also, as I said when I was presenting it, is where you get the aftermarket, far more importantly.

**Charles Armitage:** A final little thing: is £1 million on an engine 10% of an OPV, typically? I have not bought many OPVs recently. What is a typical offshore vessel?

**John Rishton:** It depends on the type of vessel that you buy and the complexity of the vessel, so an anchor handler will cost an awful lot more than a supply ship, etc. When we talk about this, the 60% that we generally talk about is a fully loaded anchor handler vessel where we have winches on board, we have our thrusters on board, we have a propulsion system on board, we have the captain's chair, we have the dynamic positioning system on board and the engine. If you look back in history, we have had a very strong position within Norway, because that is where our strength and history is. As the industry expands and changes and diversifies, it will be important to have a broader engine offering than we have today to help drive the pull through that we have had successfully in Norway in the past. That is why we want to address that gap in our portfolio.

**Zafar Khan (SocGen):** I have three questions, please. The first one is a follow on from Charlie's question on the medium speed. I just want to ask in very simple terms what Charlie was asking in a very longwinded way, if I can put it like that. Can you achieve your ambition in medium speed diesel without M&A?

Secondly, I just wanted to say, Mark, thank you very much for an excellent explanation on the accounting, but I think I have fallen at the final hurdle on that. The conclusion on

page 24, the debtor rising due to shop visits taking place, is that not debtor falling if there is shop visit rather than rising?

The third question is on the confirmation of the 2014 guidance that have you given in the statement. I remember from the IMS you suggested that there would be a one-third/two-thirds phasing in that profit this year. Historically, we have never been that wide between the two halves. I can understand some of the shortfall, if I can put it that way, in H1 against H1 in 2013, but in order to get to the full-year guidance you have given and then the H1/H2 split I cannot make the numbers add up at all. Therefore, I would be very grateful if you could provide a little bit of colour in terms of the divisions on how we get to that one-third/two-thirds split based on the full-year guidance you have given.

**John Rishton:** Okay, let us go back to the first one on organic growth. The short answer is yes. If we were sitting here in 1990 and talking about wide body and we said that we were going to have 50% of the wide body share, I suspect there would have been a level of scepticism. Yet here we are today with 50% of the wide body share and we have done that organically from about 2%, so, yes, you can do it. The only question is: are you determined to do it and how long does it take? That is all it is about. If you put the investment in, you can do it, but there are other methods by which you can do it. So, the fact that it is a priority does not say it is something that I must resolve tomorrow or the day after or the world comes to an end. This is a long-term business and I am looking at long-term issues. The narrow body, similarly, is not an issue for today or tomorrow but, as I explained in my presentation, it is an opportunity for us for significant growth and it is a market that we should be in and we are going to get back in. It is not something that I have to fix today, but it is certainly something that I and others worry about with regard to the long-term thinking of the business.

Mark, maybe you want to talk about debtor shop visits and perhaps something on guidance.

**Mark Morris:** Right, okay. Zafar, just to make sure I understood your question, I think you are saying that debtor rises as shop visits take place you do not think is correct. Let me just explain net debtor, gross debtor, creditor, before we start. If we think about what is happening on the cost side, we are building up a creditor, we are accruing costs and then when we spend the money the creditor is retired. Therefore, when you take that away from the gross debtor position, before you were taking a creditor, say, of 100, now you do your overhaul and the creditor is reduced to zero, you have nothing to take away, so the debtor will rise, all things being equal. That is all it is. Okay?

Now for an easier one: the H1/H2 guidance for this year. Let me just try to remind everyone what we said in terms of guidance this year. We said, broadly, one-third/two-thirds H1/H2, a bit more acute than usual. Revenue, just to be clear, is about 15% higher in H2, a little bit higher than last year, so volume is driving part of it and, again, much of that driven by all the divisions, but more specifically on the MIPS business, Power Systems and Marine. We are seeing more cost reduction coming in as contractual cost reductions kick in and the volume benefits kick in, in H2. You heard me talk about restructuring back at the prelims, which is about 90 million, about 30 million higher than last year, all happening predominantly weighted towards the front end; that is mainly in Aerospace, both indirects and directs. R&D is the other one I signalled and again that is predominantly being driven by spend patterns around the Trent programme being a little bit more weighted to H1. Finally, on the Marine

side, we took a product quality charge of 30 million. That is where we are and, like I said, we have maintained our guidance, we have confirmed that today. I am not going to break it down into all the separate divisions, but you have an idea of where the main things are coming from.

