12-May-2015

The Boeing Co. (BA)

Investor Conference

CORPORATE PARTICIPANTS

Troy J. Lahr
Vice President-Investor Relations

W. James McNerney
Chairman & Chief Executive Officer

Dennis A. Muilenburg
Vice Chairman, President & Chief Operating Officer

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes

Christopher M. Chadwick
President and Chief Executive Officer-Boeing Defense, Space & Security

Timothy John Keating
Senior Vice President-Government Operations

OTHER PARTICIPANTS

Cai von Rumohr
Cowen & Co. LLC

Howard Alan Rubel
Jefferies LLC

Francis Carter Leake
BB&T Capital Markets

MANAGEMENT DISCUSSION SECTION

Troy J. Lahr
Vice President-Investor Relations

Okay. Good morning. Welcome to Boeing's 2015 Investor Conference. I'm Troy Lahr, and it's our pleasure to be with you in Chicago this year. As you can see from the agenda, Jim McNerney will kick off the session this morning. And then you will hear from Dennis Muilenburg, Greg Smith, Ray Conner, and Chris Chadwick.

Please hold your questions until we are finished with all the presentations. After a short break, we'll bring everybody back up on stage for the Q&A session. I also need to remind you that throughout the presentation today, there may be information that is forward-looking. This information is subject to risks and uncertainties, as detailed in our SEC filings.

Now, it is my pleasure to welcome Boeing's Chairman and Chief Executive Officer, Jim McNerney.

W. James McNerney
Chairman & Chief Executive Officer

Thank you. Good morning, everybody. Forgive the voice if it cracks every now and again. I feel like a teenager whose voice cracks every now and again, sort of, like Troy's age, roughly. But thank you, Troy, and let me add my welcome to each and every one of you. It was fun chatting with you last night and then again this morning. I appreciate you all coming.

And just looking around the room, it looks like most of you did make it last night. There's a couple of stragglers, but we're not taking attendance. We're not at all. I hope you all had a chance to mix with the team. We tried to get everybody here who you would have thought was important in terms of gaining perspective about the company and the opportunity that lies in front of us. So, I hope the right kind of dialogue happened in the right kind of way last night.

Look, based on some of the input last night, I thought I'd go straight to a couple of the topics that I picked up last night in discussing with all of you. And some of you actually raised them on the first quarter call. So, we're going to cover all of them in the presentation, but I thought you'd like to hear from me at the start by calling them out separately.

First, the commercial airplane market. There was some discussion last night and whether demand is softening and whether recent and, in our view, totally normal fleet planning adjustments by the likes of United and American were harbingers of a change in cycle. The answer is pretty straightforward, as we see it, and that nothing about our fundamental view of the market has changed. Demand for our new airplanes remains high, consistent all with our – all consistent with our expectation of a book-to-bill of around 1 this year.

Airlines are increasingly profitable and, therefore, are more likely to have the resources they need to buy new technology. Cancellations and deferrals, as we've said a number of times, requests remain at an all-time historic low.

Replacement demand – in other words, that element of the demand untethered to GDP growth rates, rather tethered to somebody who just wants to get a quick payback on old technology replaced by new technology – represents about 50% of our deliveries. That's solid kinds of stuff because of the quick payback. And air traffic growth is actually growing at a clip of around 5%.

So all the fundamentals that bear on market demand are there, and I think they underpin the strength of our current production rates and the promise of increases in the future. Ray is going to talk obviously in more detail about that, when he stands up, but a quick overview.

Second theme, commercial airplane pricing and whether we're seeing deterioration. The answer is no. Every sale is highly competitive for sure. But pricing is holding up well due to the value of our airplanes and what they bring to the marketplace, even in model transition environments – 737 to MAX; 777 to 777X.

The third theme is cash performance and whether our first quarter free cash flow should be seen as a concern that the full year won't match expectations. Here again, nothing has changed our view since we established our guidance in 2015. We said the first quarter would be our lightest, as it always is, and that the year-end would be back-loaded. That's still how we see it.

Greg will dive further into the details when he speaks. But bottom line, there is no change in 2015 cash guidance. And we see cash flow continuing to increase in 2016 beyond that on higher production rates, 787 improvement in terms of the build and overall productivity gains ongoing across the company. So, I thought I'd just – I didn't have a chance to say that to each and every one of you when you asked me the question last night, so I thought I'd broadcast it.

So, look, now turning to just the regular script here. This morning, as Troy mentioned, I've asked four of our top leaders to take you through the significant progress we've made over the past year at an enterprise level and within our commercial and defense businesses and also to describe our plans to capture additional growth and extend our industry leadership for decades to come.

But to kick things off, I'd like to preview some of the themes you'll hear today beyond the ones I just mentioned. First and foremost, a consistent discussion thread at this conference is centered on our strategy to deliver an unprecedented backlog to customers profitably and with significant and increasing cash flow.

In 2014, as you know, our teams continued to build on our overall financial momentum with strong and, in many cases, record operating performance. These results, combined with a positive outlook, have increased our confidence and given us greater flexibility for fulfilling our promise of returning cash to shareholders at levels that are in line with our increasing financial strength and performance.

Many of you know that in December, we established a new $12 billion share repurchase authorization and increased our dividend another 25%. At the same time, we have continued to make disciplined strategic investments in new programs and capabilities to sustain our growth and technology engine.

In summary, our balanced cash deployment plan reflects the strength of our product lineup, and I mean relative strength, versus our competition, confidence in our future performance and an unwavering commitment to deliver innovation to customers and value to shareholders today and over the long term. This powerful business platform is rooted in a strong culture and well-defined and decade-old management model, both of which instill values in and provide direction for our people.

I'd like to go a little deeper into those points to give you a sense of how we talk to ourselves, because they are so fundamental to our current performance trends and our potential going forward.

Next slide, please. We've been working to this model for the last 10 years. Each and every year, we talk about it. My team is bored to tears about it, but what it does is provide a set of signposts for how we think about driving this company. For the better part of the last decade, we had used this model to help us see the big picture and to focus on the key leverage points to help us achieve our objectives.

You can see that this framework is based on big goals and objectives at the front end, growth and productivity driving it at the center, and shared prosperity for all stakeholders as the outcomes. It is pretty simple. But every now and again, when you get a couple of hundred thousand people, you need to remind them what we're all about.

Also foundational is a strong performance-driven culture, underpinned by enduring commitments to innovation, inspired by our customers' needs, a One Boeing approach to problem solving, and the utmost integrity in all we do with no trade-offs allowed between our values and performance goals.

Ultimately, this picture reinforces that our financial and operating performance goals are fully aligned with the interests of the constituencies that are important to us, obviously, our customers, our employees, suppliers, communities, but very importantly, our shareholders.

Consistent performance and evermore challenging plans help Boeing provide our customers with the best value and competitive edge, attract, retain, and reward top-performing employees, strengthen our business partnerships, and build better communities, and generate returns for our shareholders.

You'll notice that this model does start with answer on the left side and move across. That's the culture we've got here. These themes and values have inspired a decade of restoration and renewal for our company, and they are key to driving future growth and world-class business performance.

Next slide, please. As most of you know, during the latter part of the past decade, we also embarked on a mission to derisk the upcoming decade for us and for our customers – and I'm talking about the decade we're in now – for us and our customers on a comprehensive new product development agenda and in the buildout of our record backlog. Surely and steadily, we have made substantial progress in these efforts.

For example, in 2011, we selected the 737 MAX derivative as our next entry in the single-aisle market, rather than pursue a higher risk, higher cost clean sheet design with an entry into service date that will have placed years of near-term market share strength at risk.

And 2013 saw a marketplace advantage and a derisked strategy. In 2013, we solidified our twin-aisle airplane advantage with the heavily subscribed launch of the 787-10 and the record launch of the 777X, both of which smartly adapt the hard-fought technology gains of the original 787 to further extend our lead in this high value segment of the market, which Ray, again, will discuss in more detail.

In 2014, we secured unprecedented production continuity with a long-term labor contract extension – extensions, I should say, in our three largest production centers, the Pacific Northwest, St. Louis and Philadelphia, where the bulk of our commercial and military aircraft are built. Through these contracts, as well as changes announced for 6,000 nonunion employees, we also reduce the threat to our balance sheet from defined benefit pensions. Beginning next year, around 90% of our workforce will be covered by defined contribution plans that provide solid, very market-based retirement benefits with less risk to Boeing's financial health.

As Dennis will mention, our efforts to derisk the decade also go hand-in-hand with our work to break the upward cost spiral of development programs. This initiative is multifaceted. It extends beyond the disciplined, gated development process we implemented to improve our development program performance.

For example, it includes working aggressively within and across individual product families as well as across our commercial and defense product lines to increase design, parts and system commonality; eliminate duplication of effort; and share resources technologies and lessons learned. In so doing, we are lowering the development cost and risk on both sides of the company, brutally realizing the promise of a highly diversified and fully integrated aerospace company.

Further to that point, our success with development production certification and fleet introduction of the 787-9 in 2014 validated our strategic decision to place all commercial airplane development programs together under one organization led by Scott Fancher, who many of you have met.

We have taken that same blueprint for capturing development efficiencies at commercial airplanes under Scott and are applying it within defense, space, and security now. As Chris will discuss in more detail, earlier this year, we established a development programs organization under the seasoned – seasoned, that's a good word for you, Jim, wherever you are – so seasoned and effective leadership of Jim O'Neill. That's another word for gray – got some gray hair.

Finally, to position ourselves to compete and win in the defense market, we are taking further actions to ensure that we are always providing the right products at the right price. Since we first challenged our defense, space and security teams with a market-based affordability initiative several years ago, we have captured $5 billion in cost savings. And we are not finished yet. We have asked our teams to find another $1 billion in cost reduction to meet ongoing customer and competitive demands in this tight defense market.

In summary, the achievements of the past and our plans for the future reflect the fundamental changes we have made in the way we are structuring and running the company to reduce strategic and business performance risk, enhance our competitive position and ensure the health of our balance sheet.

Let's turn to our growth and productivity initiatives on slide number 4, please. As we have materially derisked the decade through our deliberate and disciplined actions, we are increasing our focus on execution and driving productivity to position Boeing for additional growth and continued prosperity in our second century to create a virtuous cycle of customer-inspired innovation and strong sustained business performance underlying it.

We know that delivering on our unprecedented backlog and improving our productivity year-after-year is a tried and true formula for funding our future and returning value to shareholders. Our focus on execution throughout the entire production system is enabling the profitable buildout of our backlog.

Our teams successfully raised production rates 15 times over the past four years by following disciplined processes that enable us to assess and ensure readiness in our factories and throughout our supply chain. In 2014, we stabilized our 787 production system at our planned 10-per-month rate, the highest ever for a twin-aisle airplane by the way. And we are intensely focused on capturing efficiencies at that rate as we prepare to move even higher.

Our commercial airplane production plans include five more rate increases over the remainder of the decade, with the 787 going to 12 per month in 2016 and then 14 per month by end of the decade. The 737, moving to 47 per month in 2017 and then 52 per month in 2018, and the 767 increasing to two airplanes per month in 2016.

Of course, it is not just about building more airplanes but also building them more efficiently with higher first-time quality, greater component reliability and improved employee safety. The growth and productivity initiatives that Dennis is spearheading company-wide are key enablers of higher profitability and ultimately increased shareholder value.

With a One Boeing approach to these efforts, we're already partnering for success and market-based affordability. In this more-for-less world that confronts us of increasing customer expectations and aggressive global competition, we must not leave any part of our work unexamined in our drive to continuously improve productivity of the enterprise. These efforts are already paying dividends in many areas, and we believe there are more promising opportunities to harvest a lot more.

If we are successful, and our track record gives me confidence that we will be, we see the potential for higher margins over the long term. Later, Greg will discuss the key imperatives required to do just that.

During the defense spending downturn over the past few years, we also have continued to position BDS for the long-term with significant investment to nourish development programs and expand market share in domestic and international markets. We have seen the benefits of those investments as we captured new domestic programs, such as Commercial Crew and NASA's Space Launch System, and added international sales of Chinooks, Apaches, P-8s, and other systems. We are optimistic also about our prospects this year for winning the new U.S. Air Force Long Range Strike Bomber Program.

Next slide. Now, whether we're talking about the Next-Generation Bomber or the Dreamliner family, with every program milestone achieved and every hard-fought technology gain, our success is fueled by the talent, teamwork and leadership of Boeing employees, the human capital behind the hardware and inside the software of what we do. So along with our investments in market-leading products and services over the past decade, we have also come – investments in developing our future leaders. And many of which – and the reason I wanted all of them here last night, I wanted you to see, touch and feel the future of this company.

We have focused on developing a deep and diverse pipeline of talent across the entire company to lead Boeing well into our second century of business. Having clearly defined our values and what we expect from Boeing leaders shortly after I came aboard, for nearly a decade now, we have been recognizing, rewarding and promoting those who demonstrate those attributes and deliver results aligned with the interests of all our stakeholders. And the expectations are just as high for the leaders of our core functions, from engineering, to finance, to HR, and others, as they are just as high as they are for general management of our programs and our businesses.

Let me close with a brief reminder of our strategic priorities on slide 6. Our priorities for delivering sustained growth and consistent world-class business performance are unchanged. At Commercial Airplanes, our imperative is to deliver on our record backlog of more than 5,700 airplanes, as we scale up for future growth, and, as I mentioned, with an intense focus on profitability to allow us to fund our new programs and reward our investors.

At Defense, Space & Security, the imperative is to continue sharpening our capabilities with investments in our future while extending existing programs through ever-improving affordability and leveraging our One Boeing approach to take share globally from an aggressive list of competitors.

