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PRESENTATION

John Dawson - *Rolls-Royce – Head of IR*

Okay. Thank you very much for your patience in settling so orderly. This is the largest Investor Relations presentation gathering I've had the pleasure of addressing as a Head of Investor Relations over the last 18 years, so thank you all very much for coming. I hope you will find the next two hours interesting and enlightening on Rolls-Royce.

Thank you, all, very much for joining us here today in London, and for those of you joining on the webcast, my name is John Dawson, I'm the Head of Investor Relations of Rolls-Royce. And with me here today, Ian Davis, our Chairman, Warren East, our Chief Executive, and David Smith, our Group CFO.

The running order today is as follows. Ian will make a few opening remarks, followed by Warren who will take you through the highlights of the operating review. David Smith will share some thoughts about this in this financial review before Warren returns to give you some conclusions and we'll turn the proceedings over to questions.

We expect the presentation to last around 75 minutes and we've allowed plenty of time at the end for questions. We will be able to field some questions from the webcast, so for those of you online, type your questions in and a member of the Investor Relations team will ask them on your behalf. And if we don't have time, we'll come back to you, by email, later on.

We may also include forward-looking statements in our presentation today. As normal, you should refer to our Safe Harbor statement included in the back of the presentation materials.

Finally, before we begin, could I ask you please to turn off all your mobile phones or make sure they're silent during the course of the presentation.

With that, thank you, and over to Ian.

Ian Davis - *Rolls-Royce - Chairman*

Thank you, John, and good afternoon, everyone. Thank you, all, for joining us. Today is about Warren East, our new CEO, and his plans for the future. But before Warren starts talking to you, I would just like to say a few words of introduction by way of setting a context.

Firstly, let me say that neither the board nor myself are under any illusions, any illusions at all, about how concerned and how frustrated many of you in this room are. We get it, and we get the associated need for the decisive but well-judged action.

There's a lot of talk about portfolio and about capital allocation in the business and Warren will address these in his talk. But let me just say that for my and the board's point of view and the management's point of view, the overwhelming priority now is to improve our financial and our operating performance and to increase the speed of response to events and improve our internal controls. This is the absolute priority.

At the same time, we recognise that we have to continue to improve our communication with investors. I hope that today will be a stepping stone in that direction. But let's be clear, our priorities are improvement in the financial and operating performance, those are our priorities. And I should just say that the profile of recent appointments to the board reflect these priorities and will continue to do so.

But as we focus on operational and financial performance, let me also be clear that I, in no way, want to detract for the fundamental underlying growth potential in the business. I know we've banged on a lot about this in the past, but it is real.

The value creation in this business is not aspirational, it's not a mirage, it's real, it's there. It's underpinned by the order book, its extraordinary order book, it's underpinned by our engineering and technology platforms proven in the marketplace and it's underpinned by the extraordinary breadth and depth of our customer relationships.

There is value creation potential in this business and our focus and priority must be and will be to capture and deliver that potential. We are going to return Rolls-Royce to a position where it not only generates attractive returns to shareholders but ensure that these returns are growing returns as well. Fundamentally long term, this is a growth story.

In my and the board's judgment, Warren has got off to a very strong start in challenging circumstances. I think you'd all agree. He's now going to describe his plans and priorities to the business and I just want to emphasise that he and the management team have the total support of the board in executing these priorities and delivering the value creation potential in the business.

Warren, over to you.

Warren East - Rolls-Royce - CEO

Hi. Good afternoon, everybody, and thank you, all, for your patience in turning up in numbers and waiting for us for the webcast there.

Now, I'm going to talk for quite a while about operational review, but just before we get started, I'm going to be talking about a number of things which arguably are wrong and need fixing.

And I'm going to be talking about what we're doing to fix them. And there have been a lot of questions about things which are less than desirable, and it's very easy to go away with an impression that it is all bad.

But then I thought, "Well, why on earth that we've got so many people coming to this event if it's really all that bad?" And I think it's very important that we do retain that sense of balance, because

whilst I'm going to be talking about improvements, I'm going to be talking about improvements around, a great company that arguably has some of the best engineers in the world doing what they do, creating some of the best engines in the world for what they're used for.

And that business is positioned in markets which are, as Ian just said, growing markets. We're strongly positioned and we are growing market share in those growing markets. And this afternoon amongst other things, I'm going to be talking about steps we're taking to grow our profitability around that.

So actually, we're talking about a great company with a great future that happens to be at a bit of a turning point, and that does happen with large businesses that are long-lasting businesses and have been there for a while and have a long future in front of them.

And I think it's important to retain that sense of balance whilst we go into the depth of some of the things we're going to talk about over the next 30 to 60 minutes.

So key topics for today: we're going to talk about what I have discovered in my first three to four months in the job. And back in July, I said, "No, I wasn't prepared to just stand behind everything that we were saying because I wanted to review the operations first." And you'll see some of what I've been looking at.

Then we know there are a handful of pretty key questions for this community. We're going to address hopefully a lot of those key questions today, but in particular, there are some key questions around civil aerospace performance and cash generation, and I'm going to go through that.

Then David is going to give us an update on the improved disclosure that we are striving for. We know that one of the issues is around financial disclosure and we are striving to improve that. We'll also talk about capital allocation and then I'm going to come back and talk about the areas for business improvement. And that last box is very much the emphasis for me over the next several months.

So review of operations, this isn't a discrete thing, this is an ongoing process. And what I'm going to say today is that we are committed to giving you regular updates on this.

Today, we'll talk about some initial findings and some of the actions that we're taking. I think it's important to note that, you know, some of those actions involve people and jobs and that sort of thing.

And we are not going to talk about details of that today because a lot of discussions are happening right now, we're engaging the team. But what I will say is that we'll commit to this roadmap, if you like, this plan of communication.

We will be back on February the 12th and we'll, at that stage, have nailed down, in fact, by the end of this year hopefully, the high level structure that we intend to work with, and we'll have nailed down plans, costs and time scales by February the 12th update.

We'll give you more updates in Q2. We're intending in Q2 to hold an additional capital markets day at some stage, and early in Q2, we have an AGM and interim management statement. And so plenty of opportunity for communication, for updates on how we're doing versus measures of success and so on.

Now, down at the bottom of the slide, we've got strategy and portfolio and it would appear that that sort of starts not now. In July, I talked about doing an operation review or a review of operations because I thought we could park strategy for a while.

Well, of course, it's impossible to divorce some elements of strategy and the portfolio of activities that we're undertaking as a business from reviewing the operations today. So I will touch on some of that -- some of those portfolio questions as we go through the presentation.

Now then let's have a look at what we do. Now, clearly, as Ian said, you know, we are fundamentally an engineering company with a focus on engines and power systems targeted at a range of different applications.

So how do we look at that as a business? Traditionally, we look at it like this. And actually, it's a little bit of a mix of markets and products, and it's quite hard to see what's going on in the business when you look at it like that.

So actually, we need to get under the skin of it and break down some of those markets and go a little more granular in order to analyse what's really going on and then absolutely, we can reassemble from that more granularity to create a simpler presentation as we go forward.

But in reviewing the different parts of our business, the different markets in which we operate, what we've looked at is we basically looked at it through the lens of competitiveness and market attractiveness.

And in competitiveness I mean the strength and weaknesses of products and our technologies, the strengths and weaknesses of our routes to market, how we're positioned in terms of routes to market and the cost competitiveness of our product offerings.

In terms of market attractiveness, I mean things like long-term growth potential, absolute levels of demand and potential to generate margins.

And as you look around the different parts of our business the different parts have different strengths and weaknesses and different levels of market attractiveness. So going into the detail on that now.

And normally a Rolls-Royce presentation like this starts with the review of our aerospace applications and then we run out of time in the presentation, and so I thought we do it a bit differently this time.

And so we're starting with what we currently call Land and Sea businesses. And actually, this is a collection of different businesses. Some of them are historically very strong generators of cash flow and good margins. Certainly, we've seen some headwinds over the last couple of years and some of those reasons have been well-debated over the last couple of years.

The charts in the bottom, the light blue line is group average and the dark blue line is these particular businesses. And you can see that generally, these are lower capital intensity businesses with modest levels of R&D.

If you look at what the activities are, what markets we're operating in, then we're operating in five broad market categories and 14 separate sectors. And the areas of each block are roughly proportional to 2014 turnover. [Comment: slide x has proportional chart areas, but not slide y]

So a current snapshot when looked back through the lens of market attractiveness says that it's a mixed bag. And we have some areas with definitely high levels of market attractiveness, others, less attractive for the time being and that might be due to the margin potential, it might be due to the growth potential.

And we've tried to look at it fairly objectively and recognized that, for instance, in some sectors, there are particular conditions that exist at the moment that aren't necessarily normal, so, for example in nuclear, nuclear services, it's strong, it's a growing market, and our expertise can really command a premium in that space.

If you look at it through the lens of competitive position then, again, it's a bit of a mixed bag and, I would say, a real mixed bag because if you look at, say, the offshore sector, we've marked that in both colours because the mixed picture represents the fact that we've got some opportunities but we've also got some challenges.

So, we have some very high quality product there and yet our route to market is non-optimal for 2015 and going forward. So if I put that altogether on a chart and plot competitive position or competitiveness versus market attractiveness and look where we are today, you can see fundamentally, we have about 60% of our revenue here in areas of good competitive position, there are some significant areas for improvement and refocus, and there are clearly opportunities to adjust the portfolio, and I want to say that just because something is in the bottom left-hand quadrant does not mean that we need to sell this business or get out of this business.

It could mean that actually we need to change what we're doing in that business to improve the competitiveness or take us into a different place to improve the market attractiveness. So it doesn't necessarily signal sales just because we happen to put some business in that bottom left-hand corner.

So how can we change that as we look forward? This chart shows the position in 2020. If we take the existing portfolio, so this is the existing portfolio of activity and, you know, arguably, if you got out of everything in the bottom left-hand corner then, of course, you wouldn't have anything left there and you would look as if you were in a fantastic position, but a route, a quick and a very reliable route to a small business.

And in 2020, I don't think we necessarily need to be there. This shows that there is significant opportunity to change. There could be some very good reasons for being in that bottom left-hand quadrant.

It could be to perhaps give us some scale so that we can deliver profitably in some of the sectors where we are more competitive and where the market is more attractive, or it could be simply a matter of timing where today and in 2020, things aren't particularly attractive, but we absolutely need to be there for some stage in the future where we recognize there is a large opportunity in the future.

So how do we make that move and make that change? Well, just before we do that, I want to draw out one of the parts of this business that we don't mention very often, and to give just a quick look at nuclear activity.

Now, first of all, obviously, timing, with the strategic defence review yesterday, I think that was broadly good news for Rolls-Royce. By the way, I had an interview with a journalist this morning who was asking that question, is broadly good news for Rolls-Royce, and certainly good news as far as our submarine activity is concerned.

I think what we found with the characteristics of this business is that its excellent cash characteristics and some very good longer term customers.

Our civil nuclear business is small today, but we do have an amazing presence in terms of our presence on nuclear reactors around the world. Our technology is present on approximately half of the nuclear reactors around the world, so our penetration is quite small within each of those nuclear reactors, but our presence is very strong on approximately half.

And here is an example of the business with great growth potential because we're very well respected where we are present on these nuclear reactors and there is a market sector with a lot of growth potential in excess of 50% over the next 10 to 20 years.