**Selvan Masil (Westry Capital):** Just looking at the benefit of TotalCare, can you quantify what benefit, if any, you get from the fact that you have such a high market share on the maintenance on a programme that has 90% on the TotalCare, making it harder for third party overhaulers later in that programme to compete given you take all the used part early on.

Related to that, to give some numbers around that, on the TotalCare programme, maybe an engine or the programme as a whole, how much more money would you expect to make off a Trent XWB, because it has such a high TotalCare versus an RB211, if it was here today, all on Time and Materials? That does not need to be per engine; it could be just looking at the programme overall.

**John Rishton:** I will ask Tony to make a couple of comments. The first thing to say is that this is a really competitive market and the reason that we and the airlines like TotalCare is it aligns our interest and their interest together. That is the attraction for both parties and why airlines will generally want to choose that. It is a level of risk, but our interests are aligned. What do I mean by that? I mean we both want to keep the engine on-wing for as long as possible, the airline for obvious reasons in terms of operational performance, us for obvious reasons in terms of cost performance. However, this is a very competitive market, so when we sell these products into the market it is not about trying to control the market in some shape, size or form. We are selling other engines and other products, our competitors sell them, how do you sell them, how do you compete against them? There is quite intense competition around these markets.

Tony, do you want to make any comments?

**Tony Wood:** In terms of how the maintenance is provided there is a number of options. There are Rolls-Royce wholly-owned facilities, there are joint ventures in which Rolls-Royce is involved and there are also independent shops. There are independent shops in Japan, in the Middle East with our relationships with some of the Middle Eastern carriers, in Air France there will be for the future. There are a number of options, therefore, dependent upon what the airline strategy is: are they going to have a big maintenance infrastructure and want to participate in that or are they happy to come to a Rolls-Royce facility or a Rolls-Royce joint venture? It depends what the airline's strategy is, but there are those three options.

**Selvan Masil:** What I am trying to get to is do you think you will make more money, profit, from a programme that has a high TotalCare penetration, absolute dollars, versus if you did not have TotalCare? Do you have to sacrifice something in profit to get the stability?

**Tony Wood:** I think it is quite clear that there is risk transfer going on, as John has explained, on a TotalCare contract and for that we seek to generate a better margin. The focus within the business is on having the most efficient maintenance footprint in terms of driving productivity, driving repair technology. That is the focus. That is the bit where our intellectual property sits that gives us the confidence that we can deliver those margins. So, absolutely, we seek and should secure a better margin as a result of that risk transfer. That is the premium.

**Mason Thalheimer (Samlyn Capital):** You guys keep alluding to 2013 being maybe a pivotal year. Are we supposed to understand that as maybe 2017 is when we see the peak in the total of the net debtor and the REC engine cost account or whatever we are calling it these days and that, going forward after that, cash will be above earnings as we draw those balance sheet items down? That is the first question.

The second one is it sounds like you guys are, in October, committing to giving us longer term guidance. In the past you have talked about margins expanding over the medium term. Could you at least give us a teaser today? Could you commit to margins expanding over the medium term without giving the exact numbers, as maybe you have done in the past?

The third question is it would seem logical that the contingency on a linked programme would be much higher than an unlinked programme as you are recognising more of the profits upfront. Is that true and is there a way to think about an order of magnitude between the two of them?

**John Rishton:** As I said about 2018, that is when, according to the charts and the projection that we have, we start to see things evening out. We will have gone through a number of years of what I have called growing pains, we will have done a lot of the work that we are doing on cost and I said that that is the kind of year when we would expect to see an improvement in cash conversion, subject to not having any major new programmes that would change that profile. That is the only comment that I would make on that topic.