The balance of our enterprise agenda includes continuing to align our operations with the current more-for-less environment by defining and implementing winning business strategies, further strengthening our financial health and performance, fueling innovation and growth, addressing customer needs, and building a better team and company to take us forward into our second century.

With that, and thanks for listening, I'll turn it over to Dennis to elaborate on some of the initiatives that are driving some this growth and productivity. Thank you, everybody.

Dennis A. Muilenburg
Vice Chairman, President & Chief Operating Officer

All right. Good morning. It's good to be here with all of you. And Jim, thank you. And as Jim said, we really appreciate the opportunity to talk with many of you both last night and this morning. Great conversations and I enjoyed the dialogue. And I wanted to start off by reemphasizing a couple of themes that you heard from Jim, and then I'm going to dive a little deeper on some of our productivity initiatives before handing off to Greg, Ray, and Chris.

And one thing I wanted to note right up front, Jim talked about some of the fundamental changes and advancements we've made over the last decade, I wanted to acknowledge his leadership. And frankly over the last year here, I've had the opportunity to spend some time, I'll say, learning by osmosis from Jim which has been extremely valuable. And I also want to reinforce the fact that what he talked about in terms of commitment to the management model, our growth and productivity initiatives, our leadership investment, where we're taking the company, full force, full support behind those initiatives. And we intend to continue to drive that going forward.

Also, I want to acknowledge that over the last year, I've had an opportunity to spend some additional down and in time with the rest of the team, especially with Ray and the Commercial Airplane team and just a lot of respect and appreciation for what Ray and his team have accomplished. Tremendous. Continuing to stay connected with Chris Chadwick and the BDS team and then working with Greg and the rest of the functional leaders across the corporation. This is a solid team.

And Jim talked about the leadership investment that's been made in the One Boeing culture. I think that investment and leadership and the resulting enterprise headset, the integrated headset, is a really valuable competitive tool that we have, a competitive advantage. And so, that team, I think, is a strong team, the right team for the future.

So with that, let me start off where Jim left off on these strategic imperatives. Jim walked you through our strategic intent as a company. A couple of key enablers here that I'd like to focus on. I mentioned the One Boeing theme. And so, when you look at ramping up the commercial airplane business, executing that backlog, when you look at our opportunity on the BDS side, international expansion, services expansion, all of that is enabled by our One Boeing effort.

Our ability right now to flow engineering talent from across the enterprise – John Tracy's core team as well as the BDS team – to assist on 787, our ability to team up on some of the new development programs like 777X and Long Range Strike. That One Boeing flow of talent and technology is a real enabler for these business objectives.

Secondly, the productivity machine that's behind us, the investment in Lean/CVQ, the investment in Partnering for Success, Development Program Excellence. That productivity machine is fueling growth. It's creating our R&D capacity. It's driving bottom-line performance, profitability and cash, and it's allowing us to be even more competitive in the marketplace. So, in terms of enablers behind these strategic imperatives, that One Boeing force and the productivity framework we see is key.

A little more on that One Boeing approach and where we see some of those advantages coming to bear in a very tangible way. International growth. Today, about 70% of our sales commercially outside of the U.S., about 30% on the defense side. Composite revenue for the company, about 60% outside of the U.S. Our backlog in total, three quarters outside of the U.S. and Europe. So our international, our global strength is unique. And I think it's advantaged by our One Boeing approach. Our ability to offer industrial packages, for example, that span commercial and defense product lines.

Derivative products. We're gaining unique advantage there: things like the P-8, which are now into full production; the ramp up of the new tanker; the fact that 747-8 was selected for the new presidential aircraft platform for the United States, all examples of derivative product advantage.

Our services synergy across Commercial Airplane services and what Stan Deal is doing and our Global Services & Support business on the defense side under Leanne Caret, those teams are working together to take cost out internally as well as expand growth-wise into the marketplace. Those are real examples of how One Boeing is working to our advantage on the growth side.

Similarly, on the productivity side, our ability to leverage technology, to co-invest, to leverage common infrastructure, to use common toolsets, to drive and exchange Lean best practices are all good examples of how One Boeing is enabling our productivity initiatives. And what I'd like to do is dive deeper into some of those key items that you see in the right-hand column of this chart and how that productivity is producing some very tangible results for the businesses.

So, if we take a look at this productivity framework, last year, we talked a bit about this framework and how we were pulling it together conceptually. Over the last year, what we've really done is drive this from a framework to reality and producing real tangible results. And just to give you a high-level view on this chart – and then I'm going to dive one level deeper on three of those initiatives – first of all, again, setting aggressive One Boeing targets here. This is market-based and, as Jim had said, bringing the outside in. The idea of not only do we want to get better than we were the previous year, and that continuous improvement model is a good and important model for us, we're also making step function changes where we need to compete, what is the market telling us in terms of unit cost requirements, what are we seeing in terms of pricing pressures in the marketplace, what do we need to do to be competitive? That outside-in view, market-based view is driving a different level of aggressive step function targets.

Partnering for Success. Last year, we told you we had touched about 150 of our top suppliers. We've now expanded that to more than 500 of our suppliers. In fact, we just held our Tier 2 supply base meeting in Seattle a couple of weeks ago. And under the leadership of Kent Fisher, Jack House, Paul Pasquier, Joan Berry-Robinson, we're working Partnering for Success supply chain leverage across the entire Boeing enterprise. And I'll walk you through some of the details behind that.

Lean+/CVQ. Last year, we told you we're going to launch a new initiative around capturing the value of quality focused on first-time quality everywhere, not just in the factory space but in our engineering upfront, downstream in our support and services business into our supply chain. We have launched that initiative over the last year. We've put some needle-mover teams in place that are now helping us achieve real first-time quality, tangible results in our commercial production lines, first-time quality in engineering and our development programs. And I'll walk you through some of the results and outcomes of that. But over the last year, really turning that initial first-time quality concept into reality with more than 9,000 projects deployed.

And then lastly, development excellence. This is, as Jim said, breaking the cost curve on development. We need to make sure that we not only break the ever-increasing cost of development programs but also provide stability, repeatability, predictability in our R&D profile. And that allows us to do a good job of planning our long-term R&D streams, more predictable for all of you, which is good from your perspective, but also good for us in terms of our ability to feather in different development programs to be able to flow engineering from program to program and to produce consistent reliable results in development.

And we've made some very tangible progress on that again through 787-9 and 787-10, 777X, the new Bomber program, and I'll walk you through some of the details of how we're implementing that. But as a composite, this framework is real. It's tangible. It's producing bottom-line results, billions of dollars of savings, and much more opportunity still ahead of us. This is measured in billions.

If we could go to the next chart, please. So, let me just dive deeper on three of those initiatives, one level down, Partnering for Success. If we take a look at this initiative, under Jim's leadership, launched this about three years ago. We have now reached long-term agreements with 40% to 50% of our supply base. There are still many suppliers that we're working with. We are being very diligent about getting the right long-term agreement, not rushing to closure but doing the right thing from a long-term business standpoint. We are working with our partners to find win-win solutions which is an important principle behind this.

As I've said, we've now expanded this to more than 500 suppliers. Last year, I told you that in our value engineering process, this is ideas coming in from the supply base to create value. We had a pipeline of about 800 to 900 ideas and about 200 of those have been implemented. That was last year. Now, more than 1,900 ideas have been implemented and the pipeline is still full at a little over 1,000 projects. So, the flywheel is working. The idea generation is working, but even more so the implementation. And we put in place what we call velocity teams to take ideas from suppliers, ideas from our own teams, bring them together, and pull them into the development, production and support programs. That's producing very tangible results now and long-term benefit that will hit our financials over the next many years.

We also are now looking at this as a full lifecycle program, so not only Partnering for Success in production, but upstream and to development downstream into our support business, looking at those total lifecycle solutions. And within that – you see that circle in the middle – four discrete areas that we're working on, taking our first-time quality and pushing it into our supply base. A good example there is with Ray and his team on the 737 wing section 11, working with our supply base there, about a 70% improvement in first-time quality on section 11 of the 737 wing. That drives right into Boeing 737 profitability.

Reuse on F-15 software. It's taken about 40% cycle time out of software in the F-15, another example in that area. In the lower right quadrant, this idea of competitiveness and bringing in new supply base where we need it, 737 MAX displays, 777 landing gear, a couple of good examples there, working across our commodities as well to get enterprise-wide deal on commodities like fuel costs for flight testing. Under Joan Berry-Robinson, contract labor across the enterprise, more than $100 million of savings associated with leveraging across the enterprise. Good examples in that area.

And we also have teams that are working together on architecture in the lower left corner. This is the idea of working across multiple programs. A good example there is we had a supplier where we're able to give them some additional 787 composite work that created enough volume so we could gain cost advantage on some F-18 composite tail work at the same time. So, spanning military and commercial sectors.

We're also creating architectures where investments are being made by our partners in programs like 777X and T-X on the defense side with knowledge that it's going to create some long-term benefit for both them and us. So, these broader architectural solutions are important as well.

And then lastly, in the upper left corner, designing out cost. We've implemented teardown labs. Last year, we told you we were looking at implementing those teardown labs. Now we've implemented them. Ray has a great teardown lab up in Everett, where we're bringing in supply chain, we're bringing in customers, we're tearing down parts, we're looking for ways to take out cost, and it is producing significant tangible results.

A good example there is with our partner, BE Aerospace, on lighting solutions for Next-Generation airplanes, taking advantage of commercial technology that significantly take cost out of lighting. That's just one simple example of the thousands and thousands of opportunities that we see for these teardown labs going forward. That's all enabled by these velocity teams that Kent Fisher and his team had set up.

As you see in the upper-left corner, we've dedicated about 400 people, engineers, who are full-time working on looking at ideas from our supply base, creating associated engineering solutions and driving them into the design and production systems. That's what's creating these 1,900 projects that have been implemented and also keeping that pipeline very active.

So, this is a way of doing business for the long run. This isn't a one-and-done kind of deal. This is a way of doing business that we think is going to create competitive advantage for the long run.

Next chart, please. The second of the three examples, Lean+/CVQ. Last year, we told you about rolling this out. Since last year, we have rolled out a number of needle-mover teams where we've taken targeted experts in, I will call it, the science of Lean and capturing the value of quality and have spread them out to the enterprise.

They're working on development programs like the 777X to determine how we take cycle time out of development programs and reduce concurrency. They've been deployed on things like 787, working with Ray and his team on implementing Lean in the factory space, first-time quality in the factory space on things like wing-body join, taking out flow time in final assembly, taking hours out of final assembly. All good examples of how we're producing tangible results.

We have a team deployed on tanker who's looking at the flight test program and how to reduce cycle time in flight tests. Anywhere we can apply first-time quality, we're gaining productivity advantage, and it's not just in the factory. In fact, I'll argue that the big advantage we have here is moving first-time quality into the upfront engineering, downstream into how we do support and then out into our supply chain. And that breadth of application, we're just beginning to see the advantage of doing that. And we have teams deployed that will continue to capture that advantage over the next several years.

Idea here is Lean+ continuous improvement is a foundation of our business. And on top of that, first-time quality and, where needed, step function improvement at first-time quality, which in the end also helps us on safety, helps us on employee engagement and overall performance.

All right. Next chart. The third and final example of the Boeing product development system. Jim again referenced this, as we talk about how do we break the upward spiral of development cost, how do we consistently execute on development programs. In my mind here, a key part of this is taking some of our Lean principles again and applying them to how we do development programs. It does include the rigorous gated process that Jim referenced, but as he said, it's broader than that.

If you start at the left-hand side of this chart, the category of optimizing value, this is upfront getting the right requirement set, designing for value that customers see as value. And a good example there is 737 MAX, picking the right combination of technology, cost and schedule that produce value for that customer.

702SP, our small sat, all-electric satellite, coming up with a technology solution that allowed our customers to dual stack satellites on a single launch fundamentally change the value proposition, design for value up-front, nail down the requirements' stability up-front, and that includes flowing that requirement stability down to our supply chain. And as Ray has really been pushing hard on, up-front designing for producibility and making those firm requirements. And we haven't always done that as well as we'd like. We've made significant improvements, as you see the producibility of the 787-9 and 787-10 compared to the 787-8. We're taken that even another step on 777X, the design for producibility up-front, so we can optimize factory performance which also helps us on in-field reliability. That's all part of optimizing value.

The second category of controlling demand, this is taking concurrency out of development programs, prioritizing the work, not deploying all of the engineers at once to begin all of the major design tasks in parallel, but creating a more successful non-concurrent development process where we knock out the high-risk items first and then we could flow the engineering teams over time and avoid rework. A good example there is high reuse. 787-10, 95% common with the 787-9. High commonality, where it makes sense between the 737 MAX and the 737NG. Those are good examples of significant reuse. Technical maturity, Commercial Crew, we believe one of the reasons we won one of the multibillion-dollar awards from NASA on Commercial Crew, in their statement of the competition results, Boeing had the best technology maturity in their design. So, upfront, understanding the technologies, deploying technologies that are executable.

And the third category is around accelerating flow. This is operationalizing product development end-to-end. I think some best-of-class work being done here on the 777X and now also on the Apache program. And this is one area where Scott Fancher, running the development program organization in Commercial Airplanes, and Jim O'Neill, running it in BDS, are exchanging some lessons learned. And I've had a chance to sit in on some of the development program reviews, and I could see the tangible results of these teams working together across development programs, sharing best practices and operationalizing this idea of development program excellence, fundamentally breaking the cost curve and also leveraging geographic diversity. So 777X, for example, deployed engineering packages not only in Puget Sound but also in Huntsville, Philadelphia and St. Louis, allowing us to leverage talent where it exists and work it across the enterprise.

And then lastly, preventing traveled risk on the far right-hand side. This is another fundamental of what makes this machine work. It's the gated review process. It's also full kitting. Don't launch the next development job until you have all of the incoming data that you need, again, to avoid rework. The new Space Launch System is deploying that. And again, 777X is deploying that concept.

