Operator

Good day, ladies and gentlemen, and welcome to the Intel Corporation Q4 2017 Earnings Conference Call. At this time, all participants are in a listen-only mode. Later, we will conduct a question-and-answer session and instructions will be given at that time. [Operator Instructions] As a reminder, this conference call is being recorded.

I would now like to turn the conference over to Mark Henninger, Head of Investor Relations. Sir, you may begin.

Mark Henninger

Thank you, operator, and welcome everyone to Intel's fourth quarter 2017 earnings conference call. By now, you should have received a copy of our earnings release and the CFO earnings presentation, which replaces the CFO commentary that we previously used. If you've not received both documents, they're available on our Investor website, intc.com. The CFO earnings presentation is also available via the webcast window for those joining us online.

I'm joined today by Brian Krzanich, our CEO; and Bob Swan, our Chief Financial Officer. In a moment, we'll hear brief remarks from both of them followed by the Q&A.

Before we begin, let me remind everyone that today's discussion contains forward-looking statements based on the environment as we currently see it, and as such, does include risks and uncertainties. Please refer to our press release for more information on the specific risk factors that could cause actual results to differ materially.

A brief reminder that this quarter we have provided both GAAP and non-GAAP financial measures. Today, we will be speaking to the non-GAAP financial measures when describing our consolidated results. The CFO commentary and earnings release, available on intc.com, include the full GAAP and non-GAAP reconciliations.

With that, let me hand it over to Brian.

Brian Krzanich

Thanks Mark. 2017 was a record year for Intel and fourth quarter results were outstanding. Well ahead of the forecast we outlined in October, based on the strength on both our PC-centric and data-centric businesses. I will review our results with you in just a moment, but before I do that I would like to share a few words about security. We've been around the clock with

our customers and partners to address the security vulnerability know as Spectre and Meltdown. While we made progress, I'm acutely aware that we have more to do, we've committed to being transparent keeping our customers and owners appraised of our progress and through our actions, building trust.

Security is a top priority for Intel, foundational to our products and it's critical to the success of our data-centric strategy. Our near term focus is on delivering high quality mitigations to protect our customers infrastructure from these exploits. We're working to incorporate silicon-based changed to future products that will directly address the Spectre and Meltdown threats in hardware. And those products will begin appearing later this year.

However, these circumstances are highly dynamic and we updated our risk factors to reflect both the evolving nature of these specific threats and litigation as well as the security challenge more broadly. Security has always been a priority for us and these events reinforce our continuous mission to develop the world's most secured products. This will be an ongoing journey, but we're committed to the task and I'm confident we're up to the challenge. To keep you informed, we've created a dedicated website and we're approaching this work with customer first urgency. I've assigned some of the very best minds at Intel to work through this and we're making progress.

With that, let's turn to our 2017 and fourth quarter results. We just wrapped up the best year in Intel's history with the best quarter in Intel history. Revenue was up 4% year-over-year in the fourth quarter, 8% if you exclude McAfee, setting an all time record. Our data center, IoT and FPGA businesses each set revenue record. We meet or exceeded all of the financial commitments we made to you at the beginning of the year and our focus on efficiency and profitable growth produce significant leverage, driving non GAAP operating income up 21%.

Our data-centric businesses deliver the technology foundations for the newer data economy, making the analysis, storage and transfer of data possible, giving our customers the ability to turn data into amazing experiences and actionable insights. They are central to our strategy. Data-centric revenue excluding McAfee was up an impressive 21% over the fourth quarter of last year, and I would like to share a few highlights with you starting with DCG.

DCG's revenue was up 20% over the fourth quarter. The cloud segment was up 35%, comp service providers were up 16%, enterprise was up 11%, and our adjacency revenue was up 35%. We saw broad base demand strength with customer preference for high performance products driving richer ASP mix. Cloud segment results were driven by significant volume growth and continued customer preference for higher performance products. In the

comm service provider segment, we continue to take share and grow revenue as customers chose IA-based solutions to virtualize and transform their network.

Enterprise segment strength was driven mostly by ASP as customers transition to Xeon Scalable product in a seasonally strong fourth quarter, IT buy window. While we continue to see enterprise customers offload workloads to public clouds, we're also seeing those customers prioritize performance solutions for hybrid and on-premise build outs. Customers across all of our segments are accelerating deployment of the Xeon Scalable processors, which is ramping roughly in line with our historical Xeon transition.

We continue to demonstrate leadership and progress in artificial intelligence with the data center, for the edge and from 100s of watts to megawatts. Our software optimization for the Caffe framework has improved already strong Xeon Scalable ResNet-50 influenced performance by two times, just since the launch in July. The first generation Nervana Neural Network Processor ran on neural network less than two weeks after we received silicon and we've shipped our first customer unit.