In terms of margins, October is not too far away and we will wait until then, teasers or otherwise.

Mark, do you want to address the linked and unlinked?

**Mark Morris:** Yes. The short answer is the mass in the accounting drives what we do, so the estimation risk, when we look at it, is we treat a linked contract as a whole, so when we assess what we think the estimation risk is we then obviously apply it to the entire contract. By definition, therefore, if you have an OE element in, in terms of the implication in dollars or pounds, yes it has a bigger impact because we treat it as one. Whereas with a pure, unlinked aftermarket you do not have the front end revenue and costs to consider. Does it affect our margin? No. We are thinking about the cost looking through. The OE is delivered and the cost is known, so the driver of the estimate is driven by our cost assumption and what I will call the small error bar in how we try to make sure we have a sensible line going forward. It is our best estimate, but let us be clear, it is an estimate looking forward 10, 15, 20 years. Once we have assessed that we then apply it, because the rules require us to apply it in terms of evening the margins on linked and therefore we take the margin based on flying hours flown and that is all factored in.

**Christian Laughlin (Bernstein):** How successful have efforts been so far to extract costs and better terms out of your supplier base?

Related to that, do you expect to find greater success in newer engine programmes like XWB versus, say, Trent 700 or because of supplier overlap you are able to exert some leverage on both?

Finally, related to that, in terms of the timing or phasing, just realising that these cost improvement efforts do take time, what is your general view on how the phasing or the positive impact of the benefit will end up in the financials?

**John Rishton:** Okay, thanks. I think your second question is 'could you give some medium term guidance today?' again and we will deal with that in October and give you some clues. I will reflect on these questions. I am not trying to be flippant about it, but we understand the question and the interest.

In terms of the supplier base, I will ask Tony to make a few comments, because he has been involved in this. My summary would be mixed and it is mixed for all the obvious reasons. If I put our suppliers into three unfair buckets, the one where you have good negotiation leverage, one where you have some negotiation leverage and one where you have none, guess where you make progress and where you do not? If you look across the supplier base, it is always easier to make more progress in the first part, so we are making progress. If we look at our programmes in terms of the number of suppliers that we have, we have reduced them significantly. Go back in history: hundreds and hundreds of suppliers; XWB: fewer than 100. That changes the negotiation dynamic significantly and, yes, where we can link past and future together it gives more volume and that then helps into the first bucket of suppliers.

The other thing that I would say is, having worked in and observed the car industry, they went through a whole raft of relationship issues with suppliers about how they could or could not manage it and what I would say is we should learn from that. The real learning, I would suggest, others may disagree and there is at least one person here with a lot more knowledge of the car industry than me, is to make sure that you have a firm relationship and partnership with your critical suppliers where you both benefit, rather than trying to push them under water for a period of time just to get a better price now. The other complexity that we have is around the length of the programmes, the old programmes, the nature of the beast, the regulatory environment that makes it a more complicated and generally longer discussion.

Tony, do you want to add anything?

**Tony Wood:** I think you have covered most of it, but on the point about reducing the number of suppliers, Rolls-Royce Aerospace today, 135 suppliers is 80% of the value of equipment that we buy in our engines. That is a dramatically smaller number over the last decade. I can get them in a room and have this conversation with the aerospace team; we did it at Heathrow only a few weeks ago. It is a continual process. It does require us to be a partner, to look at the specifications, go into a lot of detail to liberate cost of every component and every system that we buy, but there is the reality of the complexity of the parts in the engine versus the competitive position. We do have those suppliers who have proprietary equipment and systems and capability in our engines and those are the ones where we have a much deeper and more partnered relationship to drive costs down. So, it is very much a two-way relationship that we are developing and our posture is really important in that and we are getting traction. We are working our way through offsetting the escalation piece, the pressures that our suppliers face as well and then getting beneath to the real things that drive cost, inspection requirements that we put on for our engines and the other elements of the design and really working much more closely with them. It is a long-term drive to get cost out.