So now, how we're going to change the positioning on that portfolio more generally? What can we actually do about it? A lot of the good news about me looking around this business, well, I have discovered this, we can do an awful lot of it with self-help.

This isn't a matter of having to go out and spend -- spending billions of dollars on acquiring this business and that business and selling other businesses. There's a lot of self-help that can be done within this business. So how do we change the portfolio?

I think broadly, there are three axes here to work on, there is providing more value where we are engaged, there is strengthening our route to market to ensure that we can grow our market share and also again, to help grow our market share, really drive our competitiveness.

So a few examples of that would be here in our marine business, one of the key drivers right across Rolls-Royce actually of increased value is increasing the efficiency of our product.

And here's an example where we're delivering to a customer improved fuel economy, materially improved fuel economy, and that's an example where by doing that, we can hugely increase the competitiveness of our product and expose us to a potentially quite large growth opportunity over a relatively short term.

What do we have to do to do that? We have to increase our expenditure in R&D in this part of the business. This is the part of the business where actual capital requirements are, as I said, much, much lower than the group overall, but we do need to spend a little money to improve the competitiveness of our products in this part of the business.

Another example would be in terms of route to market. Here is where we had some very good products, but we didn't actually have much for positioning the market in the U.S., which is a huge market opportunity.

And so through a relatively small acquisition a little while ago, we now take our technology with a much better route to market in the US. And six out of 10 of the top technology companies are now relying on our technology for power -- backup power.

And these are -- these are sort of usual suspects in terms of -- in terms of technology companies with their data centres. But I think that it's a good illustration of what you can do with small changes to improve our channels to market.

And then there's competitiveness, and we've had quite a lot of announcements in this part of our business and particularly in the marine areas over the last 12 months where we are repositioning the business so that we're operating in the areas of market growth and we're also getting much more efficiency in terms of numbers of locations and actually reducing our fixed cost so that we're leaner and fitter to deal with these.

And by the way, I would stress that this particular example, is stuff we have already announced and I'll return to that. But quite significant cost savings on an annual basis by 2018.

So if you want to summarize where we are in terms of the collection of businesses that we currently call land and sea then here it is on the chart in 2020. And basically, we think that with the current portfolio, we can be in 60% of the business in growth markets, attractive markets where we can improve our competitive position as well.

We're not dependent for this on specific market recovery, by the way. If -- and certainly in our offshore sector where, you know, we are very sensitive to market conditions at the moment, certainly, if and when that improves then the position will be -- will be further strengthened. But right now, this is about self-help.

So at that stage, I'm going to switch to summarizing applications in the aerospace field. So in aerospace, we are basically -- if you're going to step back from it and say "where are we?", we're in a position of a transition, we've talked about that before.

We're bringing a whole new series of products to market. We're undergoing once in a generation frequency sort of levels of investment in new engine technology. They're our next generation products, and once in a generation transformation of our industrial base to improve our competitiveness. Specifically, we can -- we can split it into two parts and we can -- we're going to talk around these two areas of defence and civil aerospace.

So I'll start off with defence, and again, compared with the group, this is lower levels of capital spend. And R&D is quite well supported by the government customers, and you can see the line here, that very light blue line on the right-hand chart down the bottom is growth R&D versus real R&D in that business. And I think maybe the scales -- I'm not quite sure, I'll have to dig in to the scales there.

So if you look at the portfolio then we actually got nothing in the top right-hand corner here, but that is not bad, actually, our transport and patrol applications, this is our strongest position, you know, where we are very competitive.

Right at the moment, there are no particular new design slots there for those airplanes. So it's a matter of optimising and servicing the aftermarket that's there. The attractive features of these businesses that are very, very long cycle and very good cash generation potential in both the O.E., with the government support, and in the aftermarket.

And what we intend to be doing here is very much defending our current applications but we do anticipate growth in transport and combat in the sort of period post about five years and you'll see that that can actually mean that it becomes much more attractive post-2020. And what we need to do now is position ourselves to exploit those future opportunities in 2020.

If we look at the defence business and the cash flow characteristics, I said it's a long-term business. It is a very long-term business. Some of the —the horizontal line here represents zeros. So below the line is cash consumption, above the line is cash generation.

So we start off by investing in technology and development, and that can be a very long time, that can be like 20 years before entry into service. But then we get product development and some of this is actually cash generative, so some of this, in the defence business, actually sits above the line because it's customer-funded.

Then the engine goes into service and we're in production and then typically, it is a very long period of the engine being in service and we have support packages every so many years, is very consistent cash generation.

If you take a sort of slightly stylised view of those blocks. You end up with a curve which we'll see in a minute if I press this button enough times.

If we look at the portfolio that we have today on this slightly stylized curve, you can see that it's actually a fairly mature stage and a lot of operators are reaching a fairly mature stage. So this is an elderly portfolio.

But we are investing in new technologies to capitalise on those new opportunities in transport and patrol, and in new combat. Unfortunately, we're not going to talk any specifics about the new technology that we're developing, but we're confident that with developing that new technology, we'll be improving our competitiveness to take advantage when that market becomes more attractive.

One of the other ways that we're improving our competitiveness in the defence space is by looking at our cost of production and our facilities. And this is a transformation that we've talked about for a little while and we announced at the beginning of October this year, where we're taking our facility in Indianapolis and we'll be occupying roughly only half of the footprint in a few years' time.

And that is all about improving the cost competitiveness, so as well as reducing the size, we're investing a lot of money in improving the manufacturing technology that is there. And that's a five-year programme, it's going to take a little while.

So if I summarise defence for a moment then it's very much about maintaining our leadership positions in transport and patrol. Investing to strengthen those positions, if possible, and the focus there is about adding value through new technology and improving our cost competitiveness through more modern manufacturing.

So now, let's talk about the civil aerospace applications, and there are several different applications here. It's made up of different applications have different characteristics, so I can't really treat this as a block, I have to go into the different characteristics here.

This is a higher capital intensive operation and a higher R&D operation than the group average because we've just talked about all the businesses that are lower, so this is clearly the space that is higher than the average.

So let's start off with the business jets. And our large business jets is where we have a very strong band and a strong position. The O.E. revenue is volatile year to year. This is a market that is driven by business spending and high net worth individuals, and you will find volatility in the O.E. But the aftermarket, which obviously depends on the installed base, is much steadier.

And a snapshot where we are at the moment in this sector is that we are moving from a position of a very strong market share. It will decline following several platform losses that have happened over recent years, but we do have very strong customer relationships and we're using those strong customer relationships and investment that we're making in new technology to hopefully regain some of that strong market share in future years. So that's where we are in large business jets.

If we look at the cash flow cycle, it's quite similar to the one that we built up before but note here, the product development is all on our P&L rather than being shared with our customer. And we're talking about a long period of aftermarket revenue.

If you stylise it and look at where our cycle is at the moment, then what I would say here is that the O.E. margins are good in this particular sector and therefore the cash flow turns positive quite early on in the cycle.

And, of course, we are investing as I said in new technologies here with which we'll hopefully recover some of that market share. Why it is an attractive market is it is a long-term growing market.

Now, you can see where we are in terms of timing at the moment. Please don't assume that that line goes up into the right smoothly as it's shown on this chart. And that is clearly an estimate at the moment and we obviously will anticipate bumps in the road as we go along there.

But in terms of units, there are going to be ups and downs. I said the O.E. is a little bit volatile. Obviously right now, we can't second guess exactly when the various economic conditions over years out to 2032 are going to cause bumps in the road. They're going to cause bumps in the road like we've seen bumps in the road if you look back over the last 25 years.

However, you can draw through those bumps over the last 25 years and see that if their market has consistently grown, and that's what we're saying is going to happen over the next 20 years or so.

Regional jets, we've put this in the bottom left-hand corner because actually, this is a legacy position for Rolls-Royce. We do expect this revenue to decline. We have no new opportunities for getting designed into a new product.

And we actually expect that revenue to decline as the existing products retire to about 1/3 of today's revenue over the next five years. And we don't actually anticipate any new market opportunities here

for the next 10 years or so, and so this is very much an example of the business that we need to harvest. There is aftermarket potential here for the next several years. We need to harvest it as efficiently as we can.

Now, switching to narrow-body, narrow-bodies in the bottom right-hand corner, our competitive position is similarly not so good, but it is a very attractive market, let's be honest. At the top of the slide, it's a strong growing market, and we were in this market to a limited extent with a share of a joint venture that had a small share of the overall market. So in total, Rolls-Royce commanded about an 8% share of the market opportunity once upon a time.

And the important thing to note is that what we actually sold, when we sold out of this business a few years ago, is only part of it. We retained our business and that's why there is a square in the bottom right-hand box.

You know, at the moment, we retained a cash generative business, supplying modules for a while and for many years into the future to enjoy an aftermarket revenue. So, you know, Rolls-Royce is actually present in this market sector.

The big question I think and there's been a lot of debate that I've heard since joining the business, is so what about narrow-body in the future, and, surely you have to be in narrow-body in the future?

I think the answer is no, we don't. We don't have to be in narrow-body in the future. It's a great opportunity at some stage when it arises. But right now, there isn't an opportunity. There is no opportunity for us to enter this business until the early 2030s. There's maybe a little bit of discussion about a sort of quasi wide-body opportunity maybe five years ahead of that.

So this is actually not something that we should be wasting our time on right now in terms of debating. And we are developing technology for the wide-body jets, and I'll come onto that in a moment or two. That's a much harder environment for developing our technology and flow down to the engines for these types of products, it works if you flow down.

So we don't actually need to do anything right now other than enjoy the aftermarket revenue and work on making sure that we're earning that aftermarket revenue as efficiently as possible and maximizing the profit opportunity on that over the next several years. Developing our technology and taking advantage of an opportunity if and when an opportunity arises, that is essentially the position for now on narrow-body.

The area of most interests to the room probably is where we are in wide-body aircraft. And here, of course, is a well-known story. We're in a strong position in a market which is growing and there are high barriers to entry and we have a great order book which gives us good visibility that our market share is going to grow.

In fact, we're on course to achieve a greater than 50% share of the installed base by the early 2020s. And right now, as we transition from older engines to new engines, and there are some headwinds.

Some of the new engines that we're selling at the moment, pricing is lower than it could be. This is launch pricing, this is normal, this has happened with all the other engines that Rolls-Royce has introduced over many years.

And right now, we're seeing headwinds because people are doing that transition, they're refreshing their technology and they are older engines with aftermarket revenues associated with them that are retiring.

But if we look at -- look at the trend over years going forward, projections, we kind of see a growing demand, and actually, we can see that in the order book as well. And if you look backwards in time as well as forward in time, you'll see, the wide-body fleet that's out there and GDP are remarkably well-correlated.

And if you look backwards, you can see they're sort of correlated but they don't actually sort of line up. So looking forward into the future for the next sort of 20 years or so, they may not line up exactly as shown on the graph but they certainly correlate fairly strongly.

And in the past, yes, we've had GDP shocks, the light blue line is GDP. When you look at it on this sort of time scale, you see the world recovers from GDP shocks fairly quickly. And in the big picture then these wobbles are wobbles.

So there is a correlation there; there isn't going to be a smooth trend line for both. There will be opportunities for O.E. in terms of replacing older engines with more efficient, less noisy, cleaner, nicer to the environment, newer engines, and also to feed the growth of the installed base.

