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CERN - Cerner Corp 2018 Investment Community Meeting

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PRESENTATION

Marc G. Naughton - *Cerner Corporation - Executive VP & CFO*

Just want to let you know that for all of you that are probably wondering, so this seemed like a really nice place to have a Cerner investor meeting. This is actually a HIMSS room that was set up for a prior meeting yesterday. My set-up costs to Cerner was 0 for this room. So it cost me less than I paid last year for the room. And it might even be a little less than Harrah's way back in the good old days. So enjoy the ambiance. You probably won't see it again.

So once again, welcome. This morning, I was doing my 5 a.m. power walk because I tend to do it through the canals, shops of the Venetian, getting my heart rate up, listening to Eye of the Tiger on the piped-in music, walking on recreated cobblestones in the street in the heart of Venice, past the indoor gondola ride, and I was really struck by how familiar and similar Las Vegas is to Disney. The carefully crafted artificial environment, the high costs, the costumed cast members. Of course, there are some differences. Instead of teacup rides and a It's a Small World soundtrack at Disney, Vegas has craps and hookers. But basically the same.

Speaking of hookers, I heard this morning that this year at HIMSS represents the first time ever that investment bankers have outnumbered prostitutes in the city, and that's pretty amazing. And actually, I should probably apologize for comparing bankers to prostitutes. After all, that's really unfair to the prostitutes.

With that, let me get started.

Hey, you guys expect from me to say some joke. I can't -- they can't all be winners. So clearly, right.

All right. This is the agenda. We have a very packed agenda today. I'll start off with a financial overview. Mike Nill will do Cerner's imperatives. Marketplace will be Zane Burke, and John Peterzalek will give us a global update. Federal business, Travis Dalton will be here. The -- for revenue cycle, Jeff Hurst and Bill Wing from Adventist Health will talk to us. Population health, Ryan Hamilton and Don Trigg will visit us. And we'll have closing comments from Brent Shafer.

And just for our technical guys, the monitors are going in and out over and over and over. So just so you know.

This is our forward-looking statement. You feel free to go to our website and read it at your heart's content.

This is the first -- give you -- most of you, I think, in the room I know so this is much more of a background for those who might not know us as well. Clearly, a large employer -- largest company focused purely on IT. We have clients in over 3 -- 30 countries. We'll talk about that a little bit more. History of organic growth, $700 million annual investment. A large IP organization. Lots of clinicians included in that. Focus on creating and delivering new patents. We use those not only to drive a small amount of revenue but also protect us against others that have patents. And we have a diversified, highly recurring revenue stream. Clinical and revenue cycle solutions across the board, cloud platform, license, SaaS, all sorts of different options that the company puts out.

The monitors keep going on and off. It's getting really hard to present. So I will use the other screens.

These are financial highlights. The -- clearly for the year, bookings was a standout. 16% increase in bookings, certainly one of the best years we've ever had in bookings in -- from a total gross number, a clear record. Good revenue growth and, obviously, good increase in our backlog.

Bottom line did not grow as much certainly from adjusted earnings perspective. But the balance sheet and cash flow finished very strong. Certainly, cash and investments now almost are over $1 billion, and so that's very strong.

Operating free cash flow continues to be strong, and I'll talk a little bit more about that as we continue on.

This is the Cerner business model. We usually give an update on this every year and basically kind of takes us from the sales pipeline through the income statements and down to operating margins. So let me give you a kind of a quick update as to where we landed for 2017 and give you some of the highlights relative to comparison to 2016.

So on the revenue license side -- for licensed software, revenue was up 11% year-over-year. 35% of that total was SaaS-based, so that's impressive and we're excited about that and the visibility that, that brings with it.

Technology reseller revenue was relatively flat year-over-year. There was a higher mix of hardware and lower-margin device business, so that contribution margin went down slightly from a 20% to 16%.

If you look at subscriptions, that revenue was up 6%, so a good contribution from that. Contribution margin stayed in about the low 60s range, so that was all positive.

When we get out of the system sales line and go down to the services elements, professional services was up 10% while still maintaining a 28% contribution margin; managed services was up 7%. Contribution margin up slightly in that business, so that continues to be impressive for a business that's focused on hosting and assisting our clients in running their solutions. Support and maintenance was up 3%. That's about normal for that large bucket of recurring revenue. Contribution margin remained flat at a strong 75%.

So as you go down to the expense line, R&D as a percent of revenue stayed about 11%, flat year-over-year. SG&A at 15% kind of rounds up from the 14% last year. My expectation is that that's not going to -- you're not going to see increases in that going forward. That was more -- probably a little bit of classification adjustments as we go through -- forward. But I think overall, that's definitely a positive relative to -- from an ability to get leverage from that. We do not expect those areas to grow nearly as much as revenues as we go forward. And I'll talk a little bit in the future about some of our differences, our ability to drive operating margins as we drive forward.

From a long-term growth -- this is an update of our 10-year model -- not significantly different from what you've seen before. So just some slight adjustments. We're targeting 7% to 12% long-term growth through 2020 -- from '17 through '25. That's up slightly from a prior range of 7% to 11%. The 9.5% CAGR is the midpoint of that guidance. Certainly, the near-term growth comes from EHR replacement, VA, RevWorks and ITWorks. All of those are driving in that medium term that revenue top line. And then population health clearly is a growth driver as we get to '20 and go to 2025, and you can kind of see from the bars, obviously, in the right side that you all are familiar with.

The -- one of the key things to note, that was the core that shows a growth in this slide. I think that VA reflects a slightly higher expectation for core growth as that contract will grow over time and basically offset any flattening that you might expect as that EHR market continues to mature over that time. So that is actually a great bridge for us as we work our way to 2025.

Just some of the observations and assumptions as you look at kind of what are the markets that we look at as we -- for that 2025 time frame. I mean, the addressable market, global -- we think -- so about $63 billion of non-U. S. opportunities, much less penetrated than the U.S. And we've got the broadest presence, as John will talk about in his presentation, of any company.

Population health, we've seen good early success establishing footprints in both fee-for-service opportunities and our at-risk models. So those 2 are working both off those environments. Average PMPM today is still less than $1, but we expect to grow as people adopt more of the modules and services that we're offering under that platform.

The 2025 targets that we show here can be achieved basically with growth in the PMPM in the $2 to $3 range. And certainly, internally, our expectations are that, that number in total for 2025 is pretty conservative.

Revenue cycle, software and services, that's a $90 billion market. I mean -- and that is one that is just starting to come to fruition. Certainly, Jeff Hurst and Bill Wing will talk a little bit more about that opportunity as we go forward in the presentation.

And then ITWorks. Certainly, we should target that number. Shows about 40 new clients by 2025 in addition to the existing 31. We think that's a pretty reasonable growth rate. And as we look at the pipeline, the average size of our clients in that pipeline is a bigger number. So the ability to get to that revenue line doesn't require as many clients to be signed as it probably did in prior versions.

And certainly, core is everything that's not in one of the other bars. Represents EHR replacement, federal government, device resale. And the list is in front of you there. So lots of different things that go in that market. But once again, because some of the opportunities that are in front of us is in the medium term, we feel pretty good at actually being able to grow that number through 2025.

One of the questions I get a lot and makes a lot of sense is, talk -- let's talk about operating margins. So as we go out and look at that 2025 model and try to look at the opportunity to enhance our overall operating margins, in the past we probably talked about a 50 to 100 basis point growth, with about half of that coming from growth in the contribution margin level and half of that coming from exposed -- being able to leverage the expense side of the equation. As we get to -- as we kind of look at this -- at the 2018 -- 2019 starting ramping up, the 2018, we -- adjusted operating margin probably drop a little bit below 21%, as we've talked about, based on our guidance due to Works mix and investments we're making this year. In '19 and '20, the impact of the Works business begins to be offset by R&D and SG&A leverage. So we're starting to get some of that spending leverage as we get into that time period. And in 2020-plus, basically population health growth starts kicking in and starts stabilizing and balancing the overall contribution margin.

So if you look at the graph, the graph kind of keeps contribution margins right around that 47%, 47.5% range. So you're not going to -- our expectation is as the mix continues to be a Works, pop health, software mix, that the contribution margins aren't going to vary a whole lot. But as that revenue continues to grow, the percent of that -- of our other -- of spend from R&D and SG&A that's not already included in those contribution margin calculations as a percent of that revenue is going to decline. And that decline is certainly what we see as driving 30 to 60 basis points. So there is still opportunity in this margin, not even assuming any upside on the -- from a contribution margin perspective.

And this graph doesn't mean that we're going to cut R&D spending. This represents, even as it's a smaller percent, that you were spending about $1.1 billion on R&D as we get to 2025.

We talk a lot about how recurring and visible our number is. 88% of 2017 revenue was highly visible, up from 86% in 2016. I think as we move forward and we go into '18 and actually -- and we continue off -- go through -- I'll -- we'll talk a little bit more about how that visibility increases as we go through time.

On this graph, the little -- the chart on the right kind of shows you by the different business models the percent of those with -- relative to the total revenue contribution and kind of shows you the elements that we regard as recurring and visible -- recurring or highly visible such as support and maintenance services, managed services, subscriptions and with software and technology primarily being the onetime elements, although, once again, SaaS being such a high percent. With 35% being SaaS-based, that now license is becoming part of that recurring visibility.

So if we look at trends over time as we kind of look out to our 2025, the size of the circles expands as the amount of the revenue grows. You can see that we kind of go from 2017, where we've got recurring and highly visible about 88%. You move on to the next one; it's about 89% in 2020. And by the time it gets to 2025, it's going to be 90%-plus. So for me, the exciting part of the business is as we continue to grow and we have lots of opportunities to grow that top line at 9.5% CAGR, we still got a lot of opportunities to go get even more visibility to that larger revenue number.

