

THOMSON REUTERS STREETEVENTS

EDITED TRANSCRIPT

GE - GE Aviation & GECAS Analyst Meeting

EVENT DATE/TIME: JUNE 19, 2013 / 06:30AM GMT

Caution Concerning Forward-Looking Statements:

This document contains "forward-looking statements" – that is, statements related to future, not past, events. In this context, forward-looking statements often address our expected future business and financial performance and financial condition, and often contain words such as "expect," "anticipate," "intend," "plan," "believe," "seek," "see," or "will." Forward-looking statements by their nature address matters that are, to different degrees, uncertain. For us, particular uncertainties that could cause our actual results to be materially different than those expressed in our forward-looking statements include: current economic and financial conditions, including volatility in interest and exchange rates, commodity and equity prices and the value of financial assets; potential market disruptions or other impacts arising in the United States or Europe from developments in the European sovereign debt situation; the impact of conditions in the financial and credit markets on the availability and cost of General Electric Capital Corporation's (GECC) funding and on our ability to reduce GECC's asset levels as planned; the impact of conditions in the housing market and unemployment rates on the level of commercial and consumer credit defaults; changes in Japanese consumer behavior that may affect our estimates of liability for excess interest refund claims (GE Money Japan); pending and future mortgage securitization claims and litigation in connection with WMC, which may affect our estimates of liability, including possible loss estimates; our ability to maintain our current credit rating and the impact on our funding costs and competitive position if we do not do so; the adequacy of our cash flow and earnings and other conditions which may affect our ability to pay our quarterly dividend at the planned level; GECC's ability to pay dividends to GE at the planned level; our ability to convert pre-order commitments into orders; the level of demand and financial performance of the major industries we serve, including, without limitation, air and rail transportation, energy generation, real estate and healthcare; the impact of regulation and regulatory, investigative and legal proceedings and legal compliance risks, including the impact of financial services regulation; our capital allocation plans, as such plans may change and affect planned share repurchases and strategic actions, including acquisitions, joint ventures and dispositions; our success in completing announced transactions and integrating acquired businesses; the impact of potential information technology or data security breaches; and numerous other matters of national, regional and global scale, including those of a political, economic, business and competitive nature. These uncertainties may cause our actual future results to be materially different than those expressed in our forward-looking statements. We do not undertake to update our forward-looking statements. "This document may also contain non-GAAP financial information. Management uses this information in its internal analysis of results and believes that this information may be informative to investors in gauging the quality of our financial performance, identifying trends in our results and providing meaningful period-to-period comparisons. For a reconciliation of non-GAAP measures presented in this document, see the accompanying supplemental information posted to the investor relations section of our website at www.ge.com."

"In this document, "GE" refers to the Industrial businesses of the Company including GECC on an equity basis. "GE (ex. GECC)" and/or "Industrial" refer to GE excluding Financial Services."

GE's Investor Relations website at www.ge.com/investor and our corporate blog at www.gereports.com, as well as GE's Facebook page and Twitter accounts, contain a significant amount of information about GE, including financial and other information for investors. GE encourages investors to visit these websites from time to time, as information is updated and new information is posted.



CORPORATE PARTICIPANTS

Paul McElhinney *General Electric - Vice President, Engine Services*

CONFERENCE CALL PARTICIPANTS

Andrew Obin *Bank of America-Merrill Lynch - Analyst*

Rami Myerson *UBS - Analyst*

Alan Christensen

Howard Rubel *Jefferies & Co - Analyst*

Scott Davis *Barclays Capital - Analyst*

Clifford Ransom *Ransom Research - Analyst*

Norman Liu

David Joyce

Julian Mitchell

Nigel Coe

PRESENTATION

Norman Liu

Okay. Greetings to everybody here and on the Web and on a beautiful Parisian morning. What I'd like to do is just give you a brief overview of GECAS, talk a bit about the industry and the environment, and then go to some of our key initiatives.

GECAS did its first aircraft lease about over 45 years ago. We've got a large fleet of about 1,800 planes owned and managed, benefit from being an affiliate of the GE and its top tier credit rating.

Because we have such large scale, we're able to have a broad distribution network. I got a chart on that later and also with that broad network are able to offer a bunch of different financial products.

The team has been around a long time, been through multiple cycles. We have many, many long relationships, hardware experts, financial experts as well. And last but not least have been very important is the risk team and underwriting deal as well.

We obviously benefit from the whole GE Aviation domain linkage. As we can see over the different cycles and events, we've been consistently profitable.

In terms of the industry, the airlines, as you know -- I mean, it's historically been a cyclical business broad in credit spectrum, but very solid collateral and that it's movable quite quickly. It also has relatively long lives it's not an iPad 2 or anything.

And in terms of the economy, it tends to be a core part of the transport infrastructure of many economies out there, plus it's been -- this whole space is benefiting from the secular trend where it's the whole global emerging consumer space. But it's still cyclical so you have to adjust your Playbook depending upon where you are in this cycle.

This page just sort of lays out our 24 office, roughly half are in the emerging markets where the growth is. We service 75 countries. It's key to keeping abreast of all the trends, the locals like having people call on them locally versus fly-ins.

And last but not least, we're always part of a GE office somewhere so we can benefit from their government relationships and long-standing ties.

This is just a chart that shows our different product offerings, ranges from narrow bodies to wides, to regional jet and turboprops as well.



Financial products where structure finance, doing all sorts of sale leasebacks. We're a top five lender in terms of debt. We've been very active in capital markets and developing new managed investor vehicles for aircraft, which we then serviced and gain servicing fees.

And then last but not least, we provide a lot of ancillary services to the fleet as well. We're the largest engine lessor. We're one of the top used airframe parts distributors.

And entirely we also got more active in the infrastructure space. We are one of the leading airport consulting firms in the world out and the suburbs of London. And actually we've been joint venture with Credit Suisse to do an infrastructure fund, so that's a slide of London City outside Canary Wharf.

In terms of the environment, aircraft supply, as you know, is increasing because the OEM production rates are going up. There's also new manufacturers from the different countries coming out, a lot of lessors slots and roll-off adding to supply; some very, very large low-cost carrier orders. And then you always have supply from the few airline bankruptcies, and also some of the low-cost carriers are exiting some of their planes as well adding to supply.

On the demand side, it's obviously tied to the GDP situation around the world, which is still slow. And replacement cycle has been a great brewing for the last couple of years, but we're sort of at the last quarter of that.

I would say there is strong capacity management in the U.S. increasing capacity management and Latin America, but more signs of market share expansion amongst the Asian low-cost and the Middle East carriers.

In general, airlines are managing their capacity better, you know, daily flight hours, load factors are up. And everywhere there's alliances and in the case of the U.S. mergers as well. So that's sort of creates some capacity up.

Meanwhile, the real issues on the ground such as the airport infrastructure pilot availability bilaterals that tends to, you know, make it a little bit difficult to fulfill some of the inherent.

And then cargo remains tied into macros, tied into the belly space coming out, also changes in trade flows for near-sourcing, iPhones versus PCs that sort of trend. So cargo is struggling.

The technology curve is pretty much clear now. A couple of years ago we used to always imagine what the different products could be. It's pretty much clear for the next decade or so.

You've got NEO/MAX on the narrow bodies. You've got 78350s on the wides, and so the recent launch of the 787-10, and we'll see what the 9X holds later in the year.

Now all that supply is putting some pressure on the mature -- in addition to the mature kits that's available. In many countries, there's a cultural bias to own new planes. Also the debt markets are a little nervous on the -- somewhat older planes regulatory as well. So there's a bit of pressure on the mature kit.

At the same time, there's more financing competition coming in Asian banks who -- they're in the growth markets. So they're in the growth markets so they're looking at expanding. There's a lot of money slush going around, as you know, in the system. And the traditional players are active as well.

The European banks, I will say, are transitioning, but Asian and local banks are entering. And the bond markets are quite active. And Exim remains quite active. So that's the environment.

In terms of what are we doing at GECAS, first and foremost, we're being reasonably selective in terms of new sale leasebacks and financing volume. We tend to focus on margins, purchase price, things like that and tend to do better on the larger deals where there's less bidding activity. We tend to because of our balance sheet strength, some of the competitors we won on bank funding, things like that.

We've got -- we can benefit from speed and certainty, sometimes at year-end, tight deliveries. We do well on those deals.

And also we have a larger array of products to bring together for customers so we can do spare engines in addition to the sale leasebacks sometimes at the same point. Sometimes the airlines need new slots. At the same time, they want financing on their own orders.

We've worked very hard. The last couple of years we've ordered several hundred planes including the NEO and MAX. But in terms of we've been very focused on placing the skyline. Up until 2015, we're over 90% place out. We only have about 13 planes up. I think we're far forth on our curve.



In general, we're facing down our purchases of last-of-line 320 CEOs and 737 new-gens and instead focusing on the future technology applications like the MAX, the NEO, and then you probably read about our 787-10 order that comes in that later part of the decade.

And if you're just, there are some examples of deals that we did Thomas Cook where we did six 321s, also took three slots Air China because we are able to -- well over the fleet of 737s, we're able to put in 320s. So these are the sort of value-added approaches that we take to compete in the marketplace.