So if I look at the installed base, it is the installed base that drives the aftermarket revenue. Some of you in this room have seen we present this chart before because it looks remarkably like the ARM royalty chart: by the way, different processes, different engines, but hey...

The value, and this is the crux of the business model here, the value is all about the installed base, and it's about how we generate profit from that installed base. And, of course, there are wobbles in the line there. When you look at it on a year by year basis, you will see fluctuations.

But as that installed base grows, some years, we wouldn't grow it quite as quickly as other years, but the trend is unmistakable and the revenue that we extract from that is about the volume of the installed base and the price that we're charging for the flying hour.

And that's why the aftermarket revenue correlates roughly with installed thrust and more thrust equals more passengers.

So if I look at the portfolio progression for the whole of that bit that we've been talking about, the civil aerospace, then 3/4 of the portfolio is currently in a very strong place. And as we look forward due to the growth of wide-body and our growing market share there then that grows to 90% over the next several years.

I think there's a clear message in the other sectors that narrow-body is essentially about harvesting and keeping our options open and regional jets is essentially about harvesting.

So what does that mean for the group portfolio? For the group portfolio, it means that over 80% in 2020, over 80% of our group activity is in attractive markets. Over 75% is where we have a strong competitive position.

That doesn't mean that we're going to bail out of other areas, it means that we have opportunities to improve, or it means that actually we deliberately need to keep those and we look at a couple of it just now in the civil aerospace business, so why not we get out of those even though they happen to be in the bottom half of the chart right now.

Two thirds of the activity here is set to benefit from the transformation programs that we have underway. And that's about improving the competitiveness and improving the operational excellence.

As we look forward, it would be wrong to ignore some of the legacy issues that we're carrying forward from the past in various investigations into historic behaviours, so let's just remind ourselves.

We are cooperating with all the relevant authorities in all the relevant regions. We have taken significant actions about this. We've got a lot of consistent education going on within the business.

We have a very clear zero tolerance policy to misconduct around the sort of thing, and that has become very well embedded in the business over the last several years. So I think those are issues

which we need to remember are there but we need to deal with those issues and concentrate on the operational excellence of the business.

So our future - I think a couple of drivers for the future here is all about product innovation. I said we had an excellent engineering base, and that I'll return to in a little while. But we need to turn that into innovative products addressing real customer demands, take note of the geographic changes that are happening.

And our order book at the moment is very much a reflection of the significant value that's in the business. The order book is very strong. Contrary to popular belief, the pricing is robust. We are driving cost savings.

Now, we can talk about the pricing at some other stage. The essential thing to remember is that we are competitive and pricing is about pricing in the market. We are competitive, we don't win everything.

So that tells us that the pricing is not ridiculously low because we actually lose some of these opportunities against our competitors. And so the emphasis is very much for the order book, for the installed base driving competitiveness in our operations as we go on.

So I think I'm going to come back to this slide in a little while. The Rolls-Royce's core is all about engineering excellence. We are an engineering company. We're good at engineering engines and power systems.

We have a very strong powerful business model that's all about an installed base and capturing value in the aftermarket on the installed base. And right at the moment, we have a few issues around our operational effectiveness and those are some of the issues that I'm going to address when I come back and talk after David in a little while.

I'm just going whiz through one of the key questions before I hand over to David. One of the key questions is particularly with regards to wide-body engines, the cash flow dynamics there and what actually happens.

We've shown you this chart before and it's a typical Rolls-Royce chart actually because it's actually quite difficult to work out what's going on. And this is exactly one of the things that we need to improve, and so hopefully, you'll see that this is an improvement.

Because what you struggle to work out from that is: 'Okay, so that's a cumulative cash flow chart for an engine program. So what does that tell me about what's going on this year', you have sort of in your mind work out the slope. So we've done that for you.

The light blue line is the cash generation on an annual basis and going forward, we're going to talk with a little bit more clarity about this and make these things a bit easier to understand.

So on an annual basis, the light blue line is a more recognisable project cash flow. The dotted line, by the way, represents the time it takes to be cash flow positive on a cumulative basis.

And that's a very long time, but actually, we get cash flow positive on an annual basis much sooner than that. So let's step through the stages. First of all, we're doing R&D, capital investment, we're building engines, we're buying equipment to build them and working on new advanced materials.

If we go into the next phase, we actually start manufacturing, start selling products, we're starting to wind down R&D and we're starting to generate aftermarket revenues. It's still making cash losses at this stage.

The next stage is when we start going cash positive. At this stage, we've gone beyond the launch phase. The O.E. costs are coming down with a learning curve effect. The prices are going up

because we've gone beyond the launch pricing effects. And the aftermarket revenues are starting to exceed production losses.

And this phase runs for quite a long time. We're now out, the right-hand edge of the blue chart here is 10 years on from where we've flipped over the line and we're sort of 20 years and more into production here. So there's quite a long lifecycle.

And then there's the aftermarket. This is the installed base of those engines which are in service, they're flying around, we're servicing them and we're generating revenue out of that. And obviously, on an annual basis, it declines with time because some of the earlier engines that got shipped in the very first place, they're coming out of service.

Now, not every programme is the same. So some of them will have greater launch pricing, some of them will take longer to ramp up than others, and some of them, the aftermarket will build more quickly. There are higher volume projects; lower volume ones.

And some, they last, some have very, very extended lives. The RB2211 has a very, very extended life and still going now. So all the curves are slightly different shapes, and when you put them together, the inflection points were all at slightly different places.

And so we end up with a kind of shape, removed all those lines from it, it's in that sort of broad area. That's how we could simplify the picture. So below the line is cash consuming, above the line is cash generating.

And what we can do is plot our portfolio of different engines on that chart. And you can see at the moment, the balance of the portfolio is very much in -- we are at a stage, as I said at the beginning of this aerospace piece, that we're in a transition with lots of new engines.

And so we are cash consuming at the moment. And the cash consuming nature of some of the newer engines is outweighing the cash generating nature of some of the older engines that are in service.

We look forward five years and everything is moved to the right. And also the balance of cash generation has moved with this portfolio. And if you move forward another five years then we move significantly into the cash generative position.

That's one way of looking at it, another way of simplifying the picture is let's look now, let's look in five years and let's look in 10 years and the little white arrows going down are cash consumption and the blue arrow going up is cash generation. You can see we're in a phase where, as I said, cash consumption exceeds cash generation.

Roll forward five years, things have changed. We're strongly into positive territory now. The blue line is much bigger than the white line. And in 10 years, the blue line is much bigger than the white line, but the white line has grown in depth as well because by that time, we're investing in the next generations of engines that are going to take us forward even more. And we mustn't forget that next generation of engines obviously has to be included.

So when it comes to "what can we actually do about this to improve?", what we need to do is look at "so what can we do to flex this line and move things around?" So first of all, we can talk about engineering; improving engineering efficiency, improving the ramp up, so making the below the line a bit smaller and making the ramp up steeper and then we can talk about ways of improving the profitability of the large section above the line.

So just a very quick glance at some of this, engineering efficiency, this is an example of where we're doing some modelling and so we're able to do in days in computer modelling what would otherwise take weeks or months in real-time measurements on real engines.

And that means that we have fewer iterative experiments with very costly kit which is a very valuable resource and we do more on the computer.

Delivering the ramp up, obviously, we've talked about strong backlog, we've talked about doubling our engine production over the next several years. We have to provide new facilities to do that and new manufacturing techniques.

Industrial transformation is about -- is about improving the profitability of the production phase and as we go into detail, and that's happening at the moment, improving our O.E. costs, and actually improving how much it costs to service our aftermarket as well, so making the business model really work.

And as I've talked about the aftermarket, with our TotalCare programs, we take on the risk of maintaining these engines for our customers and we charge them by the hour. So how can we improve our profitability, how can we reduce our costs there? Well, the first thing we can do is make sure that we don't have to service the engine quite as often as we -- as we used to.

And so the chart on the right shows the percentage improvement in time to the first time we have to bring an engine in and refurbish it. We can then reduce the amount of time that we take and the number of parts that we're putting into the engine when we -- when we refurbish it, and by better means of inspection and by making full use of data.

So a number of ways that we can improve the shape of that curve, again, self-help. So put all that together and look at cash flow for the group as a whole then civil aerospace, we've just talked that in much detail.

The others have broadly the same business model but if I look at cash characteristics over future -- future years then they are sort of broadly flat. The civil business is where we're going through the big transition and it's also the biggest number, so it's having the biggest impact on the overall cash generation of the business.

So just a quick summary, I think we've done the first couple of things. I'd now like to hand over to David to take us through the next couple of stages.

David Smith - Rolls-Royce - CFO

So thank you, Warren, and good afternoon, everybody. You can see that we've been spending a lot of time really examining the fundamental strengths and weaknesses of the business.

And this really reinforces the need to focus on improving operating performance, cost and cash in the near term while also evaluating the priorities we have for investment to support the long-term growth of the business.

A few things are clear to me from this, and you all have heard some of this from me before. Firstly, we have an outstanding opportunity with wide-body engines to transform our business into a true world leader with critical mass in both scale and financial success.

Secondly, our other businesses offer differentiated levels of prospects for growth. We have products and services that come on real competitive advantage and are focused on attractive growth markets or at least markets where we can sustain good margins as a result of our concentration for local presence.

Thirdly, we have significant opportunities to improve our operating performance and our pace, customer delivery, programme delivery, project delivery, lean manufacturing, et cetera, as well as reducing our capacity.

Fourthly, we need to ensure we have the right platform for the future and are making the right decisions about footprint and technology investment and have the optimum space to grow profitably.

And finally, there are no special cases here. We've identified businesses, products and services where we need to make more fundamental decisions, decisions around investment, JVs, small divestments or small acquisitions to optimise value for shareholders.

And we'll make those decisions with a clear focus on return on capital employed. That sets the scene for what I'd like to share with you. These are my thoughts on our financial framework, our balance sheets, cash generation and investment outlook to give you a context on how we'll be making these decisions and the targets we'll be setting the business to achieve.

It also introduces the opportunities we're going to be looking to enhance our disclosure which will replace our medium term guidance framework. And we can't deliver all of this ambition right now.

Some of it is dependent on our management information systems and the project I kicked off earlier this year. But I'll share a bit about this with you so that you can understand the journey we're on and we're aiming to get to.

So clearly, the developments over the past year have created a number of major challenges, but we have managed our cash position thoughtfully and taken the necessary actions when needed to ensure we don't stretch ourselves too far.

We recently raised around GBP1 billion in new debt to replace maturing facilities and to provide the headroom needed as well as increasing our revolving credit facility. And our balance sheet can cope with the stresses and strains placed on it by the headwinds we've identified over the next few years.

So fundamentally, our long term outlook is unchanged. Consequently, I still feel comfortable targeting an investment grade rating in the medium to long-term and we've been A-rated since 2006.

As far as the dividend is concerned, our next decision on that will be in February when we consider the full-year payment for 2015. We clearly want to present the market with a sustainable policy that reflects the underlying strengths of the business and its long-term growth opportunity. But at the same time, being mindful of the potential interplay with our rating, that is ultimately a broad decision and one for early next year.

So our recent news flow emphasises that our business and our assets and reporting remains a work in progress. However, the review we've done over the last few months does confirm to me that our judgments around capital investment, programme management and pricing are improving.

In some of our businesses, our systems are strong and providing good quality financial information. But the areas of strengths are not consistent across the group and this is where our new investments will help us.