Contribution margin visibility is similar to that. So I think as you look in 2025, it's, once again, plus 90% relative to where the contribution margin is coming from. So once again, another positive trend relative to the option -- to the margin expansion.

And finally, I'll close on this cash flow and balance sheet slide.

Cash flow has certainly been strong. We expect an increase in CapEx in 2018 for an expansion of a campus, but that should be offset by operating cash flow. Total CapEx as a percent of revenue peaked in '16 about 16%; should remain about 14% or below going forward. Free cash flow as a percentage of GAAP net income should be 80% to 95% over the next 7 years -- next several years. And then you see stabilizing CapEx combined with increasing revenue, the recurring revenue, expected margin expansion should position us to be generating some strong free cash flows going forward.

Balance sheet, as I said, $1 billion in cash, $500 million in debt. We use cash to repurchase equity. Obviously, our initial minimum view is we want to repurchase shares that we're offering as equity compensation. But in reality, we've over-attained that in the last 2 years with repurchases of around $900 million. Certainly, we're going to spend the money on R&D. And in my view, I don't need to be acquisitive. I'm spending -- investing $700 million a year in building new technology rather than going out and buying it in the marketplace for the most part. And that doesn't mean we aren't going to look at acquisitions. We're not an acquisitive company, but in this new, interoperable world, there are opportunities out there that we'll look at.

So with that, I will close, and I will ask Mike to come up and take over.

Michael R. Nill - *Cerner Corporation - Executive VP & COO*

Thank you, Marc.

Good morning, everyone. My name is Mike Nill. I'm the Chief Operating Officer for Cerner, and my task this morning is to provide you with an overview of our imperatives or areas of focus for 2018.

Each year, we go through a very rigorous process where -- toward the end of the year where we evaluate our performance, we look at our clients' perspective of us, we look at how the market is changing, we look at what's going to continue to grow our business and convert that into a plan. The diagram on the right is the artifact of that process, and I'll walk you through the imperatives that we defined for '18.

It starts with -- okay, I've got the flickering monitor as well.

It starts with our corporate imperatives, where we -- the most valuable asset to our company is our people. So growing our high-performance enterprise, ensuring that our 26,000 associates around the world have the appropriate experience, knowledge and the ability to innovate and meet the needs of our clients.

Driving client value, -- this is flickering, by the way.

Driving client value, this is what we do. We are a health care IT company, and we do produce -- through the $700 million we invest every year, we do produce a tremendous amount of technology. But ultimately, it's the value that we produce for our clients, the -- providing the ability for them to achieve their business objectives and clinical objectives that's critical to our success.

The third corporate imperative is accelerating innovation. Again, we produce a massive amount of innovation on an annual basis, and it's important that our clients are able to take advantage of that capability immediately. Today, it takes too much time for them to activate those capabilities, and we're focused on changing that.

I'll walk through the 5 imperatives in the next set of slides.

And we have 3 market imperatives that are key as well, and we've got speakers that are going to cover each one of those. It's very critical that our revenue cycle solutions are -- and capabilities are successful. We're putting a lot of focus on our consumer applications. Ryan will speak to that. And the VA, DoD and other government efforts are obviously a critical part of our business that need to be successful.

So the first imperative, driving client value. Again, it was very easy for the executive team to center on this as an imperative for the company. We have a tremendous amount of clients around the world, and we're constantly refining our capabilities in the way that we configure our solutions, we adjust workflows, enhance their business processes to achieve the biggest benefit, improve the clinical process and ultimately drive costs out of that process as well.

We package that -- more and more, we are packaging that into programs that we're taking forward with our clients and positioning it so that we can take risks with them. We're not just going to sell them solutions and services, we're selling them actual outcomes. And we're willing to take the risk for those outcomes with our clients. We've developed a number of new value programs that we'll introduce this year, and it's really a collection of the capabilities that we have.

And driving client value then becomes the driver for all of our other imperatives. Still blinking.

New middles, second imperative, this is really a topic about efficiency and scale. Our former CEO and founder, Neal Patterson, you often heard him refer to the concept of the new middle. And when he talked about that, he was really referring to the very inefficient payment -- the reimbursement process that exists within health care today. That process has built up over time. And obviously, if we could sit down today, we would design that differently. There's tremendous inefficiencies in that process: extra step, wasted effort, wasted dollars. As an executive team, as we looked at our clients, the truth is there are literally hundreds of middles that exist within health care. This is where 2 entities are trying to transact with each other. A process or method has developed, evolved over time. But the reality is it's highly inefficient and ineffective and needs to be reengineered.

So we are -- you can see the examples on the screen. We have -- yes, there are many cases where clients are building these middles independently, and there's an opportunity for us to create national services that they can leverage to drive greater productivity and cost out of their systems.

Third imperative is continuous advancement. And as Marc indicated, we do spend $700 million each year on research and development. And the reality is, for our core platform, it takes too long and too much effort to put those capabilities into the hands of our clients. All of our new solutions that we're building, we can deploy -- if we take HealtheIntent, for example, we can deploy that on a continuous basis. We need to move to the point where we can deploy Millennium on either a 90-day, 60-day, 30-day cycle or even a daily cycle. And it's a concept that includes much more than our software. It includes everything that's required to activate the system. So it would be the system configuration, the workflow definition, the services that surround that as well.

This topic, it -- when you discuss it, the word cloud is going to materialize as well. Obviously, the cloud is the mechanism that we will leverage to achieve this objective, and our relationship with some of the key technology partners like Amazon, Microsoft, Google will help enable us to achieve this objective.

In the end, the benefit to our clients is that, number one, they will be able to receive our innovations on a continuous basis. And as we prove that a solution or capability works and we know the right method for activating that, we can deploy that in a very rapid manner so our clients will advance much more quickly.

From an internal standpoint, it allows us to drive down our cost of operations tremendously. The time and effort required to implement these systems and manage those, I mean, the reality is we can probably drive as much as 50% of that cost out of the system. And then as we begin to leverage the public cloud, again we can make a dramatic impact on the -- our infrastructure cost.

Fourth imperative, contextual, intelligent experiences, this is really, again, not a new concept for us. We've talked for years -- and it's really been part of our vision from day 1 -- to create a smart and intelligent system. But with Meaningful Use, we've now digitized the entire medical Industry, and we're aggregating a massive amount of data. And it's -- with our HealtheIntent platform, creating that longitudinal health record is a very powerful device that we need to take advantage of.

In many cases today, the digitization of the health record return many of the caregivers into data entry clerks, and it's now our opportunity to take advantage and get the real power out of the data that's available.

Our systems will become much more intelligent. We'll leverage the advanced AI, ML, voice-to-text, text-to-voice capabilities to create cognitive assistants that actually help capture the information, take the burden off the caregiver and present information to them rather than the way the systems are designed today where primarily, they have to go find the data that they need. So we fundamentally believe that we can dramatically change the way that health care is practiced today and create a lot of new opportunities with our clients.

This space, again we're leveraging much of the AI, ML, voice technologies that are becoming commoditized, and we're able to tap into the suppliers of those services very easily and embed those within our applications.

Final imperative: one record, one plan, one bill. Again, this is not really a new concept. We -- our fundamental strategy has always been building an integrated set of solutions. We have 3 primary platforms, HealtheIntent, Millennium and CareAware, and all 3 of those work together in a common architecture to provide a seamless flow -- workflow across the full continuum of care. This is becoming increasingly important as the industry continues to consolidate and our clients expect to be able to drive processes across the entire continuum of care. These are platforms where the AI-enabled workflows will be activated. This is where the data will be generated to drive those engines, and it'll continue to be a focus for us. So I think this is a key differentiator for Cerner, and it will continue to allow us to be successful and strong in the future.

So with that, I will land and turn the stage over to John and Zane and Travis.

Okay.

Zane M. Burke *- Cerner Corporation - President*

From time to time. So the test is -- for me when I talked with our reference and demo teams are basically how much can you divert the attention to yourself versus what's going on behind. So this is part of the skills test at Cerner.

Appreciate the opportunity to spend time with you. Zane Burke, President of Cerner. And we're going to spend a few minutes talking about the marketplace overall, both here in the U.S., around the globe, particular focus around federal, and then really thinking about not just the core EMR market but as we think about the move-forward space in the many other marketplaces that we engage with our clients and the market opportunity. And so kind of one of the broad elements that -- while all that's going on in the background, if you heard nothing else, which is our addressable market continues to grow significantly. And the number of different types of clients that we're selling to and the number of solutions that we're selling has dramatically -- have been dramatically increased over the last couple of years. And we actually see the opportunity of only growing from an addressable market perspective. And you'll see that in some of the early results as we go through here, but it just gives you a sense of -- you'll get a taste of kind of what's to come and some of the things that we're focused on overall.

So we did have a very strong and, in fact, record year last year for bookings. And so bookings were up 16%. We saw the return of the Works business that we had predicted. Obviously, '17 was a bit lumpy in some of the execution on those bookings, as we have talked about multiple times, and I think that is part of a phenomenon that we expect as we move forward. But very strong performance in some of those growth areas that Marc talked about as we move to 2025, and we saw great market share wins. And so we saw the same kind of market opportunities in the core EHR marketplace in 2017, as we saw in the previous year, which is an all-time record high for us on number of opportunities in 2016, and we saw the same number in 2017.

When we have a -- think of the total contribution areas, significant contributions both from pop health, ITWorks and revenue cycle. Obviously, the bookings that we had in the fourth quarter will drive the revenue side and continue that strong growth that we've seen. As you see here on the CAGR, over this time period, it's quite significant. And it flattened a bit in '17 as we didn't have some of those bookings in '16 and '17 on the Works businesses. But as they returned, as we projected, we anticipate the growth to -- curve to come back in as we move forward.