At the edge, Google announced its AIY vision kit featuring our Movidius vision processing unit and Amazon announced the DeepLens, the world's first deep learning enabled video camera for developers, which uses an installed CPU, graphics and compute libraries for deep neural networks. We're also seeing design wins that combine technology from multiple data-centric business units, reinforcing the idea that we've developed a unique and differentiated collection of capabilities that can address customer challenges together more effectively than anyone business could alone.

A great example is Darvas' recent announcement of their deep sense product line, which combines core CPU, Intel FPGA-based network video recorders along with Movidius VPU-based cameras, enable people and automobile detection in smart city applications using artificial intelligence. In the Programmable Solutions Group, we saw strong double-digit growth in the data center, auto, embedded, and advanced product categories, as well as last time buys of legacy products. That strength was partially offset by softness in the comm's infrastructure.

In Q4, we launched the Intel FPGA SDK for OpenCL to dramatically increase productivity for our customers. We also delivered first-to-market leadership innovations in this Stratix 10 product line, including the first SoC FPGA with an armed processor at more than 1 million logic elements and the industry's first FPGA with integrated HBM2 memory. Our Internet of Things grew 21%, with continuing momentum in retail, video and in-vehicle infotainment

vertical. Wind River saw strong multiyear contractor growth and delivered its most profitable quarter ever for Intel.

Memory business grew 9% and achieved profitability in Q4, a strong client volume was partially offset by a one quarter qualification delay of a data center SSD volume. Last quarter, I shared with you that our leadership technology is resulting in strong customer interest in long-term supply arrangement. That interest has continued to grow. We have since signed additional agreement and now expect prepayments totaling roughly $2 billion over the course of 2018. Mobileye had another strong quarter and business momentum is growing. Our steady design winds over the course of 2017 and 15 new program launches in 2018 are both increases a 2.5 times over the prior period.

We now have level two plus and level three design wins with 11 automakers to collectively represent more than 50% of global vehicle production. These advance program launch over the next two year and they represent a major lead in functionality versus current semi-autonomous distance, and our significant step towards saleable level four and level five fully autonomous distance. We reached an important milestone in the fourth quarter, the announcement of our level through five autonomous driving platform based on EyeQ5 and Atom, which will sample over the next few months.

We believe this will be the most advanced, scalable and efficient platform of its kind. EyeQ5 will deliver 23 tera ops of deep learning performance and a 10 watt power envelops or about 2.5 times, the efficiency of the competition. Just a couple of weeks ago at CES, we announced that by in 2018, we expect 2 million EyeQ-equipped cars will be collecting crowd-sourced data for the REM, our road experience management mapping solution. The resulting map will first be utilized in level three getting in 2019. The ability to crowd-sourced data to build and rapidly update the procession match required for higher levels of automation is a major differentiator in our plan to build out the safest and most affordable autonomous vehicle system. It's also a great example of our data-centric strategy at work.

And finally, I would like to touch on our PC-centric businesses, the client computing group. Over the course of the year, the PC market improved our 14-nanometer manufacturing cost came down and the competitive environment intensified. Against our backdrop, DCG is focused on innovation and performance especially in growth segment by gaming two in one thin and notebook and enterprise, led to record core mix and record i7 volume in the fourth quarter. We also shift our first low volume 10-nanometers skew and our modem business grew 26% over the fourth quarter of last year.

Intel is undergoing one of the most significant transformation incorporate history. While the PC-centric company to a data-centric company. We've made thoughtful disciplined investment along the way that expanded our TAM to $260 billion. Those same investments have produced the collection of data-centric businesses that are unmatched, growing at double-digit rate and approaching 50% of the Company's revenue. Our opportunity is larger than it's ever been and we're hungry to compete and win.

In 2018, our highest priorities will be executing to our strategy and meeting the commitments we make to our owners and our customers. This concludes our commitment to restoring customer confidence in the security of their data. This year Intel will celebrate a half century of innovation that has profoundly changed the world. Over the last 50 years, we invented the architecture and manufacturing technologies that have made personal computing, the Internet and the cloud not only possible but pervasive. The journey hasn't been without challenges, nothing worth doing ever is.

Our culture has been forged through taking challenges head on and developing solutions our customers can count on. That includes working directly to address the Spectre and Meltdown security threats. We leave 2017 on a financial high note, but I am even more excited about what's to come about our strategy producing great products for our customers and great returns for our owners.

I see Intel innovation changing the world for another 50 years and that journey starts with 2018. Over the coming year, we'll bring amazing innovation and performance for the PC market against the state-of-art in the artificial intelligence, lead the way towards mass 5G deployment, launch the industry's first new memory architecture in two decades and take another step towards a safer world in which autonomous driving is a reality. Looking back on 2017, I could not be more proud of our team and all they have accomplished. As I look to our 50th year, I am more optimistic and confident than I've ever been about Intel's future.