Most importantly, we need to focus on developing a much more intuitive reporting of in-year and near-term performance. The linkages between physical drivers and financial results and between profit and cash and underpin this with clear measures of success that we can drive the right behaviours in our team.

This in turn will help us provide the market with better information. Allied to better scenario planning analysis and an enhanced disclosure framework, this will help you model the business and overlay your own judgments. So I'd now like to share some of the changes that we are proposing to make the disclosure going forward.

At the moment, in addition to group figures, we provide you with a breakdown of revenues split between OE and services and also profit before finance charges and tax for each of the five business segments.

We've only had the group data on headline as opposed to underlying up till now. However, looking forward, we're proposing to expand our level of disclosure to include both a group level underlying gross margin and to introduce a breakdown of gross margin, R&D, and aggregate other costs below gross margin for each of their segments.

This will enable you to better understand the relative gross margin performance across our business in addition to having better insight into where we're targeting our R&D investment.

We'll also break out our estimates of capacity under-utilisation or double running cost that we're currently incurring in the cost of sales line and show how they improve over time.

At present, we're only sharing the groups within the chart but we will fill in the blanks for 2014 and provide a breakdown of the 2015 figures when we present our preliminary results in February.

We're also intending to expand our breakdown of revenue for civil aerospace to give you more detail on the moving parts sort of distinctly different achieved gross margins. In the past, we've shown a breakdown of civil aerospace revenue generated from our large engines and our small and medium engines. But what we haven't told you is how these are represented by O.E. and aftermarket sales.

And as you can see from the slide, I proposed this to provide more detailed disclosure for each of these areas. Our current plan for O.E. is to separate our revenue from our large engines into linked and other which includes spare engines and unlinked, and also by corporate and the V2500 program.

Within aftermarket, the split would be large engines, corporate, regional and V2500, all of which are meaningful. So when we announce our prelim results in February next year, we'll provide you with the actual revenue splits for these categories in addition to total gross margin, R&D and other costs.

We're pretty clear that there are still some important commercial sensitivities about our publishing accurate gross margins beyond the segmental total. We're already providing quite a lot of data here, so you will have to form your own assumptions on the gross margins for the different categories, but these are some useful observations I can make.

Large engine linked and other will include the profit on spare engine sales in addition to blended margins from linked accounted O.E. and TotalCare contracts.

Unlinked engines are generally at zero standard gross margin as we capitalise any cash losses as contractual aftermarket right so that that grows over time as a proportion of our sales, the impact on gross margin will be quite material.

Corporate jet engines as well, and set out earlier, are normally sold at a cash profit and our remaining V2500 modules are sold under our agreement at a modest margin. This, of course, will decline in volume and quite soon as Pratt & Whitney transitions to the new geared-turbofan, A320neo variant.

Aftermarket margins are more consistent with less of the disruptive characteristics of mixed changes within TotalCare accounting. And on an achieved basis, are fairly consistent between corporate and large engines.

So overall, there should be quite a lot of additional scope here for analysis based on an accurate revenue split and an overall gross margin to reconcile back to.

Looking forward, what we are also proposing to do will be to provide additional directional guidance on the absolute trends in each of the important revenue lines. We'll include these in our appendices and pull out the key elements in our review of the business or updates on expected trends as appropriate.

I think this is an approach used by a few of our peers although we will no doubt have more lines than most. It should provide a sense of what's going on in our judgment.

In addition, due to the nature of the accounting within the civil aerospace, we'll also extend this disclosure down to trading cash flow by providing details on the net TotalCare debtor movements, net contractual aftermarket right movements, working capital movements and other noncash movements and depreciation, capital and other intangibles, capitalised R&D, for instance.

Doing this on an annual basis and then providing directional guidance should enable you to model out our views on cash conversion and get a proper sense of how sensitive this will be to other performing measures going forward.

And as Warren indicated, at the moment, this would be a negative number, but over the next five to 10 years, if you remember those charts, it's going to turn strongly positive.

As you know, we believe the NPV of embedded cash flow is the most appropriate way of valuing our civil aerospace business and I believe that this improved disclosure will go a long way towards helping you model on this basis.

Turning now to look at 2016 and the headwinds which are shown on this slide, it's worth considering how this would be modeled if you break the revenues and margins out in this form of analysis.

Well, clearly, it does depend on where you start from in terms of core assumptions you've made, but if we look at some of them in turn: firstly, the impact of the Trent 700 rate reduction we outlined in July, at the time we talked about this being a significant volume and price effect of about 100 million each as well as the loss of spare engines.

So in modeling the volume reduction, you'd need to form your own views on the degree of impact based on revenue segmentation, average number of engines sold and factoring in a higher average achieved margin as the Trent 700 is a very successful engine programme.

For you to model the comments on pricing, we have to indicate what that would mean in terms of the likely margin decline, and modeling that would bring you down to the result you would expect.

Implicitly, this means that the average achieved margin for our new linked and other O.E. sales would have reduced significantly.

But, of course, on a cash flow basis, what we're losing in 2016 is a lot less reflecting only the change in the net cash loss of the engines we're actually selling compared to those we would have expected to sell previously.

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Here, we would be pointing you to this fact indicating that you would expect a reduction in the change in the TotalCare net debtor.

Turning to the more recent headwinds and looking at the new wide-body developments, the GBP100 million to GBP150 million we discussed on the 12th breaks down into three parts. Around GBP50 million to GBP80 million relates to aftermarket changes, GBP25 million to GBP35 million reflects lower JV profits and the rest is the net of a lot of other different factors.

Looking specifically at the aftermarket issue, quite a few frontline fleets are now changing quicker than we expected. And as a result, the older planes are coming into the second hand market.

This is creating hangover and capacity in specific geographies regrettably because this specific customer mix, this is mainly on Rolls-Royce powered aircraft, our Trent 500s, and more recently a few Trent 800s on all the 777s.

We're also seeing a continuing decline in the revenues generated from RB211 engines as more aircrafts are parked. Overall, we expect something like a 15% to 20% decline in legacy engine revenue in 2016, and that's around double what we saw in the first half of this year.

In modelling terms, you know these are large engine effects and you would also have your own assumptions on the degree of margin and you would need to adjust the line items accordingly.

For our corporate jet business, we're expecting a volume reduction impacting revenues by around 20% with some effect on pricing and therefore margins. Again, that's significantly higher than we saw in the first part of the year.

For our regional business and the V2500 programme, the headwinds are more structural as Warren described and reflect an acceleration of already anticipated trends.

While the endpoint has probably not changed, the pace in the near term at which these businesses have deteriorated remains an issue for us. Overall, our regional business is declining at around 20% per annum, a little faster than we would have expected a year ago. You'd be able to model each of these impacts into the relevant line items, through a mix of volume and margin assumptions.

I now want to share a few thoughts and take you through the investment we are making in our management information systems project and how this fits in with our review of forecasting and analysis.

As I discussed earlier, we've identified a need to improve transparency through better communication both inside and outside Rolls-Royce and have been working on putting a better framework in place.

The important drivers of this are the links between physical factors such as engine volumes, flying hours, productivity, inventory turns, et cetera, and our financial forecasts as well as the more complex links between contract accounting and revenue margin and cash recognition.

We to date have been inconsistent in the way we are giving guidance here, and this is clearly unacceptable. I know -- and as you know, I started a project in January this year to undertake a major overhaul of our management information systems to try and improve transparency and accuracy.

Together with our enhanced disclosure framework, our improvement will over time help the market to get a clearer understanding of our performance and be -- able better to anticipate changes based on our market factors.

We are starting to see the first positive outputs, a framework of key performance indicators which includes both internal and market-facing metrics, and that's being rolled out right now to our business leaders.

We are planning further actions and forecasting and also revisiting our costing systems and processes. This is a pretty major project and we do have appropriate external support for it.

Next year, we'll update you on this project and its outputs and also we'll give you our assessment of IFRS15 and its likely impact on the financial reporting from 2017 onwards.

Doubtless more change I'm afraid, and I'm also afraid that it's unlikely to eliminate all of the timing issues created by present accounting standards, but we are trying to find ways to simplify it and as I think, you know, we're also working with our peer groups to try and find a consistent approach.

Before I hand you back to Warren, I'd like to say a few things about capital allocation. I touched on this earlier when I discussed our balance sheet position. And I know it's an important topic for many as we consider the investments that Warren has set out and we'll talk about more in a minute.

Capital allocation at Rolls-Royce is essentially about evaluating and balancing priorities across some important investment needs as well as maintaining a positive and coherent dividend message for investors as we grow the business and improve cash conversions strongly in the future.

The decisions we make as to how we prioritise and best make our discretionary investments, including investing cash in building out our installed base of large engines and capturing that long-term aftermarket revenue stream are fundamental to the long-term shape and scale of this business and the enduring benefits we'll create. It requires us to have a clear view on our weighted average cost of capital, our return on capital employed for individual projects, and the risk of those projects, and make sure that we have available capital both by project and for the group as a whole.

It is also essential that we impose greater discipline as to the hurdles we're seeking and for the senior team at Rolls to robustly challenge and monitor the programs and the detailed analysis our teams do.

With improved reporting and enhanced financial scrutiny, I'm confident we will be better placed to make these judgments.

At this stage, we have many uses for our cash resources over the next few years and relatively few strong cash generators, but it does mean we have to be very clear about our priorities, disciplined, and with a focus on initiatives that offer the strongest returns and most enduring legacies. But we will do this without also reducing our commitment to R&D and the essential investments needed to complete our supply chain transformation because those underpin our future success and are really key to the business journey we're on.

As Warren has said, we must complete the journey we started without compromising on customer service and product performance. We will therefore judge our dividend policy in light of the priority uses of cash. But we also have a clear and balanced view as to how important over time our strong cash payment to shareholders is as a way of both judging and reflecting our success as we become more cash-generative over time.

So in summary, we have a strong balance sheet. We're working very hard on improving our management information systems in the financial framework, but this has to be underpinned, as Warren said, by improvements in our operating assumptions and performance as well.

Put simply, we need to define a realistic plan and deliver on that plan. We have updated you on the headwinds we see primarily for market realities, but we're also working hard on mitigating actions, and we'll maintain a focused discipline on capital allocations.

Thank you. And now back to Warren.

Warren East - Rolls-Royce - CEO

Thank you, David. Bear with me. I won't be long. I'm now going to talk about that last box on the agenda slide about what we're doing with the business as we change.

A quick reminder. We're starting from a pretty strong base really in terms of strong mix of businesses, well-positioned, and two-thirds of the group benefiting from the announced transformation programmes that are underway.

I spoke earlier about the three themes based around the core of Rolls-Royce, the strength of the business model, and the operational effectiveness, which we need to turn into operational excellence.

Just a couple of contextual points. I would say that since joining the business, I've spoken with quite a lot of customers and almost to a person, they have told me how much they like working with Rolls-

Royce. They find our people very easy to deal with, very helpful and they're very appreciative of the products and the engineering support and the services that we provide. So that customer support for us is really important.

And the other contextual point I make is that I think the arrival of the digital age presents a number of new opportunities to add value both to the business as a business, but also to how we go about doing our business.

Now, to improve operational excellence, and I said this wasn't going to be a strategic review, we certainly need some strategic clarity. Now, these statements, by the way, are not tablets of stone. These statements are work in progress, but I think the thrust of these statements is clear. And importantly, for us internally as a management team, it provides us with a framework so that we can actually be more ruthless in managing the portfolio and making some of the tough decisions that we've got to make about how we deploy our capital. And it will guide us as we make changes to products and services over time, and redefine what we're actually doing.