Emerging markets as you know has been a huge driver the past bunch of years all total equiv about \$30 billion of commitment.

When you look at our activity in terms of asset sales, placements, financings, upwards of 70% is in this area. You see between the BRIC and the next 11 we've got about plus \$20 billion.

China is a more multi-pronged market, before we're just being airline placements. But now we spend time also selling some of our leased assets to Chinese banks who want to grow in the space, also dialogue with the [Comac] people and their C919 project.

Africa is probably the last great pioneering market. We've opened up as you saw on the chart three offices there growing the activity to about \$3 billion of planes. They are just trying to find which country is up to 50 there. We can do some business. Some may not make sense, but trying that, more often than not, there's opportunity there.

And then the low-cost carrier phenomena is something that we've actually worked through the years. Some of the first -- actually the first planes at leading carriers now like GOL, Air Asia line, we actually did, so establish the relationships early. And now they're a very, very large carrier, so we're a big believer in this low-cost phenomenon.

There are some new names here that are all pretty much Asian names that we've been very active in Spring in Shanghai. It's very interesting.

Airline Peach is a ANA, All Nippon Airways low-cost carrier in Japan, which is still, you know, works a lot more in the leading worlds' economies, Jetstar. And also that little duckbill is Nok Air in Thailand, and so that's a big market as well.

So a lot of, I think, exciting business plans out there in the low-cost area. And they may start small, but they could end up very large someday. So emerging markets still remains the driver for us.

We've been very active. Probably one of the most active sellers of leased aircraft in the market. Partly for capital appreciation, partly for managing the fleet types and also the account exposures.

Historically, we were selling to other lessors, some of the new Asian entrants, but the return of the capital markets and doing asset-backed securitized debt, some of these business development corps. We've been very active in terms of doing pooled sales over on the right. And it's not just for aircraft, but also for engine leases as well. That's why we had the rotor product.

In terms of approach on the mature kit, we've spent a lot of time over many years building sort of full lifecycle capabilities from sort of cradle to grave. On the young asset side, I mean, obviously at the place of the planes, but we've been, as I said, very active in terms of asset sales of the younger planes, maybe about 80% of our book is in this sort of 10-year and under space.

And then what we increasingly -- let's say the lease comes off in year eight, we're heavily focused on extending that lease as long as possible, you know, to get out sort of 15 plus years versus just doing the easy lay-up three, four-year expansion. So we like to avoid the redeployment second tertiary lease-type phenomenon. So that's on the young asset side.

On the middle life planes of 10 years and older, we've been leveraging our distribution network to find new operation. Sometimes it's a freighter conversion, sometimes it's a VIP application, sometimes it's a flying a 767 plane for the huge building Chinese tours trade going to -- for example, the mall guys, basically running all the airlines. I think that's a tremendous application for this use of wide bodies, also a big market potential in the whole Hajj-Umrah activity going into Saudi Arabia, I mean, very huge flows.

Also we're starting to find some of the very experienced operators are looking at sister ships of used aircraft, these 10-type planes, so people like the [Legion], they're rolling from MD-80s to CFM-powered A320. They don't want to do onesie-twosies. They want to do sort of 10 plus deals, so that fits very well to GECAS because we have a large technical department, and we can provide those multiple aircraft.



SAS is also an interesting story. That was 737 700s instead of getting into some of these new types like C -Series and all that. They really operate the 73s so it's economical and good for them to just take some more and then bridge into CFM-powered NEOs in the future as well. So that area is a big focus. We're actually seeing a lot of inquiries from very large carriers to get this sort of fleet.

And then finally, end-of-life, we've owned for many years a company we called Memphis that is a large used airframe parts distributor because we literally break apart the planes to high-value parts. We sell them off. A lot of the value is in the engine side so having a large engine lessor helps the GE capabilities as well on the use space, so have been a very good full lifecycle suite to not only offer to the market, but also service on our own portfolio.

Sometimes we take out some of the older planes -- a bit of the used car lot, we part them out, put in some new planes. So that's a really good capability we have not just sort of defensively, but doing new deals as well. And last but not least, we spend a lot of time just blocking and tackling, managing the fleet, being sort of looking at the pie charts and where we are versus the world fleet.

We've kept the aircraft on the ground very low, single digits for many, many quarters, a little bit trying every now and then, but the team has a lot of focus, a lot of early warning systems. We tend to be very, very proactive. It helps to have the regional network, helps to have the GE relationships through a parent company. And so we've been very, very good at managing the fleet just weekly, block and tackling meetings, repos, collections.

Many times we tend to be -- I mentioned we were in some of these meeting low-cost carriers first in. We also tend to be first out. And other people recognize that, so that gives us some leverage as well.

And in terms of the pie charts, we are still -- as most of us was, we're primarily a narrow body shop just because it's a bigger base of operators. And we're a little underweighted wide bodies. We're changing that a little bit, but the world fleet is 35% to 40%. We're not going to go there. We're going to stay in the 20s somewhere.

And in terms of regions that no surprise we've been way back. North America used to be a lot bigger part of the pipe, but we've spent a lot of time to diversify into different parts of the world and no surprise half of it's emerging markets. When you look at the order of backlogs, maybe 70% are in these markets, 30% are in the traditional developed markets. When you look at people, maybe 85% of the people are there, so no surprise that our fleet is shifting to those markets.

And last but not least, we focus pretty much on standards, you know, simple, no complex products of off-leases and loans, and so less on the financial lease side. So we're quite pleased.

I mean, this is a multi-year, five-year plan. And if you keep the compass going, you see five years later that it actually turns out pretty well.

So just in conclusion, I think it's a great collateral type as long as you can manage the assets for why the benefits from secular trends of this global emerging consumer story, the core infrastructure story. We think we've got a very strong business model and team and just very simple, repeatable priorities.

So that's it for me. I'll hand it over to David next. Thank you.

David Joyce

Okay. Good morning, everyone. I'm going to take you through the aviation business. And then Norm and I will open it up for questions. Pour myself a little water.

So I just start with just a little bit of history of this business, it's a great GE business. If you just take a look at the run over the last three years of 7% CAGR in revenue, big investment in R&D, which continues as we see the product portfolio shift this decade. And growth and deliveries, as you can see on the chart, up to over 3,300 this year.

We tend to see that growth continue through this decade as well and a terrific position in an installed base. That includes commercial and military of over 58,000 engines.

We really have four strategic priorities in the business imperatives. Starting with the continued growth of this installed base, as well as the service of that installed base as it grows. That leads us to have great ability to invest in the next-generation of products, and I'll show you that as we secure our position on the next-generation of narrow bodies, wide bodies and then the big twins with the 9X.



I'm going to take you through the supply chain positioning because the one thing that's going to occur in this decade is a huge mix shift. You're going to see a transition to production of new engines with new technologies. And that's kind of why I brought some of the technologies for you all to look at.

We have a table here. After we're done, I'd like you to come up and take a look at some of the technologies that are in these engines. And, of course, we've felt we'd bring one of our iconic technologies here with the fan blade as well.

And then last we're building out our digital services. We think that big data means a lot in this business not only in terms of having a great service portfolio that we can then take analytical tools to drive productivity, which creates value for both GE as well as our customers, but also as a complementary value proposition for our customers. We think of that big data through flight efficiency services.

And the new J.V. that we just opened with Accenture yesterday gives us great future as an adjacency for the business.

So we're also a very cost-effective business. This is a culture that knows that productivity is important, 2.5% productivity in 2012 variable cost productivity. SG&A as a percent of revenue is down to 7%.

We are a strong believer in the GE toolkit. Which side do you want me on? Okay. Thank you. Strong believer in the GE toolkit, which includes Lean Six Sigma as well as Fast Works, which is the speed initiative for us on process development.

And we've done a lot of dispositions. We continue to aligning the business strategically, 10 dispositions just in the last year. And we continue to refine that footprint to make sure we've got the right global footprint for the current technologies and products as well as the new technologies going forward.

Since Farnborough since the last time we had a chance to talk, there are some pretty significant changes. Number one being that we were announced as a sole source for the GE9X engine on the 777X, which is a program we've been working towards for quite some time for the last three to four years.

I always get the question of why we're not on the A350, and we go through this long dance of an answer around, you know, the 777 300ER would be a direct competitor with the A350 1000. And our first priority was to determine what the Boeing strategic direction was for the 300ER replacement and use that as our guide post as to how we were going to participate in the market in that high end.

And, of course, Boeing has made a decision on the 777X as the next generation of the 300ER. And with that, we've made a decision to go ahead and extend the great franchise of the GE90 to GE9X secure sole source with Boeing on the 777X.

Our installed base, as I said, both military and commercial combined has approached 58,000 and that includes a services backlog across both military and commercial of over \$100 billion. And I'll show you that in a minute.

We won a very, very important DOD program in science and technology called the Adaptive Engine Technology Development program, long name. We call it AETD. It really stands for Gen6 of the combat fighter segment, very important to us and an important program. We're very, very proud of the technology.