And with that, let me hand it over to Bob.

Bob Swan

Thanks, Brian. The fourth quarter was an outstanding close to a record 2017 and we're building real momentum heading into 2018. Revenue for the quarter was $17.1 billion up 8% year-over-year. Operating income was $5.9 billion up 21% year-over-year and EPS of a $1.08 was up 37% year-over-year. From the capital allocation perspective, we redeemed $1.6 billion of 2,035 convertible debt, reducing our share count by 59 million shares, and repurchased 500 million of higher coupon debt and exchanged $1.8 billion

into 30 year debt at a 1% lower coupon rate. On tax reform, our Q4 GAAP earnings reflect a one-time tax impact of $5.4 billion, and our guidance reflects approximately 7 point improvement in our effective tax rate going forward.

To summarize, we had a fantastic quarter and year and are on track to exceed the three year targets we laid out at our Analyst Day, one full year ahead of schedule. Our Q4 results demonstrate a continued momentum in our transformation from a PC-centric to a data-centric company. Intel's data-centric businesses those outside of the PC segment are at an all-time high mix of 47% of our revenue, up from approximately 40% in 2012. We've made significant investments to expand our TAM and do new data rich markets like memory, programmable solutions and autonomous driving. These investments are just starting to pay off and will fuel Intel's growth going forward.

Our PC-centric business was down 2% in a declining PC market and it continuous to be a great source of profitability. DCG delivered its most profitable year since 2011 by focusing on premium and growth segments with industry leading products. This business generated the cash to fund Intel's investment in new data-centric growth. Moving to Q4 earnings, we generated significant EPS expansion in the quarter up 37% year-over-year. Our EPS improvement was driven by strong top line growth a five point improvement in operating margin and significant gains from our ICAP portfolio.

Our gross margins expanded two points in the quarter and outstanding is a percent of revenue declined by 3 points as we delivered 700 million more revenue and 300 million less spending. In terms of operating efficiency, we're well ahead of schedule of meeting our commitment by reducing spending to 30% by 2020. We now expect to achieve this goal no later than 2019. Total spending was down 6% year-over-year in the fourth quarter while we continue to investing in our key priorities including driving more to off forward, wining artificial intelligent and autonomous driving. R&D spending is a percent of revenue was down approximately 1 point and our SG&A cost was down over 2 points as we rationalize our marketing and sales programs and generate significant leverage in our SG&A functions.

Let met touch briefly on our segment performance. The Client Computing Group had another strong quarter. Revenue of $9 billion was down 2 points and operating margins were down 2 points. Operating margins were lower on 10-nanometer transition cost. We saw strength in the commercial gaming business and we believe the worldwide PC supply chain is operating at healthy level.

The Data Center Group had record revenue of $5.6 billion, up 20% year over year, and operating income of $3 billion grew 59%. Q4 operating margin was 54%. As Brian mentioned earlier, we had strong growth in execution across all segments. Overall, unit volume was up 10%, ASPs were up 8%, and our adjacencies grew 35%. Our ASP strength demonstrates the value customers see in our high performance products.

Xeon Scalable launched in July is ramping well with customer broadly deploying its leadership products family. Revenue scale from leadership products, ASP strength and the exclusion of 2016 one-time charges drove strong operating income growth for the business. For the full year, revenue was up 11% and operating margin came in at 44% both ahead of the expectations we provided at the beginning of the year.

The IoT, NSG, and PSG business segments are becoming a larger component of our overall business, collectively growing 19% year over year. Our Internet of Things business achieved record revenue of $879 million, growing 21% year over year, driven by strength in industrial and video and continued momentum in our retail business. Operating profit was $260 million, up 42% year over year. The Mobileye business also had a record quarter and we're on track to our deal thesis.

As we called out last quarter results for the Mobileye acquisition are included in our all other segment and reflects the Q4 integration of Intel autonomous driving group spending in the Mobileye. Our memory business had revenue of $889 million, up 9% year-over-year with strong demand for data center FFT solution and demand signals outpacing supply. This segment was profitable for the quarter and we expect this segment to be profitable for the full year of 2018. Programmable Solutions Group had record revenue of 568 million with 35% growth driven by strength in data center, automotive and embedded.

Operating profit was a $156 million, up 95% year-over-year. The Stratix 10 design win pipeline, which represents FPGAs largest ever doubled over the last year due to engagements in 5G, cloud computing and the infrastructure transition to network function for virtualization. We laid out our capital allocation priorities early in the year. Invest organically, expand acquisitively and return capital to our shareholders and do it wisely. In the year, we deliver on our promise.