The pipeline overall is very strong. So despite taking out $25 billion of bookings over the last 5 years, we have continued to increase the pipeline. So the identified opportunities are quite significant, and we feel very good about the marketplace overall, again reflective of an increased market opportunity in the addressable markets that we serve. So strength in our core marketplace and growth in our new businesses are fueling these pieces. And so you see that as it relates to the ITWorks, RevWorks and in our population health side. One really promising attribute is really the growth that we've started to see in the -- outside the U.S. So that's been a spot for us that historically has not been as strong, and we haven't seen the same level of growth. John will spend a few minutes talking to you a little bit more about that as we go through that.

I'll do an acute and kind of -- I'll say this as acute and ambulatory and revenue cycle because almost every single selection we have today is inclusive of all those 3 pieces together, acute, ambulatory and revenue cycle, on the new business side. And this gives you a sense of this market share we had this past year. And so where we stand overall. It's basically head-to-head.

Probably one of the important parts on this slide, there are still 2,000 organizations in the U.S. that do not have a currently marketed electronic health record. So there are still 2,000 sites in the U.S. that don't have a currently marketed EMR market -- or solution today. So that's a great opportunity for us. That's reflected here in the bottom corner of that. Obviously, there are some major trends. Travis will take you through a lot of the federal opportunity that we see, but we see the state and local government side as an increasing opportunity for us, and we have some very strong proof points in both state and local as continued market opportunities for us. We've got the tech-enabled services aspects of what we're doing in RevWorks, ITWorks and what we're -- are going to go do around population health.

Industry consolidation is a little bit of a double-edged sword that can work for you or against you. Kind of over the last 4 years, that's worked for us in a pretty significant way. 2017 was not one of those years. So we did -- while we had a very strong bookings year and we had a strong top line and -- all that was pretty much generated by new, current -- by new competitive demand versus the acquisition side. So you have a little bit of winners and losers as it relates to that. We had done very well in the years prior to that. '17 was a little bit different as it related to where we ended up on that side. So the growth here is quite significant.

Again, if you look at the top part of this chart, not only are we neck and neck as it relates to the U.S. market share, we have a significant outside-the-U.S. presence that's often overlooked in our market share overall.

The why we win. So this is -- it's one of those slides I almost took out because this is how we go to market. And it's actually telling you exactly how we go to market and exactly why we win. But it's -- in our spirit of our transparency, we'll share with you exactly how it works, which is we're fixed and predictable costs. So in this day and age, you've got to have fixed and predictable costs. We have a commitment to innovation. There's always the competitor of the day. There's always the challenges of today. But Cerner has been -- has a discipline for innovating in the future and investing in the future at the same time. And that commitment of investing that $750 million R&D in both the now and the next is something that's incredibly important as our clients are facing significant change. So if you're here on the -- spending any time on the floor or any time with the speakers, all you'll hear about is the -- a number of change, the number of big caps that want to come play. That just means our clients are concerned about what is the technology platform that's going to enable me to succeed today and thrive tomorrow. And Cerner is much better positioned than any competitor in that space.

Open and interoperable is clearly a -- something that we're committed to in every format of that. So whether that's through CommonWell, whether it's -- have the care quality as -- care quality and implementor for CommonWell, those kinds of things, we're absolutely 100% committed and we've made a ton of progress in that space over the year. And I know Travis will touch on interoperability as part of his dialogue. So those are kind of some of the pieces.

The continuum of care is an important part of the future. As you move to the value-based portion of care, there is a good EHR marketplace there we do -- we compete very well. But it's also incredibly important as it relates to the future of health care and having all the pieces of data as we move forward. And that's part of our strategy and why we win on a head-to-head basis.

Fundamentally, though, the key element is everybody has an EMR of some sort. Why would you make the change? It's about the value. So Mike talked about our commitment to value. That's been our go-to-market approach for a while. We're becoming more public about how that works and our willingness to share in the upside and downside risk on some of those elements is part of how we go to market overall.

And talking a little bit about some of those addressable marketplaces. So we talked about that core EHR marketplace, and you can think about us in 70% of the top 200 systems have a Cerner footprint of some sort. And so that gives us a great penetration and opportunity to sell more into that base overall, and we have a number of different types of organizations that we've done that with. So obviously, you look at the Geisingers and the KU Med and some of those places which are -- have been purely thought of as our competitors' clients. That's not the case as we move forward and talk about some of the population health and of some of the solution sets that we have the opportunity to drive.

We're also moving into a number of different marketplaces. So when you look at some of our key wins for this past year, yes, we had 2 new top 100 footprints this year, which was pretty significant. You know the largest -- the third largest public hospital in the U.S. Travis will talk a little bit about where we are in the VA. But you've seen things like The Menninger Clinic, Betty Ford Hazelden (sic) [Hazelden Betty Ford] clinic, big client of ours. You see us in the employer side of the marketplace. Dr Pepper Snapple, a number of those kinds of publics, Toyota and Frito-Lay, where we're moving into wellness and doing other things that you don't necessarily think of Cerner, the EMR company, of doing. We're making quite good inroads in most -- in many of those places and moving along. And our lineage helps us dramatically in those marketplaces. It's our competitive differentiator. It's the tech-enabled service that we can provide to those employers and to those different marketplaces that really sets us apart from the core competitors in that space.

So with that, I'm going to turn it over, John, and let you walk you through the global side. John?

John T. Peterzalek - *Cerner Corporation - SVP of Client Relationships*

Well, after standing for 18 hours yesterday, I almost couldn't get out of that chair. It's quite comfortable.

Good morning. John Peterzalek. My role within Cerner is I'm responsible for our clients throughout the world. And part of that responsibility is having the privilege to work with our associates and clients outside of the U.S.

So where are we outside of the U.S.? And there's been a couple references to this so far, but we're in 30 countries and 6 continents. And for those that need a world geography lesson, there's only 7 continents, and the only one we don't have a presence in is Antarctica. But to save some of the Q&A time, we have no plans right now going into Antarctica.

So we have 1,600 clients or facilities located out the U.S., 2,200 associates, not including the approximately 4,000 we have in India. And we have major offices, but the primary aggregations of people are in Germany, the U.K., Middle East and Australia with smaller offices sprinkled throughout.

Revenue-wise, you can see where we have our -- the revenue breakdown coming out of our big 4 or 5 geographies starting with Europe, which the primary revenue coming out of there is from our acquisition we did a few years ago with Siemens Health Services. And then where we've been making really good inroads in Australia, the Middle East and the U.K. So that's our revenue picture, how it rolls off, and a lot of subcomponents of that roll into the -- these geographies as well.

The market share. So Cerner is #1 or #2 in most of the markets that we are in. The good news is, is where we're not in a leading position, we have an opportunity to get there. Many of the countries have -- are still based on what we consider legacy solutions or solutions that aren't modern, and you'll see a lot of those potentially coming to the market. So not only do we have an opportunity to expand our market position, but we can make inroads where we're not #1 or #2 based on those legacy systems.

We are HIMSS. So the HIMSS Stage 6 and 7. We have the most HIMSS Stage 6 and 7s outside of the U.S. We had the first Stage 7 outside of the U.S. a few years ago, several years ago now, and now you're seeing not only new Stage 7s, but for those that follow the HIMSS process, they have to reassess for -- or reassert for HIMSS Stage 7 now, and our clients are starting to do that as well and trickle in. So what's that showing is our ability to not only get people going or set the foundation for modernization on EMR. We can sustain it as well so we can continue that path and support our clients.

And we work across 30 countries, a very broad footprint. Our primary competitor is -- our competitor or competitors are in a lot fewer countries than that. Being in the right countries and having a wide footprint, I believe, is a very distinct competitive advantage for us.

Pipeline. Sort of a segue to what I talked about before where there's lots of opportunity out there, and Zane had mentioned it in his comments as well, but our 2017 pipeline is looking very strong. So as you look outside the U.S., as some of the economic turmoil that was out there subsides or at least stabilizes a little bit, you see a lot of activity around modernization and the social aspects of health care and results in a strong pipeline for us. Some of the areas that are noteworthy in terms of our strength, many people might have heard about some of the Nordic countries that are out there that are going into procurement status. In a generalized statement, in the next 3 years, there will be over $1.5 billion of opportunity that goes through the Nordic countries based on the RFIs, RFPs and procurements that are coming out. In fact, if you walk down here, there's a little sign that said Dutch contingent, and there was a large group from The Netherlands and Belgium out there doing the HIMSS tour. So a lot of opportunities there that position us very well in a very well-funded health care system in the Nordics.

The Middle East has always been a great opportunity for us. The challenging part of the Middle East is even though a lot of people refer to it as the Middle East, Middle East isn't a country, it's a series of countries that are out there. But every one of those have great aspirations around the social concepts of health care. And not only are they doing the modernization on the EMR projects, but they are very much interested in that second-order impacts that we can have that we either do in population health or other social aspects of health care.

United Kingdom. A lot of opportunity there as we work through what they would look as their consolidation of their provider entities there. We have had a strong position in the United Kingdom since the program -- the initial program started in -- I believe it was 2003. And we continue to be able to have the ability to take advantage of that as we move forward.

And then Canada is in somewhat of the same era where they're looking at province-wide opportunities to provide additional technology into their health system, and we have multiple opportunities in different provincial areas of Canada as well.

So you add that all up and our pipeline continues to grow and we are highly optimistic about our opportunities outside of the U.S.

So how are we kind of approaching things? The first thing we do is we've made investments over the last several decades in many markets that were strong financially and had a very -- a willingness to spend in health care. We continue to leverage those opportunities. And as you see things play out in the U.K., the Middle East, Australia and some of these things were talking about right now, we've been able to leverage that and grow our footprints and our revenue in those areas. And the more exciting part about that is as we have a growing opportunity in the overlays of the EMR, whether it's population health or other things in those countries where we've made big investments that are paying off.