One of the things you may have seen if you've been reading the Show Dailies is we announced that we had run an engine to the hottest and highest temperatures in the history of aviation just last year as part of a science and technology program. That program was the predecessor to the AETD program called ADVENT. So demonstrating technology capabilities beyond anything in the industry ever before, and it's something we're very proud of and gives us great future as we take a look at the next generation of products.

We have delivered our first turboprop with Thrush and now have five full applications within the turboprop market and growing, including the Primus application, which is the China turboprop.

And finally, we've announced a number of acquisitions leading with Avio, which we'll talk about in a minute. But also just securing the technologies we need for the next generation of supply chain. As I said, this next transition is going to occur here in the decade. It means that we have to really rethink to make versus by decision to protect their intellectual property and also the margin pools that are going to exist in the engine programs.

And we've been very active in making sure we understand what that means in terms of our supply chain and our supply chain growth going forward.

This is the portfolio of \$20 billion. And I brought the vice presidents that run these P&Ls with me, which I'd like to introduce. If you have any questions for them afterwards, please feel free to come up.

So I'll start with a commercial engine. Bill, if you'll just stand up. Bill Fitzgerald runs the commercial engine portfolio. These are all the engines in production, and the new engines, all the new NPI work that we're doing, new product introductions.

Paul McElhinney, who runs the services business, which after Bill hands off the engines and goes into service then Paul makes sure that those engines are serviced correctly and that we have the right portfolio of products that not only support our customers further a value proposition with our customers, but create great opportunities for us for productivity.

In the military engine and services is Jean Lydon-Rodgers. Jean is over here. She runs the military business for us, business in general aviation as well as integrated systems, which includes power and mechanical as [Brad Mattier].

And finally, avionics and the digital solutions piece is Alan Caslavka, who's shown here. And then coming soon second half of this year, we'll add Avio Aero to this list, which will be the sixth P&L in the family plan, and that is the name of Avio. We're going to keep the name Avio. Our intent is to grow the third party piece of Avio quite a bit. And as a result of that, we're going to keep the brand and the brand recognition in the marketplace.

I'll start with the commercial equipment growth. Norm went through quite a bit of this on the left-hand side in the environment. These are IATA's figures. Growth in revenue passenger mileage demand of over 5% last year, which will be equal forecast for 2013.

You heard Norm say that the airlines have been quite disciplined in terms of their capacity. As a result of that, load factors were up. And with load factors being up, obviously, yields go up as well. And, of course, jet fuel has been pretty stable throughout the last year. That's the largest variable cost for all these folks.

So variable cost stable, demand going up, control and capacity so that they have some scarcity that they can hold the yield, which is an environment that you see play out in the commercial aviation space now at the airlines.

For us, we're taking advantage of that with the products we have. We see production volumes growing all the way through 2020. This is in commercial, so 3,300 engines a year. We will add four new models to the family over that same timeframe. And our in-service fleet will be as high as 4,600. That's net and includes retirement as well as growth by the end of the decade.

So a very robust story for commercial equipment. We're very happy with where the portfolio is and where it's positioned for the future.

Service is much the same. Passenger demand is the same. Utilization is a big story, a 1.8% improvement year-over-year. Wide bodies are up in utilization about 1 point. Regionals are up a full point. And narrow bodies are up about 1/10. I think if you average them all out, that's about 1.8.

For GE CFM and the other joint ventures, we see an additional 1 million departures year-over-year from 20 million to 21 million departures. We represent about 65% of all departures worldwide in commercial aviation, GE and our partners. Our in-service fleet up to 46,000 and shop visits will grow close to 5,900 by 2020.

If you look at our commercial backlog, our backlog has been growing in the equipment, year-over-year from 1Q '13 at 8% and in-service at 6%. So just in the commercial world, it's about \$96 billion of backlog as we -- as we talked to today.

That growth is really spread out across the globe, which is exciting for us. This represents not only the major reasons. But if you look right underneath the titles, it shows what the traffic demand growth is. So, for example, in North America, traffic is growing at 3%. Europe, it's growing at 3.5%, China at 7.5%.

And then the figures show our growth through 2015. So, for example, in America, traffic growth at 3%, our growth of installed base at 11%. If you look in the Middle East, traffic growth at 6.3%, our growth will be at 32% in terms of equipment that we put into that region.

So in everyone of these regions, we represent more than 15% of the existing installed base today and that will grow as we continue to grow globally around the world. So a very, very well-position product portfolio, which then is grows that installed base, grows the services and allows us to invest in the next generation of products, which is really the cycle of this business it needs to run on.

With that in mind, that's exactly what this chart says is that today if you look at the regional, the narrow body and the wide bodies, all that installed base is really leading to an opportunity to invest in the next generation of engines. And I'll take you through three of those investments on the next three pages, which are very critical to this business going forward.

The first one being, the power for the narrow body. Today, CFM56 is certainly the preferred power. 34,000 departures a day on CFM. And departures are a good thing because they burn cycles on parts and burning cycles on parts creates the service business.



Our shop visits through 2020 will be up about 1,000 per year so we see 3,400 shop visits a year just on the existing CFM fleets. And in addition to that, we have secured the future in this narrow body by having a sole source in the Boeing 737max, one of two engines on the Airbus A320 and the sole source on the COMAC C919. So a very, very nice position today and a very good investment with the lead technology for the next generation of CFM in the future.

If you move to the mid-sized twin aisle wide bodies, the CF6, the best-selling wide body engine in the history of aviation is being replaced by the GENx. This is the 787 -- all three models of the 787.

Boeing announced the 787-10, the higher capacity airplane this week. We placed two orders placed with GENx. United placed their order with GENx on the 787-10. And, of course, Norm. Thank you, Norm, at GECAS, placed his order with GENx. We had to fight hard for Norm's order.

So CF6 will be in production through 2020 and beyond. I mean, this is -- we've got 800 shop visits on it this year. This is not a franchise that's going away. It's a solid franchise for us.

And the GENx fastest-selling wide body engine, we've seen in the history and we'll have over 2,000 engines in service. Right now, we're running at just about 60% share on the 787. We'll have 10 customers in service by the end of the year on the 787. And the engine is doing exactly what we've told the customers would do.

And then the big announcement of this show for us is the capstone, which is the big twin -- the big, big twin, the 777 300ER replacement with the 777X. And, of course, we committed the GE9X, which is a brand new centerline. We'll be the -- not the largest, highest thrust engine, but certainly the biggest diameter engine we've ever built versus even 777 300ER.

At the time this engine goes into service, which will be sometime towards the end -- way at the end of the decade. It will better than anything that's flying by five points of fuel burn -- at least five points of fuel burn. That's how advanced the technologies are going to be in the 9X engine.

Now what gives us such great confidence to be able to say that is how much we invest in technology. The great thing about all these programs from the GENx to the LEAP product in the middle of the decade to the GE9X at the end of the decade is just how efficient our investment is in technology. We get to leverage each one of those investments and get great productivity out of our technology investment.

It also gives us scale, so not only do we make investments in manufacturing, we know that we'll have the scale that we need in every one of those investments and gives us great efficiencies in the supply chain.

So to give you a perspective, by the time that GE9X goes into service, the technologies on LEAP and on GENx will have 60 million hours of operation and service, and there will be 6,000 engines out, but those technologies are already flying by the time we start entering the service on the 9X.

I'm going to go through three technologies, which I have with me. And then I'd like you to come up. We can talk about them. And the first, of course, is the fan blade. By the time the 9X goes into service, there will be 100 million flight hours on the fan blades starting in 1995. We're still the only company with a composite fan blade.

Now, from an efficiency perspective, this really is the enabling feature for big, big, big diameter engines so the weight differential in a composite fan blade like the one shown here in the room versus a metal or even a hollow metal blade is extraordinary. But it's not just the material difference, it's also the aerodynamic difference as well.

If you look at this beautiful marriage of aerodynamics and material systems, we've been able to take the blades on the GE9X to 16 blades to produce the thrust of the GE9X versus -- if you go back, we were at 22 blades in 1995 when we originally started the GE90 program.

So an unbelievable marriage of great technology and materials along with advancements in aerodynamics that have given us terrific efficiencies in this engine, which were being rewarded with in the marketplace that we were so confident in this carbon fiber blade that we went ahead and went into carbon fiber cases, which took 700 pounds of weight out of the 787 versus the traditional metal cases that we use for containment of the blade.

We'll extend that from the 787 onto the 777X and again give a terrific weight story for that airplane, a heavyweight story for that airplane.

Second technology is the compression systems. For the last several years, I've been talking to you about this program we called eCore, which was a technology program platform that we had developed in order for us to really mature the next generation of compression, combustion and turbine technology. And that platform has paid off big for us.



We now have four product applications that have come out of the investment in that technology platform. Starting with the GENx, we have Passport and LEAP. And LEAP occurs all three variants. And, of course, the 9X, which will be at 27 to 1 pressure ratio of compressor.

If this compression system that gives us the efficiencies that we need to be able to secure these applications and secure the future of this business as we move forward with our customer, so this is a great story.