Just set-out a few timelines here. The middle part of this slide, these are the bold blue writing, is very much the thrust of what we're doing from an operational point of view. And the lower box is more some of the strategic activity that we're doing to help with the future. And the two boxes that are left blank on the bottom are left deliberately blank because actually I don't know what we're going to be doing from a strategic point of view in 2025 and beyond.

However, we do need to recognize that we will be doing something there, and so they are blank boxes for the time being, but we will need to fill those in in time so that we know where we're going and we do the right strategic things over the next five years to position us to do the right things in the years after that.

But, you know, there are great opportunities there. We might well be developing a much larger nuclear business. We might well be exploring all sorts of new methods of propulsion, and we'll certainly be exploiting greater trends towards more electrification. But the focus very much now is on the top line, the operational piece, and over the next five years. So that's where we're going to focus.

So, picking up on the three themes that I've used to talk about, this is about focusing our resources, thinking about what we actually need to do. And it's clear to me when I look at Rolls-Royce the image that I get is one of an athlete that's a little bit overweight. And we need to get rather more fit, and that means possibly shedding a little bit of the overweight. And that's what I mean by defining what's really needed.

If I look at it from a business point of view and look at some of our costs, and as I said on the IMS a little last week, the problem here is the operational gearing in our business. So let's look at those operational costs.

We are spending today about GBP4 billion on being a sales and engineering organisation, so this is money that we're not spending on building products and shipping them out the door or supplying spares into our aftermarket. This is money that we're spending on keeping that machine going. Are we doing this as efficiently and as effectively as we should and as we can be? And I think that's a sort of a little bit of a rhetorical question.

Now, there's a lot of very good things already in train. If I look at programmes that we've already announced to date: aerospace, a programme that was announced approximately 12 months ago. We're making great progress on that. You can see some of the reductions that we're making in headcount. In the marine space, again some significant improvements. This is a programme only announced this year, but already announced and again targeted around restructuring and headcount reduction.

Now one of the issues with headcount reduction is that the cost does come out eventually, but you have to be very careful about it growing back, and you have to be careful about it growing back if

what it leads to is essentially doing the same thing with fewer people. It's actually a bit of a negative motivational point as well. So those are programs announced to date.

Other programs announced to date, the manufacturing transformation. And if you put all of this in aggregate, we're talking about over the next five years reducing our footprint by 20% and improving our output by about or increasing our output rather by about 80%. You can think of that as an alternative, a new 80-20 rule. That's how I like to think about it.

However, all of that is necessary, but it's not sufficient, and that's why we talked about the programme we talked about last week.

If I break into the three buckets and think about how we are deploying resources to really maximize, are we deploying those resources to really maximize value to our customers and look at it through the lens of what are we doing, what do we know that we can do well, and how can we do that better, and how can we better exploit our strong business model, and then what are the processes that we actually use to execute that.

So, our programme, as we announced last week, is primarily going to be around fixed costs. As far as people are concerned, it's going to be primarily around we have a top heavy organization with a lot of management. And there's complexity associated within our organisational structure of our corporate and divisional organizational structure.

What I'm talking about here is the organisational hardware of the business, and you'll excuse me for using a few sort of computery-type terms. The structure of the organisation, how the people fit together, that's the hardware. We need to dig deeper than that. We need to get into the organisational software, and I don't mean SAP systems. I mean, the processes and procedures that you wrap around the organisation to make it work.

And when I look inside Rolls-Royce at what needs changing, then the list on the left-hand side of the slide is a non-comprehensive list of some of the things that we need to do. But we know and we've talked with you before about the numbers are too complex. It's too difficult to extract the information from the data. We have multiple owners of processes and data. We have difficulty and ambiguity in over our accountability. We operate too slowly and we need to increase the frequency.

And I think all of you know what it's like trying to run a computer with rather bloated software, and that's really the situation we have with organizational software that is in Rolls-Royce at the moment. So, it's all about simplification to improve the pace at which we are operating. It's making sure that the right people are having the right conversations at the right time to get things done.

An example of that, we are a technology company, an engineering company, and it is really important for us from a competitive point of view to be right out there in front with the technology, and so we identify a number of key technologies that we need for our businesses, 27 key technologies. But can you imagine what it's like trying to manage all that? Can you imagine the number of meetings, the number of reports, the number of processes that go around that? Colin, our director of Engineering sat there - though he's raising his eyebrows to this guy, just imagining it as I'm saying it, right?

But another way of looking at that is you can think about that as around about eight different technology themes. Now, this is again a bit of work in progress. I don't know if the right answer is seven, eight, or nine, but it certainly isn't 27 in terms of managing those technologies. And so we're talking about reducing the number of meetings, the length of time it takes to manage these things by simplifying how we actually go about doing it.

It's very important that we deliver to you some operational measures. The picture on the right talks about how we talk about our performance with the market at the moment, and it's all very financial. And the trouble with it being very financial, as David has just outlined, there's an awful lot of accounting fog that sits around there so it's very difficult to understand what's really going on, what is

the real operational performance of the business because, yes, we do have complexities in capitalising costs. We do have complexities in accounting for our TotalCare service products.

Now, as I have looked at that and thought it's complicated, actually I look at it, and it isn't really rocket science, but we perhaps could do a better job of explaining that and taking you to the underlying operational performance of the business from a financial point of view. And as David has just outlined, that's one of the things that we intend to do, just strip away some of that fog and make it easier to understand from the numbers point of view.

But it's also about much more than the numbers. Improving the performance here is about metrics around productivity. It's about unit costs, and it's about how effectively we're using our working capital and so on. And so we have a very small list really of measures, which we think are a bit more around operational performance that we hope to be able to share targets and progress on as we go forward.

So as we look at updates in 2016, then, very, very roughly we'll have some structure at the end of this year. In February, we'll have costs, time scales, and our first look at measures. In Q2, we'll have an AGM, and we'll have a Capital Markets Day, and we'll have some updates on how those programmes are going and on the measures. We'll have an opportunity to do that at the half year and this time next year as well. So, I think we have hopefully addressed these key topics.

I think just by way of conclusion, this is a period of amazing change for this business. And as I said at the very start, long-term successful businesses do go through these periods of change. And just because we happen to be in a period of change at the moment doesn't mean to say that we're not sitting on top of a fantastic business with great growth potential.

Actually, everything I've done in terms of reviewing the business over the last couple of months, absolutely underpins my confidence in that future and has also exposed that we've got a heck of a lot of work to do to change the way we do things in Rolls-Royce to realize that potential, but it has highlighted a huge number of areas where we can make these simplifications where we can inject pace into the business and improve our operational gearing and turn out operational effectiveness into real operational excellence.

So with that, I'm going to finish. David is going to join me, and we'll take your questions.

QUESTION AND ANSWER

Rob Stallard - RBC Capital Markets - Analyst

Hi there. Rob Stallard from RBC, just a couple of quick questions.

Warren, you set out where we stand today on net cash generation and you set out where we should be in 2020, which is nicely positive. When do you expect the crossover point to be? Do you expect it to actually be in 2020 or to be before that?

And then secondly, maybe one for David. You said one of your targets is obviously to maintain your investment grade rating. How much capital buffer do you have in case some of these may be shorter cycle areas don't go as well as plans in power, marine, or in the old aircraft aftermarket? Thank you.

Warren East - Rolls-Royce - CFO

Yes. So, on the cash generation question, certainly our cash is quite volatile, and so picking the exact moment when that transition happens is quite difficult, but it's certainly going to be comfortably before 2020.

David Smith - Rolls-Royce - CEO

And just on the cash buffer, so we, at the end of last year [CORRECTION – this was as at end-June 2015], had I think GBP1.6 billion of cash, and we've now increased the revolving credit facility to GBP1.5 billion. So that kind of GBP3 billion at year end is about what we think is the right number because we do have peaks and troughs during the year as well. And the aim is not to use our RCF basically.

Nick Cunningham - Agency Partners - Analyst

Thanks very much. It's Nick Cunningham from Agency Partners.

You're confident about the long-term, but you've withdrawn guidance for the medium-term. And I was wondering whether -- I mean, there's a sort of hint that partly that's because you're setting new metrics in place and you may not actually have those metrics yet. But also is there a genuine lack of visibility into 2017 and 2018? And if so, what are the kind of the big known/unknowns which give you that, if you like, that pause in terms of giving guidance.

Second question, you want to recapture BizJet share and to sustain your widebody sort of circa 50% share. Is that containable within say 6% of sales as an ongoing self-funded R&D spend?

Finally, little detailed one. In the slide 76 is sort of breakdown of Civil Aero engines profitability and revenues. Is the UTX payment that you received from the IAE disposal, would that fall into V2500 or would that fall into presumably more likely other right at the bottom of the -- bottom right-hand side? Thank you.

Warren East - Rolls-Royce - CEO

Okay. Well, I'm the one that's very reluctant to talk about medium-term guidance right now. And I'm not sure that 2017 and 2018 is particularly medium-term guidance. That's actually quite short-term.

I think right now we've talked about the challenges that we have with our information systems and producing medium-term guidance based on those information systems, at the moment, is unhelpful for us and it's unhelpful for everybody in this room. This is the sort of business, which we can actually be quite bullish about. We can be quite confident about in the longer run, but things do happen in the short-term. And I think we've adequately demonstrated over the last 18 months and certainly over the last six months that our systems at the moment are just not capable of picking up short-term fluctuations.

And therefore, it's very easy in this business to be approximately right in the long-term with trends. It's also very easy to be precisely wrong in the short-term. And we do need to improve those so that we can at least talk about a medium-term range and a range of targets, but we're just not in a position to do that at the moment.

I hope that we can improve these management information systems and possibly get into that position in a sort of 12 to 18-month time period. But we won't make any promises on even that right now because this is very much a work in progress.

Nick Cunningham - Agency Partners - Analyst

That's the first question.

David Smith - Rolls-Royce - CFO

So, in terms of R&D, I mean, R&D will fluctuate a little bit from year-to-year depending on what we're capitalizing, what we're expensing, et cetera. But so keeping within this sort of R&D level is absolutely what we intend to do. And it does assume that we continue with the programs on technology that Warren mentioned in terms of simplifying those technology programs as well as the widebody and the BizJet product development programs as well.

I'm struggling to find slide 76 at the moment, but maybe I'll answer your V2500 that clearly we've got three sources of revenue. We've got the license fee. We've got spare parts and both of those will be in aftermarket. And then we've got the modules, which are with an area at the moment. That's the bit that we'll drop off over the next two to three years is perhaps switch to the Neo.

Nick Cunningham - Agency Partners - Analyst

Okay.

Andrew Hollingworth - Holland Advisors - Analyst

Hi, I'm Andrew Hollingworth, Holland Advisors. Just two questions. Obviously, you've gone through and highlighted the areas that you are likely to spend future R&D and CapEx on. Would it be fair to say that perhaps if we look back and have the disclosure on those that is not where we've been spending money in the past? So do we have effectively free resources to focus in more focused areas if you like? So you know that data we - maybe we don't do. We'd like to get your sort of read on that.