End-to-end, implementing this system will not only break the development cost curve, it's going to give us consistent, reliable development program performance and it's going to change the culture. And we can already see it beginning to happen. The development program organizations that we put in place will further embed this in the culture as the standard way of how we do development programs for the future.

Go ahead to the next chart. So with that, if you take all of those productivity initiatives and roll them back up, again, our bottom line here is driving shareholder value. Like I said, this is enabling us to be competitive in a ever-tougher marketplace. Jim has talked about the reality of more for less that our customers are expecting. That's not going away anytime soon. So, we have to have a relentless long-term focus on driving productivity for competitiveness. That's part of the headset here.

Productivity will fuel the bottom line. Cash and profitability. We see those results starting. I'd say there is significantly more to come, and these opportunities are measured in billions. So we're very serious about pursuing those. And ultimately, this productivity will fuel our growth engine and we want to continue to invest in innovation for the future.

And in terms of what kind of results this is producing financially, you look at top line of the company. If you go from 2012 to the guidance that we've given you for 2015, over that time span, about a $13 billion growth in our top line or about a 5% CAGR over that time period. Year-over-year, 11% growth in earnings per share; annual, 11% growth, so a very strong CAGR on earnings growth. And over that time period, about $30 billion of operating cash flow.

So, the results are tangible, and I will say we're at the beginning of this, much more at the beginning of this effort than we are at the end. So, our opportunity to continue to grow top line, bottom line and generate cash will be fueled by these efforts.

So with that, what I'd like to do is now turn it over to my partner, Greg. And he's going to dive a little bit deeper on the financials and our plans going forward. Thank you.

Gregory D. Smith

Executive Vice President-Business Development & Strategy and Chief Financial Officer

All right. Good morning, everybody. Welcome. Hope you enjoyed the reception last night. It was good to catch up with many of you. What I thought I would do today is provide you with an update on, I'll say, the strategic accomplishments and then get into the financial objectives, the actions we're taking to convert our unprecedented backlog into profitable growth, and driving additional shareholder value going forward.

Let's jump in in the next slide, please. As we continue to make progress on the strategic initiatives that Jim noted, derisking the business being number one, driving growth and productivity and increasing long-term shareholder value, the fundamentals of these strategic accomplishments.

Last year, as you saw, $70 billion added to the backlog, $502 billion in total at year end, more than five years of our revenue in our backlog today. I'd say driven by the robust demand for our 737, we had the opportunity to increase the rate again to 42 per month. Our teams have completed this rate hike seamlessly and are already working on increases to 47 in 2017 and then eventually to 52. And as a reminder – and I know a number of you have seen this, but this is all taking place in the same footprint that we delivered 19 a month. And it really goes to the credit and the focus of the BCA team on really being very efficient with their investments and risk mitigation efforts in implementing rate increases.

On 787, stable at 10 a month, focused on now capturing more efficiencies through the entire production system. And Ray is going to talk a little bit more about that later. 787-9, very successfully, I'd say, entered into service, 23 airplanes delivered so far, and it's performing very well for our customers.

On our defense business, we continue to see solid demand, where it's proven, I'll say, product portfolio. International backlog remains strong, and we're executing on our strategy to leverage the One Boeing approach that Jim and Dennis discussed.

With regards to our financial results, driving that market-leading product strategy. Confidence in our outlook allowed us to invest in the next-generation products, helping sustain that growth while also allowing us the meaningful return cash to shareholders.

And as I noted last year, we also revised our long-term management compensation structure to more closely align to shareholder returns which, once again, reinforces the culture of financial discipline, innovation, productivity, and customer satisfaction, remain dedicated to the continued derisking of this business, driving long-term competitiveness, and sharing that benefit with our stakeholders.

Next slide, please. Starting with our backlog, a robust backlog is the result of a strong resilient marketplace combined with the unparalleled strength of our product portfolio, as well as the unprecedented value our products are bringing to our customers. Our current commercial backlog now stands at over 5,700 airplanes, and we are continuing to see demand of nearly 37,000 new airplanes globally over the next 20 years. This represents a unique and unprecedented long-term growth opportunity for us.

Our confidence in our revenue growth comes from the strong long-term fundamentals in the marketplace and the strength and diversity we're seeing in this backlog today. We have diversity in customer mix with a healthy balance between legacy and low-cost carriers, as well as freight and lease companies. In addition, we have regional diversity. Our backlog consists of orders from more than 60 countries. This provides significant revenue stability, as we're not overly exposed to any one region, country or customer.

Driven by the compelling value proposition of our airplanes, we're seeing a balanced demand in our backlog with regards to growth and replacement, 60% coming from growth, 40% coming from replacement.

Our defense backlog also remains solid, driven by a portfolio, again, focused on affordability, reliable, proven products. The President's fiscal year 2016 budget request strongly supports a number of our major space and defense programs, including Commercial Crew, P-8, tanker and rotorcraft programs. This backlog continues to provide a great foundation for which we deliver significant value to our customers and to our shareholders.

Let me now to talk more specific about executing on that backlog. Next slide, please. Over the past four years, we talked about successfully executing 15 production rate increases and steadily increasing annual revenue on those deliveries out of our backlog. And as we discussed also earlier, we have four more production rate increases ahead of us over the remainder of the decade which will provide further revenue growth for our company. Preparations are well underway to support the next rate increase on the 787 to 12 per month later in 2016 and then a rate increase of 14 per month later at the end of the decade.

And as I mentioned, in 2016, we expect to increase 737 production 12% to 47 per month, followed by a 10% increase to 52 a month in 2018. These production rate increases are supported by the strong demand of our commercial airplanes where a number of our key programs are sold out into the 2020 time period and beyond.

Leveraging our One Boeing approach, we've established to build upon the momentum we've generated, with international defense revenues growing from 15% of BDS to now approximately 30% over the last five years. Demand remains strong for our defense systems and services, particularly in Middle East and Asia regions. We continue to see significant international interest in products such as P-8, the V-22, Fighters, Apaches, and Chinooks, as customers recognize the impressive, proven capability these products bring to their operations. And we continue to see organic growth, driven by prudent and ongoing investments in critical future programs like Long Range Strike and the T-X trainer program. More from Chris on this a little bit later.

In addition, we plan to grow our services revenue at both of our businesses. We look to capture additional market share. The strength of our backlog and the planned production rate increases provide an unprecedented revenue visibility and a financial opportunity going forward.

Let's move to slide 5, and we'll talk more about our financial, improving our financial strength. The company remains focused on the objective of increasing productivity for the enterprise by setting aggressive targets every year and holding each one of us personally accountable, back to the management model that Jim discussed. Productivity is embedded in our culture, and we're continuously looking for opportunities to improve our performance at all levels. Key elements that Dennis discussed earlier provide the roadmap for our future.

We steadily improved company core operating margins over the last two years. And in 2015, we show solid improvement, notwithstanding dilution from 747 and 787 deliveries, and increased plan investments for 737 MAX, 787-10, as well as 777X that support future growth. We're building on this progress and continue working dual parallels towards long-term margin objectives. These objectives include successfully executing on our backlog and our production rate increase, as we've discussed; continuing to execute on the scheduled 787 deliveries; expanding 787-9 production; and further improving 787 profitability by implementing production efficiencies both internal and external through our supply chain; also, by fully leveraging our more than 5,000 productivity experts; to maximize productivity and affordability efforts that we've just discussed, such as Lean+; capturing the value quality; Partnering for Success.

A great example of this continuous improvement on productivity, again, is on the 737 program where we've recently incorporated our automation into our wing manufacturing line, allowing us to decrease flow time for the space needed to go up in the additional rate, improve cost, safety and first-time quality. The entire team is focused on these efforts, and we understand the urgency we need to drive the continuous improvement throughout all aspects of the business. The objective of the productivity efforts is allowing us to enhance our competitive position. It is currently, as Jim noted, a more-for-less environment. We're also expanding margins and again, the long-term objective on margins to be industry-leading margins in our sector.

Next slide, please. The margin expansion we've generated has also led to strong year-over-year core earnings per share growth. We have consistently grown core earnings per share after adjusting for some non-recurring items, and we expect 2015 to be no different. We expect healthy growth over 2014 as we leverage our production stability and further capture the benefits of our teams' focus on productivity. We're fully committed to this important measure of shareholder value creation and productivity efforts we've outlined earlier will be critical to ensuring that we continue to provide consistent year-over-year growth.

Move now to cash flow on the next slide, please. As it relates to cash, we have a long-term objective here to continue to grow operating cash flow and also be best-in-class in all aspects of cash management, including payment terms, advances, as well as inventory management. This aggressive push to become best-in-class won't happen overnight, but the entire enterprise is focused on this key objective.

We expect to generate approximately $18 billion in operating cash in 2014 to 2015 time period which represents 15% growth. Specifically for 2015, we continue to expect operating cash flow to be greater than $9 billion, reflecting higher deliveries, strong operating performance, continued 787 productivity, and capturing final C-17 orders. This is somewhat offset by the higher cash tax payments associated with improvements on 787 and favorable timing and receipts that benefited us late in 2014.

As we look forward, we expect further growth in operating cash flow, as Jim highlighted earlier, in 2016 and beyond. And we continue to execute on this backlog, capture additional productivity gains, and improve 787 cash performance. The strong cash flow we anticipate uniquely positions us to return cash to shareholders while still investing for future growth.

Next slide, please. Now, if you step back and look at between 2012 and 2015, we've made investments of approximately $22 billion in research and development capital expenditures. This spending supports the next generation of products, allows for those higher production rates, and drives higher utilization in automation and Lean manufacturing efforts. These investments are helping shape our future and are key enablers to driving future revenue growth, earnings and cash flow.

We now have an industry-leading product portfolio that offers unprecedented value to our customers. Our investments in the 787, 737 MAX, and 777X will provide significant returns in the years to come. Also on our ongoing investment in our defense business and leveraging technology across the company, providing a competitive advantage that supports our efforts to win key future franchises, such as the Long Range Strike and the T-X trainer programs.

In addition to R&D, as we've discussed, we've made prudent capital investments to support 15 production rate increases we've completed over the past four years and the four key planned increases in the coming years. These investments have facilitated seamless rate breaks, including on the 787 ramp, which I'll remind you was the fastest ramp-up of any wide-body program in aviation history. And as I mentioned earlier, we are currently working through our final steps to bring that program to 12 a month and then eventually to 14 a month.

Finally, we've increased our investments in automation and Lean manufacturing processes, projects such as the Fuselage Automated Upright Build on the 777 and the wing panel assembly I discussed on 37, providing, again, improved first-time quality, supporting higher production rates, lowering unit cost.

Now let's move to the next slide, please, on capital deployment. I believe our actions over the past couple of years clearly illustrate our intent to invest for growth, while also returning cash to shareholders. Since we restarted that repurchase program in 2013, we've spent more than $11 billion buying back approximately 90 million shares, and we remain committed to continuing to reduce our share count going forward.

In addition, we've paid more than $4 billion in dividends to our shareholders, an increase of per-share basis over 90%. And at the end of the first quarter, we had $9.5 billion of repurchase authorization remaining which we expect to complete over the next two to three years. These decisions reflect the confidence we have and the cash generation potential this company has, and we continue to deliver on our backlog and deliver efficiencies in all aspects of the business.

With the strong cash flow expected over the remainder of the decade, we have the flexibility to deploy that capital by again investing further in growth, while remaining a top priority of returning cash to shareholders.

Go next, please. When you step back, I'd say 2015 represents an exciting opportunity for us. We're well positioned. The markets we serve are strong and growing, and we have the right portfolio, meeting our customer requirements. Our large and diverse backlog represents a significant opportunity for us as we remain focused, again, on driving core performance across all aspects of the business. We will balance growth and productivity, make prudent investments, execute on our disciplined cash management practices with, again, the objectives of driving long-term financial performance and ensuring that we are increasing shareholder value.

So with that, I'd like to introduce Ray Conner to talk about our Commercial Airplane business. Thank you.

Raymond L. Conner

Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes

Okay. Good morning, everyone. How are you? Are you kind of wearing down a little bit? Hopefully, this won't be too boring. But, hey, I wanted to just quickly – as Greg mentioned that we began 2015, the first quarter here, on a really strong footing after coming off a record-breaking year in 2014. I just want to take this opportunity – and you met a lot of these people last night and this morning as well. But I just want to just thank the team, the leadership team, that's here from BCA and from the functional groups in terms of the whole corporation for all the work that they've done in facilitating us to be able to accomplish a lot of these things.

It's been really a terrific performance over the course of the last few years. And I think when you look at the management team that we have in place, I guess the better word to say would be that they're kind of battle-tested. These guys have been through a lot of tough stuff. They've come through in an incredible way, and I'd match their skill and their experience with anybody in the industry. So, they're a terrific team that does a fabulous job for us. So on behalf of everyone, I just want to say thank you for what you've done.

Now, with 2015 in full swing, our priorities for this year and into 2016 continues to be delivering on the backlog and the development programs, while improving our market position in the new aircraft and aviation and services market. This is a big thing for us in terms of how we go through it. But with these priorities in mind, obviously, we continue to focus on increasing profitability and enabling the long-term growth for our overall business, and these are absolutely the top things that we want to do. So, my remarks this morning are going to focus on our progress in these areas and then the BCA strategy.

But always as you kind of start this thing, if we go to the next chart, we closely monitor the market to ensure that our supply matches the demand. And given that backdrop, we firmly believe that the demand is there, that the market remains very strong with a forecast of nearly 37,000 airplanes deliveries over the next 20 years. So, the overall business climate for our customers is a continuation, really, of last year story. We continue to see solid passenger traffic with growth at a rate of about 6% which is above the long-term average and with load factors and the utilization rates at record high, as we don't see things slowing down.