And not only that, we can also leverage the assets that we've got from Health Services in that acquisition in the context that they have other platforms that can go into these countries that we might not have been willing to invest in because of some economics issues there. We can take advantage of that and have our second-order impact platforms go there as well.

We continue to look for other countries that invest in. As the economies get stronger, some places where we might not have been thinking about going, we will think about going now. And we are very disciplined about how we go into different countries. As you go into a country, these are essentially life-long commitments. You can't start with a client and then leave them behind. So we're very disciplined about where we go, and I think there's going to be increased opportunities in countries that we may not be in today to start that same investment process that we did a few decades ago in the countries right now.

And then the last comment I'm going to make is around TCO, and Zane hit that on his as well. No different than here in the U.S. There's a lot of pressure on cost and maybe even more than there is in the U.S. considering their direct funding by the public entities. And we continue to work and take the same things that we do in the U.S. outside the U.S. to reduce cost. And I think you'll see over the next few years, increased activity around some of the things that we do in terms of our service side to reduce cost, so things like ITWorks.

Some of the components we do with RevWorks as more of these countries are looking at growing and collecting for their services and then other support services that we have that takes some of the burdens -- the burden from the client and reduce their overall spend. Very good opportunities for us outside of the U.S.

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

Good morning. I'm Travis, I run the Federal business for Cerner which is always interesting as I mentioned, been really interesting of late. So we're excited about our prospects. What I'd like to do is last year, I updated on where we were at with the Department of Defense. So I'd like to give further update on DoD, but we're also, as you're probably aware, we're in a process with the Department of Veterans Affairs. So I'd like to give an update on that as well.

So they are very different, the Department and the Agencies, as you probably know, but they have very similar health care objectives. So primarily, one of their stated goals is really trying to get out of the licensed software business. So the VA alone has 130 disparate systems of VistA. That's the current system they use today. So literally, they have 130 instances of that, that they have to maintain. The care and feeding of that is inordinately expensive. It's choking out their ability to innovate and progress. So they're looking to leverage commercial investments, commercial off-the-shelf systems to improve in that area.

They're heavily focused on quality and outcomes. As you might imagine, Mike had mentioned our population health capabilities, and I think Ryan will talk about that later. That is a massive -- of massive interest to them and one of the reasons that the VA decided to move forward with Cerner.

Continuum of care, interoperability, I'm going to talk a little bit more about that later. Force readiness is crucial for DoD, so one of the things that's a little known fact about the DoD is that one of the main reasons that someone is declared unfit for duty is dental issues, which is actually pretty interesting and not what you would expect. And part of that was really related to the fact that they just don't have the dental information integrated. So a lot of the times, they don't have the information they need to declare them fit for duty.

We're using FHIR integration to integrate product called Dentrix with the DoD, so that's been a very positive innovative thing we've been able to do for them as part of that process. And then research and innovation are crucial. So the VA is one of the largest research institutes in the world. They do a lot of work in that area. We're working closely with them.

Massive scale between the 2, so almost 20 million beneficiaries. They've got over 1,500 facilities collectively. That includes ships, submarines, austere environments, forward operating environments. We're working in all those spaces with them. And then they've also got over 500,000 users between them.

We're using a programmatic approach. So the hard-earned lessons from DoD are being applied to the VA. The solution that we have in place today for DoD will form the baseline for VA. So about 80% of everything that we're going to put in for the VA is already live with DoD. And then the VA in turn for things that they want to implement that DoD didn't, for example, cardiology, they are going to actually create the baseline and then the DoD will benefit from that work.

We have a hard implementation approach that we've used throughout the Pacific Northwest. We're also following the Wave structure. I'll talk about that for a moment. And then we've been working very closely with the Department of Defense for really going on 4 years now related to our cybersecurity posture. So we've been working hard very closely on cyber. VA will also be able to leverage that. So there's a lot of synergy and leverage between the 2 organizations.

Program schedule. Department of Defense, we're -- successfully completed our IOC or the pilot phase of that program. We've also gone live with ships in ports, so we've done some work on the ships. Contrary to what you may have read, we actually had a planned optimization phase for the DoD. So the work that we're doing out in the Pacific Northwest, we were always planned to have a pause, if you would. We call it optimization. It's been expressed as a pause. It's not. We're just doing work with them in order to prepare the system for what they call Full Deployment Decisions.

So FDD is full deployment. That's in the May time frame. And once we get that, we'll move forward on a Wave construct. And we've got about 23 Waves or so that we'll be doing. The Department of Veterans Affairs will come in behind the DoD. So essentially, we'll start out in the Pacific Northwest with the VA. DoD is finished in the Pacific Northwest, they're moving down to Balboa in California. VA will come in behind. That's obviously planned so what we're trying to do is wire the regions and then move out and across the country. So we're leveraging the investments already made to-date by DoD related to Medcorp, their networks, other infrastructure to the advantage of the VA.

We expect our first site to be live roughly in Q4 of '19, some of that depends on where we're at with the contract. I'll talk about that in a moment. But roughly in that time frame, and then we'll have a Wave structure going across.

On the DoD rollout, we're -- we say we don't celebrate conversions, but it's pretty darned hard to turn one on, so we're pretty happy when it happens. But we are entirely -- we're really focused on outcome, so we've seen good progress out there. To say it was perfect wouldn't be true. It's hard. It's complex. When you're working across the 4 branches of the military, you can imagine what it's like trying to get them all to standardize. So not only are we standardizing workflows across the 4 branches, we're also implementing new technology at the same time both networks, other hardware, et cetera.

But we're seeing improvement. We're pleased with that improvement. The time that they are spending in their ordering scenarios and workflows has decreased dramatically since they first went live. Fairchild went from a score -- a HIMSS level 2 to a HIMSS level 6, which demonstrates the -- their use of technology and their improvement in the use of digitizing the record.

We're avoiding duplicate orders, which is a major cost savings for them. Also, thousands and thousands of meaningful alerts, meaning if something is happening or there's a decision support within the system, which is prompting a user to take a different action than they may have otherwise. That's been very meaningful for them in terms of outcomes.

And then some of the really cool and interesting things we're doing, we're embedding intelligence into the system. So we've got a suicide risk prevention rule and alert that we're using. So we've had over 400 soldiers that have been identified as at-risk for suicide. That's pretty crucial for them. As you know, that's a major initiative, that and PTSD, which we're also working on an algorithm using data analytics and aggregating data in order to predict those outcomes.

That's very important for them because in terms of suicide prevention, it's one of those things that no one ever wants to talk about. If you just ask someone how they're feeling, they'll say fine. If you have metrics, analytics, data to intervene early, you have a much better chance of helping them in terms of the outcome. So that's important and that's the type of innovative work we really want to do with them.

In terms of where we're at with the VA procurement, we're actively working the contract with the VA. So if you told me a year ago when I was doing this presentation related to DoD, we'd be here, I would be thrilled. So we're very pleased with where we're at. We feel great about where we're at.

As you may know, there was a -- towards the end of the year, there was a independent -- there was an ask for an independent study by Mitre to look at the interoperability associated with the contract. We welcome that opportunity. We think that, that really was the best opportunity to demonstrate Cerner's leading position as it relates to interoperability in the market. We believe that the Mitre assessment further proves what we've always said.

So it was a positive assessment of Cerner, they recommended going forward, we adjudicated issues and items that they had. They really didn't have issues but they had a few things they wanted us to look at. We did that and we've included contraction where appropriate.

We're working on the stakeholder areas, so you kind of know when you've been spending too much time with the military when you start talking about anacondas. What I said this in front of our team. We're trying to apply pressure to the contract for multiple areas, so we're working the Hill, White House, [DSOs,] other key stakeholders. We're working all those avenues. We feel positive. Positive messaging out of the Hill yesterday. Positive messaging from the Secretary of the VA yesterday. We feel like we're in good shape. We're pleased with where we're at on the appropriations process for FY '18 and conference. We feel good about that. And then you may have noticed the dollar amount that the President had included in his budget request for FY '19, specific to the EHR project and that was a line item, which is significant for us as well because it's harder to reprogram those funds.

Working together closely, we're also working to move out with them. Additional growth opportunities, we're very pleased with that as well. Coast Guard, which had a faulty start at a project. There now coming back to market. Indian Health Service, which is also on the same system the VA uses is looking to do something. The Department of State, continued opportunity with the Department of Defense. John had mentioned some of the global elements. We're meeting with the U.K. this week, the German military, we met with Australia twice. So global military health, I think, is going to be a big opportunity for us going forward collectively.

I'm going to move through this quickly but everything that we're doing essentially for DoD and VA on the innovation side, we're applying back into our commercial markets.

And then finally, my final slide, this is really the future of what we're trying to do on the interoperability side. So the #1 thing we need to do is we need to wire the VA. So I mentioned there is 130 disparate systems. We're going to bring all those on to one -- on to one instance of Cerner or an integrated seamless capability. We're going to connect the VA and the DoD. So seamless record from the time you enter to the time you leave and into the VA system.

We're going to connect to the community providers. So we're working closely and we announced yesterday in National Coordination Center with the VA, Cerner, PwC, Harvard, Yale, Stanford, a number of Cerner clients, where we're all going to work with the best interest of our veterans on interoperability.

Standards-based open APIs. All the buzz words you've heard, but we're actually going to go do it together and focus on that. And then finally, it's nationwide interoperability. So they deliver a tremendous amount of care outside their system. We want to make sure that we're able to seamlessly transfer data, which was a big part of why they selected Cerner to begin with. So that's the vision for interoperability.

So with that, I think I'm going to land -- turn over and I'm going to turn it over to Jeff and Bill.