And the second one is obviously you've outlined the sort of cash flow profile, which is really sort of useful in the timeframes attached to it. But is there a sort of real world threat to this by some of what's happening in the aftermarket now, sort of gives a clue that the sort of aftermarket market might not be what we think and what we project it to be? And is there anything we can learn from that? Is Q.E. meaning that people can buy capital faster? And is it dangerous to have a 30-year cycle without fully understanding that?

Warren East - Rolls-Royce - CEO

Yes. Do we have the resources to invest where we need to invest? Broadly the answer is yes. The fact that we perhaps haven't been investing in some of those areas over recent years doesn't really mean that we can't. I mean, most of the area that we need to invest in is the underlying technology that we develop for our large civil aerospace business.

The other businesses are, as I showed on the charts, less R&D-intensive and less capital-intensive. And so the answer is broadly yes. We can invest in the areas that we need to invest in.

Your second question --

David Smith - Rolls-Royce - CFO

Yes, maybe I -- shall I take that one.

(Multiple Speakers)

David Smith - Rolls-Royce - CFO

So on cash flow profile, you're absolutely right that what we're seeing at the moment is an increased acceleration or a deceleration in flying hours essentially and T&M activity on the legacy programs. And that would cause you to question maybe what's going to happen in 20- 25 years in new programs. I understand the point.

When we model this and so the triangles that you saw on that graph, we absolutely look at scenarios around that. So don't think that in there we've necessarily got a straight 25 years, which is the experience over the last 20 years of engine life. We actually model that in different ways so we look at scenarios and we put risk factors in about that and take account of that when we look at the programme cash flows.

Ben Fidler - Deutsche Bank - Analyst

Yes, Ben Fidler from Deutsche. A couple of questions. Thank you for your slides, Warren. I'm looking at slide number 54, your cash flow trajectory by program. And in the back of my mind, bearing in mind what you also presented in slide 42, which is the installed thrust growth.

So, over the last 15, 20 years, your installed thrust has grown. It looks like it's kind of doubled, and yet slide 54 we have a portfolio of engines, which are reasonably old, most of which don't seem to be generating much cash, Trent 500, Trent 800, Trent 900.

The next stage of -- back to slide 42 -- your installed thrust growth, very strong growth. And yet if we look at your 10-year on cash flow chart, we have a portfolio that is phenomenally cash-generative. So, the question so it's quite a long one, the last doubling in installed thrust doesn't seem to have ended up giving us a portfolio of legacy engines that are throwing of much cash, yet in a decades' time. We will have that with a doubling in installed thrust, a lot of which is coming from engine programs where the RSP positions are roughly twice that which they are on the existing portfolio, so presumably twice as much of that cash flow is through RSP partners from that installed thrust, so just to understand what I'm missing in that linkage there.

Warren East - Rolls-Royce - CEO

Okay. Well, I think we'll have to deal with all of that linkage at another level of detail. But, you know, broadly it's about the size of the installed base. And if I look back, then, you know, whilst the cash generating potential of the installed base has indeed been growing, then the challenge in terms of it not actually appearing to be a bit delivering is actually we've been consuming cash as well.

The position of these engines on the cash flow towards the bottom of the shaded area there if that's what you're referring to, don't forget this graph is not scaled. And it isn't scaled. They are drawn towards the bottom because they are low volume programs. And I think in order to answer your question properly, we'll have to actually pull out the numbers. This chart was meant to be illustrative. They're in -- those dots are in roughly the right place, but the chart is not scaled deliberately.

David Smith - Rolls-Royce - CFO

Maybe I can just add a couple of points as well because there's a very important thing, I think, to understand here, which is the snapshot of our portfolio at the moment is actually probably at its weakest point. We've got the RB211s as the 800, 500 coming down, not generating all the cash.

Trent 700, despite the fact it's been in production for 20 years, has only become cash-positive in the last few years, so it's actually still climbing up its cash ramp. In fact, this year's cash flow from that product is higher than last year's. That's where you can see actually Trent 700 becomes a stronger cash generator as we go through time over the next five to 10 years and will be added to by XWB. So, this point, I think, we may have discussed before a little bit about understanding where the portfolio is in this transition is actually pretty fundamental to understanding the strength of the business.

The other thing then I would say is that the other change really over the next five to 10 years is we're really going to sort out the industrial footprint over the next five years, so we will have a much better capacity cost position by the time we get to 2020 and therefore our cost structure is fundamentally changing as well.

Ben Fidler - Deutsche Bank - Analyst

Thank you. Could I ask one more question just on management remuneration? And obviously compared to the number of the targets that you had in place and this may be one that the chairman wishes to answer. I see some of the non-execs are here. Maybe they wish to answer, I don't know. I'll leave it up to you.

You have a free cash flow per share target, which is you need to achieve 100 pence of free cash flow per share as a minimum over the next three years to qualify for one of the performing share plan targets. Now, obviously that is in the current environment out of ballpark. How the board feels they're going to deal with that to incentivize you and the people to deliver numbers rather than have a target that is so unachievable that it almost becomes de-motivating, and when those new numbers may or may not be released?

Warren East - Rolls-Royce - CEO

Yes. Well, I mean, the answer is, of course, motivation and isn't just for executives, by the way, it runs into the business. Of course, that's our motivational headwind at the moment. And we are looking at how we can design things to be more appropriate, but is it a matter for the remuneration committee and the board? And I don't know if anybody wants to add anything to that. It's not something that we are sort of ready to have that discussion right now. Is that fair enough?

Yes, the chairman is nodding. Good.

Ben Fidler - Deutsche Bank - Analyst

Thank you very much.

Nedko Kyuchukov - Westray Capital - Analyst

Hello. Nedko Kyuchukov from Westray Capital. You talked about double running and underutilization costs that are included in the gross margin. And from slide 88, it seems like the target is to remove those, to eliminate those. How should we think about those in relation to the \$150 million to \$200 million cost reduction program? Are they entirely separate and entirely incremental?

Warren East - Rolls-Royce - CEO

Completely different.

Nedko Kyuchukov - Westray Capital - Analyst

Completely different, Okay.

Warren East - Rolls-Royce - CEO

Yes.

Nedko Kyuchukov - Westray Capital - Analyst

Quick and easy. Thanks.

David Perry - J.P. Morgan - Analyst

Hey, good afternoon. It's David Perry at JP Morgan. A few questions please. One of them is probably for David. Can you just help me? I've got a little bit lost on where you stand today on linked contracts because 18 months ago, at the big accounting teach-in, you told us that quite substantial margins were taken on linked contracts on the O.E. sale.

You probably, I estimate, stored about GBP1 billion of sales a year going forward on linked, on the Trent 900, Trent 1000 and still for a few years the Trent 700. So, are you still taking quite a big margin on that O.E.? And if you're not, why not because something will have changed in the policy? That was the first question.

The second one perhaps more for Warren. I was a bit surprised in the presentation there wasn't really anything about the structure of your aftermarket, which may be quasi-operational, maybe more strategic, but it seems to have been a hugely topical issue in the last few months partly on the potential EU inquiry, but also a lot of commentary in the trade press about airlines not liking your closed aftermarket network, therefore, parking some of the older engines and it sort of created a vicious circle for you and may explain some of the increase in the parked planes. So, can you just tell us your thoughts on how that may play out please?

David Smith - Rolls-Royce - CFO

So, Dave, just on the first part, yes, I mean, we haven't changed the accounting policy. Clearly, the Trent 700 for this last batch of engines that we'll product over the next two to three years is going to be a lot less profitable than we saw there. And that's the reason why we're seeing this GBP250 million headwind into 2016. So, they will still be accounted for as linked. We will book a gross margin at inception, but it's not going to be as high as we booked in the past.

And the other thing that's really changing at the moment is the mix. So when you look at the mix of our production between linked and unlinked, that's going to change very significantly over the next two or three years as XWB ramps as well.

So, on the linked engines themselves, that policy will remain, but it's a lower profit level on the Trent 700s, and then we've got this mix issue between linked and unlinked, which drives some of the short-term profit headwinds as well.

David Perry - J.P. Morgan - Analyst

But actually I'm more interested in the Trent 1000s, because you're selling Trent 1000s. They are linked.

David Smith - Rolls-Royce - CFO

Yes.

David Perry - J.P. Morgan - Analyst

I mean, if you're not taking the margin on the O.E., does that mean you're not expecting them to be as profitable over their life?

David Smith - Rolls-Royce - CFO

We are taking the margin on the O.E. It's not as profitable an engine as is the 900, as the 700 was now. Part of that is because on the 900 certainly is a volume effect, and on the 1000 it just isn't as profitable an engine as the 700 was.

David Perry - J.P. Morgan - Analyst

Okay. And on the aftermarket issues please?

Warren East - Rolls-Royce - CEO

So on the aftermarket issue, I think most of our engines are sold with a TotalCare agreement, the very, very significant majority of those. And talking with our customers, then our customers actually like that arrangement. Our customers are prepared to pay for that arrangement. And as I said in the presentation, that effectively means that we are taking the risk. And what the customers appreciate is that we take that risk, and they pay us a premium for taking that risk.

Actually, a lot of the issues that are in the sort of swirling around in the rumour mill are actually around narrow-body engines. We're not playing in that space right now and rather more associated with the sort of time and materials, and spare parts type business model than the TotalCare business model.

Where some of our customer find the TotalCare business model less useful is towards the end of life of some of the aircraft. And we have recently introduced variations on a theme with TotalCare Flex to address some of those concerns. And we're signing up our first customers on that. So, I actually don't think that's a particular concern right now.

Zafar Khan - Societe Generale - Analyst

Thank you. It's Zafar Khan from Societe Generale. I just wanted to pick up on David's question if I may please.

David, you've been very helpful in giving us a little bit more granularity on the GBP650 million headwinds you face 2015 to 2016. And I think the disclosure on the different engines is extremely helpful. But starting point this year, the guidance is GBP800 million to GBP900 million for the Civil

division. And if I remember correctly, 200 million within that is a provision release on the Trent 1000, so the underlying number is 200 lower than the guidance. And then we've got the headwind.

So if I transpose from 2015 to 2016 using your guidance, I end up with a very small number in the Civil division for the EBIT. And in my sort of simple way, a lot of that would appear to be profit coming from IAE, which means the rest of the portfolio is not really making any contribution. So I think it would be very helpful to us in this new spirit of openness and being very helpful to the community.

If you could either give us a starting point or the ending point of the kind of bridge that you're creating because you have left me dangling in the middle there without starting or an ending point.

David Smith - Rolls-Royce - CFO

I hope I don't leave you dangling too long there. But I mean, you're basically right. I mean, I think it's clear that the profit that we get on the V2500 based from the license fee and sort of the engine flying as a fee and the module and spare parts profits is a significant chunk.

It was 100 for the Trent way back by the way, but there are other factors that will probably add up to more or like 200 in total is a factor. So, yes, if we strip all of that out, then we get quite a small number for Civil profitability, which is the point I was trying to make that you can actually see that when you look at it on a cash margin basis. And I think that that was going to be helpful.

And I think various people have analyzed that already, and so I don't think this should be a huge surprise, but what we want to do is actually provide some specific clarity around it when we report on this.

Zafar Khan - Societe Generale - Analyst

I think we'd really appreciate....We do need some sort of understanding of why everything else is making nothing.

If I look at it the other way, there's GBP4 billion within the Civil division, which is aftermarket. So, is it making such a tiny margin? I really don't know where to start with this.