I actually brought with me a video of one of the other technologies that I'd like to demonstrate with you, which is all about this additive manufacturing you see so much in the press.

(VIDEO PLAYING)

David Joyce

I brought one of these blades with us so you can take a look at it. This has actually been grown -- completely grown. This is a prototype of a high pressure turbo blade. And this technology gives the designers an entirely different view of the constraints that normally exist when they think about laying out hardware.

This fuel nozzle that we're going to put in the LEAP product is a single piece. Now that fuel nozzle in the past engines has been anywhere between 18 and 25 parts that had to be embraced together with incredible tolerances in order to make it work inside a jet engine. And now we grow those nozzles with one single piece, and all the tolerances are met just within the laser centering, laser melding capability of the part.

So it really is eliminating constraints that have been limiting quite frankly the design capability of a jet engine, and we're very excited about it and look forward to taking it into the future.

In addition to the engines, I wanted to touch a couple of other things that we're working on adjacently and then talk a little on the military, and business and general aviation. The first one is what we've done with the entire digital space, which is created really two fundamental portfolios of products. One is flight efficiency services, which deals with how our customers fly their airplanes and the services we can bring to them in support of their productivity like fuel management.

We have contracts with folks like GOL where we are giving them almost 2% reduction in their utilization of fuel on a year basis through these fuel management programs. Flight Safety, which is the flight quality assurance data called [Kopela], is a company we bought called Austin Digital and it allows us to create new solutions using that Flight Safety data.

Navigation Systems is performance-based navigation. It deals with the track miles that are flown by an airline and how we can help through our avionics business of improve the efficiencies and reduce the fuel burn and the cost.

And finally, Fleet Synchronization is all about approaches, reducing holes and getting more efficiency in the approach and landing cycle.

Now in addition of flight efficiencies, which deal with how they fly the planes, we've also now launched intelligent operations which is really reducing the cost at the airline by enhancing the utilization, so how many hours a day is the airplane in service versus on the ground. And we do this in a number of ways, bringing some pretty sophisticated advanced prognostics and diagnostics.

This is where the entire software center of excellence integrates with the business in order for us to come up with prognostic tools that use big data off the airplanes and off the engines in order to actually predict maintenance activities that may have to occur. Once we do that prediction, we have to have a way of actually incorporating those into the airlines operating system.

So the thing that Accenture brought us in this was a terrific group of products around air and crew passenger recovery as well as operational integration into their entire systems, so crew scheduling, crew optimization, all based on the availability of the equipment and when maintenance should be scheduled in order to eliminate unscheduled maintenance and timely delays and utilization of the airplanes.

We just launched this with [Etihad] yesterday, the intelligent operations piece. This is a joint venture called Taleris with Accenture. I'm very excited about what this is going to be for the future. Both of these portfolios are in Alan's P&L, which includes all the avionics as well as our digital systems.



Business in general aviation, we're very bullish on this market. Our little experiment with Walter Engines in the Czechoslovakia has turned out to be very, very positive. We have three new products that we've launched out of Czechoslovakia called the 8-Series of turboprop engines. We have five applications for those. And we're very bullish on continuing to grow out the turboprop side of the business.

In the light jets, we anticipate certification of the Honda engine this year at the end of this year. By doing so, we'll be flight test and flight certification of the Honda jet next year. And there's a lot of anticipation -- access anticipation for that airplane and their service. And we're very excited to be a part of it.

Large cabin, the GE Passport, which is really the small brother of the LEAP engine. It is essentially the architecture and technology that we're putting into the LEAP product for the narrow bodies, but a little smaller in size, and it's on the Global 7000/ 8000 which is the new big long range business jet from Bombardier. That engine will go to test on Monday at Peebles.

And that's important for two reasons. Number one, it puts us right on schedule with Bombardier for the Global 7000/8000. It also gives us a window under the sole of the LEAP product. So LEAP's first engine goes to test in September, but the components that make up that entire system just scales a little bit will be on test as of Monday. So we'll give some insight as the LEAP at the same time.

And finally, services in this market is synonymous with support. Everyone buy this business in general aviation products wants a service package, which is a really good business for us. So making sure that the services portfolio is combined with the engine portfolio here is a nice story.

Switching over to military, right now we represent a pretty large portion of the installed based around the world, 22,600 engines. We see this as a growing franchise through the end of the decade so we see us growing almost 30,000 engines in service. Most of that is in the rotorcraft, which I'll show you in a minute. But we really like our positioning here as an affordable alternative.

Internationally, sales are growing. We've won over 75% of the international fixed wing competitions over the last three years.

Science and technology programs, we are now active in seven aggressive science and technology programs around fixed wing and rotor aircraft as we speak. We have a very nice portfolio of upgrades for this installed base. There is a potential of over \$5 billion of upgrades, which is a very, very cost-effective alternative to a new program. And in a time when sequestration in the Defense budgets are shrinking, finding ways to upgrade the existing equipment versus launching new programs is certainly an alternative that's being looked at favorably.

And we also have a great position on the products that are least effective by sequestration. So Army helicopters, Navy aircraft like the F-18 and the science and technology programs were very, very well-positioned on.

I wanted to highlight one, in particular, which is the helicopter marketplace. The left-hand side of this chart shows GE's power in international military helicopters, which will grow over 40% between 2012 and 2020. We power just about every one of the helicopters that are in really heavy utilization around the world and are very proud of this position with the T700 franchise.

What's more exciting is the work that Jean has done over the last few years to take that same product portfolio and move it into one of the fastest-growing helicopter markets which is oil and gas. So we now power all three of the big oil and gas helicopter platforms -- the Sikorsky, which has been in service since '04, the Augusta Westland and the new Bell helicopter.

So we're now seeing and expecting growth in that market. As you can see, almost 4X over the same period of time. So just a very, very nice product positioning in helicopters that we've been able to expand into a really nice growth market in oil and gas.

Finally, we've talked about this a little bit like you can imagine the challenges that exist in the supply chain with all this new product going into service. As we literally do these generational transitions in narrow bodies and wide bodies and we bring in a bunch of technologies, whether it be additive, whether it be ceramic matrix, composites, which we'll talk about in a minute or whether it be these titanium aluminide blades, which are a third of the weight of traditional nickel-based alloys or whether it be the next generation of the composite fan blades.

We have to make sure that we really do secure our intellectual property that we've worked so hard to give us a differentiated value in the product and also make sure we understand where the profit pools are in the supply chain, and we don't end up creating, if you will a very profitable business for a supplier when we should keep it for ourselves. So we have an entire process around make versus buy, which has been quite re-energized for us to make sure that we do the right things on all these new products.



That chart on the left shows you the great piece in 2020 represents new product introduction that today is not in service or is barely in service on the GENx. So the blue represents the production engines that are near and dear to our hearts -- CFM, CF6, GE90s. The gray on that chart is the new stuff, GE9X, GENx and LEAP. So you can see what a large percentage of the production environment by 2020 will be all these new engine programs, which is why this is such an important dialogue for us in 2013 to make sure we're ready.

So here's two examples of how we're looking at this. Ceramic matrix composites, which is one of the really critical technologies for us in the future. And I brought a number of parts here for you to look at.

This is actually a turbine blade that we're testing as we speak on the GENx, and this is an example of a shroud, which is the piece that runs right above the turbo blade that controls the clearances. These are both made out of ceramic matrix composites, which is a composite material with a ceramic coating on it. They're not metal. They're about one-third of the weight of their metal equivalent and these are the parts that are going to be in the 9X, that are going to be in the LEAP. This shroud will be in LEAP engine.

And in order for us to make sure that we could make these and make sure we have the confidence in the manufacturing readiness and as well as the technology readiness, we started with the joint venture all the way back with the fiber.

So we entered the joint venture with the Japanese company that creates this fiber so that we can secure it. Then we moved all the way to where we were going to design and build and manufacture the product which was in a lean lab in Delaware of which we created our own facility to start actually manufacturing these products that you see on the table.

And we transitioned when we're ready for production into a production facility which we just announced this week in Ashville, North Carolina which will be the first ceramic-matrix composite production facility in propulsion in the world.

The other one is the additive manufacturing which was the video you just saw. That technology for us started out of our global research center in Schenectady, New York. We then knew that we like what we saw in terms of the capabilities that this brought to the technology of our products but we needed scale.

So we went ahead and bought the world's highest capacity manufacturer in additive which is Morris and RQM. They just happened to be located just north of Cincinnati which made the drive very easy.

We bought RQM and Morris to create the capacity and scale we need to make sure that we can then manufacture using additive for the next generation of products. That manufacturing includes a JV with Parker on the fuel nozzles. We looked at the fuel nozzles and the amount of service on fuel nozzles and the aftermarket decided that it was time for us to get a piece of that action if we were going to put this level of technology in it.

So we joint venture with Parker, we created this company called Advanced Atomization Technologies which will create these additive manufacturing fuel nozzles for the future and allow us to service those fuel nozzles within the JV as well.

So this is just some examples of how we're building that technology capability to make sure that we understand what we need not only to fulfill but also ensure that we properly secured the right profit pulls for the engine moving forward.