First, we generated strong free cash flow at 10.3 billion in the year and returned 8.7 billion to shareholders through dividends of 5.1 billion and share repurchase of 3.6 billion. Second, we funded a majority of the Mobileye acquisition from the sale of non-core assets during the year including McAfee and the sale of ASML shares. And third, we redeemed 1.6

billion in convertible debt reducing 59 million shares, and we also tendered higher coupon debt for lower coupon debt.

Let me expand on the ICAP and treasury related transactions we executed in the quarter. First, we sold 11.4 million shares of our ASML Holding, which generated $2 billion in cash proceeds and again a $1.5 billion. Second, we redeemed our 2035 convertible debenture. This redemption created a 2.8 billion cash outflow in a non-cash loss of 385 million, which was tax decidable. Since this debenture was convertible and therefore dilutive, the redemption effectively acted as a buyback that will reduce diluted share count by 59 million shares. And third, we successfully tender 2.3 billion of high coupon debt in the quarter. We exchange 1.9 billion of all debt in the $2 billion of 30-year new debt, reducing our coupon rate by 1%.

We also redeemed 425 million of all debt for cash. This transaction both lowered our leverage and our interest expense. Adding in all up, 2017 was another record year for Intel revenue of 62.8 billion was up 9% year-over-year, driven by 16% growth in our data-centric business and 3% growth in PC-centric business. Operating income of 19.6 billion was up 18% on strong execution across the businesses and discipline spending. Earnings per share of $3.46 was up 26% on excellent operational performance and the benefit of $0.35 from ICAP net gain. With the change to the accounting rules for recognizing price changes on equity investments, we do not expect to see these ICAP gains repeat.

Before I turn to guidance let me provide a little more context on the impact of tax reform on our business. Intel's fourth quarter results reflect a higher GAAP income tax expense of 5.4 billion, as a result of U.S. corporate tax reform enacted in December. This includes a one-time required tax adjustment on previously untaxed foreign earnings able over eight years which was partially offset by the re-measurement of deferred income taxes to the new U.S. statutory tax rate.

Looking ahead, we expect the Tax Cuts and Jobs Act will help level the playing field for U.S. manufacturers like Intel that compete in today's global economy. We expect the 2018 tax rate of approximately 14% driven by lower U.S. statutory tax rate of 21% lower tax on foreign income benefits of U.S. exporters and the continuation of the R&D credit. The change in our tax rate drives approximately $0.28 in 2018 EPS. Intel has a rich history of investing the U.S. led research and development and U.S. manufacturing. This last year we committed to the setup of our fab 42 facility creating thousands of jobs at completion. These tax forms provide further incentive to continue investments like this.

Before we turn to our 2018 outlook, I also want to highlight two accounting rule changes. First, new accounting rules for revenue recognition; and second, accounting for equity gains and losses. We do not expect a material impact to revenue from the revenue recognition accounting change. The changes in accounting for equity gains and losses will require the recognition of unrealized price changes each quarter. The equity holdings like our ASML position will see mark-to-market adjustments that will flow through earnings in 2018, which may create greater volatility on a GAAP basis. This change resulted in an impact of 2.7 billion of net unrealized gain at year end that we booked to equity on January 1, 2018.

Now moving to the full-year, we are forecasting the midpoint of the revenue range at $65 billion up 4% year-over-year. We expect operating margin of approximately 30% with gross margins down 2 to 2.5 points and spending as a percent of revenue to be down 1 to 1.5 points. The decline in gross margin is driven by growth in our adjacent businesses as we play in an expanded TAM and transition costs associated with 10-nanometer, both partially offset by higher gross margins from our 14-nanometer products. We expect EPS of $3.55 up 14% excluding the ICAP net gains driven by a strong top line growth and a lower tax rate of approximately 14%, which will increase EPS by approximately $0.28.

We expect to net capital deployed at $12 billion. This reflects gross CapEx of 14 billion offset by approximately $2 billion of customer prepayments for memory supply agreement. Increasing CapEx reflects our and our customers confidence in our memory technology leadership. We expect free cash flow of $13 billion, an increase of approximately 30% directly contributing to our decision to raise our dividend by a full 10%.

As we look to the first quarter of 2018, we're forecasting the midpoint of revenue range at $15 billion up 5% year-over-year. We expect operating margin of approximately 27%, flat year-over-year with a 3 point decline in gross margin offset a 3 point decline in spending. We expect EPS of $0.70 up 11% excluding ICAP net gain from strong top line growth and a lower effective tax rate.

We believe 2018 will be another record year for Intel and we feel great about where we are entering year two of our three year transformation. We've met and exceeded our commitments. Our PC-centric team continues to operate very well in a down market, and our data-centric businesses are up double-digits collectively as we continue to transform the Company to power the cloud and smart connected devices.

With that, let me turn it back to Mark.

Mark Henninger

Alright, thank you Brian and Bob. Moving on now to the Q&A as is our normal practice, we would ask each participant to ask one question and just one follow-up, if you have one. Operator, please go ahead and introduce our first questioner.