The American and United changes, if I could just take a moment to talk about that, those were really driven by fleet optimization. And specifically, adjusting the American delivery stream was more about matching what their requirements were in their fleet, particularly when you think about the combination now of U.S. Air and American, the combination of that; and then adjusting their fleet mix, which ended up being a win-win for us as well. And then United, kind of upgauging to the 777-300ER, more about replacing a lot of those 747-400s that are out there.

And then the 767, that's kind of addressed another need that they had to do, associated with the North Atlantic and having the range capability provide the right kind of service for their passengers there. And all that was facilitated us, getting back some very valuable positions on the 787. So all-in-all, every one of those moves was a fantastic win-win solution, which we always are trying to do with our customers as we move through these things.

Regardless though, our backlog remains the same across the board. American did not drop their orders. The numbers are still out there. It's more about a mix between the 787-8s and 787-9s at this particular point. And like American and United, all the airlines are doing a really effective job in terms of managing their businesses, especially in the face of the dynamic environment that's going on and some of the fuel price volatility that's out there.

Industry net margins, I mean I think they were going to remain to grow which is a very good thing for us to 3.2% this year or better, and that's on track for another record profitability year for the airlines which is always a very good thing for you. And notwithstanding fuel price environment, the airlines continue to procure newer fuel-efficient airplanes.

The feedback that we're getting is that recognizing the critical – they recognize the critical value of our products in terms of the innovation that is providing more efficiency at any particular price point on oil, lower maintenance costs and higher residual values. I mean these are all the things that are driving the airlines to come forward today and continue to buy our airplanes.

On the cargo front, the market is moving basically now from a recovery stage into a growth phase, with the growth being about 5.5%, continuing the trend that we saw last year. It's still a challenging market for everybody. But with some growth in some of these really key areas and concentrated in the Asia Pacific, in particular, that growth was about 8% for the first quarter of this year compared to the first quarter of last year.

Overall, while global growth is a little slower than anticipated. We still continue to see the market fully recover by the end of 2016 which is a very good thing for a couple of our products.

Commercial aviation financing and liquidity is experiencing unprecedented diversity of capital providers and balance among funding. XM still remains an important source of funding for our customers with about 15% of Boeing's deliveries are supported by XM in 2015, but we fully are optimistic that we'll be able to get an extension on the XM here over the course of the next few months.

Recognizing the dynamics of our customers in the market, BCA remains totally focused on our strategy on providing the most value for our customers across the board. It really hasn't changed over the course of the last few years. We are delivering the most efficient, comprehensive set of world-class products and services to our customers, while continuing to pursue single and twin-aisle market share and expanding our services business. Our development organization, which we put in place at the end of 2012, is driving efficiencies through commonality, controlled resource sharing, lessons learned across each program.

And the collective gains that we've seen from this approach and embedding those kinds of behaviors throughout the organization is generating the right balance between innovation and customer-focused value. I think Scott Fancher and his teams are doing a fabulous job with respect to really mashing the development together. And we're starting to see some great efficiencies as we move through our development programs, and we have so many of them going on right now. It's really neat to see.

We continue to enhance the production system efficiencies and flexibility in order to meet the changing market conditions while effectively executing on the backlog. We remain completely focused on introducing new customers, new configurations. I mean the amount of work that we're doing with respect to new customers and configurations is at an all-time high, and we continue to do that in a very seamless manner into the production system. Although we've had some challenges around seats and some of these other kinds of things, the fact that we've been able to maintain all the deliveries and continue to do that is really a great complement to Pat Shanahan and the entire operations and production system teams. And at the higher production rates that we're talking about, we've been able to continue with the quality and continue growing the business profitably.

So, things from a production standpoint, even with a little bit of blips and some of the disruption, things have gone very, very well. And like development and production, the service is equally important to our overall business stance. We are focused on being the number one player in this market. We just moved into being number two. And so, now our sites are set on now being number one. And we believe that we have the right kind of product knowledge. We have the right kind of capability to provide the best value for our customers in this particular area. Our services support business really does closes the loop for our customers, and it leverages the R&D that we're spending.

Stan and Scott are really joined at the hip here on creating the kind of designs and such that are going to really help us expand that support business and services business. So, we believe our overall approach in terms of aligning BCA's development, production and services organization is providing an advantage, not only to us but to our customers as well. And clearly, this really does begin with a very strong portfolio of products.

And if we take a look at our product makeup, we think that we have the most comprehensive set of products in the marketplace. It's very customer-focused and driven with emphasis on providing customer value and innovation. Each product complements one another, and it goes in their design in the 15% seat increments with a high degree of commonality now across each product family.

At the very top, I just want to make a quick mention. The 747-8 continues to be a very critical part of our product offerings. And while cargo has been down for a little while, we still believe that the 747-8 continues to be extremely competitive airplane, not only in the cargo market but in the passenger market as well with superior economics and a significant operating cost advantage over the competition.

One addition to this chart, you'll see it down there in the single-aisle, is the 737 MAX 200. We launched that last year with Ryanair, and this is a terrific airplane, particularly around the low-cost carriers' markets, which is when you think about the 37,000 airplanes over the course of the next 20 years, 30% of those new airplanes are going to be coming out of the low-cost market. So, this airplane is a perfect fit in that respect. And we feel very excited about that, and we're getting a lot of activity around it now as we move forward.

Now, with our project strategy is largely set for the foreseeable future, we're very focused on execution and meeting our existing commitments.

If we go to the next chart, let's talk a little bit about the Boeing 787. Everybody wants to talk about the 787. Stability, productivity, profitability, cash flow, in-service performance, those all remain the 787 program's top priorities. We've delivered now 43 airplanes this year; 271 airplanes to-date to 33 customers. Everett delivered their first 787-9 in June of 2014. Charleston delivered its first 787-9 in March of this year. And overall, we've done 23 787-9s, as Greg pointed out.

The 787 production system continues to grow healthier and more stable as we've moved on. We are seeing it translate now into continued progress in key operational performance indicators such as unit cost. Today, Charleston and Everett are running a combined rate of 10 per month. The 787-9 now is becoming a greater portion of that production. And that's going very smoothly, and we still are on track to increase our production now to 12 month next year while preparing for the introduction of the 787-10 shortly thereafter.

Last week – I think this is a very important thing, and maybe it went a little bit unnoticed. But last week, we announced that we were going to retire the temporary surge line up in Everett at the end of the year. I think this is a great indication of how the production is going, both at Charleston and in Everett. And when you think about the combined production of 787-8s and 787-9s and beginning to integrate those now into single lines. That's a really good sign in terms of how we are producing in both cases. And that's going to drive stability. It's going to drive a lot of productivity down each line. It's hard to run two lines in a production system like that, and I think this is going to be a big benefit to us as we move forward, and also allows us to start doing the transition for the 777X production system, because that's where we're going to do the 777X there. So that's good sign as well. So we will be able to reduce the risk as we move forward.

On-time schedule, quality performance, our program's focus for the supply chain as well, and we've got a number of people in the supply chain embedded there, working not only on their productivity but on their quality as well, which translates then into lower cost, not only for us, but also for them. And we've continued to leverage our Partnering for Success and the value engineering to drive productivity gains and cost savings throughout the whole supply chain.

So things are moving much better now in the supply chain. Seats are recovering. The engines are recovering. Those were two things that were driving a lot of disruption into our production system. And all that is all starting to move through and we're starting to really see some benefits from that.

Clearly, the 787 financial performance is a top priority for us. We remain focused on the day-to-day operational performance. That's going to end up being the real driver of us getting the costs down, improving our long-term profitability and cash flow fees. This is where the 787 is really focused. And now with the – we basically have most of all the teenager airplanes that are on the field sold. And that will be a big benefit to us as we move forward in the upcoming years.

As the production system has been moving forward, we've got more initiatives identified in terms of flow time and unit cost improvements. On the 787-8, we've seen the decline in unit cost at approximately 30% over the last 190 deliveries. And couple this with a decline in the cost of the 787-9 at 25% over the first 25 deliveries, we're really starting to see the production system do well for both models.

And it's a combination of both models. You have to keep thinking about that. The 787-9 was a very big derivative that came in at a 10 per month. And now you're starting to see those things start to converge in terms of their unit costs, which is a big message to all of us that things are starting to really come together for both on the 787.

On the 737 program, this is an amazing story on productivity. And for any of you that have been out there, what a phenomenal production. It's just beyond belief how much we can do there. We are at 42 a month, and we're on-track to go to 47 in 2017, 52 in 2018, exactly in the same footprint that we did before. I mean, this is an amazing productivity story. And we've decreased the factory flow time. This is another thing that just – it just kind of shocks you, but it's true. 55% over the course of the next couple years – over the last couple years, and we've improved quality by 49%. Obviously, you can't improve the flow times without having the quality.

And then the factory floor space, we've reduced 63%. So when people – now, I know that the other guys talked about going to 60 a month. We can go to 60 a month. We could do that. We've got to just make sure that we've got the kind of demand necessary to take it up there. But we're going to watch and see how this thing goes. We do have the capability to go higher if we need to. I just want to make sure you understand that.

And to further enable the 737 program, we're increasing the automation. Greg touched on it and so did Dennis. This is in the wing area. It's the panel assembly line. We have four machines going right now. We're going to increase that over the next coming years, and this will help us a lot in terms of both the MAX and on the NG, and it's going very, very well. Pat and his team on the 737 have done a great job in terms of doing that. And this is all going to enable lower cost, higher margins on the 737.

On the 777, it's a very similar story in terms of productivity gain. 31% reduction in factory flow times, 55% improvement in quality, and a 20% floor space reduction there as well. Same kind of thing: more gains that we are going to see through the automation process of the fuselage assembly. We're going to be automatically drilling and filling over 50,000 fasteners per aircraft that today were installed by hand.

Now, this is a big benefit, not only from a productivity standpoint but also from a quality standpoint. But more importantly, it's a much better working environment for our team. So we are excited about what we're doing in terms of the automation. And these are not real high-risk automation type things. These are proven things that we're doing. But again, bringing them in on the 777 existing program and then transferring them over to the 777X is going to really de-risk the 777X production system as we move forward.

As we move to the development process, we have numerous derivative programs going on happening all at the same time, and we're really focused on investing the R&D that we have there in the most efficient manner possible. Every program is utilizing a similar development infrastructure to keep us on track. And they're working that through what we call the gated process. And through this approach, we are finding a number of ways to multiply commonality and reuse across the product families. This has been a big effort of our development team led by Scott Fancher, and they've done a fabulous job.

As far as the progress on each program, the MAX, over 2,700 airplanes, a firm 57 customers, both 737 MAX 8 and 9 have reached a firm configuration. And in the last quarter of 2014, we began fabricating our detailed parts. We will load the spars for the 737 MAX here in this month – later this month. So, I mean, things are rolling. This thing's on track now to deliver in the third quarter of 2017. So we are doing very, very well. 787-10, 142 orders, 7 customers, engineering, quality, commonality, that's a big critical focus for the team.

The thing I want to point out about the 787-10, the 787-8 to the 787-9 was a very significant change. So that caused a lot of disruption into our production system as we transitioned 787-8s and 787-9s going down the production line. The 787-10 is 95% common to the 787-9. So the disruption associated with bringing the 787-10 in will be quite minimal as we move forward. So that's an important thing to think about as we look forward.

The 777X, 300 orders from six customers. The airplane, 12% lower fuel consumption, 10% lower operating cost than the competition. This is going to be a fourth-generation composite wing for us, and the final assembly is going to begin in the 2018 timeframe with first delivery in 2020. Overall, a very disciplined approach to our R&D, and we are very focused on technologies that drive really true value for our customers.

On the services side, CAS and our airplane development organization are working very closely together in terms of leveraging the investment for new programs in order to gain the greatest value for our customers through the product life cycle. This is a very big deal for us. This is the first time we've really brought those two organizations together to try to enhance our services business. And any good services business obviously starts with a good support organization and it's anchored by world-class support and training. And we are working very diligently right now to execute our services strategy and in concurrently improving our support and our training. And that includes completing our transition down to Southern California this year for our customer support center. It's working with our customers, continue to be able to implement the new aircraft such as the 787-9s so they can effectively bring these things into service. And then providing the right kind of maintenance training, the right kind of flight training in order to support all the deliveries that are going on.

Clearly, though, parts are the largest and the most profitable part of our services business. And in order to grow that, we are really strategically managing our inventory while expanding the parts portfolio, which we control. We're also expanding our engineering and fleet services business through our GoldCare offerings and through our modification business. And both those have done very, very well over the course of the last year and a half or so. And we are working very closely with Chris and his team to drive the synergies between CAS and BDS on the services business. There's a lot of synergies there to be captured over the course of the future years.

Now, just to summarize, I would just say, look, this is not real complicated stuff for us: execute the backlog, keep driving for market leadership in terms of capturing our market share, keep driving the productivity, profitability. That's right up there. I mean, if we execute on the backlog in the right way, we're going to drive a tremendous amount of productivity and a tremendous amount of profitability. And then as we move in to the development programs and we are going through those, keep driving for customer value, producibility, maintainability, and reliability. If we get those things right, this is going to be – these things are going to be tremendous products as we go forward. And then always, always, at the end of the day, strive to be the very best that we can be so we can be the number one aerospace company in the world. And that's where we are from a BCA perspective. So, thank you.

Now I would like to introduce Chris Chadwick, who is going to talk about the defense side.

Christopher M. Chadwick

President and Chief Executive Officer-Boeing Defense, Space & Security

Good morning. Hang with us. Only 20 more minutes; we'll have a break. And I'd like to echo [audio gap] (01:23:01) our development organization. A lot of cross-sharing, functionally. And then I am blessed with a phenomenal leadership team. We'll talk about that as we go forward.