Finally, Avio, this was a very smart acquisition for us. This was our biggest RSP, our biggest revenue sharing partner, and we bought them at an inflection point in the industry, at just the right time, we paid 8-1/2 multiple form, just terrific complimentary technologies. We're happier now with the engineering due diligence than we've been. We've known these guys for 28 years. We worked with them for 28 years.

Very, very, very positive efficiencies in the supply chain so the synergies looked good. And it reduces our dependency on RSPs. When you look at the GE9X, you know, we will be at half of the RSP content at GE9X than we are in the GENx as a result of Avio on the couple of other things we've done to secure that.

And finally, this technology gives us a chance to expand once more beyond just simply being a supplier of GE Aviation which is why we kept the brand name Avio aero and our intent is to service the whole market and actually grow our third-party work throughout the industry at the same time.

So in summary, really unprecedented in install base growth which is for us the fuel with service that allows us to maintain the investment that we need to secure the future and every one of these marketplaces.

We are investing in technology and -- every day and making very sure that we understand what the manufacturing innovation and technologies have to be to really set those franchises up for a great run in the future.

We're excited about the synergies in digital. We've got a lot of work to do but just the last joint venture with Accenture, it's very sensible for us and combined with flight efficiency services is a winner in our mind, we have to build it out but it's an exciting future.

And finally, this is a very, very cost competitive business and we get it, so a culture that really does understand the importance of Lean Six Sigma and speed as we move forward.

So I'm going to end just quickly with just some of the announcement of Paris. We'll announce a tally of north of \$20 billion by the end of this week when it's all said and done. I put some highlights up here (inaudible) fly with 60 Boeing 737, a big on-point agreement with [JAL] on the GE90.

GECAS, thank you, Norm, for the -10s. AirAsia and United did 20-10s and 15-9s in the 787s and AirAsia with 100 of the A320 family of Neos and [CO]s all announced, plus we announced the first round at matrix composite plant in full production in the history of the industry in Ashville and we launched a new joint venture with Taleris, so it was kind of a pretty good week this week.

So with that, I'll bring Norm back up and we'll start the questions, okay? Yes.

QUESTION AND ANSWER

Clifford Ransom - Ransom Research - Analyst

Dave, Clifford Ransom, Ransom Research. First of all, thank you for buying Morris. I struggled with the 3D printing and the additive manufacturing industry for 17 years before it got to \$1 billion in revenues and you're probably going to be the tipping point. Thank you.

I just want to get a very quick point of clarification. When you talk about 100,000 parts, are you talking about 100,000 different parts or a total of 100,000 parts?

David Joyce

No, 100,000 total, not different. You know, I wish it was but we're not going to be that big. That volume alone, Cliff, is enough of a challenge.

Julian Mitchell

Thanks. Yes, I just had a question on the sort of long-term serviced agreement. You know, what kind of share on the newer engines do you target to have a sort of long-term service model versus traditional models? And also I guess, you know, when you're looking at the margin profile over time, how does that differ from traditional aftermarket models?

David Joyce

Okay.

Julian Mitchell

And then with the LEAP I guess specifically, you know, when you start to ship that, are you going to be seeing a slight boost to the margins because you'll be having some of the aftermarket revenue kind of upfront because you're smoothing out the recognition profile or will be traditional a little bit like the GENx, you'll have a big hit for five years and then it move off?

David Joyce



I'll start with the last one. It will be -- it will be like the GENx. There's no difference in the modeling at all. You wouldn't see it because again, the beauty of this cycle is that by constantly increasing that install base in the service, we can afford these investments and still deliver. You know, and that is the model that has to be maintained in this business in order for it to continue to grow and grow in a predictable manner both for you and for Jeff.

Your question on, we don't target a percentage, it depends on what the customer's preference is. I can tell you on these new products there's an inherent tendency for our customers to want to transfer more risk to us in services. They're not as comfortable with the engine because they've never seen it before.

So what we find is on GENx and LEAP so far that most of the customers are entering into some form of a service agreement more because they like the risk transfer to be to us, you know, the product is simple, right? It's -- we transfer -- they transfer the risk to us on a fixed revenue line. We work productivity to make that profitable for us.

And there are two things that work for productivity within the contract time period, how long does an engine last on wing which is how many overhauls you're going to do in the contract period and how much is the cost when it comes off, right? And those are the two variables that literally control the game like when it comes to the service contract.

So we drive productivity hard with the service contracts and that productivity allows us, you know, to not only return the value to the customer with time on [wing] but return it to us as well. But we're seeing a higher percentage than we would on the traditional set of fleets just simply because it's new technology and they want the risk to be with us.

Nigel Coe

With regards to the pre-printing question.

David Joyce

Yes.

Nigel Coe

What is the cost saving you're seeing on the fuel nozzles? And I'm wondering what limitations do you see on, you know, (technical difficulty) nozzles to maybe, you know, (technical difficulty) the engines, what do you see limitations on this model?

David Joyce

Well, I'll tell you, I think that this -- think of it in two ways. One, the cost savings is really dependent on what you're replacing, right? So 28 braze joints cause a lot of money. And keeping the balances within that little tiny fuel nozzle, right, so you can itemize the fuel is not cheap. So that cost saving is significant.

But what I would tell you is that it's not just cost because the fact that there had to be 28 little braze joints in that nozzle meant that the designers couldn't design that nozzle the way they wanted to. You know what I mean? Because they had to -- when they wanted to, you couldn't manufacture what they wanted to design because you had to do it in pieces that were brazed together.

So this is as much about, you know, changing the canvas in which the designers are designing on as it is the cost savings of doing this in an additive sense. Both of those dynamics are very, very important in the future. There is a tremendous amount of technology in the jet engine that we know we'd want to do but we can't because the manufacturing doesn't allow us to do. Do you get me?

Now, we have taken that restriction and limitation and we've changed the paradigm so the designers have a new way of thinking about the way they're designing parts. The nozzle is probably the most obvious answer.

But, you know, think of 3D printing and repair, so today, you know, the typical turbo blade not only when the turbo blade comes in needs repair, it's the tip. It's where it oxidizes and it's where it cracks. So you cut the tip off and you weld the -- you just kind of [bead well] the stuff up and then you go ahead and machine it out.



Today, we'll grow it. You know, in the future, we'll put that blade, we'll cut the tip off, we'll put it in a machine and we'll literally grow the tip back. Do you know what I mean, instead of doing this well tip repair?

Now, are we ready to introduced that in the service, the model? No. As the technologists working on that and have been working on it for quite a while, absolutely yes, right? So that's another example.

You know, blisks which are the big rotating disk inside an engine and the blades that connect to them are normally there's a thing called a dovetail and a slack which is this thing right here. So this slide into a big rotating disk.

Blisks, so when we make the blade and the big rotating piece in one piece, today, we have to machine that which is complicated. With additive, we literally will take and build the disk part and we'll grow the blades on the disk with time rather than manufacture it. So all of this machining will be eliminated or at least significantly reduced over time.

So, you know, it -- the freedom is endless except for us, you know, now, it's all about application. Once we know what the manufacturing technology can do, the engineers can just work their tail off on what the application engineering needs to be to make it work.

But we've got literally decades of development to do on this new technology. It's not like we've got it. But, you know, engineers are creative people and, you know, they'll figure it out for us.

Nigel Coe

Great information but in terms of the cost saving, any communication? I mean what is the ballpark?

David Joyce

Part -- you know what I mean? It really does depend on the part.

Unidentified Audience Member

Yes, over here.

David Joyce

Yes.

Unidentified Audience Member

Two questions, one for David and one for Norman. You mentioned 100 billion in backlogs for product and service. What is the split between those and what is the -- how different are the margins and what do you expect the growth rate of each to be?

David Joyce

Yes, so I showed the -- I showed on the commercial what the split was on one of the charts. Commercial is \$96 billion and I can't remember the numbers on it -- 78, 70 -- 78 of that is service. The rest of it is equipment backlog.

Unidentified Audience Member

And how different are the margins to your business in service versus...



David Joyce

Well, service is -- the margins in services are bigger than they are in equipment. You know, I mean this model is for us to put the equipment in service. We make -- you know, we make decent money on it depending on the model. And depending on when it is in the lifecycle, you know, there's a big investment in these engines. We have a big learning curve we go down with things like the GENx.

And then with time, you know, the way it settles in where it should be. And then the service model is, you know, think about three, four overhauls that have to occur on the jet engine over the life. You heard Norm talked about 25-plus-year life in some of these assets, right? So think about all of the service that has to occur with that 25-year life period which includes, you know, a lot of parts.

Unidentified Audience Member

And it's checking question for Norm, the last question. What the financial metrics or what credit qualities are you looking for in your customers? When I look at your list of customers, you know, there are some very questionable credit risks.

And so can you just say specifically what you need to have in order to lease to a customer and do you think in any way big picture some of the aggressive leasing not just GE but industry-wide is in a way damaging the end market?

Norman Liu

Yes, we looked at return on investment. We tend to be on the higher margin. We're not a bank-oriented player. I would say between a 2.5, 3.5 ROI is our target range, not just for us but for GE Capital in general.