Question-and-Answer Session

Operator

Our first question comes from the line of John Pitzer from Credit Suisse. Your line is now open.

John Pitzer

My first question just revolves around the revenue guidance for the March quarter at the midpoint down about 12% sequentially is a lot worse than I guess normal season, and I guess I am trying to figure out kind of the parameters that you guys are using to come up with that number. Was there something in the DCG strength in the calendar first quarter that you don't think is repeatable given your comments around the PC supply chain being healthy, that to me feels a little bit more seasonal than not in the March quarter? So I am just kind of curious as to why the Q1 revenue would be so much below, what is being kind of the five year medium seasonality for Q1?

Bob Swan

John, thanks, it's Bob. So really two things going on, one, the enterprise growth in DCG as Brian highlighted, it was up 11% in the fourth quarter. So extremely strong seasonal growth for enterprise, a little bit -- more than we expected frankly, that's number one. Number two, PSG 35% growth was helped by end of life sales during the course of the quarter. And if you adjust for maybe a more normalized enterprise growth and PSG growth, you get to more of a seasonal Q4, Q1 dynamic, so in line with seasonal if you make those two adjustments.

John Pitzer

And then Brian on my second question revolves around CapEx, I think it was a year ago on this conference call that you kind of mentioned that you thought that calendar year '17 and calendar year '18 would be sort of above churn line CapEx spending for you guys and then you thought it would come down again in calendar year '19 to a more normal trend albeit you didn't quantify the trend. Just given the big uptick in '18 the 14 billion, I realized two of that’s already being covered by prepayments. But how do we think

about kind of the trend line CapEx from here especially in light of the changing relationship between yourself and Micron on INFT?

Brian Krzanich

So you know my prospective is, if you take a look at right memory kind of logic on our CapEx scaled with our increase in revenue and kind of our overall growth rate. So that's felt in line. With memory, we're going to take a look at it, really on a year by year basis, and I would tell you that Bob's is really doing a good job of helping their business unit, look over the capital. And when we have demand enough and people are willing to pay upfront to that demand and reserve the capacity like we done this year, we're going to go head and put that capacity in place plus what we think what Mark and we can do as distributing across overall market.

And that's really independent of that changing relationship with Micron, that's really more about how we're doing development work in time, really that's actually there are two generations away that been really effect 2018. This was really about what we saw for the overall main memory market plus the additional capital and capacity that people wanted to reserve through that process. We will look at that each year John and say, okay as we look out into '19 at the end of '18 will be that same analysis.

John Pitzer

Thank you for that evaluation, Brian.

Bob Swan

I would just -- sorry, just follow on to Brian's comment. In the way we're looking at memory and we talked a bit about this on the last call is increased confidence in our customers and the technologies that we're developing where those relationship, they will help fund the scaling of the capacity to grow the business and we're really trying to match net capital employee to be in conjunction with known customer demand. So what that means -- what that meant for 2017 as the net capital was roughly $1.5 billion. We held that relatively flat in 2018, so our growth capital is higher.

We have more conviction in the customer base to fund $2 billion of the growth capital. So memory, we're really trying to focus on customer adoption of our technology to effectively and efficiently scale the business. And then just the only other point that make logic and remember year ago in terms of our outlook for growth we're well ahead of our outlook for growth. We're probably have the time, implied in our outlook was probably 62.2 billion kind of number in 2018. Obviously, with our guide now 65 billion were 2.5 billion higher and if that incremental growth that's placing similar

demand for our logic, logic capacity both for 14, 10-nanometer and as we take forward about 7-nanometer.

Operator

Thank you. Our next question comes from Joe Moore from Morgan Stanley. Your line is open.

Joe Moore

I wonder if you could talk about OpEx obviously you've been pretty discipline there bringing that down, but you've also got some other initiatives you announced to discrete graphics effort, maybe if you talk about -- it seems like we costs a lot, if I just look at what your competitors are spending? And then, at some point you're going to spend money on NAND that used to be shared with Micron. So just, can you talk about the puts and takes are? And is there something we should think about this coming down to sort of offset those potential increases?

Brian Krzanich

Sure. I'll start and I'll let Bob to kind of give you there under the cover detail of dollars. But Joe, this really, we've already factor all of those things in so things like the discrete graphics is a ramping spend. The memory R&D spending out in time, so for '18 has no really effect. And then we've given an overall efficiency and all of our R&D spending to offset that. So increasing in GPU spending, there are some other increases as well around things like autonomous driving and some of the other artificial intelligence in some of the emerging areas.

You're right, overtime will increase spending in NAND in R&D, but those are being offset by efficiencies that were driving into the rest of our product R&D. And we really feel like we're getting good play where we can keep the place of innovation going on our core products, while we fund these new initiatives as well and not to compete from our continued efficiency efforts across spending as a percent of revenue.