From a macro perspective, every day, every second, a BDS product is used by our customer. And every day, BDS employees are standing side-by-side with our customers to support those products. In this environment, that's a competitive differentiator. Having the largest installed base in a constrained budget environment is absolutely a competitive differentiator for us.

Next chart. We are all aware of the environment around us. Domestically, even with the budget cuts, the U.S. DoD budget remains predominant. Our customers' buying habits and needs are changing. And once again, what you see that is in vogue is reform, all signs of a more-for-less world.

As a reflection on the international side, traditional and asymmetric challenges are everywhere. Our international customers are focused on capability and value; and thinking globally while engaging locally is critical to our long-term success in another area where we partner with BCA for presence.

For BDS, here's the bottom line. The market is without question significant. We're adapting to customer and market changes ahead of the curve and you'll see that play out. The world remains a dangerous place with challenges arising from across the globe and the need for our products and solutions remaining very high. BDS is making the right moves from a market perspective, and we're making the right moves from a financial perspective.

Next chart. There's nearly $3 trillion of market opportunity ahead of us. Our focus is expand, reposition, and grow. We're creating derivatives, we're extending lines, and we're expanding our service offerings.

Some specific examples: V-22 is poised to expand through international sales and the Navy COD mission. P-8 and Tanker are positioned to replace C-17 revenue. And keep in mind, our franchises tend to be 30-year franchises, the product and the support.

We're the leader in space. We've made very conscious and smart business agreements with our customers across the board over the last 24 months. And we have expanded our international portfolio with services leading the way.

We are in the midst of a wave of future franchise opportunities: Long-Range Strike; UCLASS; T-X, the next-generation air force trainer; the next-generation army rotorcraft; some weapons programs. And we're leveraging the creativity of Phantom Works and we've consciously invested in a very significant way as compared to our competitors to position ourselves for success.

We really don't want competition. We want to differentiate our products and solutions and win. And what distinguishes us the most internationally is the Boeing brand, because what it does is it brings the expectation that all of Boeing comes with each of our product and solutions, and it does.

Next chart. The FY 2016 budget, extremely clear. The administration submitted their budget, the President's budget for FY 2016. They funded DoD at $534 billion. The President included overseas contingency operations funds at $51 billion. The Congress is now in the throes of trying to increase the OCO funds and the dialogue has begun. The Administration, the Hill, are in deep conversations. Committees are starting the mark, and we'll see how that plays out.

In simple terms, though, for BDS, this is what we see. There is pressure on the budget, but there is extremely broad-brush support for our products across the board. And in FY 2015 funds, all our programs are supported, and they're supported at an increase of $1.9 billion over what was originally enacted. Think of this. KC-46 tanker, V-22, Apache, Chinook, P-8, GMD, Space Launch System, Commercial Crew – all rock solid. And many of them have multi-year contracts.

Next chart. The Venn diagram is how we look at our market because that's how our market has evolved. We're world class in platforms from airplanes to satellites, from commercial derivatives to missile defense. We're world class in support and services and training. And the information and security that is sweeping the post-PC and telecommunications world, our customer wants it.

It enhances our platforms and services and allows us to provide capability to our customers that they didn't even know was within the reach. And we are. We're creating vertical capabilities that are going on our platforms today and they'll be integrated into our platforms tomorrow, and the customer is noticing.

Dropping down on the chart – and Jim and Dennis talked to this – to succeed in the years ahead, we have realigned our businesses and functions to ensure enhanced execution across the entire product lifecycle of our business by looking through a lens of create, develop, produce, and support.

Global Services & Support, led by Leanne Caret, is our support business. In the produced world, Boeing Military Aircraft, led by Shelley Lavender, and Networks & Space Systems by Craig Cooning. We want them to be world-class at delivering products. And we've partnered with BCA to take our capability to the next level.

Jim O'Neill runs our develop organization, the seasoned Jim O'Neill, includes KC-46, 777X, commercial crew, SLS. What we've done is we've put all the development programs together. We've learned from Scott Fancher in the commercial world. What we found is 80% to 85% of the program management on all those programs is exactly identical. It really allows you to accelerate success and streamline how you go after those programs.

And then in Phantom Works led by Darryl Davis, he's the only one more excited than I am about the future that we have in BDS because of the way we've invested, because of the way we've leveraged our resources, and I think the way we've distinguished ourselves from our competitors.

This chevron and how we've focused in a very unique way from the rest of the industry, we believe, will allow us to become an industry leader in profitability, will set the benchmark for performance and development programs for all defense industry, and will separate ourselves from our competitors. We've got a $62 billion backlog, and we're growing it.

Next chart. And here's how. We focused on investing in our products to ensure the right capability at the right time, at the right price, and the customers recognize that. We're investing in productivity.

Jim mentioned $5 billion over the last four years in productivity. It's enabling margin growth and it's breaking the price curve of our offerings. Customers recognize that. And we're leveraging information as the competitive differentiator, data analytics, C4ISR, the fusion of data to provide our customer with enhanced solutions and products. And they've recognized that as well.

Next chart. From there, creating a healthy and predictable business across all dimensions begins with a foundational set of expectations that ensures safety and drive first-time quality in our decision-making. It's about ensuring we have the right businesses in the right geographical locations domestically and internationally. And you've seen how that's played out and it plays to our strength of where the capabilities are. And it's about a more-for-less design, develop, produce mindset that sets us apart from our competitors in the marketplace.

But here is the reality behind the strategy. It starts with the right cost structure and a culture that embraces productivity as a sign of a strong business. We have achieved $5.1 billion in savings, but we're not stopping there. We're not finished targeting additional reductions. We're focused on cash management and working capital initiatives. We're driving margin expansion even within a challenging market. That mindset, coupled with conscious strategic investments to position ourselves to win key competitions, is positioning BDS for both short-term success and for long-term success.

Next chart. A perfect example is in the services area. We have the largest installed base of any of our competitors and we're leveraging it for growth opportunities, integrated solutions across the sustainment life cycle, creative partnerships that take share and international investment for presence and long-term business opportunities.

We have a strong partnership with Path and BCA for synergy savings and for growth, leveraging Aviall, taking advantage of single-fleet management for commercial derivatives, and combining engineering and manufacturing skills for mods and upgrades. And we're leveraging data and information, again, associated with that installed base. It provides more affordable sustainment solutions, it allows us to leverage new technology across the fleet, and it gives us new insight from data analytics that we can use in our business, in our products, and in the ecosystem that surrounds our products.

Next chart. In closing, the BDS mission is to inspire and create innovative defense, space and security solutions worldwide. Our objectives align with the Boeing Company's strategy. And they are clear and straightforward. Run a healthy and cost-competitive business, lower costs, ensure safety and quality, and deliver on our promises; create a differentiated capabilities-based business. Innovate in a collaborative fashion.

We really don't want an even playing field. We want our solutions to stand apart from our competitors; embrace the global business, having presence overseas, partnering, investing abroad, and conducting business in the way our global customers want to. And finally, embrace and nurture an aligned and adaptable and diverse workforce. Look at the photos at the bottom.

Experience comes from different backgrounds, unique opportunities. And when we put it all together, we are unstoppable. Top line focus, bottom line focus, that's how BDS is playing its role in building a bigger and better Boeing.

And with that, I'll turn it back over to Troy.

Troy J. Lahr
Vice President-Investor Relations

Okay. We're going to take a quick 15-minute break. We'll try to be back here at 10:50 and then we'll start the Q&A session a little early. Thank you.

[Break] (1:36:52-1:50:54)

QUESTION AND ANSWER SECTION

Troy J. Lahr
Vice President-Investor Relations
A

If you could grab a seat, we're going to go ahead and get started to Q&A. [Operator Instructions] So, with that, we will go ahead and start the Q&A session. Cai?

Cai von Rumohr
Cowen & Co. LLC
Q

Yes. This is for Jim or for Ray. So, Jim, you talk of...

W. James McNerney
Chairman & Chief Executive Officer
A

Where is Cai?

Cai von Rumohr
Cowen & Co. LLC
Q

Right here. Right here.

W. James McNerney
Chairman & Chief Executive Officer
A

Oh, there, yeah.

Cai von Rumohr
Cowen & Co. LLC
Q

Just so you hear me. So, you talked of commercial demand being good and still looking for book-to-bill of 1. Maybe give us a little more color in terms of which models are stronger and which geographies are stronger in terms of demand and which are weaker?

W. James McNerney
Chairman & Chief Executive Officer

A

It's kind of across the board model-wise, but, Ray, I think, Ray, you're...

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes

A

Well, I mean, on the single-aisle, the 737 is still significant demand there. And particularly, you can't discount China. I mean, people talk about China slowing down, but certainly, China is not slowing down with respect to air travel demand, those kinds of things. But across the board, I think we see tremendous demand on the 787. And the thing that we struggle with there is availability at times.

But obviously, with some of these positions becoming open with the United thing, that's going to help us quite a bit. And I would say that the 777 continues to have a lot of interest in that product, too. And we have a lot of things in work on the 747. So, to say I think probably if I was to rank the single-aisle, it has the greatest demand. I don't think anybody would – yeah, I think the other guys would say the same thing as well. But across the board on the wide-bodies, we still see a lot of demand there, too. And obviously, China being the biggest – the single biggest market still today in that respect. Okay?

Troy J. Lahr
Vice President-Investor Relations

A

Yeah. Hunter?

Q

Hi. Can you guys hear me?

Troy J. Lahr
Vice President-Investor Relations

A

Yeah. Yeah.

Q

Okay, great. Hey, Ray, you talk about the 95% commonality between the 787-10 and the 787-9.

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes

A

Yeah.

Q

What was the corresponding percentage from the 787-9 to the 787-8? And also, of that 5%, I know it's a small number, but is that like the hardest part? I mean, is that like some very complicated stuff?

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes

A

No.

Q

Is that a much more heavily disproportionate...

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes

A

No. It's not that hard.

Q

Okay. What is it?

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes

A

I mean, it comes down to – you got the stretch of the 43 section I've been in the 44 -I mean, those are areas that are not common because of the stretches in there. We have some slight differences in the aft end of the airplane as well.

There's some differences in some of the air conditioning requirements because it's a bigger airplane, the ECS requirements there. So it's not huge stuff, but it's just – that's just where – where we really try to drive commonalities in wings, the big cost items, wings and some of these other kinds of things. And 95% common is going to be a big benefit to us as we bring that into the production system, particularly down in Charleston and across the board into the supply chain.

Now, with respect to the 787-8, to the 787-9, a much different scenario just on a part count basis. So we changed a lot of parts, changed a lot of – some of the systems, a lot of which then we back drive into the 787-8. But on a big block point from where we were to the block point of the 787-9, I mean, it was a 75% to 80% difference in part numbers. So, when we change a part number, that means we've changed the fit, form or function of that particular part.

Now, a lot of the things that we've put in place on the 787-9, we rolled back into the 787-8 particularly from a producibility standpoint. And that's been one of the driving factors enable to start to really drive the cost of the 787-8 down along with the 787-9.

W. James McNerney
Chairman & Chief Executive Officer

A

One way to answer that, just to elaborate, Ray, what would the commonality number have been on the 787-10 without this initiative that we've been driving, which has sort of a top-down question associated with it?

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes

A

Yeah. So, Scott, when we started...

W. James McNerney
Chairman & Chief Executive Officer
A

Yeah. No. I was – yeah.

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes
A

Scott, what was it? That's a really good point. What was the number when we first started?

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes
A

About 70%.

W. James McNerney
Chairman & Chief Executive Officer
A

Yeah. Yeah.

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes
A

So through the development organization with the intense focus on commonality, reuse, all those kinds of things, producibility, and still maintaining an airplane that could do what we sold, we went from 70% to 95%.

W. James McNerney
Chairman & Chief Executive Officer
A

That's really the key here is it's getting that reuse headset upfront in the engineering. And then further to Ray's point, just to reinforce what he's saying, not only commonality in the design, 95% common, but then, as we translate that into the manufacturing plant and build two packages, how we're going to load parts in the factory.

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes
A

And that flows all the way back up the supply chain.

W. James McNerney
Chairman & Chief Executive Officer
A

Spot on. Yeah. That's really where the horsepower is. And Ray's guys are doing a great job at doing that. Not only design commonality, but lifecycle commonality.

Troy J. Lahr
Vice President-Investor Relations
A

Howard?

Howard Alan Rubel
Jefferies LLC
Q

Thank you. You've talked a lot about productivity and you've also talked a lot about managing R&D better. And you've talked about selling for value. At what point do we see some of this translate into an acceleration in earnings per share?

W. James McNerney
Chairman & Chief Executive Officer

A

Well, you already have, Howard. I mean, you've been checking us out for a few years. I mean, there's...

Howard Alan Rubel
Jefferies LLC

Q

Yeah. But I'm not looking backwards. I'm looking forward a little bit.

W. James McNerney
Chairman & Chief Executive Officer

A

There has not been an immodest progress there, but no, no, to – I'll take a quick shot at your question.

Howard Alan Rubel
Jefferies LLC

Q

Thank you.

W. James McNerney
Chairman & Chief Executive Officer

A

And then maybe...

Howard Alan Rubel
Jefferies LLC

Q

Then Mr. Smith will have [indiscernible] (1:57:13)

W. James McNerney
Chairman & Chief Executive Officer

A

Just have to have the normal repartee between me and Howard.

Howard Alan Rubel
Jefferies LLC

Q

Yes. Thank you.

W. James McNerney
Chairman & Chief Executive Officer

A

But then, Greg, you might take a shot at it.

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

Sure.