I think we tend to be better at underwriting than most we've had some very successful start-ups that you get in early, you get the returns. We also have done some turnaround stories. I don't -- I got to review the list again but we -- but, you know, there are always airlines in transitions and things can turnaround very quickly if cost come out as things roll.

And so I think we've been good at picking some of the higher margin opportunities and if it doesn't work out, it's always affordable asset and we can rely on our distribution network to place the plans and we've been pretty successful over that -- over many, many, many years. And if you're in the airline business, there's always going to be some excitements on restructuring somewhere in the world.

Unidentified Audience Member

Yes, just a follow-up on your additive manufacturing comments, could you give us some sense of proportionality in terms of may be in 2020 what percentage of kind of the new engines will have additive parts replacing traditional forges and investment cast parts either by value by way, anything that could help --

David Joyce

It's really small, Adam. You know, in the grand scheme of things, what we're trying to do now is go after those complicated parts that we have and most of that is finished machining. You know what I mean?

So it's -- think about additive as replacing complexity for us, right? It's a productivity play for us. But you talked about big structural casting and big investment castings and forgings. That's not where we're going. You know, we're going after these very interesting fuel nozzles with 28 braise joints. We're going after blades with these laser drill holes all over them and these -- that are just very involved manufacturing finished pieces.

You know, that's where the value is for us. It's not going to be on a percentage basis on the big stuff. It's not going to be in the single -- you know, you're going to be hard to find it. For us, it's going to be meaningful in terms of cost and in terms of capability of the engines but for the industry, it's going to be a bliff, you know what I mean, in my opinion.

Andrew Obin - Bank of America-Merrill Lynch - Analyst



Do you, guys, have a view on interest rates, how much interest rates would have to move to change your customer behavior in terms of -- aircraft purchasing and leasing?

Norman Liu

Sure. On that question, in terms of GECAS first of all, we're pretty much, much funded so not much sort of impact on our portfolio from that side. I think if you contrast...

Andrew Obin - Bank of America-Merrill Lynch - Analyst

It wouldn't get you down?

Norman Liu

Right. Let me get to that. And from -- but when you look at some of our less lower competition, they run gas so they're probably be more impacted a bit. I mean certainly low interest rates help capital purchases and, you know, the sort of numbers we hear, 1%, you know, maybe even 1%, 1.5% basis points.

I don't think it's going to change because there is other drivers beyond just, you know, cost of capital to all these fuel efficiency savings, all the need to re-fleet and tap into all of that emerging market growth.

So I think in the range that people are talking about, I don't really see much impact from the rates -- rents will tend to trend up, but typically when rates are good, the economies are good too.

Rami Myerson - UBS - Analyst

Good morning. Rami Myerson from UBS. Earlier you're talking about partnership for success. Any ideas talking about this product, would you say the input cost is probably 10% from legacy programs? Can you talk about how that will impact your business and, of course, where do you get to the stage where this may jeopardize the ramp up or the new production programs?

And the question for Norm, when we move through the decade and we go through the transition to our next generation, when this deterioration in residual values and do you expect an increase in part out of legacy aircraft?

David Joyce

Okay. So partners and success, you can imagine we work with Boeing every day. You know, and anything that makes the interface between our products and theirs is more efficient, it's something that we can't wait to get started on.

So for us, partners and success is more realization that we need to get closer together in terms of making sure we understand exactly what it takes to integrate engines and systems into airplanes. And when we do that, we find productivity, we find savings. We find savings in -- you know, in the installation of the engine on the airplane, in the trust reverser and the [cell] system integration with the engine on the airplane and the systems integration and the cockpit in the airplane and the power distribution systems.

There is, you know, a world of I'm going to find every interface perfectly in a document, hand it to you and then you're going to go ahead and design to those interfaces and hand me back a product. It's not an efficient world, right, a world in which together, we're looking at those interfaces and I'm telling you what I can do and can't do and what's the more cost effective solution that both of us will benefit from us a much more effective world.

So Airbus is going exactly the same thing that Boeing is and that is they're really getting closer with their major suppliers in looking for areas where there's inherent productivity to be had just by being a little bit more flexible in terms of how we integrate some of the products with the major systems.



And, you know, we're -- we like it because it leans into, you know, the culture that -- of productivity that kind of fuels the business, so we're okay with that.

Rami Myerson - UBS - Analyst

And you don't see that jeopardizing the ramp up pressure on supply?

David Joyce

No, no. In fact, I think if anything, I see the throughput of our products getting better because, you know, we're going to be able to talk about the limitations that we have which are inherently, you know, cost, you know what I mean, as they -- as a proxy for cost, right?

And so as we can really become more efficient as a supplier, we can actually have better throughputs and we can pass the piece of that onto Boeing or Airbus. We want to welcome to it.

Norman Liu

Okay. And on the residual question, a focus on Neo and MAX, you know, MAX is, you know, five years away Neo's and, of course, there's be a big impact on residual but the install base of the [CO]s and new gens are so large and even at high production rates, you wouldn't get to be a substantial percentage into sort of early middle part of next decade the Neos and MAXes.

And what we do is we obviously price that phase residual impact in on -- into our curve as you get into the last of line. You know, we also start from a very conservative parts versus the industry, we're about 20 years there at the other.

So I think we are pretty well positioned for this curve. We've been through it on the classic new gen phase and we've learned some lessons and so I think we're pretty well prepared for this multi-year transition.

Alan Christensen

Do you expect (technical difficulty)?

Norman Liu

Well, I think, Alan, at some point in the life point that that is a possibility. But most the value is in the engines and to keep on the frame -- you know, probably the most values is on the engines and they keep on being, that's why it's good to have a good engine leasing business also. But most of them are refurb and put around on rentals and on install bases.

David Joyce

Yes, and it's right, we have a used part business. We've had a used part business for 10 years in [POS] portfolio that grows. It gives us an opportunity to not only understand what's going on in the marketplace but also participate pretty significantly.

That plus upgrades are the two strategies, you know, that you do to make sure that you're -- your product stays current, stays in the field. So, you know, the other thing that all these technologies are going to find their way in the existing products.

As we get, you know, more comfortable with ceramic-matrix composites and additive and different design capabilities, you'll see us roll this through a set of upgrades on the existing engines if it adds value, right, which, you know, is one way in which we work through the used material challenges. Howard?

Howard Rubel - Jefferies & Co - Analyst



David, Howard Rubel with Jefferies. Two questions, one for Norman and one of you. On -- Norman, you talked about growing your market share in wide bodies. Does that mean at some point you have to put in some A350s given just the mix and the timing that's evolved there?

And then second, for David, on the military side just to ask for a moment, I mean is that a lot of technologies that you could put into the [four] engine make the F18 even more competitive that it is? It's clearly got a price advantage to today. When do you step up and do that?

Norman Liu

You know, in terms of wide body -- certainly, we're not talking about growing big, big enough. Maybe 21 goes at 25, some round number like that. Right now as you know on our new orders, we focus on GE given our parentage bud over the years as to -- and then right now when we're still in the establishing phase, I think that will be our continued focus. But over the long term, you know, we like to service our customers so we've done some sale leasebacks and other powered engines, but that's sort of how the future.

Howard Rubel - Jefferies & Co - Analyst

Then we have 10 747s -- excuse me, we have 10 787's in total of your -- total portfolio and there's 1,000 airplanes there. So either have that buying more of that or...

Norman Liu

You know, and we're active in the sale leaseback market and 787[G] still have 67%, still a majority of share. So I think that there are plenty of opportunities on that front. But again, you know, it's customer by customer, plan by plan.

David Joyce

On the F-18s or F-414, you know, we are in active dialog right now with Boeing as to what upgrade we'd do for the airplane and the engine. I'm not going to kid you. We've looked at it and we -- you know, we thought at one point, Howard, we were going to launch that in India. When the India campaign was going on, that was probably -- that was our first big swing at it.

So we like that idea and if -- when the time is right, the market is there and Boeing and GE decide that's a good idea, we'll be there with an upgrade. You know, it's a very, very affordable way to get more capability, very affordable.

Howard Rubel - Jefferies & Co - Analyst

Thank you.

Scott Davis - Barclays Capital - Analyst

I guess I have the microphone so I'll ask my question. Norm, when you think about the industry overall, your competitors overall, is it your opinion that your competitors are using the right conservative model on residuals? You know, obviously, that has an impact in how you price things and the changing prices and it's more of an industry dynamic than just something purely [G-cast].

Norman Liu

Well, as I've said, I think we -- you know, we've got a more conservative policy and we think we're really well positioned I think for the others -- you probably are best talking to them. And it's not just the, you know, book policy but it's the economic pricing policies you get into last line and, you know, we'll lose some business maybe.

But -- and, you know, we offset that sort of conservatism because we have better funding costs than most of the other folks given our GE parentage. And also we -- we're able to spread our overhead cost over, you know, close to \$50 billion of assets to our servicing cost are lower. So I think we can still -- we're going to lose deals especially at the last line deals but we still want our fair share where the deals make sense.