Bob Swan

Joe, I'll just add some numbers to Brian's word. We've kind of come down from 36% to 35% to 34% to a second half of 2017 at roughly 31% of revenue. So we've been coming down as we've been doing two things. One, the investment that we've been making our paying off in terms of higher growth; and number two, we're making real trade-offs in where we're investing our money. As we go into implied in our guidance as we go

into ’18, we’re expecting our spending level to be roughly flat with an annualized 2017 spending level.

So, we’re going to -- and underneath that, continuing to drive efficiencies and sales and marketing, as we become more of a B2B or data-centric company and getting real leverage on our G&A functions across the board. So, we’ve made real progress during the course for the last couple of years. Including the second half, we expect to make continued progress while making the critical investments and things like discrete graphic, autonomous driving, artificial intelligence and continuing to invest in Moore's Law.

Joe Moore

AND as you think about that NAND investment, I guess people have asked me, what your -- what the separation from Micron on the long-term path means? Is that you know sort of more of a focus on proprietary products like 3D XPoint? Or do you from fully committed to sort of more competitive NAND to your more competitive market?

Brian Krzanich

So, sort to make sure you -- we clarify a little bit, Joe. The separation of development work is -- again out in time think of it in 2020 timeframe is when real independences come and its NAND specific. So, we continue to work together on to the plus point. So and this is really just, it’s not a separation of the Company or something about the relationship. The relationship with Micron continues to be a good one. And I foresee it will continue to be good one in the future as well. This is about direction of where we are going to take our products and we have talked about our aggregate data center-centric and really tie a performance and allaying to the customer market that we are really looking at. And so, the spending in R&D we are talking about right now is really a NAND specific, 3D XPoint continues to be a joint effort.

Operator

Thank you. Our next question comes from Ambrish Srivastava with BMO Capital Markets. Your line is now open.

Ambrish Srivastava

I wanted to go back to DCG specifically on the up margin front. We have not seen the high handle if my model is correct, it's been eight plus quarters. So, can you please speak to the sustainability of the up margin? And kind of what were the drivers that got you to that level? And then I have a follow-up for these things.

Bob Swan

Yes, so we came into the year and we indicated that we expected margins for the full-year to be in the 40% to 45%, and obviously, we started out low but we said our expectations were that we grow throughout to the course of year. A couple of things in the fourth quarter, obviously, you know growth. So we'll build leverage on our existing investment was a big contributor.

Secondly, ASPs were up 8% so of the 20% growth ASPs accounted for 8 point to that. And as Brian highlighted, whether its cloud comps or enterprise, customers in the quarter will really paying for performance and that performance for us was higher ASPs.

Third, continued progress on unit costs. And then last you may remember last year's fourth quarter, we had some warrantee and IP-related charges in that data center business that I think cost was roughly 4 points year ago. So last year's, we're little deflated. But good volume leverage, strong ASPs as customers paid for performance and unit cost improving.

Ambrish Srivastava

So we should expect this level going forward Bob?

Bob Swan

Yes, I think I wouldn't get too far away from the 40 to 45 to be honest with you. I think as we go into 2018, we think good cloud momentum that’s been consistent performance over the course of the year or last couple of years. Comms, our performance we believe it was real strong in a somewhat sluggish market so real share gains. But the high kind of seasonal enterprise growth and strong ASPs in the quarter, we think are more seasonal in nature and we are not anticipating enterprise growth to stay at these levels as we go into '18.

Ambrish Srivastava

And then from my follow-up on the gross margin for next year, you provided the sort of qualitatively the adjacencies as well as the cost impact from the 10 RAM. But A, I was surprised you didn't mention competition because now AMD will have a full year of a product in an area they never were for -- I shouldn’t say never, they were not in an area for a long time. So, question is, are you seeing any competition? Are you factoring that in? And then B, would it be possible to quantify the two impacts that you've mentioned?

Bob Swan

Yes, it's just -- I'd highlight three things that are driving the deterioration that I'd start first with -- we've always characterized our long-term gross margins to be in the 55% to 65% range, and for the last several years and including in our guidance this year will be at the upper end of that 60% to 65% range. But for the last couple of years that we've had maturity of 14-nanometer and that maturity both in terms of getting more and more performance and lower and lower unit costs, has been contributors to gross margin.

As we go into '18, we see 14-nanometer modest contributions from profitability because we've matured on the cost curve, that's an increasingly competitive environment, and we don't anticipate dramatic ASP improvements over the entire company, some cases yes, but for the most part, no. So, we'll see some continued improvement in 14-nanometer products during the course of the year.

Secondly we're really accelerating the growth of our adjacent businesses, the investments that we've been making in both the data-centric businesses and our growth in modem. Those are contributing to our year-on-year EPS growth; however, those both of those product lines of businesses have lower margin. So our success in modem and memory is having a mixed impact on our gross margins.