W. James McNerney
Chairman & Chief Executive Officer
A

I think the real point is that we're working all of these things. I mean, I think you can't manage an enterprise like this without a fundamental belief and progress on year-over-year productivity. I mean, the numbers that Ray – I think Ray got into more detail and there was some detail on Chris's chart, too.

But those kinds of gains in flow and productivity, variable cost productivity, overheads, in the case of Chris, that doesn't happen without enormous focus and effort and a reward system within the company that values that behavior as highly as it does coming up with the new leading-edge wing on a brand-new airplane program. That's been a little bit of a cultural shift for us at Boeing.

I think the trick has been, over the last N number of years, how to value that work as highly while still celebrating the incredible designs that people do. How to make – and that led us to the initiatives. That led us to the way we pay people. That led us to valuing business progress as well as design progress for design progress's sake and for the sake of mankind.

And so – but you can't lose sight of the fact that none of this works without producing – designing and building a better airplane, which gets to your price for value. I mean, everybody, even within the company – and Ray and I have had debates with some folks. Hey, isn't it about time we started pricing down on the 777? I mean, we're entering – we're transitioning to a new thing. And Ray Conner goes, are you kidding me? I mean, this is a totally unique airplane yet today. It's outsold the A350787-1000 five to one, since the A350787-1000 was supposedly introduced to attack the 777, the new one. And I'm talking about the old one outselling it five to one.

And so I think there's – we needed to re-believe the value of our products. And I think when we say we have not seen dramatic deterioration in pricing, I mean, rather we've seen stability in pricing, and that's at a level that captures the value of what we've done. I mean, there is not a competitor for the 777. The MAX still commands a price premium versus its competition in the marketplace. But there's some disciplines within the company you have to have as you go to market and as people sell the airplanes and as we approve deals, and so we have to focus on that.

And then what leaders do you promote in the company? And one of the reasons I put a picture of this team and others and wanted you to meet all the leaders last night and this morning is in part because this has been a development process over a long period of time that has produced a leadership that values business progress as much as product and services progress.

When you become as big as we are now, if your leaders don't live that and get promoted and paid based on it, it isn't going to happen. I mean, just to add anything, sure.

Howard Alan Rubel
Jefferies LLC
Q

I got off on a tangent.

W. James McNerney
Chairman & Chief Executive Officer
A

Howard does that to me.

A

No, I think – you and I have talked about this, embedding it into the culture and the expectation set. Sounds pretty basic, but in order to do that and get alignment with 165,000 people and how you're rewarded and that being aligned to how shareholders are rewarded, it's a pretty big shift that is taking place.

So the things that Dennis talked about, they're all at, as he described, different levels of maturity. As we talked about entering into PFS, what stage are we at? I'd say where Dennis described is where we are, but the fact is that isn't going to be a normal course of business of how we run the company. It's not an initiative, the development costs.

These organizations weren't set up to go away. These organizations were set up with a clear objective in mind in leveraging. And I think – I'd say early stages of that – but you saw it on the 787-9, and as you heard, on the 787-10 and some of the stuff that is happening in Christiansen...

W. James McNerney
Chairman & Chief Executive Officer

A

And you're seeing it on the MAX, too.

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

And you're seeing it on the MAX.

W. James McNerney
Chairman & Chief Executive Officer

A

And the MAX is in pretty good shape.

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

Yeah. So continuing that and capturing the value of that going forward. But I think I said we're leaving no rock unturned, which I think was clear by the discussions we had, prioritizing, getting everybody aligned, having the rewards system aligned to that, and then working across the enterprise even more.

And I'd argue, Howard, I just celebrated my 25th year here. We're working as One Boeing more than I've ever seen, and we're seeing tremendous value. And I would argue early stages when I think about some of the other things we could be doing. And PFS is a One Boeing approach. The development program is a One Boeing. And the leverage – taking things out of Chris' business that are best practices, bringing them across to BCA, linking the teams up and looking for further opportunities.

So, that's kind of more now in the day-to-day. I'm not saying it's done. There's a lot of work to be done still, and you got to capture it at the end of the day, but I would argue that every one of those things that Dennis laid out, those are all priorities and we're all scored on them. And some of them are risk mitigators, as Jim talked about, and some of them are clear productivity and profitability.

Overall objective on the margin front, industry-leading margins, that's the broader objective internal inside the company. That'll take time, obviously, to get there. But I think those are the right paths to do that. And if we find there's further opportunities somewhere else, we'll divert. But like I said, it starts at the top and it's a culture and rewards system behind it.

Troy J. Lahr
Vice President-Investor Relations

A

How about Byron?

Q

It's a question for Jim – right here in the front. Okay. I appreciate the optimism on LRS-B and some of these other franchise opportunities that are coming up. If in a worser-case scenario you don't pick up one or two of those, how do you think about BDS in the broader context of the Boeing portfolio? Do you need to maintain a particular size or growth trajectory in those businesses without those programs?

W. James McNerney
Chairman & Chief Executive Officer

A

Well, I think it's hard to believe we wouldn't get one of those big programs. But in the extreme case of getting none of them, I think we would still be an at-scale defense and space company that would have all of the same advantages that it brings today in terms of partnership with BCA, the technical sharing, the leadership development sharing. As Chris pointed out, the value of coming together internationally, which really does have tremendous value – sort of value from BCA to BDS that we've accrued, industrial base kinds of advantages globally where the two business – all of those things would remain at scale.

And so we would have to shape BDS to that size and which would not be dramatically smaller than it is, but it would be smaller than it is today. We would not overreact and feel that we had to get big again right away because we've got BCA. I mean, we've got this great aerospace company and BCA, arguably, the strongest business within the aerospace industry. And so we don't have to panic.

There was a time at the beginning of the last decade where BDS and BCA were about the same size. It's hard to – BCA has grown so much now, but the Christmas cards were going from here to here. Now the Christmas cards are going from here to here. And that will change – we don't have to panic because we still maintain the advantages that accrued at the world's largest aerospace company even if BDS is a little smaller. And so I think our headset there, would there be some big acquisition? Probably not. There's enough technology and we'd regroup and re-grow organically. But I think chances are we're going to win one of those programs.

Troy J. Lahr
Vice President-Investor Relations

A

Doug?

Q

Yeah. I'd like to follow on Howard's question a little bit because you've got a lot of things in place. You talked about Lean+, explosion of cost improvement ideas, Partnering for Success, moving to Tier 2s, [indiscernible] (2:06:53) supplier meetings, but you're in a unique situation in that at BCA, you've essentially got your revenue priced in for the next five years.

The other thing you have is with program accounting, you're basically giving us margins that you will expect you're going to have for the next five years. So when I listened to all of the performance improvements that you're talking about and I think about those margins, when you calculate those margins, do you presume you're going to have those successes or are those upside?

W. James McNerney
Chairman & Chief Executive Officer

A

They're upside. I mean, I think we have a very rigorous process, which Greg can – we don't take anything into program accounting unless it is...

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

It's mature.

W. James McNerney
Chairman & Chief Executive Officer

A

Yeah, a proven project where we have clear visibility on the relationship between cost and benefit and it's proven up. And so when he talks about – just as an example, when Dennis talks about a pipeline of Partnering for Success efforts, we may be talking that we're working with 500 suppliers. Now, are all of those projects proved out and moved into our program accounting? No. But most of them aren't at this stage. So that remains an upside.

Q

Because this is different than in prior periods because in the past, when you looked at initiatives, your backlog wasn't priced in. You might have open slots in two years, things like that, and you could end up competing it away. But do you feel that there's a trajectory here that because of this, your margins could have some steady improvement?

W. James McNerney
Chairman & Chief Executive Officer

A

Yes, I mean, I think the – it's hard to predict everything that could go on in the marketplace or in the environment, but there is room for improvement in margins, BCA and this company. And we'll let you know when it's proper to give the guidance, but the potential is there. And a lot of the work that Dennis has highlighted on the initiative side and Ray has highlighted on the operating side can get you there. And it's not all – maybe you want to comment just on how this stuff is taken into program....

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

It really is about getting – there's obviously a gated process and maturity of those ideas before we actually book them. And so, what Dennis talked about is we do have a lot of initiatives in work, but they're not all mature. And frankly, not all of them will make its way. Somewhere along the way, they'll fall off and we've been dealing with that.

But I think maybe another way to think about it, think about the transition from the NG to the MAX. And I think if you went back and looked at the transition from the Classic to the NG, you would see margin degradation through just end-of-line sales and early introduction. And you've seen on the MAX – or the NG to the MAX that not taking place. That was a very clear objective, Partnering for Success playing into that along with internal productivity.

But until those things are firmed up and they make their way into the accounting, but the fact is it's the objective that's in mind. Not to let the margin ride the wave of maybe a lower revenue through that transition, but a focus on how do we maintain it back here, long before it's happening, and what are the actions about – behind every one of them and how are we going to mature them and, ultimately, to your point, capture them? Some of them, we didn't all capture. Some of them we did. Some of them we did a little better than what we thought.

W. James McNerney
Chairman & Chief Executive Officer
A

But when you start with the answer, you're much more likely to get to the results you want. And I would say the MAX transition and the 777, while it's not done a whole hell of a lot of work to be done, but we have a plan to do that. I'm not sure the same business plan – that there was a product plan on the transition from the Classics to the NGs that was not as robust a business plan.

And so that's what we're trying to do with this company is combine business planning and product planning with – you saw my crazy chart, what everybody laughs at me about now in my operating model, which starts with objectives. It doesn't start with anything else. It starts with what kind of company do you want to be.

Dennis A. Muilenburg
Vice Chairman, President & Chief Operating Officer
A

And, Doug, you kind of referred to it, but it creates the unique opportunity we have here with this roughly eight years of backlog. A stable long-term backlog puts us in a very unique position to now go exercise what Jim and Greg are talking about. It's an extraordinary opportunity. You got it.

W. James McNerney
Chairman & Chief Executive Officer
A

Well, it puts the entire value stream into position. We know exactly where we need to be. When you know what you're...

Dennis A. Muilenburg
Vice Chairman, President & Chief Operating Officer
A

And the real value...

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes
A

If it drives you to very, very specific things and you're able to prioritize them in the right way, then – sometimes you would say it's not a benefit, but it is. In a lot of ways, it's a big benefit to know exactly what the revenue stream is going to be so you know what you need to [indiscernible] (2:11:58)

A

It certainly catches the attention of our supply chain. And so whether it's Partnering For Success, how we're working together in development, how we're implementing Lean, having that kind of backlog...

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes

A

It's a great communication tool.

A

...to work on is a great asset.

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes

A

Yeah.

Troy J. Lahr
Vice President-Investor Relations

A

Myles?

Q

Hey, Dennis.

Dennis A. Muilenburg
Vice Chairman, President & Chief Operating Officer

A

Right here. Yeah.

Q

Dennis, you talked about breaking that cost curve. And I'm wondering if you can take it from an angle of schedule. So if you look at every aircraft developed by Boeing before the 787, it was 50 months, plus or minus six. And your planning horizon for the MAX, which is a derivative, and the 777X, which is more than a derivative but not a full clean sheet, is 72 months.

Dennis A. Muilenburg
Vice Chairman, President & Chief Operating Officer

A

Yeah.

Q

And we didn't even bring it up the 787, how long that took. So if you look out, is the next plane going to take 50 plus or minus five or 72, or does the curve keep going up close to 80 months?

Dennis A. Muilenburg
Vice Chairman, President & Chief Operating Officer

A

So this is the key to breaking that cost curve. So I really see this as two steps. In fact, we were looking at a little centennial documentary, well, a couple of weeks ago. 747 back in its day was about a three-and-a-half-year development, just to give you another reference point. So what's happened over time is we've seen development programs grow in cost, both in terms of volume of activity and duration of the development.

Now what we're doing with this development program excellence initiative is working both volume and cycle time. First of all, attacking volume, because what we need to do is eliminate waste and rework in the development cycle. And traditionally, we've had cases where we're doing up-front engineering where we might launch a lot of concurrent activity, we'd have engineers designing parts, components, structures, electronics, all in parallel, bring it together, integrate, iterate, and as a result, do a lot of rework.

And so now we're thinking about how do you, in a Lean way, sequence engineering work, do clean hand-offs, and instead of saying I have six months to do six cycles of work, let's just do it once, and not only take out volume but also take out cycle time.

So now what we're seeing now in our initial wave here through the MAX, what we're seeing on 777X, what we're seeing on 787-9 and 787-10 is that first wave of achievement of just reducing the volume and being able to execute to a plan, not overrunning the total R&D plan. That's a big first step, important to get repeatable, reliable development performance.

The next opportunity, which we're just starting to scratch the surface on, is when you get first-time quality within those development programs, you have the opportunity to shorten up cycle time, right? So we're starting to see some of that on 777X, where we're running ahead of plan in some cases. Future products, we're going to be able to take additional cycle time out. That further reduces cost, because it reduces the standing armies of development activity, and it frees up resources now that we can apply to other innovation investments or return to the bottom line.

So that's kind of the way we see it is this first wave is let's get repeatable, dependable, consistent development program performance. And then, secondly, we're going to be able to take cycle time out, which has a ripple benefit that's even bigger.

A

Well, you also can't separate the fact that in both the 737 MAX and the 777X, we're bringing in a new engine program on track there, too. So those two things really combine in terms of what the timing is going to be. Now, obviously, we're able of being a little bit more conservative, but irrespective, I mean, when you look at all the engine development that's going on and currently, I mean, those – it's a combined schedule between ourselves and the engine companies, too.

Troy J. Lahr
Vice President-Investor Relations

A

Ron?

Q

Yes. Greg, just a quick question on the balance sheet. How do you think about deploying it in terms of – if you look at the cash balance of the company, could you deploy it more aggressively in terms of share buybacks or in other ways? And do you have a target leverage ratio?