Scott Davis - *Barclays Capital - Analyst*

So just to be more clear, if you have a wager in three years or you have more assets more than \$50 billion of assets or less?

Norman Liu

Yes, I think we're probably -- you know, we're in one of the growth buckets within GE but as GE Capital shrinks a bit, I think our growth potential would be, you know, modest single digit, maybe even on the lower side partly because of some of the shifts and residual questions going on to time to be a little bit -- a little bit cautious in terms of the older technology buys.

Scott Davis - *Barclays Capital - Analyst*

Okay, and then David, a question for you. And can you clarify, you know, when you talk about these long-term service agreements and particularly, CFM, the economics favorable being a hot parts supplier or unfavorable? I was talking to some people yesterday and so the economics are less favorable if you're a hot parts supplier, you can get a little bit of a free ride if your parts aren't being replaced. Is that...

David Joyce

No, naturally, I mean, you know, hot parts tend to wear out faster, right? I mean they oxidize more. They go through a tougher ride, you know, if you just think of how hot they are when they're -- when the engine is running and how cool they are when they aren't.

You know, the material grows with heat till it goes through the strain cycles, right, and that normally leads to cracking which requires some level of repair or replacement depending on the significance of the crack and the limits that we have in the manual.

So, you know, I think a fuel nozzle, blade or [shrouds] which are the things that's [not above them], you know, that's -- that's really -- there is a lot of service that goes on, on those parts, a lot of service.

Scott Davis - *Barclays Capital - Analyst*

I think just to be more clear, I guess my question is that the folks I was speaking to yesterday were saying, if your parts are being replaced more frequently, you actually are less advantaged under a contract structure versus kind of the older model I guess is my question.

David Joyce

No. I mean --

Scott Davis - *Barclays Capital - Analyst*

What you're saying is no?

David Joyce

Yes. I mean the risk transfer proposal for a long-term service contract is you'll give me a revenue per hour and then whatever the cost is, it is, right? So if I work really, really hard with you to keep the engine on wing or work really, really hard to designing the parts to where less of them have to be replaced or more can be repaired then that productivity is advantageous to me, right?

So the long-term service model puts both of us on the same side of this equation. You get a very fixed expense per hour you fly and I'm incentivized like heck to get productivity out of that, right? And you negotiate really hard upfront to make sure that I have to have productivity in order to make my business case closed.

And that's essentially how the business runs, how Paul and -- and so there's a big engineering content that occurs after the service contract is signed to make sure we can find the right productivity which is why we're so excited about this digital world, you know what I mean, because we now through some of these prognostic technology with Big Data have the ability to get much deeper insights into what's going on in the machines which may change what we do at a given shop visit, right, in order to make sure that it is optimized longer term than just simply when we open it up and take a look at it, you know. So I think that's one of the things that Big Data is going to hopefully bring us. And we have a few examples using this integrated vehicle health monitoring prognostic stuff that this is -- that's a great frontier for this industry going forward.

Unidentified Audience Member

All right, (inaudible). I have two quick questions for you, please. The first one is on your position on the 3% of the mix. You talked about secured sold source of position. Actually the welding of the (inaudible). Can you say to which extent is it fully secured that on a pretty position on the 3% of the mix?

And the second question is on your predictability of your aftermarkets. We have a conflicting trend in the recent past with the next generation of retirements and developments of markets in the used parts.

So I guess predictability on the market on the CFM56-3 and (inaudible) certainly low but on the other side, you have better R&D and condition monitoring systems and we had a really interesting presentation by Safran on Sunday about the new forecasting model for CFM56 aftermarket going forward.

So if you compare to five years ago, do have the impression that you live in a world full of better predictability of your aftermarket or lower predictability, you know, especially on the singular side?

David Joyce

Okay. So the first question, we are the sole source engine manufacturer for the 777X. We've signed the contract and that will be the GE9X. It will be for the -- it will be for the 8X and the 9X programs, yes. And we've secured that position this year.

Now, on the second question on predictability, you know, we feel very confident in the modeling that we do which analyzes utilization and remember, utilization is in departures, is a proxy for cycles and cycles is, you know, what you count on life limited parts in order to determine what happens at shop visits.

So we -- you can imagine how much risk underwriting we do on assuring ourselves we understand what the profitability of the services portfolio is when we price one of these deals. That's -- to us, that underwriting risk is as essential as the underwriting risk is in Norm's world for his assets. So we feel very confident in our ability to underwrite the risk and understand exactly what the predictability is.

That being said, when there's an exogenous shock that hits this industry like 9/11, you know what I mean, or something else, then, you know, you have to adjust to whatever and make sure that you've got the right contract structure that you're going to adjust to whatever happens in the environment.

But I would tell you that we feel very confident with it. We've been working with Safran on the model where you're trying to predict the behavior of a given type of customer based on some consumer work that's being done and you can break your customer base into different types of buyers, you know, just like you -- a consumer model and use that as a predictor of how they're going to act in their aftermarket spend.

It's exciting, it's brand new. We're not going to transition to that in the near term versus the utilization models we use now but it's an exciting new frontier and predictability.

Unidentified Audience Member

And just following up on it, can you just talk about what the current trends are in the aftermarket in terms of average daily order rates and are you seeing an -- any improvement?



And then the second question is, if I just look at the composite blade facility, the advanced manufacturing, the Avio, it would seem like you're moving much more into the make versus the buy when you're doing that make/buy decision? And so are you changing how you're thinking about that vertical integration?

David Joyce

We're seeing improvement in the aftermarket spares rates year-over-year. I would say it's high single digit improvement on the year-over-year basis. So I think the trough was in 2012 compared to what we're seeing now which gives us great confidence.

Last year was an intriguing year. 1Q didn't look bad 2Q and 3Q did, 4Q started to come back. So I would say, [Paul], high single...

Paul McElhinney - General Electric - Vice President, Engine Services

Yes.

David Joyce

Double -- low double digit kind of numbers in spares rate. In terms of make versus buy, we're making big investment in intellectual property that differentiate the engine, we're going to hold onto that inside the company rather than do a buy on it, OK, because we don't want to transfer that intellectual property because we'll create a profit pull forever.

Just think of LEAP, all right, there are 26,000 CFM engines now. Now, right now, we're on the preface of renewing that entire franchise with LEAP. Figure out how important it is that we make the right decisions on make versus buy.

Now, it's way beyond my career that those will play out but if we set it up right now with the real understanding of where the profit pulls are in the intellectual property we want protect then that will create the alignment for decades on LEAP just like it has on CFM, right? So you don't get a chance to completely flip product families that often and we have.

GENx is the CF6 replacement. LEAP is the entire CFM family replacement. 9X is the 90 replacement. So it's imperative that we do a really serious study of what makes sense in order for us to capture what we need to in those engines.

The Avio deal, I mean they're our biggest RSP, you know, they are an important piece of our supply chain today and they've got power transmission technologies that we like not only in our business but in other portfolios within GE.

So we thought that it made a lot of sense for us at an inflection point where we see a huge transition in our portfolio at the same time we see the growth in demand and with all having to secure that as an acquisition when it became available. That was a very sensible buy for us.

Unidentified Audience Member

So the sales market. Is there difference between the different engines between the CFM56, CF6, CF84 between narrow body and wide body? Do you see a difference in the trends? You said [high tail] visits but how do we see now narrow bodies vs. wide bodies right now?

David Joyce

Well, you know, narrow bodies are always the work horse of the industry and Norm commented on that earlier. I think from a product technology perspective, we're actually seeing convergence. We feel being where it is, you know, at -- you know, pick a number, 97 WTI a barrel or 98 or whatever.

It means that fuel efficiency in the short cycle market is becoming more important than it's ever been before. The variable cost picture within, you know, a low-cost high-frequency operator is becoming significant.



So the technologies that we're bringing into the narrow body are coming from the big wide bodies that were traditionally, you know, long ranged technologies. When you were in cruise, you really wanted to tighten down the fuel burn because fuel was such an important piece of the equation.

So I would tell you that what LEAP does is it takes the GENx technology suite which, you know, think about two to three cycles a day and move it into the narrow body space where there may be seven to eight cycles a day, right?

And still maintaining the durability and the reliability that has become the hallmark of CFM at the operators, you what I mean, and that thing goes what it needs to, with just the reliability of 99.98, so it's a very, very -- the transition is subtle but it's for us, the technology transition significant.

Nigel Coe

On disaster recovery, you mentioned disaster recovery.

David Joyce

Yes.

Nigel Coe

Is that broadly based or is that mainly on the narrow body?

David Joyce

No, wide body and narrow body, both.

Nigel Coe

Yes.

David Joyce

So utilization in white bodies is up almost one point year-over-year, regional is up almost a point year-over-year.

Nigel Coe

Okay. And then you mentioned Avio, you alluded to the -- you know, why it makes sense now versus five years ago. What are the opportunities you see to may be, you know, further integrate the supply chain?

David Joyce

Well, there's -- obviously, they do low pressure turbine work for us on the existing GE90 and GE9X, right? So there's some very, very natural synergies in the products that they already made for us only bring into our supply chain.