The third area is we're going from 10-nanometer startup where costs are coming down to more the ramp to the 10-nanometer and that ramp is going to weigh on the margins, as we begin to develop production going into the second half of the year where we're way up the curve where our yields and costs are. So, those are kind of the three things as we see it. If I were to characterize roughly plus one, roughly minus two, roughly minus one, rounding those.

Brian Krzanich

I understand your question about specifically around competition. I think every year we look at it as the competitive environment, and we're out to compete for our customers. And so we factor that in each year appropriately I think against the competition. So we look at the competitive environment and we believe Xeon Scalable, great performance that has, our overall product roadmap, we think we have a highly competitive roadmap and have adjusted for that in our forecast.

Operator

Thank you. Our next question comes from Stacy Rasgon from Bernstein. Your line is now open.

Stacy Rasgon

Firstly, can you walk us through your free cash flow waterfall? I can't get your flattish operating income on 4% revenue growth. It was a couple of billion dollar ICAP gains, CapEx I guess maybe flattish with some memory payments. Taxes maybe get to me a third to half of the way there, but where does the rest of the free cash flow comes from? Are you just draining the kind of working capital or what? Can you walk us through?

Bob Swan

Yes, first $13 billion free cash flow, up roughly 30% year-over-year, first higher cash earnings. Our guide has EPS of up roughly 14% in that guide there is depreciation has grown in '18 relative to 2017. So that has just higher cash earnings. Secondly, we do expect lower working capital as we go through 2018. And third, we have higher strategic customer supply agreement and those three things were all contributed positive. And then obviously, Stacy, the higher growth capital is a bit of an offset; so longer cash earning, better working capital, more strategic supply partially offset by higher CapEx.

Stacy Rasgon

Okay, so my follow-up, I want to ask about that gross next year of your kind of adjacent businesses versus your core businesses. Of that 65 billion of that 4%, can you give us a feeling how much of that is coming from adjacent, I guess mostly memory in modems versus the core must be the decent given the gross margin pressures? And I guess as a corollary to that you mentioned a one delay -- one quarter delay in data center memories, was statement in XPoint?

Brian Krzanich

No, that was a NAND out start with just answer to that question, Stacy. That was 3D NAND SSD we -- has been delayed in the fourth quarter and those are being addressed now. So, that was that comment.

Stacy Rasgon

And growth on -- sorry, go ahead.

Bob Swan

I think on your first question. In the 65 billion, we characterize it as roughly low single digit decline in our PC-centric businesses. So implied to that is, PC may be decline a little bit more and modem adjacency within the CCG

segment partially offsetting that. In the overall guide, we said that the data-centric businesses would be growing in the mid teens, obviously that we believe that would be a strongest segment within the makeup of our data-centric business will be in memory. There would be the function of customer calls that Brian just highlighted, and we expect NSG growth to accelerate throughout the course of 2018. Those single digits decline on PC-centric and mid team growth on data-centric businesses.

Stacy Rasgon

So, what is the memory strength implies for the data and the growth of the DCG growth, unprecedentedly given the strong performance in Q4?

Bob Swan

For the most part, the wins for NSG that will go through date center will be late in 2018 and won't really have an impact on the overall growth rate of that business. So it's primarily about growth of 3D NAND during the course of the year.

Operator

Thank you. Our next question comes from C.J. Muse from Evercore. Your line is open.

C.J. Muse

I guess couple of housekeeping questions, if I could kind of put them together. Curious, if you could share with us, how are you thinking about CapEx spend between logic and memory? And then on the 10-nanometer start-up, can you share with us when you're expecting to begin depreciating those costs?

Bob Swan

First, on the CapEx, we indicated the gross capital in the year of 14 billion that we've got customer strategic supply agreements of roughly 2 billion. So our net capital is $12 billion in the year. Again, I've kind of break that into two pieces; memory, net capital employee no change and logic CapEx up roughly a $1 billion year-on-year. And as we mentioned earlier that $1 billion is a function of primary growth continuing to grow 14-nanometer. Second, scaling up 10-nanometer. And third, investing in next node 7-nanometer during the course of the year. So, those three things are really driving the $1 billion increase in CapEx for logic.

The second part of your question -- so for 10-nanometer, as we bring that equipment online, we turn on. There is some equipment now that being depreciated, but as we bill bring online as we ramp in the second half of the year when we turn that equipment on is when we start depreciating. So we'd expect our depreciation bill in second half for the year to be growing. And that's one of the contributors to -- really to come full circle. That's one of the contributors to the gross margin deterioration during the course of the year, as we start to ramp 10-nanometer.

Operator

Thank you. Our next question comes from Vivek Arya from Bank of America. Your line is now open.