**Ben Fidler (Deutsche Bank):** I have three questions, it may surprise you. The first one is a fairly simple one on the buyback duration period, this £1 billion, just to help me understand your intention as to how we should think about the time period over which you will execute that. I know some of that may be out of your control in terms of market volumes and price volatility, but do you see that as a two-year programme, is it a five-year programme? That would be helpful to bound it.

The second one is on capex. Thank you for the additional detail you have given us on the rate of decline in tangible capex, down from the 4.9%. Last year, intangible capex was 500 million. Could you help me understand how that will progress, the intangible capex line, over the next three to five years, over that corresponding period? That would be very helpful.

The final one is coming back to the supply chain cost reduction activity and just so I have understood the messaging correctly. You are saying with your 400 engineers and the activity that you are undertaking at the moment with supply chain cost reduction we should think flat procurement cost, we should not think down. A while ago, my understanding was you were targeting 15% reduction in bought in costs from the supply chain, which is about a four billion cost item over a three-year period. I just want to understand how I should think about that. That would be helpful.

**John Rishton:** Mark, do you want to make a comment on the buyback time period?

**Mark Morris:** On the buyback, again it is subject to the energy deal concluding and getting the regulatory approvals that it needs and our working assumption is that will be by the year end. If that goes according to plan, I think you have alluded to the fact that some of these things are out of our control, but certainly our plan would not be looking at many years. It would be at a sensible level, a sensible run rate. As I said, it is a discrete set of proceeds and we will do it in an orderly manner through the various exchanges and the usual mechanisms that we stick in place. Like I said, some of it is out of our control so I cannot be explicit, but certainly we are not looking to eke it out over many years. That is certainly not our intention.

**John Rishton:** Capex, Mark.

**Mark Morris:** We talked about tangible capex. On intangible capex one of the big drivers there is RECs and we are going to start to get into medium term guidance territory, which we are holding off more for September. There are other areas, but we have not given any guidance at this stage on where it is, but obviously it is an area we look at as well.

**Speaker:** [Inaudible].

**John Rishton:** Okay, we withdraw the capex guidance, does that help? What I would say there is you are damned if you do, damned if you do not. We are going to drive that down, that is quite clear and is something we can do. One of the observations I made is I can control capex spend at the centre and we can achieve it and we can look at that quite comfortably and work out what we are going to do. For the more specific guidance we are talking about that Mark has outlined, we want to go through a much more thoughtful and rigorous process and really consider what it is we think is right to do. That is the difference.

In terms of the supply chain, you mentioned 15% and certainly that was a headline number a year or so ago where we go out to the supply chain and say, 'We want a big reduction'. Anybody who sits here and thinks that all the suppliers say, 'Oh yes, sure, no problem at all,



here is 15%' or whatever it happens to be, obviously has not been in a supplier negotiation. What it does, though, is set the bar in terms of saying we are serious about this, this is not a 0.5% or £0.50 off kind of thing, it is a big programme and then you get straight back into what I described as the three buckets. In addition, the suppliers we talked to at that point in time were fewer and we are now expanding those discussions, as Tony was saying.

Tony, is there anything you want to add?

**Tony Wood:** No, we are tackling it. We started with the 50 suppliers with the 15%, 5% per year over three years. We have made good traction on some areas of that. We are still working on some of the more complex relationships with the more complex systems and we are making traction. It takes time to deliver these programmes and it is related to some of the engineering work that we are doing as well, in terms of looking at where we can put easements in that help suppliers take cost out as well as the commercial leverage in the negotiation that volume and some of the other growth that we are seeing brings.

**John Rishton:** Lawrie, do you have anything to add on the MIPS side?

**Lawrie Haynes:** Yes. I would say that the discussions we have had with our suppliers about cost-cutting have been improving over the last six to nine months because we have been able to demonstrate that we are cost-cutting. An important part of the relationship that John talked about is being able to demonstrate that internally we are taking the appropriate actions as well as asking our suppliers to do that. We are getting more traction because we are able to demonstrate our own position.