Jeffery Hurst - *Cerner Corporation - Senior VP of Revenue Cycle Management & President of Revworks*

Can you guys hear me? Okay. All right. Good morning. Jeff Hurst, I'm Senior Vice President of rev cycle for Cerner as well as President of Cerner RevWorks, which is our managed services business in the revenue cycle space. I'm joined this morning by Bill Wing, who's the President of Adventist Health in Roseville, California. I'm going to spend a few minutes providing an overview of some of the key aspects of our revenue cycle business with a particular discussion around the RevWorks component of the business. And then Bill is going to come up and spend a few minutes talking about the expanded partnership between Cerner and Adventist Health that was announced towards the beginning of January.

So as Zane and Mark kind of talked through this, at a high level from a 2017 performance perspective, very, very strong year for Cerner and the revenue cycle business and particularly in the RevWorks space, over 50% growth in our overall bookings. It's flashing again. And 15% growth just from a year-over-year revenue perspective.

Again, Bill will talk about Adventist Health. Obviously, that was a major component of that overall growth. And if you were on the earnings call in the first quarter, Marc referenced that we were adding 600 people in Kansas City primarily tied to the new relationship with Adventist Health. I would also add that there's another 500 people that we're adding above and beyond those 600 to manage the overall growth in our RevWorks business. So if you take Adventist Health and the non-AH business combined, we'll be adding about 1,100 medical billing associates in 2018, which again I think is a strong indication of the overall positive momentum in our business.

And even with that growth, there's still a lot of white space opportunity for us both from a solutions as well as from the services perspective. About 60% of our Millennium client base remains a target for our revenue cycle solutions. And by extension, our RevWorks managed services business.

Can you guys go back for me? You guys go back on my slide? Sorry. All right. Well, let's talk about the marketplace opportunity. There you go. So Marc alluded to this earlier. Almost doubling in size from an overall global marketplace perspective and for revenue cycle from 2017 to 2022. About 70% of that market opportunity both in the current state as well as into the future in 2022 and beyond is in the services space, which is why our RevWorks business is such an important component of our overall growth in rev cycle over the next 7 to 10 years.

And then on top of that, the industry is obviously changing. A lot more focus on payment rates, a lot more focus on not just capturing revenue but ultimately collecting on that revenue and a lot of focus from just an overall cost reduction in terms of how you both generate positive improvements from a revenue perspective as well as from a cost perspective, to ultimately optimize your bottom line earnings.

Beckers earlier in 2017 had released a study where they identified that 92% of surveyed CFOs now see revenue cycle outsourcing as a viable option for their organizations into the future. So again, we think just with the overall growth in the market as well as with the changes in the industry with a focus on value and cost and just the focus and where you can take advantage of that opportunity whether that be internally or whether that be partnering with a strategic partners like Cerner, we think gives us a huge opportunity as we head into the next 7 years.

So I want to spend a little bit of time talking specifically about our RevWorks business, and it's really based on what I would call 5 pillars or to use Zane's comments earlier, why we win. I think one of the key differentiators for Cerner in the services space is the fact that we actually own and operate the underlying core technology. When you look at a lot of our competitors, they don't own the underlying core technology. They may have bolt-on applications that they bring to bear, but they don't own the underlying technology. We think that gives us the competitive advantage both from a standpoint that we understand the core technology, we understand how to optimize and leverage that technology but also over time, we have the opportunity to automate and innovate as much of that process flow as possible, which again we think can create value for our clients in terms of increased collections as well as reduced cost.

The other side of that is the broader operating model. So in addition to the technology, how do you combine that with people and processes, and again, since we own and operate the underlying technology, we have the ability to then wrap around processes that will allow us to effectively manage that process from an end-to-end flow perspective.

Full-service engagement, we are looking for opportunities to become basically a full-service end-to-end revenue cycle partner for our clients such that we can bring service offerings, operational process flows, et cetera, to manage that entire revenue cycle process for them.

A good example of that, there will be an announcement officially next week. Cerner's entering into a strategic partnership with Parallon, whereby we will be leveraging their bad debt Medicaid eligibility and their early out-service offerings, which again we believe will allow us to manage that entire process flow end-to-end.

The fourth pillar is really what I'd call management execution. We have people, process, technology, but ultimately, your ability to execute operationally on that end-to-end process flow is a key differentiator. In addition to the very talented team that we have in place today, we added 3 key hires in 2017: Don Paulson from University Hospital, he was Vice President of revenue cycle; Angie Cox who was Vice President of revenue cycle at Centura Health; and James English, who is Vice President, revenue cycle for Adventist Health System in Orlando, Florida, all joined Cerner revenue cycle in 2017. So we feel like we've really upgraded our management team and really again have positioned us for success in terms of our ability to execute.

And then lastly, and Bill will talk a little bit about this is just how do we create an economic model that ultimately drives value for our clients and, in return, value for Cerner? Again, a lot of our competitors, if you look at them, it's typically structured more as a contingency rate. Whatever you collect, you get paid a percentage of that. With Adventist Health and with other clients, we've really structured the economics in such a way that there's mutually beneficial objectives that we're trying to achieve and if we achieve those, there's both value for our clients as well as value for Cerner from a revenue cycle standpoint.

So with that, I'm going to turn it over to Bill and he's going to talk a bit about the expanded partnership.

Bill Wing

Am I on? Can you hear me? Great. It's good to be with you this morning. Had an opportunity to be with this group 3 or 4 years ago and talk a little bit about our story. But before I do, who is Adventist Health? And probably just to add context to the numbers which I'll share next, a little bit about what makes Adventist Health unique, not unique to others, but unique as it relates to who we are.

So Adventist Health is a faith-based organization, has its heritage in about 170 years of what I'll call health. And so we started our journey around health and wellness going all the way back to Battle Creek, Michigan and if you know who Dr. John Harvey Kellogg is, he really founded, kind of our health journey. So health is number two. Three is our geography, so we are on the West Coast in California, Oregon and Hawaii. What's unique about our geography is we actually operate in 75 different communities that are both urban and rural and I would say that 60% of our footprint is rural.

And the fourth, because of that geography is who we serve. And who we serve is primarily the underserved and the frail elderly. Today, our payer mix is 80% government based, 40% on the Medicaid side and 40% on the Medicare side and note, the rest of the countries sits at about 55%. Everybody's a little bit fearful of what 65%, 70% looks like. And from our vantage point, we're already living at 80%.

So let's talk a little bit about the numbers and I'll come back to that. So our workforce, just north of 30,000 when you think about our employees, our physicians and our volunteers -- see if this will advance.

Second, our network made up of 5,000 physicians, 19 hospitals, about 2,900 beds. Again, across the 3 states primarily in California. Fairly sizable post-acute along the hospice in home care environments, you can kind of see some of the statistics there. And then lastly from a physician perspective, of the 5,000 that are part of our system, about 1,400 of those are exclusively contracted in some states employed depending on the corporate practice of medicine.

One thing I'll call out here is that we have 280 ambulatory sites, and you can see that 87 of those are rural. We do about 2.4 million visits a year, and I'd say 1.2 million of those are in the rural setting. And so we do really see ourselves as kind of living in this space of the full continuum, and a really kind of full continuum from a geography perspective.

When you think about our growth, I do want to touch on this as I move to the next section here. We've grown from about $2.7 billion in 2012 to $4.1 billion in 2017, about an 8.5% CAGR over that period of time, and our operating margins have improved about 300 basis points. So we finished '17 at 5.5% operating margin even with that 80% government-based player. And as part of this journey, and this is an eye test right here, so I put this up here only to tell the story and you can take this away and read this as you'd like.

This slide really encapsulates where Adventist Health is going between now and 2020. And I'm going to call out just a handful of things on this slide. In the upper right-hand corner is really kind of our strategic vision where we would like to be from a destination perspective in 2020. And I'll call out just a couple of things here, and it starts with through our engaged workforce, physicians and communities, we will transform the health experience and outcomes and health status for those we serve.

And we're actually measuring that by achieving top decile performance in quality and outcomes. The second thing it would call out in the second sentence is really focused around this journey to population health. So today, we have about 200,000 at risk lives globally at risk capitated in California with an aspiration of achieving 2 million by 2020.

Third is that we would love to double the number of people served. And at the clip that we're going right now. We'll be able to achieve that by 2020.

And then lastly, we'd like to see about a $6 billion in net revenue as a result as well as a 13% EBITDA margin or a 7% operating margin.

Our strategy breaks down into 3 categories. One is mission expansion. How do we serve more communities and how do we integrate deeper in the communities that we already serve? And that is expressed as double the lives served the 2 million capitated lives and $6 billion in revenue.

The second is care transformation. And I would say that of everything on the slide, probably our single largest swing for 2020. And as you -- I didn't call that out, but each of the boxes and each of these kind of swim lanes are playbooks, so are kind of analogous to our strategy, our road map to achieving it. And you can see there's -- if you count it up there, there's about 16.

But in the Care Transformation space, really kind of 2 key things that we want to achieve. One, the top decile performance on the outcomes. The second is top quartile performance on clinical operations. And we believe that, that generates value of close to $200 million on a run-rate basis for Adventist Health in the communities that we serve.

And then the third is around business transformation. And business transformation is really for us about how do we really modernize and consolidate and drive performance, the top quartile, in these functions listed below? And the reason I share this is in context to the journey and the partnership that we have formed with Cerner. And I would say that as we think about our journey, one of our core competencies that we believe is necessary to carry us over the next 3, 5, if not 10 years, is our ability to partner.

You see a lot of consolidation happening right now in the health care industry with large systems coming together. And they're doing that in order to create scale. Now we don't have an aspiration to consolidate as such. Our aspiration and what we believe is right for our patients and our communities is that we perform at the highest level that we can. And we believe that top quartile and decile performance will compete against the scale that's being created across the industry. So this road map here is really about how do we drive that level of performance?