There are obvious synergies in nine -- in the next engine with GE9X and the low pressure turbine area. So that's just -- you know, that's very natural. They do our accessory gear boxes today on our engines so there are very natural synergies in bringing them in to the family for all of that work as well.



But I want to make sure that I'm clear, we are interested in growing the third party portion of that business as we are just like Unison which is the igniter and exciter business we own like essentially igniters and exciters for the industry and is now growing into power and oil and gas, you know what I mean. So there's a value to Avio that extends beyond aviation in our opinion and way beyond GE aviation engines, you know, as we look at this in the future, OK?

Unidentified Audience Member

Thank you. So first question for you both, both of your used parts or parting out businesses, could you comment on what aircraft to engine types are driving -- presumably, you're seeing part of the growth, you know, these activities right now. So what aircraft to engines have in particular are hot right now?

And then just to sort of leverage to Jack's question, on LEAP, if you're making the hot parts and you got that fixed surprise and you've got this sort of assumed costs, do you have the protections to make sure effectively this (inaudible) doesn't give a free lunch just because we're dividing everything by 50/50 but actually you, guys, are doing all the work?

David Joyce

Well, you know, the JV on CFM is 40 years old. If we haven't figured out how to make sure that the work and the revenue are split correctly by now or never going through. So the answer is we've got that thing pretty well figured out in terms of who is doing what and whom and production value what we call PV, service value which we call SV and development value or DV.

All three elements are considered as part of what we are able to do in the JV and it's a relatively cheap, to be very honest with you in the current generation as well as within LEAP. So I'm very comfortable with that.

And there are adjustments that we make along the way between the two of us to ensure that we're confident that we have the right sharing. That's a very amicable relationship between Safran and GE as the best run JV you'll ever find in this industry and I have got a lot of confidence that that's not an issue going forward.

Unidentified Audience Member

That's especially because of the long -- the greater use of long-term agreement --

David Joyce

No, no, no, no. For 40 years we've been together and, you know, if you look at the services growth, it only happened over the last probably 15. So, you know, it really has nothing to do with the LTSA as much as it does just with understanding what the value is in each one of the little bits in the engine to make sure that we probably account for it together. You know, that's the important piece.

On a percentage basis, not on an absolute dollar basis, right, so, you know, that's the key, is what the percentage of value in all the bits -- development, service and production -- and making sure that we account for that and have a 50/50 split of work in all aspects -- development work, service work and production work. It's not easy but it's something we've been asked for quite a while, so we feel pretty comfortable with it.

And what was the other question? I am sorry.

Unidentified Audience Member

Both within the services part of your business, you -- do you use parts?

David Joyce

Yes.



Unidentified Audience Member

And then also in the parsing out business within [G-cast] and I'm assuming probably seeing a lot of growth right now and I'm interested to know what aircraft can you talk in particular will be driving our growth?

David Joyce

Paul, what do you think? First of all, is there a lot of growth, you know?

Paul McElhinney - General Electric - Vice President, Engine Services

Yes, the used market is becoming, you know, interesting, probably a lot more growth to the last two or three years (technical difficulty). I would say within the product line, the classic CFMs, the classic GF34 (technical difficulty).

Norman Liu

On the frame side, you know, the 320s with the Neos and COs are now fragmenting. So you see people like Allegiant who use to fly in the 80s. They're taking onboard 320s (technical difficulty) and now, the 320s, I mean they were just around earlier, 10 years, before the new gens are -- you've been seeing more part outs.

(technical difficulty) service a flying operator base and now that the new gen is getting to 15 years, you're starting to see some parts on those but principally the smaller gauge [600], [700] because there's a lot of parts commonality. But again, that's all servicing a fragmented -- as the fragmentation goes to those different operators, you know, those parts and servicing those, those end customers.

Julian Mitchell

Thanks. Just a question on, you know, the world view has changed quite a lot on sort of Geared TurboFan technology in the last two or three years. I just want to know what your view was in terms of, you know, the development there.

Obviously, Avio has technology which is pretty important to that. What is the conversation with customers, how they're changing your view on the geared technology in the last sort of 18 months or so?

David Joyce

Our view hasn't changed. I mean, you know, we -- we're -- our view is exactly the same as it has been and that is that we can achieve the efficiencies associated with the next generation of products without having to complicate it with a gear.

And it has to do with everything I just showed you. You know, this is a machine when it comes to investing in technology. Take a look at eCore, right, one technology platform, four applications. Look at what I've showed you here on the right-hand side -- my right-hand side of the technologies in these engines relative to what they are going to do in terms of fuel burn and efficiency.

Look at the GE9X with the [2701] pressure [ratio] machine, it will be five points better than anything anybody can put in the marketplace when it goes into service. And right now, we're running two points to three points better on the existing 787 and we're promising one point -- plus one point of deterioration better on an existing LEAP.

So, you know, for us, everybody picks their technology suites that they're going to go in the market with. And that's OK, you know what I mean, you make your bet, and the technology suite has to give you the performance you need and the durability you have to have long term for the customer to be satisfied with the product.

We've chosen our technology suites and we're very, very comfortable with them as our customers. You know, I mean as evident by Boeing picking us as a single source for the MAX and we're running about 50/50 market share on the LEAP.



So, you know, I think that Pratt has been developing geared technologies quite a while and decided that's the suite of technologies they want to take forward in this generation. We don't believe it's necessary to have the complexity of the geared to get those same efficiencies.

So we would like to use a different model to get the same efficiencies and we're committing and guaranteeing it. So, you know, like I said last year, it's time to get both of them in service and game on, let's go, let's see how it works, right? So, you know, let's what we have now.

Clifford Ransom - Ransom Research - Analyst

Cliff Ransom. David, let's just take your production expectations for the next couple of years and Airbus' production expectations and everybody else in the commercial business and then layer in the fact that the industrial world is getting better.

You all buy from the same suppliers. Where are the first big pinch points going to come as all these production rates ramp? I mean is it castings, forgings, hydraulics, actuations?

David Joyce

You know, I don't know if I could tell you, Cliff, that there is one place that, you know, stands out amongst everything. I can tell you that if you look at two things, you look at the production ramp rates.

So to me, the whole industry is going to go through the same transition points that we just talked about in this business. You're going to end up with more production on the existing stuff that you've designed and are in service on.

At the same time, you're transitioning to a set of new products which really require new bits, new parts, and in some cases, common suppliers that have to now, you know, double down on the next generation, right?

Just like us, we've got to build CFM56-5Bs for the existing A320 classics at the same time that we're producing LEAPs for Neo, right? And there will be a couple of years there where we'll have to -- have both production lines up and running, you know what I mean, as that transition occurs, same with MAX.

So take that down at the supply chain as far as you want, take it to the finished parts, take it to forgings, take it to castings, take it to actuation systems. Everyone is going to go through this transition of managing the ramp as well as managing the mix, OK?

And because it's so prevalent within the industry, you can imagine how much focus it's getting. Everyone is focused on it from the air framers to the major systems designers like GE or Pratt or [Rolls] or Honeywell or -- you know, any of us all the way down.

So the amount of discipline in the supply chain to make sure we're ready for this decade of change is more than I've seen quite frankly in the 30 years I've been in the business and it needs to be because of the level of transition.

Okay? All right. So look, come on up if you want to look at some hardware or ask questions to some of the VPs. Thank you all very much for coming.



DISCLAIMER

Thomson Reuters reserves the right to make changes to documents, content, or other information on this web site without obligation to notify any person of such changes.

In the conference calls upon which Event Transcripts are based, companies may make projections or other forward-looking statements regarding a variety of items. Such forward-looking statements are based upon current expectations and involve risks and uncertainties. Actual results may differ materially from those stated in any forward-looking statement based on a number of important factors and risks, which are more specifically identified in the companies' most recent SEC filings. Although the companies may indicate and believe that the assumptions underlying the forward-looking statements are reasonable, any of the assumptions could prove inaccurate or incorrect and, therefore, there can be no assurance that the results contemplated in the forward-looking statements will be realized.

THE INFORMATION CONTAINED IN EVENT TRANSCRIPTS IS A TEXTUAL REPRESENTATION OF THE APPLICABLE COMPANY'S CONFERENCE CALL AND WHILE EFFORTS ARE MADE TO PROVIDE AN ACCURATE TRANSCRIPTION, THERE MAY BE MATERIAL ERRORS, OMISSIONS, OR INACCURACIES IN THE REPORTING OF THE SUBSTANCE OF THE CONFERENCE CALLS. IN NO WAY DOES THOMSON REUTERS OR THE APPLICABLE COMPANY ASSUME ANY RESPONSIBILITY FOR ANY INVESTMENT OR OTHER DECISIONS MADE BASED UPON THE INFORMATION PROVIDED ON THIS WEB SITE OR IN ANY EVENT TRANSCRIPT. USERS ARE ADVISED TO REVIEW THE APPLICABLE COMPANY'S CONFERENCE CALL ITSELF AND THE APPLICABLE COMPANY'S SEC FILINGS BEFORE MAKING ANY INVESTMENT OR OTHER DECISIONS.

© 2013 Thomson Reuters. All Rights Reserved.