**John Rishton:** Good point.

**Moderator:** We have two questions from Tal Eloya at Integer Asset Management. 'Can you please discuss the risks associated with the XWB programme? It is a large portion of your future growth.'

The second question from Tal is, 'What are the risks of further meaningful decline in defence profits?'

**John Rishton:** We can talk about risk from a number of different perspectives. What I would say on XWB, to cut that short, is we are in very good shape on the XWB. Colin, do you want to make a few comments about where we are in terms of that programme and what is going on?

**Colin Smith:** Well, we certified the engine late last year. We are in the middle of the endurance programme to make sure that we have the maintainability and the reliability that we are predicting and it is looking very good, in line with predictions. We are just over half way through the flight test programme. There are five aircraft, I think, currently flying and, by the way, we are tracking them all the time. The data being streamed off the aircraft we are bringing it back in and, as Tony said, showing how it validates against our design models. So, everything is looking extremely good.

**John Rishton:** In addition, we have delivered, I think, Tony, the first two production engines to Toulouse for Qatar, which is the launch customer for the A350 that should be going out later this year. So I think we are in a pretty good place in terms of XWB.

Risk in terms of defence, we are getting back into guidance there and I will go back to what we have said. We have confirmed the guidance for this year and what we said about 2015, but I am not going to get drawn into more detail at this stage.

**Stephen Farley (Farley Capital):** A question regarding the relationship between improving your on time delivery and your cost structure. What is the relationship between improving the on time delivery to internal plan and reducing costs? In order to improve the on time delivery to internal plan do you first need to increase costs or are they going down as you are improving?

**John Rishton:** That is a great question. What I showed you was that we do not deliver very well to our internal plan and the way that we then get from our internal plan to deliver to customers on time is that we create a buffer between the two. The buffer is, for the sake of this discussion, Time and Material. So, you create time by which you get the material coming in, by which you get a chance to finish the engine so you can get it to your customer on time. Therefore, if the buffer is this wide and at the moment I am only delivering 25% to the internal plan and the rest is coming in over the course of this buffer, then I have one financial effect. If I get this to 100% and leave the buffer the same, that will increase my cost and increase our inventory, because I end up holding 100% for longer rather than 75% for less, to use my numbers. So the challenge is we have to get stability into the supply chain and into the delivery to plan so we get towards 100% and then you close the gap, so it is a two-stage process. We can and we will do that and all businesses go through this as they mature from a low volume to a higher volume and that ripples around the supply chain. As I was saying, it is an important element of our cost and cash in relation to inventory in terms of the costs that we build into the system as a consequence of the buffers and it takes time, because you have to get the stability at this level and then drive it through in terms of reducing the buffers as you get confidence.

However, as I also said, we have already reduced the lead times, for example, on the Trent 700 engine, so it is not that you have to get everything right and then you can do it. This is the stability and confidence that you have in individual programmes and, as you know, the Trent 700 is our largest volume programme and we have made very good progress on that. However, there are other programmes, new engines, for example, where we are behind where I would like us to be, so it will take some time.

**Stephen Farley:** Are you saying you have stopped increasing the buffer or is the buffer still increasing?

**John Rishton:** We have started to reduce the buffer in terms of material and we have started to do that around the whole supply chain. If you were to talk to our suppliers, we have taken load out to start reducing the buffer. We have begun that process already. We have been doing that now for nine months or so and it is a gradual process. For example, if I have a three-month buffer, I could turn everything off for three months if I am confident, but that does not make any sense, you bring it down slowly and that is what we are doing.

**Tristan Sanson (Exane BNP Paribas):** I have a few questions on TC accounting for Mark. The first one is TotalCare life, should we care in terms of accounting compared to a traditional TotalCare agreement? Is there any difference in profit and cash recognition?