David Smith - Rolls-Royce - CFO

Yes. I mean, it essentially comes back to this portfolio point of where we are in that portfolio. We've got four, five-engine programs now that are just going through the key investment phase. The Trent 7000 is the latest one, but the two versions of the XWB we have several versions of the Trent 1000. And the Trent 900 is still climbing up its curve as well. So, the weight of that is outweighing the benefits of the aftermarket on the installed base so far, and that's where we're seeing a relatively low profit.

You'll see that change both in cash terms, but also in profit terms over the next five to 10 years.

Zafar Khan - Societe Generale - Analyst

But I understand that in cash terms but in profit terms, and I'm talking profit here.

David Smith - Rolls-Royce - CFO

Yes.

Zafar Khan - Societe Generale - Analyst

All of the stuff you're delivering, 90% of it is TotalCare linked to unlinked, so you don't book any losses on the O.E. because on the linked, as David is pointing out, you book a pretty big margin. And on the unlinked, you capitalize the loss. So, there shouldn't be any real loss on O.E. because of the way you account. And that then takes you back to Ben's point.

I'm just trying to add up all these various things.

You've got quite a big installed base. So is that not generating any profit because we just established, you and I, that big elements of the profit is V2500.

David Smith - Rolls-Royce - CFO

We should probably spend some more time, but you also have to look at this GBP4 billion, F.X. costs and where that falls as well. So, why don't we spend a little bit more time talking about that because we are very keen here to try, and as we increase the level of disclosure try and help people get through issues like that. It does make sense to me, but obviously I'll need to spend a bit more time thinking about how to explain it to you.

Warren East - Rolls-Royce - CEO

All right, yes.

Zafar Khan - Societe Generale - Analyst

Maybe everybody else would welcome that.

And just on the management information systems: I'm getting old now so not very good with the memory, but did you not put in the SAP system many years ago?

David Smith - Rolls-Royce - CFO

So, I think we're not talking about SAP here. We're also talking about all of the systems that we use to assemble information from the marketplace. Trent say that's through a gearbox into physical assumptions that we want to use, and then how we translate that effectively into financial forecast, so it's not really a SAP issue. This is absolutely the software of what we do with that information and the processes that we use in the business.

Zafar Khan - Societe Generale - Analyst

But the information is this, just the extraction, why is it going to take 18 months to do that.

David Smith - Rolls-Royce - CFO

The data is there. The information takes a lot of work actually. And we're working with the best in the business to try and improve it. And I don't intend to take three to five years like some other companies do when they do this. So we're absolutely working pretty hard on this.

Zafar Khan - Societe Generale - Analyst

Thank you.

Warren East - Rolls-Royce - CEO

Thanks. We've actually got some questions from the WebEx, I think. So, given that we've had quite a lot in the room, we ought to go to the WebEx briefly before coming back into the room.

John Dawson - Rolls-Royce – Head of IR

Thank you, Warren. So, one question on working capital, can you provide further guidance on working capital? What benchmarks are you setting and which areas of the business offer you the biggest opportunities?

David Smith - Rolls-Royce - CFO

Why don't I take that as well? So, obviously the three elements of working capital here of four elements are the receivables, payables, deposits, and inventory. So, classically, I think inventory is a thing that we're paying most attention to here.

Our inventory turns are just over three at the moment. We believe a competitive benchmark is much more in the four to five range. When you look at that across a peer group, we're not actually that bad. But when you look at it across, I think, what an industrial benchmark it is. I think there's quite a lot of opportunities within manufacturing to improve that. We will continue to work on receivables and payables, and deposits as you normally would, but inventory is, I think, the biggest area of opportunity we have.

John Dawson - Rolls-Royce – Head of IR

There's another question on credit ratings just to check. You talked about an investment grade credit rating on one slide, but you also referred to having a long-term credit rating of A minus has taken the additional debt and possibly sacrifice in the A minus rating in the short to medium-term a necessary option.

David Smith - Rolls-Royce - CFO

Well, this is the sort of issue I want to spend some time over the next month or so. Clearly, we need to have some extended discussions with our rating agencies and think about this in a broad context of capital allocation, dividend policy.

I would love to maintain the rating exactly where it is, but I have to be a realist as well that there are some competing pressures here, and we have to take the right decision, I think on balancing those pressures. Based on that assessment, we'll have the right discussion with the board, and then we'll let you know in February where we come at.

John Dawson - Rolls-Royce - IR Head

And one final question really referring to the reference you made to the digital opportunity. How big is the Internet of things as an area of focus for Rolls-Royce? As engine reliability improves and data management increases, do you see this as a positive or negative effect on your ability to manage the aftermarket?

Warren East - Rolls-Royce - CEO

Well, broadly it's a positive effect. I think I'm sort of very aware of the impact of the so-called Internet of things, but I'm also very aware that not many people make much money out of the Internet of things.

And what I indicated in the presentation there was we can use more digital capability in two ways, one to drive value by providing incremental value for our customers, and that's the one I'm more sceptical about making money from, and one to pro-vide value, which might be to our customers but is also to us to improve our profitability, and that's the one I'm much more bullish on, our ability to do that.

Rolls-Royce is actually in this space, established an underlying technical capability quite a long time before its peers. Before anybody ever heard of the Internet of things, in fact, Rolls-Royce have been collecting data. The challenge now is how to -- with the so-called Internet of things and an ability to gather much more information, much more often so it comes in greater quantities to do proper analytics on that to extract real information out of the data and translate that into value for us in terms of more information about the engines and service.

Right. We should go back to the room, I think. My WebEx friend is telling me. So, microphones?

Christian Laughlin - Bernstein - Analyst

Hi. Christian Laughlin from Bernstein. Just two questions for me taking it to a high-level if I may. So, one, in general, broadly speaking, since 2011, you have a workforce that since then anyway have been exhorted by senior management to kind of dig deep and improve cost performance, manufacturing performance, and so on.

Just, Warren, especially in your short time, I mean, what's your qualitative sense about the motivation from the factory floor to the layers of management to kind of dig deep and go harder, faster with respect to restructuring. And quantitatively, with the numbers that you do look at internally, at least directionally, are you starting to see some performance from their earlier efforts around the four Cs, et cetera. So that's the first question.

And then secondly, with regards to the recent press releases around the maintenance network and DeltaTech Ops being awarded a license to overhaul XWBs and 7000s in the future.

And then more recently around the restructuring of your Asian and German JVs, just what are your goals and objectives with kind of reshaping the network now at this point and what is driving the timing and how you are doing it.

Warren East - Rolls-Royce - CEO

Okay. First of all, on the general question about motivation here's a workforce that's been exhorted to save money, reduce cost over multiple years. Actually, I come into the business. I find a pretty, much more motivated workforce than I expected to find. And people are absolutely up for it, if you

like. However, I do think it's important that the message isn't just costs needs to be reduced. I mean, that's clear, but it's a question of how cost needs to come out.

And as I say, the effect of some of the programs that have been in place so far is one of basically removing headcounts without actually changing too much what's actually going in the business, so you end up with fewer people doing the same stuff, working harder. And that is de-motivating after a while.

What I found sort of chimed with the people with whom I've spoken is a recognition that it isn't about cost, this is about simplification. This is about an organization, which has gone through a huge period of growth over the last couple of decades. And processes and procedures have been added to, and added to, and added to, and nothing has been taken away seriously.

And it's important that, you know, that next stage happens and things get taken away, and there is simplification so that we actually have people doing more stuff rather than -- and they're happy because they're doing more stuff more effectively rather than doing more wasteful stuff, so when we talk about becoming a lean organization, that's another way of putting it, but it's essentially simplification and going back in and looking at what's really necessary. And I found people absolutely up for that.

In terms of quantification of, you know, some of the benefits of the programs that are already in place, well, on the slide we put some of the programs that are already in place and some of the quantification around there. But in terms of things like customer satisfaction, delivery date, delivering more product on time, and so on, then, you know, actually we've had huge strides over the last three years or so on that and what we measure as the cost of non-quality, a bucket which includes things like not getting it right first time and having to do it again, that's also made vast strides over the last little while.

And I think there's a lot further to go on that, but those programs are in place and they are happening. They are necessary, as I said, but they're not sufficient. We need to do the simplification step as well.

In terms of the goals around the simplifying deal -- sorry, changing the network of external MRO shops, this is about our costs of handling our TotalCare. This is about reducing the cost, so it's introducing competition into the network there so that people can more effectively, and we can more effectively shop around the network, so it's actually a cost-effectiveness activity.

Why is it happening now? It's got nothing to do with the noise as it appeared in the market over recent months. This is much longer-term activity that's been planned for a little while and we now are sort of executing on those plans.

David Smith - Rolls-Royce - CFO

I think just a thing to add there, it's also being caused by the ramp that we're going to see in the installed base really required us to look at our geographic footprint as well. So, there's an increase, there's going to be a lot increase to mind in Asia and in the Middle East, for instance. So this gives us more flexible issue to make that happen.

Rami Myerson - Investec - Analyst

Thank you. Rami Myerson from Investec, three questions. You mentioned on the one hand that you talked about the operational gearing and increasing volumes, but on the other hand, you're focusing on widebody, which is a low volume segment of the market and you've decided essentially not to go back into narrow-bodies. Can you explain how to potentially square that circle?

Second question is on the supplies and supply chain because I think you talked a lot about internal, but to what extent have you had discussions with your suppliers. We've heard that some of your peers actually pushing cash into the supply chain to bolster them, particularly the smaller suppliers. And what is the relation of demand to supply chain?

And thirdly, you mentioned nuclear, and I've understand that the U.K. lacks nuclear engineers. And do you actually think that you have sufficient engineers actually to grow that business and how you work to address that?

Warren East - Rolls-Royce - CEO

Yes. I've not quite understand the first question about the operational gearing and the volumes. The fact that the widebody is a lower volume is interesting, but the increase that we need to do in volume is relative to the volume that we are shipping in widebody at the moment. We absolutely need to double the volume that we are shipping over the next several years. I am not quite sure I understand the relationship you're getting at.

Rami Myerson - Investec - Analyst

[To this things that are more interest] where your fixed cost over a larger base of engines whereas if you have few engines, you have to spread over sort of a smaller number.

Warren East - Rolls-Royce - CEO

The issue is that we're spreading that manufacturing cost over approximately the same value though because the higher volume of engines are much lower cost engines. And when you're talking about spreading of fixed cost, do you spread within the cost domain then rather than the volume domain? And so it comes to the same thing.

If we're then talking about suppliers and the supply chain, our relationships with suppliers are we have teams working with our suppliers. Some suppliers are even joint venture activities. Some are definitely partners, long-term partners, and some are much more sort of transactional in the relationships. And we manage that supply network.

You might be talking about us moving some suppliers sort of around the world. Well, again that's to David's point about where things are growing at the moment. And we are certainly shifting our supply base to take -- well, first of all, because we're increasing our manufacturer in other parts of the world, so around our Singapore base, for example. And it cost a lot less to ship heavy things a smaller distance in Asia than it does to ship them from Europe. And so we absolutely have to look at the external supply chain in its entirety and optimize it for our operation.

Nuclear and U.K. skills, well, we actually have a lot of the nuclear skills in the U.K. at the moment. And, yes, skills are always a challenge to acquire, and I think it's one of the very good things about the defence nuclear implication. The submarines that we put up there is that it maintains skills within our business that we can then use in civil applications. But this isn't something where you suddenly get a lot more business tomorrow and we haven't got enough engineers; this work together. And so I'm not too worried about that as being a fundamental drawback at the moment.