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

No, I think we've deployed it pretty aggressively up to now. And I think that our commitment that we laid out for you, we got $9.5 billion left, as I said, two to three years, and we'll continue to deploy at the levels that we suggested.

I think as far as cash on the balance sheet, looking at the size of the company today, kind of, high-single-digit balance is what I think is probably prudent as we continue to grow through this period, but it's something we address obviously continually. But our commitment, whether through dividend or share repurchase, I think, has been pretty clear by what we've demonstrated to-date, and I don't see a change in that.

Q

In terms of where interest rates are now, given that they're so low, have you thought of levering up more?

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

Yeah, I don't think there's a need to do that. If we didn't have the backlog and the growth profile associated with that, then we may be in a different place. I think our debt levels of where they are right now are probably appropriate, and I don't see a need to run out and either pay some of that down, or go out and double down. If the business situation or the portfolio was in different case, then we'd feel differently, but I certainly don't see that. And it goes to the strength of this backlog.

Troy J. Lahr
Vice President-Investor Relations

A

David?

Q

Greg, on 787, I think you're bumping up to the point where you might be able to take a block extension on the 787. Can you talk about timing on that potentially and what that might do for your margins on 787?

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

Yeah. I mean, it'll probably be late 2016-2017 timeframe as it sits today. Certainly, looking at – there's units already sold, so bringing up the units sold and then the time period obviously associated with that. It will be favorable to margin. As I look at those future blocks, certainly, we have a learning curve, we've got contracted pricing, but we also have really favorable mix when you look at 787-10s and 787-9s versus 787-8s. But it will probably be out in that timeframe when we do that and it will be a positive to program margin.

Troy J. Lahr
Vice President-Investor Relations

A

Rob?

Q

Thanks so much. Ray, you mentioned market share a couple of times in your presentation. Are you concerned about your current market share versus the other guy, especially in light of an eight-year backlog?

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes

A

Well, I mean – no, when I look at market share, I mean, we want to expand the shares we have. We have a great lineup of products, particularly when you look at the difference in the widebodies. On the narrowbodies, this is – I mean, we're – basically since the MAX came out, we've been splitting the market share since that time. They got a head-start on us that we've kind of eaten away a little bit at that over the course of time.

There's still a tremendous amount of airplanes out there. We still have 200 operators, 3,000 airplanes on the single-aisles that haven't made – that have NGs today that have not made decisions about what they're going to buy. So I think it's still – we still have ability to grow our share going forward.

Now, obviously, we're sold out for quite some time, but people got to put their plans in place and make that happen. So as those 200 start to come make their decisions, then I think we'll be in fine shape.

Troy J. Lahr
Vice President-Investor Relations

A

We'll go with Ken.

Q

Yeah. Hi, good morning. Thanks.

W. James McNerney
Chairman & Chief Executive Officer

A

Good morning.

Q

Jim, just a question for you. One of the clear themes last year was no moon shots. And I'm just curious if you could update us on your thinking regarding clean sheet airplane. I can appreciate, clearly, you've got a great product lineup now and you've got very good visibility for the next three to four to five years. But beyond that, where should we be thinking and where do you think strategically you've got a requirement maybe to look at a clean sheet timing? And how do you see that in terms of capacity and size?

W. James McNerney
Chairman & Chief Executive Officer

A

Yeah. I mean, I think my feeling on the whole subject would be the same as last year. We have an opportunity now to spiral in some technology across our platforms, a lot of it from the 787 program. And we've resisted the temptation to do too much of that but with our customers do the right amount of it, and at the same time, get our development system stabilized, as Dennis articulated.

That should set us up well for some time in the next decade. And I think in the narrowbody space is where it will most likely happen first. And who knows precisely when, but I would imagine somewhere out there, there will be a requirement for a new smaller airplane that, in all likelihood, will encompass the – it'll be a thicker route kind of upgrade, just like we've done with the MAX.

I mean, it will – the routes as they get thicker, will get into the 757 requirements. So there'll be a challenge to think about that end of the next decade, whenever it comes, think about how a product family could encompass that requirement. By then, I think our development program capability will be significantly improved in this company, so we'll be ready for that kind of a development.

And we will have flowed out the four airplanes we've been talking about now, and we'll still be in the process of harvesting those gains. But I think small – I think in the small airplane space.

Ray, do you have – would you put a spin on it?

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes
A

Well, I would do a little spin on that. I think it's about where you start and how you flow down. I mean, there's clearly a spot there between the MAX and the 787. How do you go into that? How do you – and that's where we're communicating. We want to make sure we understand the marketplace, where the market needs. How do you flow that back in? How do you then create a new family? But it depends on really where you start at that point.

Moon shots, I think where Jim was coming from on that was not necessarily that you would never do another new airplane. It's the fact that you don't take these massive technology jumps in one single fell swoop to create – you take a jump that you know you can deliver that you don't have to have multiple innovation processes going on at one particular point in time.

W. James McNerney
Chairman & Chief Executive Officer
A

And just reinforcing that point, so the key is we can still achieve these big value steps for our customers in terms of bringing operating value to the marketplace. But to the earlier point, reducing cycle time on development, right, allows us to turn technology more rapidly, inject it into our platforms in a risk-reduced way, being mindful about reuse, achieving the same end result but significantly derisking by reusing from other product lines.

So, these principles we're talking about on development programs, how we do them, you can achieve the effect of big operational value steps without having to consume a whole bunch of technology risk or supply chain risk. Also being mindful about what verticals are we going to rebuild, in some cases internally.

The fact that we're building a 777X composite wing in-house, that is another way to derisk our supply chain. Still achieve big step function performance, but take risk out of development. So that's how we look at this equation.

Troy J. Lahr
Vice President-Investor Relations
A

We'll go with Rob.

Q

So this is a high-level question, so Jim, I think it's for you. But you guys – taking everything into consideration that you've already talked about, you've got visibility into rate, revenue is priced, you've got all these initiatives, a lot of plans, and you're really in something of a super cycle here. But what goes up eventually comes down and there'll be a down cycle at some point. And while I know you don't plan rate decreases, from a high level, when you guys, the five of you, sit around and plan, I'm talking about the whole business, is there a year in the next half decade that looks like an average year, a mid-cycle year, and when would that be?

W. James McNerney
Chairman & Chief Executive Officer

A

Well, I'm going to throw this to Ray here in a second. Look, I mean, demand remains strong. We think we're very careful with our rate increases. I mean, I think sometimes you guys have the impression that we're chasing rate for rate's sake. We're going to be in an overbuilt position at some point in the not-too-distant future. And so if there is a plateau, there's going to be a WACC that we – and we are very, very careful about rate increases, which gives us the ability to adjust along the way if conditions change.

I don't think there's anything that we see based on what we can touch and feel today that says there's going to be a dramatic slowdown or plateau. I think there's a natural – this decade, we've gone from here to here. And then I think the growth from the end of this decade on out will be more in line with consumption by passengers on airplanes. In other words, more of the 5% to 7% as opposed to these – what is it, Ray, over the last eight years? You've gone up 50% at least.

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes

A

Yeah. But keep in mind this is one of the neat things about what I talked about in terms of our flow reduction, our space reduction, and the amount of hours. And we're doing all this in such – our cycles are so [indiscernible] (02:26:34) you can take these rates down, you can take them up and still maintain the kind of efficiencies that you're seeing with the higher rates.

So, yes, maybe – there may be a time when things start to – we just have to – but it's how you've set yourself up for that through all these different things associated – I mean, think about it. At 737 today, we're doing – we're going to go to 47, we're going to go to 52. And we're doing that in exactly the same footprint as we did when we were doing 21.

That's a huge statement in terms of efficiency. The same thing holds true on the 777. The same thing is going hold true on the 787 ultimately as well. So, you then have – you create a lot of flexibility to respond to the market in a way without throwing your cost line off and being able to maintain your margins. Your revenue line may change a bit, but the margin line won't.

Q

But in that context, do you think of any of these rates or any of these milestones as being a new normal?

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes

A

That'd be hard – I don't know...

Q

Or is this a perpetual growth market?

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes

A

Well, I mean, it may – you may see a plateau, you may drop a little bit, but I don't see a big – I don't see a huge – I don't see one of those huge, steep fall-offs, unless something that we don't have any control over happens, some 9/11 or something.

W. James McNerney
Chairman & Chief Executive Officer

A

I think a simple way to look at it is after 9/11, a low point, okay, a geopolitical event. Who knows if another one like that will come along any time soon? Hard to predict not, in our model, but from that point, a combination of catch-up orders and new technology, 787, and some other things, which really drove sort of a super cycle, faster than the growth in the marketplace.

And that's the 50% increase that Ray has dealt with over the last seven years. I think at that point, end of the decade, let's just pick that, then I think the growth in production will return to the growth in the market, which is characterized by two things. It's growth in seat mile consumption by consumers on airliners, that's about 5%; and then, replacements, which is about 40% of that number, which gives this business a nice lift over and above normal GDP growth.

And if there are no other events, I think that's the rate at which our production rates will be growing. And so, I think it's not a matter of predicting a dip. It's a matter of returning to production rate increases that are in line with demand. We've been a little ahead of that because there's been catch-up and massive replacement over the last – does that make sense?

Q

Yes.

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes

A

And our diversification of backlog is way beyond anything that we had experienced before. We are not concentrated heavily in any one particular spot. So, the ability to absorb a downturn in one area versus a downturn in another, I mean, it's much better than what we've had in the past.

W. James McNerney
Chairman & Chief Executive Officer

A

And will some big geopolitical event – could it happen? Yes. But will it dislodge us from a competitive position as we respond to it? No. Are we better able to absorb it? For all the points Ray made, yes. Will – in all likelihood, will growth return after a geopolitical event? History tells you, yes. And so, do you more or less want to own Boeing stock because there might be some geopolitical event? I would argue it doesn't – our competitive position doesn't change. Our ability to absorb is better. Growth will return. I mean, it's – no, I don't – since I can't control it, I don't if we'll rotate thinking about it.

Q

Fair enough.

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes

A

The thing that we control is how we set ourselves up for something like that.

Troy J. Lahr
Vice President-Investor Relations

A

Yeah. You got it. Carter?

Francis Carter Leake
BB&T Capital Markets

Q

Yeah. Greg, two questions for you. Sorry.

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

Yeah?

Francis Carter Leake
BB&T Capital Markets

Q

One on the 787 and your commentary there around the margins and the block extension. Do you see the potential for margin uplift on that program outside of the block extension over the next couple of years? And if so, what might drive that? And I guess conversely, is there risk to that associated with the lower euro and the unsold planes there? And then secondly, I wondered if you might just speak to the cadence of cash flow in the year and the second half waiting you've talked about and maybe give us some specifics on that.

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

Well, look, I mean, on 787, as Ray highlighted, that's the big focus on productivity. So, we have productivity initiatives in place year-over-year. And some of that will come through already contracted – supplier contracts that we have and then our own internal productivity, which – some of which Ray and Dennis highlighted.

So, obviously, internally, we've got an objective to continue to grow that margin. But I'd tell you, Carter, rather than on block extensions, things like that, the focus internally is unit by unit improvement, not relying on a block. It's unit by unit. That drives cash and that's the big focus area, so as every unit getting cheaper, better than the prior unit. And that's what the team is focused on.

I don't know, Ray, if you want to elaborate on 87, but...

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes A

I mean, that's exactly where our headset is obviously everyone.

W. James McNerney
Chairman & Chief Executive Officer A

Could I ask a question?

Troy J. Lahr
Vice President-Investor Relations A

Sure.

W. James McNerney
Chairman & Chief Executive Officer A

Chris, isn't Silicon Valley going to destroy your space business?

Christopher M. Chadwick
President and Chief Executive Officer-Boeing Defense, Space & Security A

No, actually, we view that as an opportunity.

W. James McNerney
Chairman & Chief Executive Officer A

Thought I'd throw it out there, guys.

Christopher M. Chadwick
President and Chief Executive Officer-Boeing Defense, Space & Security A

The – you look at Elon Musk and what he's doing. And he's brought some new energy in to the space business.

W. James McNerney
Chairman & Chief Executive Officer A

Or it's Craig.

Christopher M. Chadwick
President and Chief Executive Officer-Boeing Defense, Space & Security A

And we've competed head-to-head very successfully. You look at the last two-and-a-half years, rock solid in GMD, solid in launch, one SLS, one commercial crew, with very good contractual deals. We know more-for-less as the world is coming at us and we're going to get ahead of that.

Same time, we're going to leverage where we can the technology that's coming out of Apple, Google, Amazon, Facebook, and see how we can compete going forward. There's a lot of innovation inside of BDS. A lot of it is created by our engineers. We obviously borrow some from BCA and we're well positioned.

And you go back to the question you just asked, Rob, what's fascinating is over the last four years, the Defense budget is down 32% and BDS is growing and our margins are moving up. We're in a very good position as we head forward for whatever plays out from a technology, innovation, and a cost perspective to compete and grow.

W. James McNerney
Chairman & Chief Executive Officer

A

And I don't want to prejudge the political process. Lord knows the beaches are littered with people who do that, but I think there's more, as I walk around Washington with Tim Keating, there's probably more likelihood of some relief from that line – that Budget Control Act line getting some halfway in between that and the top of the green bar that it was the President's request.

I think I'm a little more hopeful as I talk to Congressmen and Senators that there's a gathering consensus to find some middle ground, sort of a – what did you call it, Tim, sort of a Murray...

Timothy John Keating
Senior Vice President-Government Operations

A

Ryan-Murray...

W. James McNerney
Chairman & Chief Executive Officer

A

Ryan-Murray 2.0 kind of a solution. So, I don't want to predict that because I don't know that it will happen. But there's – just my read of the sentiment is there's a little more likelihood as these guys are actually figuring out a way to compromise on a few things.