Second, if we look at a renewed TotalCare agreement, should we just see that as a traditional unlinked contract or should we look at a different cost and revenue assumption for it?

Third, you gave a margin and cash profile for the traditional linked programme, but if we look at the total life of a programme which would start with a linked contract but with renewal of TCAs as unlinked, what would be the adjustment we should look at to the margin and cash profile of that programme to get a comprehensive view of what is happening on a programme like the Trent 700 or something like that?

**John Rishton:** Those are pretty detailed questions. Mark, I do not know if you want to give a high-level answer to those. I suggest you talk with the IR team afterwards, because I think we will probably grind into too much detail if we try to address those specifically, but do you have any high-level comments?

**Mark Morris:** I did not quite get your first question, but let me start with the other two and I will maybe take the other offline.

In general, when we look through the life of an engine we assume 25 years – they can go on for a lot longer than that – and a normal TotalCare period might typically be anywhere between 10 and 15 years. Our experience generally is that where we have reached the end of TotalCare they are renewed and they are renewed on a new set of terms, because depending on where it ended, the number of overhauls that will occur in that period and the flying hours that either the next operator is going to do or, indeed, the same operator, will be different. This will set up a different set of criteria in terms of engine flying hours and cost rates and, of course, the estimation and risk evaluation will then apply. Generally, as you get further down the number of overhauls can become larger, because you have to factor in things called LLPs (life-limited parts), which Tony has talked about. Sometimes they are in contract, sometimes they are not and that will drive the mechanics around that, but we have good experience on that and the same logic and modelling applies.

On your last question, yes, I took a very purest view which said there was just a 15-year TotalCare on those linked diagrams that I gave you as a generic. It did not then say what happens afterwards with the next call it 10, 12, 15 years and you would just add in an unlinked programme. It should be the other graph again that would kick up in the same way and the two would merge depending on the conversion rate from one to the other.

I will pick up your first question because, I will be honest, I did not quite get the detail and we are running out of time.

**John Rishton:** We will pick that up afterwards, because I am going to take the last question and then we will close.

**Timm Schulze-Melander (JP Morgan):** Thank you for taking my question. It is a two-part but maybe very simple question. You have given us a lot of detail around TotalCare, you have talked about your non-civil aero businesses being standard industrial and you have a sizeable but growing installed base with some good revenue and cash visibility. I guess I am still struggling to reconcile the half on half cash variation just in terms of the two or three really big blocks, and you gave some detail to Zafar's question in terms of half on half profitability. Looking forward, is that half on half variation something that investors should expect to diminish over time? Thank you.

**John Rishton:** Obviously, future guidance is future guidance, but we generally have, even historically had a historic profile of cash improving throughout the year and phases of what I will call buckets as we go through our working capital cycle. It is more acute, for the reasons that I have given, this year in terms of some of the money we are spending on rationalisation, R&D, some of the capex phasing that we have had. Again, this comes back to also where we are in the capex cycle of what capex we have done, creditors outstanding and paid in the year. It is just where you bring the portcullis down on a balance sheet date. In highlighting it to you, it is just so that no one panics. For us, it is business as usual, it is just what we have gone through in this cycle and we are reflecting to make it clearer for the market that this is what it is and these are the reasons behind it.

As we look forward and without getting into guidance, we have always traditionally had an H1/H2 profile that has been loaded predominantly to H2 and progressively, as we go over, our view is that will start to balance more.

Ladies and gentlemen, thank you very much indeed for joining us this morning. We hope that you have found today helpful, useful and has addressed some of the concerns that you have. As I said at the start, we recognise that we are never going to get there in one go, but if you could give feedback to our IR team about what worked, what did not work and what you would like to see in the future that would be very useful. We will try to make sure we address those concerns, thoughts and issues. We are, as we said, going to have another day, 21<sup>st</sup> October, in Norway and we look forward to seeing you there.

There is a buffet lunch outside, the team will be out there for a short period of time and we can take some more questions from you individually. Again, thank you very much for your time today and your attention.

[END OF TRANSCRIPT]