Rami Myerson - Investec - Analyst

On the supply chain, are you trying to make any changes to this way you work in this project? You have talked about changes internally.

Warren East - Rolls-Royce - CEO

Well, we're talking about -- we are talking about doing a little bit more outside the business and we're on a journey at the moment. We're transitioning from around about 70% outsource value to around about 80% as we ramp up our XWB production. And the main change is the location of some of these suppliers, which is a reflection of where the market is and where our activity is.

Sandy Morris - Jefferies LLC - Analyst

Yes, hello. Sorry, this is the agricultural community over here, if we're a community. So, it's Sandy, by the way, from Jefferies.

I mean, if I go back and tell my market-maker I'm chilled out about nuclear engineers, he may just slap me in the morning. So, can I just try and establish a few things that I think we've learned today?

So, civil aerospace is cash negative seemingly by a couple of GBP100 million. So the Company kind of checks that off, which explains why the group is coming out roughly neutral? Yes --

Warren East - Rolls-Royce - CEO

Yes.

Sandy Morris - Jefferies LLC - Analyst

-- so check.

The total -- the aftermarket installed base is at its lowest ebb now in terms of cash generation. Check? Is that right?

Warren East - Rolls-Royce - CEO

I think we'll have to unpick the detail on that.

Sandy Morris - Jefferies LLC - Analyst

Okay, more or less. But then if we turn to the investment that is currently going in and by investment, I count R&D, CapEx, and O.E. engine losses because we're in the launch phase, is that at a peak this year or next begins to moderate just so that we --

David Smith - Rolls-Royce - CFO

I think 2015 and 2016 are the peak period, yes.

Sandy Morris - Jefferies LLC - Analyst

Right. And then before you give us gross margins, let me then multiply the wrong number by the wrong number, if the group gross margin is 24.5%, and we can go back even and talk them out because we have enough recent information, you would be assuming aftermarket and civil defense is coming through at 40 or something. So this GBP3,600 million of turnover at that sort of gross margin, this GBP1,300 million, GBP1,400 million of cash in real profits is getting taken away by what I've just called investment. Is that a fair way of looking at this?

Warren East - Rolls-Royce - CEO

Yes, broadly.

David Smith - Rolls-Royce - CFO

So, I think there's two things, Sandy. I think this -- as you described as higher gross margins and aftermarket than O.E. overall, and then below the line stuff, the R&D and SG&A costs, and whatever, which will break out for you in the future, which obviously take a stand to a lower bottom line profit and the negative cash margin you described.

Sandy Morris - Jefferies LLC - Analyst

And then the other thing I think I've learned today as I need to go change my model because the Trent 700 cash flows are improving for the next number of years, which presumably is a reflection good aftermarket pricing.

David Smith - Rolls-Royce - CFO

And growing installed base, yes. It's still great. The installed base is still great, yes.

Sandy Morris - Jefferies LLC - Analyst

Still great. And therefore, if I wanted to be kind of sort of devious and mischief as I would say, well, many A350 operators have had A330s, therefore, why would we have done certainly pricing in the A350 aftermarket? And at that point, I think of chance [mile] enough.

David Smith - Rolls-Royce - CFO

Yes.

Warren East - Rolls-Royce - CEO

Well, I think you've stated it.

Warren East - Rolls-Royce - CEO

The question, we don't really need to say anything to that, do we? You're correct, I mean, why would we?

Sandy Morris - Jefferies LLC - Analyst

I'm correct. That's a first. Thank you.

Simon Denison-Smith - Metropolis Capital - Analyst

Simon Denison-Smith from Metropolis Capital. Forgive me if you feel you've addressed this. I'm probably being a bit slow. But on the linked contracts, you take profit upfront based on the forecast for what you're going to get an aftermarket revenue. So, if your aftermarket revenue doesn't hit your expectation, which is what's going on with these parked aircraft, are you saying that you're taking part of these projected reductions in future profitability that you're giving us is coming from a provision you're taking against those profits that were originally overhyped?

David Smith - Rolls-Royce - CFO

It's more driven at the moment by the actual utilization, so the engine flying hours, which is affected both if aircraft depart or if they go onto different routes. So, for instance, we have routes of aircraft, which are going from international routes to domestic routes, and then T&M activity. So, that's a bigger effect.

There will be some effects where you have linked contracts I agree, but we update that analysis twice a year. And at the moment, it's really being offset by cost reductions we're getting at the same time, so the bigger effect is absolutely through the engine flying hours in the T&M activity.

Simon Denison-Smith - Metropolis Capital - Analyst

Okay. Sort of linked to that, I know this question was asked, but I still don't think I've got a very clear answer. Are you absolutely certain that Rolls-Royce is not having a higher share of parked aircraft because the pricing is effectively at a competitive disadvantage to GE's engines through these TotalCare contracts? That your customers are not saying, "Well, actually if I'm weighing up grounding an aircraft to the G.E. engine versus a Rolls-Royce engine that I'm better off doing a Rolls-Royce engine because I'm paying a higher cost at that point in time than I am with the G.E. engines."

David Smith - Rolls-Royce - CFO

I haven't seen any evidence of that. Maybe we'll come back on it specifically. But I mean, as I said, it does get down to a choice for individual airlines on their individual routes, which may have a mix of engines or very often they may be more exposed to us or G.E. on those engines. So I haven't seen any evidence at all that this going to aftermarket pricing. I think it's much more down to operational factors.

Simon Denison-Smith - Metropolis Capital - Analyst

Okay, thank you. Sorry, one final question, which is completely unlinked to this, is 3D printing an opportunity for Rolls-Royce?

David Smith - Rolls-Royce - CFO

Yes, it is, of course, and we're already actually testing out quite large and complex 3D printed components, in fact, probably the largest of anybody at the moment.

The research centers that we do jointly with the government, other companies, and universities have been looking very hard at how we can extend the application of additive layer manufacturing on various part of technologies as well. So it is, for us, I think quite an exciting long-term opportunity but one that obviously we need to make sure works at the very high criteria that are required for the hot end of turbine engines or whatever.

And the cost is still an issue. I mean, they're still quite expensive to make, and we have to work on that over time in terms of scale.

Warren East - Rolls-Royce - CEO

So we're absolutely using it today and will in the future.

Adrian Dolman - Kintbury Capital - Analyst

Adrian Dolman here from Kintbury. I've just got a quick question relating to IAE. This morning in the release you said previous disclosure has undermined confidence in the business model. I note that when it comes to Rolls-Royce reporting your financials you never disclose what the IAE contribution is. If I look in your annual report, I don't even think IAE receives a single mention.

Given cash flows declined and profitability has declined, IAE is now a very large portion of your reported profitability. And it's a significant boost to your potentially negative cash flow. Will you improve disclosure on this going forward? And also, could you give me a rough idea of what the IAE contribution you expect to be this year and next?

David Smith - Rolls-Royce - CFO

Yes, I actually think that we have talked about these numbers openly before, but if we haven't then I can clear that out. So, I think in revenue terms it's roughly GBP600 million. And in profit terms, I think it's in the GBP250 million range, something like that. So, I actually have to think I've heard that mentioned before, but if we haven't then that's roughly where we are at the moment.

Adrian Dolman - Kintbury Capital - Analyst

It's more -- are doing -- we actually you give numbers. I think it requires people to ask you on the conference call for you to actually disclose it and make sure it's actually in the release.

No, that's great. Thank you. But will you disclose that going forward in your releases or but we still need to ask?

Warren East - Rolls-Royce - CEO

Well, I think we are talking about disclosing that in the modeling the business slides. And we'll talk about that.

David Smith - Rolls-Royce - CFO

Yes. Well, you know, if that's going to be useful, that's something we can absolutely look at.

Warren East - Rolls-Royce - CEO

We got a few over the other side, and then -- Okay, and in the interest of time after we've had these questions over here, we're going to close, but we will be doing refreshments outside for any further discussion.

Ryan Shestak - Citadel Securities LLC - Analyst

Thanks, David. It's Ryan Shestak from Citadel. I just wanted to build on Sandy and Ben's question, just trying to understand the cash flow profile of the various programs on an annual basis. You laid out what it looks like in 2020 and what it looks like in 2025. And if I just focus on the Trent 700 engine for a moment, I understand in 2020 you won't be delivering any more, so the installed base would be at its peak, i.e., sort of the maximum number of flying hours.

And as we roll forward at 2025, the flight hours or the cash inflow would seemingly be lower than 2020. And the cost to service those engines that have been delivered over time would seemingly be higher, so I'm just trying to understand how to read the chart why 2025 for the Trent 700 has considerably higher annual cash flow than 2020 if the flight hours will be lower and the shop visits will most likely be higher.

David Smith - Rolls-Royce - CFO

So, the exact positioning on those charts may be a bit illustrative in some cases. There's a couple of points why you'd still be seeing improvements. Firstly, we get escalation every year in pricing, so that's part of the contract. It doesn't stay the same. It goes up every year and inflation will increase if you like.

And then we continue actually to take cost out of that end of the legacy engines. A lot of the cost improvement that we've seen coming through TCA last year, for instance, the GBP150 million that we talked about, a lot of that was on the Trent 700, and we would expect to continue to take cost out of their engine over time. So, you're right, at some stage, we get to the peak on the utilization.

There are still a few products being delivered on the military side as well, but you're right, the civil side will stop. But we still have an opportunity to improve margin even after that both on the pricing and the cost side.

Warren East - Rolls-Royce - CEO

Yes. So, I mean, just to add I mean, these charts were based on a bottoms-up analysis, so those effects that they have just described are what we expect to materialize and that's what positioned that dot on slide 56 compared with slide 55. However, as he says, it is a PowerPoint. This is not meant to be financial reporting, but the relative positions is absolutely correct.

I think this might be the last question.

Nick Cunningham - Agency Partners - Analyst

Thanks very much for letting me come back again. It's Nick Cunningham from Agency Partners. Just looking at Chart 55 again, I think I've got the chart number right. And obviously that is indicative, but the Trent XWB is both in positive cash flow territory even though there won't be that much of an installed base generating hourly payment at that point, and you'll be delivering a lot of O.E. engines. So, does that imply that you should expect the Trent XWB to be breaking even or better on a cash basis O.E. by that stage?

Warren East - Rolls-Royce - CEO

Well, the answer there is that it will actually be a reasonable volume in that stage. Trent XWB is the fastest selling engine that we've had. And it's an engine that we have a massive order book for at the moment, and that's why we're gearing up to double the production in total. The ramp-up on XWB is really very steep.

I think I'm right that the order book at the moment is for XWBs roughly the same quantity as the installed base on the Trent 700 at the moment. So, it's massively steep, and there will actually be a lot of Trent XWB engines flying around in five years' time.

David Smith - Rolls-Royce - CFO

And I think there are three or four things that are helping this as well, so the launch curve cost through the launch pricing on O.E. side, we will obviously won't have the same level of R&D support for the product once it's in the market. And we will be generating some very -- even though it's early on, some very significant aftermarket begins to get generated by then. So, all of those things are positive.

On that 84K, we should be in positive territory on an O.E. basis absolutely, Ryan.

Warren East - Rolls-Royce - CEO

Okay. Well, with that, I think we like to close the Q&A session, and thank you all very much for coming, and there will be some refreshments outside.