So let me kind of segue into our relationship with Cerner and where do they fit from a partnership perspective. So we have been a client with Cerner for the last 17 years. And as you can see in the upper right-hand corner, pretty fully deployed across all things Cerner. Over 40 applications. We're operating in the acute, post-acute and ambulatory environment, including revenue cycle.

We are partnered along all of their core services. And a couple of things that we did over the last 4 years has really been around both revenue cycle management, and then secondly, around what we call the value creation office.

So as we've been embarked on this journey of top decile, top quartile performance, we needed to make a decision around how do we deal with analytics, one; performance improvement, two; and really, how do we manage the projects across Adventist Health and we partnered with Cerner to create what we call the value creation office, which was really to accelerate that journey that we've been on over the last 4 years. And so that's where we were up until '17. In '17, we decided to expand our relationship. That relationship expanded in order to drive and accelerate our journey to 2020.

So one way that it actually expanded was with revenue cycle. And at this point in time, we have transitioned our entire workforce around revenue cycle to Cerner. Roughly 1,800 individuals that are now part of Cerner. In fact, when we kind of look at it inside, we're roughly the same size from an employee base Mike. And 10% of our workforce is now Cerner and 10% of Cerner's workforce is now Adventist Health.

The second part of the partnership because it didn't stop with revenue cycle, was really around care transformation. And actually, this is a 3-way partnership between Adventist Health, Cerner and Intermountain Healthcare. And Intermountain is a partner with us around our journey to physician engagement and top decile performance around our quality outcomes and really leveraging the work that they've been doing for a long period of time around quality and their partnership with Cerner around embedding that into the electronic medical record. And our goal in this is that we do what Intermountain and Cerner have been doing over the period of time and for them, it's like 20 years on the quality side. How do we do that in 3 years? And how do we become a learning partner with Intermountain and a aligned partner with Cerner around the technology side? And so in order to facilitate that, we've also transitioned our clinical IT team to Cerner as well.

We believe that over the next 3 years that there is almost $400 million of value that can be created together between Care Transformation and our journey along the revenue cycle side.

And the way we've kind of looked at this and measured it historically because we started our journey back in 2012 is that we had a need to make as a result of the journey of about a $500 million cumulative run rate improvement. And we started in 2013. We finished 2017 at about $450 million. And we believe that there's at least that much out ahead of us.

And you can see that with the relationship that we have created with Cerner, that they're going to be a big part of that journey both on care transformation as well as revenue cycle. And when I think back, Mike, to kind of your imperatives at the very beginning, there are at least 5 areas that I believe our current relationship in this journey are highly aligned, not that they're not aligned on all of them. But the first one is driving value.

And driving value for us is that we have a shared vision, a shared outcome and a shared value. And that's both upside, downside around that. So absolutely number one. Number two is around innovation. We believe, and I think Cerner believes that innovating from the inside of our organization, inside of other clients is the fastest way to innovate and probably will get the best outcomes if we do that together. So innovation, number two. Number three, as Mike talked a little bit about, new middles. And when I think about one of the middles, especially on the revenue cycle side, because it is one thing to think about revenue cycle from just a -- we want to get the best yield, we want to get the best cost, we want to accelerate our cash. Those are all great and good. But as we transition to population health, one is how do we eliminate the waste in the middle?

And for our organization, and I think this is true for most, every transaction that we do on the financial side with a patient costs $50. And 80% of the touches are human. So we're spending $50 per encounter in order to actually collect our funds. And on the other side, the health plan is spending $8 to $10 on paying us. So that's $60 per encounter that's in a lot of ways is waste. And I believe by innovating from the inside, we can reduce that cost per transaction. That's one. But two, I'm hoping that over time, we can eliminate it. And that is just waste and that is just one middle. Mike talked about many middles.

Third -- or fourth is really around the revenue cycle journey. I just talked about that. And fifth, for us equally is the focus on the patient, the consumer and how do we engage them differently around their health and their care. And so for us, we believe that, that partnering is absolutely necessary for us to fulfill our 2020 strategy. Two, we believe that Cerner is the right partner. And third, they've been willing to be kind to step up in do it in a way that we collectively create value and we collectively share that value. So I want to say thanks to the team here.

And that's it. Thank you.

Ryan Hamilton

So good afternoon, I'm Ryan Hamilton (inaudible)...

(technical difficulty)

...but the cost as well. And moreover, health care spend actually doesn't just affect health care. We're seeing it affect all aspects of society. Responsible for citizens and whether that includes employers or governments or health plans or county governments, even things like life sciences and high deductible drugs are actually creating a need to better manage care. That's creating opportunities for us and we're actually intentionally partnering in each of those segments. One, to learn what's the unique challenges from their perspective? Two, what unique approaches are they using to actually manage their constituents?

But our real goal here is how do you bring that together as a connected whole? So how can my employer, my health plan, me and my providers all work together as a team around my health and care?

So how we're you doing that is actually -- to create that level of sustainability, we actually have to know how -- what is occurring in that population. We have to be able to engage both the providers and the consumers in their own care, and then how do you actually manage that? And that actually requires more than just interoperable data. But how do we convert that data to insights, those insights and push them into action and those actions into an outcome that actually improves it both clinically, financial and not to forget the satisfaction of the individual consumers themselves?

How we're doing that is conceptually, we think of this as a supply and demand problem and we built HealtheIntent to manage both the supply side and the demand side of health care.

The basic model here is can we use intelligence and algorithms to understand that demand, predict what it's going to be, use the best available knowledge to match that to the most appropriate resources, which may be providers, may be ambulatory, may be new-age roles like care management and health coaches. Might also be things like Uber and Lyft in transportation. And how do you do that in the context of the business and contractual objectives, which could be both fee-for-service or value-based care?

How we're actually doing that inside is there's kind of a natural workflow around managing an individual or cohort of people. So if I can use the best available intelligence, I can identify what people are in what cohorts, I can predict when and where I'm going to engage, I can pick the actions we're going to coordinate on their behalf, I can bring the right resources to bear across the health system, community providers, retail, even things like Fitbits and connected devices, and then we can measure all that. Are those activities occurring? Are they occurring timely? Do they produce the outcomes? What's the relative performance of providers in my network? And am I achieving my business objectives? What's interesting about that when we did it, that applies equally well to fee-for-service, contractual arrangements as well as value-based care. It's primarily a difference in steerage, whether you're trying to do care coordination or revenue growth or prevent leakage.

So how it actually works fundamentally, it works in 3 stages. We're able to acquire, aggregate and normalize all available data. So not only from primary care and secondary care and post-acute, claims and PBMs but things like open data sets, social data sets, socioeconomic, mental health, even increasingly IoT and sort of things inside the continuum. That creates a longitudinal record around the person. We then imply intelligence to that to create a personalized plan around them. So what are their goals? What are their barriers? What's the actions we're going to coordinate on their behalf? And then how do we push and activate those actions in an open ecosystem? Everything we're doing at HealtheIntent, we have to assume the front side of that or the backside of that is in the Cerner EMR. There's no communities on the planet where it's a single vendor and particularly, as you move outside of traditional health care boundaries, those aren't systems that Cerner is going to provide. And we have to rely more and more on community partners.

We actually have an expansive and very inclusive embedded intelligence strategy so some of this we're building ourselves as best practice with our clients. We're leveraging any of the industry-based algorithms that are out there today. We've built tools to get clients data ready for intelligence and actually doing some co-development with our clients to develop new models. And some recent announcements we're doing with AWS actually allows us to create sort of intelligence-creation ecosystems that actually speed up the innovation through their AI and machine-learning techniques as well. And what that manifests into is a set of solutions. So the top row represent things you'll see in the market today that we have generally available. These are kind of as you look through the population health market, things like EDW and registries and care. We're also heavily invested in what we view as the next generation of solutions and services. Things like how do we automate healthy programs? And how do we automate many of the care interventions that are occurring? Bill talked about it's $50, mostly labor-driven. How much of health care can actually be automated?

So where did we get to in 2017? It was actually a very good year. We delivered the number of clients to 144. That's about 30% year-over-year growth. Our same-store sales back into that was almost 100%, which shows the expansion of solutions within our core base. The number of data connections to our national data platform doubled, so we're up 200% to 740. The total amount of data we're responsible for from our clients actually grew, I think, it was 70% to 10 petabytes. The number of lives in our platform grew 70%. And one I'm most proud of is the number of managed lives, so things under some kind of a value-based contract actually grew 600% from about 6 million this time last year to 37 million this year.

We're seeing opportunities across many segments. We -- mid-2017, we dedicated specific sales resources to each of these segments. As I talked about earlier, that's not only market and opportunity growth for us, but our ultimate goal is how do we connect all these together around the consumer? That's actually generated partner clients in each of those segments which has helped accelerating our learning in that we're launching. Particularly one of note is we signed 6 more in the U.K. in Q4. I'm driven a lot through their national programs around global digital excellence. We see that as a way to grow an exemplar for the single-payer markets.

The biggest shift that we're seeing in the market right now is, if you go back to 2012, '13 when we started, most of the market was pioneers, early innovators, they were very willing and eager to invent and to experiment. Most of the clients in the market today are looking for a solution that works out of the box. They're not looking to experiment, they want something that just works. They're actually looking not only for solutions but advisory services to help them know the best practices and to get value quickly as well as operational services from us, things like care management and analytics that helps them scale faster than their natural labor and talents would do. The good news for us is as we move out into advisory and operations, the PMPMs go up to -- go up significantly, so we're seeing our blended PMPM rate grow as we do more of the advisory and the operational services launch.