Christopher M. Chadwick
President and Chief Executive Officer-Boeing Defense, Space & Security

A

Yes, just one other thing. In Darryl's shop, we've got what we call Virtual World Center or Virtual Warfare Center. We know our customers better than anybody. And we're able to model and simulate any future war-fighting scenario with any weapon you can imagine, whether we own it or somebody else owns it or it's even been invented. And it gives us the competitive edge on where to invest and accelerate innovation. And it's happening.

Troy J. Lahr
Vice President-Investor Relations

A

How about we go to Sam.

Q

Sure. If I can just go I guess a little bit more short term, Greg, can you – there's been a lot of discussions about advances and just cash flow.

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

Yeah.

Q

Can you address some of the big moving pieces this year?

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

Sure.

Q

And then, also, even in this quarter, the stock price is below where you just bought a whole bunch at about $2.5 billion last quarter.

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

Yeah.

Q

Can you just talk about how you think about buyback in that scenario?

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

Well, like I said, the commitment to the buyback is unchanged. So, think about what we've done and I'd say think about it in the same way going forward. So, we'll certainly look for opportunities to capture more value in buying back shares.

I think as you think about the cash flow and advances, frankly, it's pretty straightforward. As you look at the production rate increases that are coming, and typically, our progress payments out of the commercial side. About 40% of that comes in-flow and about 18 to 24 months out from delivery, and then about 60% on delivery. So as you think about those rate increases that both Ray and I discussed, you'll see increase there in progress.

And obviously, you won't see the increase that you saw going from 15 rate breaks, but you'll still see increases there. You also obviously see increases on the delivery side, this 60% of that cash coming from deliveries and producing at those higher rates. Fundamentally, that's what you'll see on cash.

Certainly, 787 improvement this year in that both fundamentals on the 787 as far as cash breakeven sometime during this year have no change to those milestones. C-17s, we've talked about selling those and getting those firm under contract. And I think we're in good shape to get that done. But that's something we've got to get done, and continued productivity, and then delivering on the production rates and the delivery guidance that we provided.

Those are fundamentally the big drivers in the cash flow. Now, the headwind, cash taxes; as you get better on a unit basis on 787, we'll pay more cash taxes, more headwind there than obviously then we had last year. But the fundamentals are executing on those production rates and continuing the productivity on the baseline business but also again on 787, and then finalizing those [audio gap] (02:37:26-02:37:34) C-17 orders. Those are, I'd say, the big moving pieces throughout the year.

Troy J. Lahr
Vice President-Investor Relations

A

Jason?

Q

Yeah, this one is for – back here – for both Ray and/or Greg. On the 787 and the plan for the cost of producing the various aircraft, can you confirm that the plan is to get the 787-9 to a similar cost structure out the door of the 787-8 in that we're nearly there? And then, talk a little bit about what the plan is for the 787-10. You talked about 95% commonality. Is it right to think that the plane will cost 5%, 10% more than what it's going to cost to produce a 787-9?

And then, the second part of the question is the list prices and the differential that you see in the ASP, 787-8, 787-9, 787-10, is that a fair way to think about the differential that you actually are getting in your sales price?

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes

A

On the cost side, between the 787-8 and the 787-9, we are collapsing that cost very quickly to be very heavily in the 787-9 and the 787-8 be basically similar in cost. But the things that we put in place from a producibility standpoint on the 787-9 really paid off pretty significantly, and we're coming right down that curve. We had some disruption because of where we started. Then you come down. But we're getting right on top of that.

So, I think the progress that we've made associated with the 787-8 and the 787-9 cost is really good. Now, I wouldn't anticipate that that would be that much different. With respect to the 787-10, there's going to be some disruption. There always is as you're taking a flight test airplane through the system and those kinds of things. But I think it would get right back on that curve.

Probably a little bit faster because the commonality is so close. And there's not a lot of change back in the supply chain. And we got to think about that up into the supply chain, too. So I think in both cases, the costs are starting to collapse into the 787-8 zone for everybody.

From a pricing perspective, I mean, obviously the 787-9 brings a little more value because it has more seats, more range than the 787-8. So, we're going to price the value into the product. Similar story on the 787-10, although not as much range, but a significantly better [audio gap] (02:40:01) but we're going to monitor the market very, very closely.

It's still in a little bit of a recovery mode, but it's come back. We may not catch things right in the right time, but we've got a lot of things in work. So, it's just a matter of what do we see come home in that respect. But we took the rates to 1.3. We feel – the airplane – the program remains profitable, even at a one per month. So, I feel okay about the 747 right now.

Troy J. Lahr
Vice President-Investor Relations

A

George?

Q

Yeah, this is for Greg. A couple of follow-up questions on the cash flow. First one, pretty short term. Last year, the weakest cash flow quarter was the third quarter. This year, it certainly looks like it will be the first quarter. Would you validate that? And two, last year's fourth quarter generated two-thirds of the cash for the year. Is it going to be somewhat more even this year? And then, longer-term, one, it is...

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

Wait, I got to write these down or what's going on? Okay, I just have a hard time keeping up. Go ahead.

Q

Just a bit – and the last one is you generated almost $9 billion of operating cash last year and you had a $4 billion headwind from deferred. This year, you got a $2 billion headwind maybe. Next year, you'll have no headwind on it. So, cash flow in 2016 I would think should be dramatically better than what we've been seeing, unless you've got this big offset from cash taxes again.

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

Well, we do expect 2016to be better, as we talked about. There will be more cash taxes, but even netting that with the higher production rates and the productivity we've discussed, we do expect it to continue to grow into 2016 and beyond [audio gap] (02:41:49-02:42:20) on...

Q

Last year's cash flow, the weakest quarter was Q3. And I'm figuring this year was probably Q1.

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

You're right. Q1.

Q

Okay.

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

Yeah. It will continue to build and like I said, it will be back-loaded into the year, but a lot of that driven again on the cadence around these orders and these progress payments.

Q

And will Q4 this year be as big as last year? Where we...

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

I don't see that at this point, George.

Q

So we get a little more even this year?

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

I think so. Yeah, I think so. But like I said, it's actively managed day in and day out, core operating engine, as well as on, Chris, on ordered definitization, milestone payment, and PDP. So, we're working it hard. But you can't – like I said, quarter-by-quarter, very, very tough to model this company because of those – the significance of those moving pieces.

Q

Okay. That's it. Thanks.

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer

A

Okay. You're welcome.

Troy J. Lahr
Vice President-Investor Relations

A

Noah.

Q

Hey, guys. Jim, you mentioned the 5 and the 45 being traffic growth and 40 being the mix of deliveries for replacement.

W. James McNerney
Chairman & Chief Executive Officer

A

Yes.

Q

Is that what the production plan through the end of the decade needs to see to stay intact?

W. James McNerney
Chairman & Chief Executive Officer

A

Well, it's largely sold, okay, through the end of this decade. So for the final...

Q

Specifically that selling is – or whoever's bought has a similar assumption in their assumptions for why they're buying.

W. James McNerney
Chairman & Chief Executive Officer
A

Yeah, but I assume your question was trying to get at from where you're starting today as you sell things. If your order pattern reflects the 5 in the 40, will that fill out the balance of the decade and meet our expectations going forward? Is that the sense of your question?

Q

I guess, its less incremental orders and more – is that what you need to actually sustain the plan that's in place for production?

W. James McNerney
Chairman & Chief Executive Officer
A

Well, that can go up or down slightly and it wouldn't change the backlog we've got. Are you concerned that there may be some dramatic change in...

Gregory D. Smith
Executive Vice President-Business Development & Strategy and Chief Financial Officer
A

Yeah, how long do we keep this production...

Q

The question is – the response to Rob's question was you would need to see something pretty dramatic, a geopolitical event, a global recession, to need to change supply? I guess my question is if traffic – if 50 and 40 are the numbers...

W. James McNerney
Chairman & Chief Executive Officer
A

Yeah.

Q

If you had two or three years of 4%, 4.5%, which you wouldn't need a global recession to have...

W. James McNerney
Chairman & Chief Executive Officer
A

Shouldn't impact our production rates.

Q

Okay. So you guys would be able to absorb – or if replacement demand was – the retirements slow down...

Raymond L. Conner
Vice Chairman-The Boeing Company, President and CEO-Boeing Commercial Airplanes

A

The replacement demand was still pretty high. I mean, and it fluctuates between 40 and 50. I mean, it depends. And as airplanes get a little bit older, some of these, like I said, we got a whole bunch of airplanes that have not been – people have not made their decisions on yet. But they've got to replace. So – and there's going to be bigger replacement models in the U.S., in Europe, in some of these more established markets. And there's going to be bigger growth models in places like China. But also China, they're going to start going into a replacement cycle as well, and that's a pretty big fleet. So, it's going to fluctuate between 40, 50, just back and forth. But barring a big [audio gap] (02:45:46-02:45:53) event, I think we'll be in that range.

Q

Okay. Thanks.

Troy J. Lahr
Vice President-Investor Relations

A

Go ahead, Pete.

Q

I'll ask a Defense question, on tanker, I think this summer I think is the first flight of the militarized version. Just interested, how much of a de-risking factor will that be if you complete that? And what milestone is DoD looking to get in-house before they start releasing long leap funding for procurement to you guys for the 2017 build up?

Christopher M. Chadwick
President and Chief Executive Officer-Boeing Defense, Space & Security

A

We should fly the EMD1 bird here this quarter. We should fly the militarized version [audio gap] (02:46:35-02:46:49) end of summer second or third quarter. And we're already in the throes of beginning to look at long leap for LRIP to meet the 18 aircraft in 2017. And it's a single contract we're moving up on or moving forward on.

Q

You've already got cash payments from DoD for long leap?

Christopher M. Chadwick
President and Chief Executive Officer-Boeing Defense, Space & Security

A

We will as we hit these milestones and tests. I don't have the specifics on it, but we're pretty close to having funding to [audio gap] (02:47:18-02:47:27) start building the LRIP here.

Q

Is the fully militarized flight, is that the last major risk factor that we should think about or...

Christopher M. Chadwick
President and Chief Executive Officer-Boeing Defense, Space & Security

A

Well, I think as you enter test and evaluation, you always look for risks. We don't foresee any major risks as we enter test, but that's why we do it. Right now, things are moving very smartly towards EMD1 flight and EMD2 flight. And we're pretty confident moving forward.

Q

Okay. Thanks.

Dennis A. Muilenburg
Vice Chairman, President & Chief Operating Officer

A

And, Chris, you put a lot of things in place to mitigate the potential risks that would be associated with – but you wouldn't see a flight test.

Christopher M. Chadwick
President and Chief Executive Officer-Boeing Defense, Space & Security

A

Yeah, absolutely. We've got a fuel lab in place. We've got a lighting lab in place. We've moved the actual workflow from airplane to airplane to take advantage of lessons learned as we build the airplanes, working very closely with Ray's team. They're the experts in the commercial side. And so the BDS, BCA team are down on the floor together. Engineers, manufacturing, you can't tell the difference. It's really coming together nicely. The functional tests as we move through EMD2 is much better than on EMD1 a year ago. The customer's pretty happy right now. We just got to stay diligent and keep pushing this forward as we go.

Dennis A. Muilenburg
Vice Chairman, President & Chief Operating Officer

A

If you think about those big risk mitigation steps, as Ray and Chris said, so wrapping up functional tests on that first full-up tanker next month here, a big milestone, right. Getting into first flight, as Chris said, another big milestone. And then, during that initial flight test phase, we'll make contact with six airplanes that will refuel all the way from small to large.

That will happen over a multi-month test period. That will be the next big risk reduction. That basically completes the EMD program. We complete some ground testing in parallel. And then, we move into Low Rate Initial Production.

And we still see this as a huge long-term opportunity. I mean, initially, we're talking 179 aircraft for the U.S. Air Force. We know the worldwide fleet here is on the order of 400 to 500 aircraft that are KC-135 class. So, completing execution of the development program, now that we're in the homing-in part of the development program, getting to the finish line, getting it into production.

Ray's team is doing a great job of getting the 767 line ready in the Everett factory, already preparing the way for Low Rate Initial Production. We'll have the opportunity to hear – to build 400 to 500 of these aircraft over the next couple of decades. So, this is a long-term franchise opportunity.

Troy J. Lahr
Vice President-Investor Relations

A

Yes – actually, Ron, you've already – how about behind you, right there. And that will probably be the last one.

Q

Another question for Chris, I mean, on one of the second bullets on one of your slides was acquisition reform at DoD. We saw the GAO study come out earlier this year, same song. We've heard it sung before and there's a period that I seasonably watch this industry. What makes it different today other than the environment demands it? But are you seeing any tangible steps that really will make it different?

Christopher M. Chadwick
President and Chief Executive Officer-Boeing Defense, Space & Security

A

I think better buying power. 1.0, 2.0, 3.0., Secretary Kendall clearly understands what needs to be done and he's pushing his organization forward. We'll see if it plays out. I think having Ash Carter come back – Secretary Carter, who initiated a lot of these reforms in his previous life, before he left and came back. He's got a vested interest in it as well. And I think the fact that you have the budget pressures, DoD has got to reform. And he's laying out the path forward.

We haven't seen substantive steps yet that really make a difference. But we do see the language, the behavior. Correct, we've had a number of very senior level industry DoD discussions, not Last Supper-like, but very focused on substantive change as we go forward. So, we're talking about offset. We're talking about how do you reform the requirements process and freeze it, and how you move forward and succeed together.

Troy J. Lahr
Vice President-Investor Relations

Okay, I think with that, we'll wrap up the Q&A session. Just as a reminder, there's boxed lunches outside. Buses will be departing at 12:30 and 1:00 LaSalle Street. So with that, thank you again for attending the conference. Really appreciate it.

W. James McNerney
Chairman & Chief Executive Officer

Thank you.