Vivek Arya

For first one, Brian, I'm curious. Are you baking in any effect on sales of cost of pricing for many resolution on the processor security issues? There is one line of thinking that says, customers might decelerate their purchase, and then you have others industry saying that customers might accelerate that purchase later on. So I'm just curious how you're looking at the financial implications positive or negative from this issue near-term and longer term?

Brian Krzanich

Sure, so we try and kind of break it into two kind of answers for that Vivek. From a cost standpoint, we've baked in and we've talked about that we don't expect any material impact of this security exploit on our spending or product cost or any of that. So that's how we baked that in. From a fourth half standpoint, we actually made our forecast and we've checked it as we go through this the first two weeks here of the year against our prior forecast to make sure that the forecasting incorporated any changes or any signs we're seeing up or down.

And I would tell you at the highest level, we are not seeing much of the change in those forecasts as a result of that the flow. I'd tell you it's pretty balanced right now, so spending not materials and didn't make any add there and then our forecast we had a forecast we checked in as we go through the first few weeks of the year and it hasn't really changed that all as we looked at it.

The only other think I'd add for Brian's comment earlier, we kind of go into the year realizing that it's an increasingly competitive environment and our focus is on right now continuing to bring the best highest performance products to market, but also to lots of time and energy spend on focusing on

fixing those issue, primarily through software patches as opposed to short-term hardware things.

Vivek Arya

And as my follow-up. For the full-year, how should we think about a growth in just the DCG business? I understand you gave some color around the entire data centric group which includes memory than other segments, but just sort of apples-to-apples how should we think about growth in just DCG that had a very strong double-digit growth here in '17?

Brian Krzanich

Throughout the course of the year, we -- sorry, throughout the course of '17, we kind of guided high single-digits; and we kind of executed to that throughout. And then Q4 wasn't dramatically different than the first three quarters of the year really with the exception of the high seasonal spend for enterprise. And that really took us from a high-single digit to low double-digit or 11% growth for the year. As we go into '18, we do not expect that. We think that in the enterprise space, things will go back down to the negative single-digits range and therefore don't anticipate a dramatic difference in the how we laid out DCG a year-ago. So that's how we are thinking about it.

If I maybe elevate that back up a little bit and just think about when we are putting together our plans for the year, there is two areas where our tendency is to be a little cautious on the outlook. One is PC TAM, we tend to be a little more cautious on PC TAM, and we tend to be a little more cautious as we think about enterprise growth in the DCT business. And the reason we do that as we think it's important to be cautious get our cost in line, and if our assumptions on market rates to growth turn out to be conservative, we will benefit from -- we believe we benefit from higher volume and real strong flow through to net income. That's how we plan the year covenant to 2017 and we did kind of the same thing for 2018.

So I don't anticipate dramatically different DCG growth and how we led out 2017 as we enter 2018 because we really haven't assume a change in trajectory of enterprise CIO spending in the course of the year.

Operator

Thank you. Yes, our last question comes from Blayne Curtis from Barclays. Your line is now open.

Blayne Curtis

Just wanted to go back to the DCG ASPs. You were talking about the ramp of scalable being kind of to plan, but then I think you got a nice tailwind and I think you implied enterprise at a higher percent of scalable. So just wanted to give us talk on broad strokes just where the scalable ramp is here? And how your expectations kind of getting through the year where that could go?

Brian Krzanich

So I'll start and Bob can add some number detail in all. The Xeon Scalable ramp is right in line with prior ramps of similar products on our DCG roadmap. And what you saw when you talked about Q4 was not necessarily more Xeon Scalable, but people buying up the stock on Xeon Scalable which drove the ASP. So, they're buying a higher performance, higher priced part, and that's not uncommon when the early stages of the ramp. People come in and they typically want to buy the highest performance parts at the beginning. And then they fill out their distribution as other buyers come in and other parts in the market kind of opened up. So, ramps on schedule and aligned with high ramps and the ASP was more about SKU, they're buying up on higher performance parts than necessarily a volume statement.

Blayne Curtis

And then I also want to go back on just -- I just want to also go back on gross margin as well as you look for March that you mentioned, the drop is from adjacent businesses as well 10-nanometer. Obviously, memory you're signaling a big ramp and it doesn't move out fully. I just wonder, Bob, if you just walk through the 10-nanometer startup costs as they kind of move through the year and kind of picking our line between those two in Q1, what's the bigger factor?

Brian Krzanich

So, actually the mix dynamics are going to be a bigger factor overall for the year both in Q1 and for the rest of the year as our memory and modem business continue to accelerate strong growth. So that's going to be the biggest impact. I think 10-nanometer will have an impact just right off the gate and will kind of continue throughout the year, as we scale volume, but also need to improve yields during the course of the year. So hopefully that's helpful.