So where we are for 2018 and beyond, sort of 4 key areas you're going to see us putting our weight and energy into. One is solution portfolio. Continuing to grow more solutions. So how do we use longitudinal data and implied intelligence to deliver business value across both fee-for-service and value-based care? The biggest shift is you'll see a lot of solutions which are more topical. So what are the business problem we're trying to solve? Whether it's NPPES optimization, whether it's consumer engagement, whether it's data management, where we're solving very aligned packages to the client's business problem. We're putting a lot of effort into expanding our services portfolio. All new implementations after August of 2017 include an advisory component as part of them. So we're coaching and working with our clients to set up governance, set up data management and apply best practices to get to value quicker. We also were able to reduce our total implementation times in '17 by about 30%. You'll also see pushes into things like care management as a service, health coaching and navigation where resources are more unique and rare and helping our clients grow faster. And then Don will talk a little bit about the movements on the provider sort of sponsored plan and demand side and what we're doing to position ourselves from that. Continued focus in each of the market expansions. So not only growing inside of our core base but outside of our core base and outside the provider markets, as a whole. And while Marc talked about, that we don't do a lot of acquisitions, you're starting to see us -- actually, as we try to connect the continuum, leverage a lot more collaborations and partnership. So we're doing a lot with AWS, not only accelerates our pace of innovation, gives us from our cloud perspective reach around the globe. As we're starting to do more collaborations, public clouds are actually providing a great sort of DMZ or meeting zone for innovators and visionaries to come together. A lot of stuff in the news today around Salesforce. So we view that as a key strategic partnership to not only increase consumer engagement but how do we better manage networks of providers. And then things like Apple and others as we directly reach into the consumer. So with that, I'll...

Donald D. Trigg - *Cerner Corporation - President of Cerner Health Ventures*

Good morning. Thanks, Ryan. So thanks. I think technically, it's been our best presentation in some time. So thanks. I'm going to talk a little bit about kind of an external framework that we view, and externalize the framework that we use through the strategic planning process around how we thought about the supply and demand landscape for health care. I'll talk a little bit about, in particular, some of the things we see playing out on the demand side that are hyper-relevant to us as we think about strategic differentiation and core approach. And then, I'm going to introduce Brent Shafer, our Chairman and CEO, to make some closing comments before we move to Q&A.

So this is a basic framework that I think you've heard allude to over the course of the morning, that really looks at what's playing out, we think, in the marketplace. And obviously, for 38 years, we've been focused on the supply side of health care, automating strategies inside that space, predominantly inside a traditional fee-for-service model. I think, we believe, you're starting to see some pretty significant movement not only on the supply side but also on the demand side, and I think some of our strategies are well-positioned to help Cerner take advantage of it. So basic framing here that we use for purposes of our strategic planning process. A little bit of a wider aperture in terms of how we thought about the supply side to include post-acute, retail, pharmacy. Thinking about the demand side, we've alluded today to a number of strategies around the employer space and the planned space. And then thinking about some of these emergent strategies, which Bill and others alluded to, about how we get to better supply-demand matching inside the health care ecosystem.

So let me hit just a little bit, I think, what we think is relevant on the demand side as we've thought about our core strategies around approach. Starting with commercial, then talking been talking a bit about Medicare and I'll quickly touch on Medicaid. From a commercial perspective, we continue to see what we think are pretty interesting trends, both from a technology and a services perspective. This is a space we know pretty well. Zane talked about it in his section from a self-insured and employer perspective, but obviously, significant trend around cost. Core strategy is driven by jumbos, but I think increasingly, it's moving down market around CDHPs, strategies about high performance through narrow networks and real appetite and demand, both for technologies to enable those strategies as well as service as wrappers around navigation, coaching, concierge, et cetera. So that's a space that we're in today and that we see significant growth opportunities around going forward.

From a Medicare perspective, this is a space that we like a lot, particularly as it relates to MA. It's got really good demographic trend around it, as Boomers move into, from Commercial into Medicare. They have a really comfortable appetite around planned selection, and thinking through strategies around choice. And we think we bring some pretty unique advantages to how you enable provider-sponsored plan strategies. So we talk a little bit about first mile and last mile advantages. From a first mile perspective, we can use our data assets to help you define network, whether that's adequacy requirements to stand up a de novo plan or how you're thinking about optimizing a panel for purposes of establishing ramp, running audit logic, driving profitability around an MA [life]. So we think that there's a significant network advantage that we bring to this space, and we think it's a space that our health for some clients are increasingly gravitating towards. Obviously, Ryan alluded to some of things that we think makes this pretty attractive from a PMPM perspective and a business model perspective.

And finally, from a Medicaid perspective. In an individual market, obviously, this is arguably the kind of biggest 5-year trend playing out in health care. While not larger in dollar terms, larger in terms of enrollment terms and a big swing variable for our health system clients both inside their core delivery businesses but also around their strategies for purposes of risk.

So that's a little bit about how we thought about the demand side. Commercial, Medicare and Medicaid. And then, let's just take a look at some of what we sort of relevantly looked at as we went through and framed up our thinking relative to 2018.

And so from a supply-side perspective, we think there's significant trend around PSPs. Purpose built narrow networks, which is something that we've talked to you about in the past. You'll recall the presentation last year from David Bradshaw and some of the work that we're doing with Memorial Hermann and Hewlett Packard Enterprise relative to that narrow network offering in the Houston market. Virtual and asset-light strategies with players like Intermountain, looking at approximate growth strategies where our technology assets are particularly relevant in terms of how they think about expensability and scale. And then finally, I think early work around BPCI and how we think about some of the alternative payment models, which, as Ryan alluded to, we think with (inaudible) and Verma have good trend on a go forward, 24 months to 36 months basis. From a demand side perspective, this is arguably where we think probably the biggest swings were taken in the second half of the year with -- particularly the traditional payers struggling with plan B strategies as they ran into regulatory and legal headwinds around consolidation. And fundamentally, although there is some vertical integration that's part of that narrative, fundamentally they are buying non-acute supply. And so how do you think about that supply-side provider landscape and what these strategies potentially do to introduce both business model risk and business model opportunity for the provider-supply side?

The other dimension I think that we are thinking about a lot is what I kind of describe as Out-In Big Caps. So you have first time entry of big cap players into the health care ecosystem, players at the $10 trillion level who see an opportunity set inside the $3 trillion health economy space, and they bring significant consumer competencies. And it's not just Amazon and some of the experimentation around their employee population with Berkshire and with JPM. It's also players like Walmart, who bring interesting assets inside the big box, 56% of their total revenue comes from groceries. So this is an interesting set of new players who bring certain assets and capabilities to the space, and I think introduce some interesting partner and competitive calculations on our side.

So finally, from a venture perspective. I think they are the sort of final piece of the stakeholder and strategic landscape. I think, continues to be an overweight focus here on the consumer side. We probably look at over 500 to 600 opportunities on a full-year basis across our partnership and investments and M&A reviews. And suffice it to say, I think a lot this money is sort of chasing active well profiles of members and patients. They tend to look for archetypes that are comfortable to them, so Uber sort of health care type constructs. And a number of them are point solutions more than companies, but I think there is innovation going on this space. And I think what they are suggestive of is a view that we share, which is that there is consumer trend in the marketplace and that there's compelling business opportunities around it.

So let me -- that's a little bit on the what is playing out the supply side level. A little about what we see from a demand-side perspective. We think there is significant opportunities around both, as we look forward on a 3- to 5-year basis. And so with that, let me do a little bit of an introduction to our new Chairman and CEO, Brent Schaefer. Brent has 30-plus years of health care experience both in the U.S. market and in the non-U. S. market. He brings a significant consumer competency to the company. At Philips, over $1 billion dollars of their U.S. business was in the consumer space. So I think really interesting competencies and background there, including in emergent areas like alternative venues like home health. And then, I -- finally, I think, as we've all spent time with him over the last several months, a real interest in thinking about growth structure and how we take some of the nascent growth areas that I described and really look to create scalable large businesses inside Cerner. So exciting addition to our team, and my pleasure to have an opportunity to introduce him this morning. Thank you.

David Brent Shafer - *Cerner Corporation - Chairman & CEO*

Thanks, Don. Good morning. Nice to be here with you. Thank you for being here. So 30 days in Cerner and 30 years in health care. So as you can imagine, these are really different ends of the spectrum, and it's been a very exciting 30 days. Let me just make a couple of acknowledgments to the whole team for the preparation and discussions this morning. I think they're very rich and valuable. And Bill, thank you. Our partnerships, our client relationships are absolutely critical to us, and you taking your time to spend with us today, to share with this audience your experiences is highly valued.

So maybe just a couple of observations about the first 30 days. As you come in, there's so much to do and so much to know as you come in to a new company. Of course, kind of an obvious place this could go is to our clients first. What do they think? What do they have to say? What are their needs? Where are they going? I've spent a lot of time there, the whole team has spent a lot of time there. We've had some really rich discussions about that. Clearly, the strategic nature of where they are headed and how they fit together with us, our fates are intertwined. We need to work together very closely, in health care, health care IT is the glue that holds it all together. What I find or what I hear is they like us, they really need us. In fact, some of the conversations go directly to that. Here's where I'm trying to go. You're a key partner in how we get there, and we need you to help us get there and go faster, especially in this changing marketplace with so much demand. The leadership team and culture has just really been a real pleasure, to come in to Cerner and experience the quality of leadership, the depth of leadership, the founders' spirit , which is really plays at all levels in the organization. You can feel it in small roundtable discussions, you feel it in this room, it really carries forward and it drives a lot of great thinking about growth in the future, and I think that runs very deep and it's something we absolutely want to continue to build on. Even our associates, I think, are bound by more than a founder's mentality. I think if you -- I'm sure if you talk to any one of these people who just presented today, casually or in conversation, you'd find that the sense of purpose and the dedication to the mission that we serve goes very deep, it is also a common bond in the culture. And that's great. And that creates a lot of opportunity, a lot of bond in team members and, I think, gives us a lot of confidence in moving forward.

So the other place I've spent time is just trying to get a hold of the Cerner strategy and position and kind of where we fit in the marketplace and understand what the opportunities are for us in the future. So looking at the markets, looking at growth opportunities, looking at the portfolio, a lot of the discussions you just heard. We have the platforms, we really have the data, which is a key element. And we have the DNA or the culture and that founder's mentality to drive forward and to make the best out of it. So it's very exciting, very promising.

So what's ahead? We've started together as a leadership team to look at kind of a specific view of the next 3 years. And with the thought of trying to take a look at some of these key topics developing a more detailed 3-year strategic plan to drive focus in -- on how we execute. And so kind of as I noted here and you'll see in the graphic, this includes reviewing priorities for our investments, refining our strategies and identifying opportunities to optimize the business. And this is built on the foundational strategic priorities that Mike laid out. So we build from there and we'll be aligned with that work. So the goal of this work is really to continue the strong forward momentum that we have and achieve our goals around innovation and profitable growth. And what we tried to represent here is there are multiple aspects to this, around talent and culture, around standardization, around pop health and some of the opportunities there, the cloud, global markets, consumerism, how these play. So we'll look at each of these topics, come back with holistic strategy and underpinned plans for where we go forward.

So there's some work to do, but it's an exciting time. I think we've already got off to a really good start in this, and the entire leadership team is engaged in this, who, by the way, are all here except for Jeff Townsend, who's at a client site today and will be joining us this afternoon. So he'll be in the booth if you'd like to talk to him. And you know the drivers. I mean, you heard these expressed in many ways today, and we all know those and sometimes it's -- we get down into the nano details. And just the drivers of opportunity are so big around cost of health care, around aging population, what comes with it, increased chronic conditions and the need to treat those across the continuums of care, and we're very well positioned to do that. So with these drivers in mind, we're optimistic, I'm optimistic, about the future for Cerner, our opportunities, I think there's a lot we can do and glad to have the team all focused together in working on this together.

Let me ask, Marc, if you would please come back up, and I think we'll now go to some Q&A.

Marc G. Naughton - *Cerner Corporation - Executive VP & CFO*

We will. We will. If the leadership team will join me in answering these questions, these thoughtful provoking questions that we are about to have. So if you want to ask a question, please raise your hand. Michael? You go first.

Michael Aaron Cherny - *BofA Merrill Lynch, Research Division - Director*

Great, thanks. Michael Cherny from Bank of America Merrill Lynch. Marc, you outlined some of the opportunities you have around the cost side (inaudible) Customers today they prefer to know (inaudible) conversations. As you think about next few years of market expansion and contribution margin. Where are the biggest points of sensitivity that could either drive margin expansion better than you expected or worse than you expected, besides just a level of R&D investment?

Marc G. Naughton - *Cerner Corporation - Executive VP & CFO*

Well, I think, clearly the model we have, the contribution margin in our -- the graph I presented kind of assumes we stay around 47%, 47.5% so -- and that is going to be tethered to the mix of business we have. So if it's overweighted for Works, relative to the SaaS business, Pop Health, lack of software, then that impacts that contribution margin now and impacts overall margins. So the mix of the business is probably the key element relative to that component of it. As far as the expense line, I think, clearly the level of spend we have already today, the level of investment we're making, we're going to continue doing that, but we'll be able, again doing what we're talking about, being able to get leverage out of R&D. But as much as we spend, yes, we'll probably grow a little bit over time, but that growth will be as much in just pay increases, slight expansions will grow as anything else. So the percentage growth, it's not going to be anywhere near what we expect our revenue to go. So I see the levers coming through, at least in the medium term, coming through the spend line with us, to the mix growth being able to keep the contribution margins around that 47%, 47.5% level. That gets us to 36 (inaudible). The upside is if we get better contribution -- mix, then the contribution margin can grow and that'll drop directly down into the operating margin.

Next question.

Eric Percher - *Nephron Research - Analyst*

Eric Percher, Nephron Research. Brent a question for you, which is involved in your background and experience. I'm interested in what degree of Cerner what element or experience or what confidence do you have that you'll be able to leverage here at Cerner?

David Brent Shafer - *Cerner Corporation - Chairman & CEO*

Thank you. I appreciate the question. So I mentioned 33 years in health care, it's hard to sometimes admit that. It goes kind of quickly. But I think I bring to Cerner a perspective that cuts across the majority of the continuum of care from different points of view. So I think that's just an opportunity for us because Cerner plays in that entire spectrum, right? The entire continuum. And I think there's tremendous opportunity there, you heard some of the discussion today about where we were going. I think there's more we can do. And I joined Cerner, I've known Cerner my whole career. I mean, how could you not be aware of Cerner? It's an incredible success story. So the opportunity to come here and be part of that and help lead it forward is fantastic. So thanks for the question.

Marc G. Naughton - *Cerner Corporation - Executive VP & CFO*

George?

George Robert Hill - *RBC Capital Markets, LLC, Research Division - Analyst*

(inaudible) Thanks no offense taken at the jokes at the start of the presentation.

Marc G. Naughton - *Cerner Corporation - Executive VP & CFO*

Thank you for calling them jokes.

George Robert Hill - *RBC Capital Markets, LLC, Research Division - Analyst*

I kind of want to start with the revenue guidance for the company, the long-term revenue guidance through 2025, call it 50 to 100 basis points. Given the numbers that you've seen bandied about regarding the VA, I would have expected the, kind of a CAGR through 2025 to be significantly higher, I guess. So can you kind of unpack the VA component of the long-term guidance? And I guess, does that imply kind of weakness in the quarter? Would it imply -- I guess can you just kind of unpack the 2018 through to 2025 revenue guidance for us, thinking about the VA and DOD and opportunities like that?

Marc G. Naughton - *Cerner Corporation - Executive VP & CFO*

Sure. If you look at the way at the way we divide things up if you look at the core element of the business. As the EHR market matures, and there's a license component to that, that comes into the revenue line, it would be logical that those elements could slightly decline over time. So I think that was probably -- we certainly in our original estimates didn't think -- we didn't think that we had much if any growth in that space, so I think what the VA does is it actually allows us to say, Hey, this core business can actually have a decent growth perspective because I think the way the VA likely will flow as the test orders are issued and the projects ramp-up, we'll create a nice sequential growth year over year over year of revenue that, I think, does help us get to a place where our core business is growing. In 2025 it's probably going to still be single digits, but it's still growing. And that's a significant change from -- relative to what we would have had in mind before. So I think as far as the VA impact, it's going to hit mainly core. Keep in mind, Travis talked about some of the opportunities in pop health, so some of that VA will also throw -- flow into the pop health bucket. So it will feed more than one line, but a principle feed will be in the core business, which allows us to grow that. So that -- the VA is a key element of driving that. And we're talking about 9.5% CAGR for '17 and '25. So that's pretty strong revenue growth, which reflects the VA contribution. I think he wants a follow-up.

George Robert Hill - *RBC Capital Markets, LLC, Research Division - Analyst*

I do want a quick follow-up because I just want to drill into -- so if we're thinking about the part -- and I just want to be sure I heard you right. The part that you said is declining. Is this just kind of the lapping of the pull through, we'll call it the 2010 to 2015 period where you're kind of lapping the license sales, which has helped the income statement? And now you've got the service and maintenance streams that come from that and the subscription streams that come from that, but you don't have the opportunity to sell those high-dollar, value-thick margin licenses again, which is kind of what creates the deterioration to core. I'm wondering, sure I understood you right.

Marc G. Naughton - *Cerner Corporation - Executive VP & CFO*

Well, to the extent that if you look at the market, as Zane says, that 25 -- there's 2,000 places that are -- don't -- aren't on a currently marketed platform. Those places aren't as big as some of the places that's have been chosen before. So there is still an active marketplace, still plenty of things to go sell. But from the license perspective, that license component is likely to be a little bit less and is not going to be a growth area because year-over-year, it will probably be equal to or a little bit less. So I think as we go into '18, we think it will probably be pretty comparable year-over-year, but it's not going to be an area that's going to grow that core business for us. I like your -- the point you make, and Mike addressed it little bit of, hey, you sold that license and you're done. Well it turns out that, if you look at the cloud as an opportunity for Millennium marchitecture and you look at some of the other companies in the industry, such as Microsoft, that basically convert their perpetual licenses that you already own into an annual SaaS stream, that opportunity exists for Cerner as well as anybody. So I'm not saying that the -- that existing, that big 25% share of the market we have, there's some opportunities there relative to license and hosting and things and can continue to feed that core. So I don't -- the core of continual growth, will continue to need new innovation. We're going to continue to roll out new solutions and such that will fall within that range and then obviously, Travis talked about all the other federal opportunities and the state and local opportunities we have that can feed that core. So that's why we feel pretty good about growing the core.

James John Stockton - *Wells Fargo Securities, LLC, Research Division - Director & Senior Equity Research Analyst*

Jamie Stockton from Wells Fargo. I guess maybe this one is for Jeff Hurst on the RevWorks business. You talked about being able to automate more of the activities within RevWorks and driving serious efficiencies over time. Can you give us some examples of things today that are very labor-intensive within RevWorks that you feel like, within a reasonable period of time, will be heavily automated?

Jeffery Hurst - *Cerner Corporation - Senior VP of Revenue Cycle Management & President of Revworks*

Sure. So some of the aspects, particularly as it relates to front-end registration processes, for example, tends to be somewhat labor-intensive. First is transition. This kind of ties in with the consumer imperative, in terms of how do we leverage technology? How do we leverage our engagement with consumers from a client-facing perspective? So that becomes much more of a self-service type function for consumers versus a labor-intensive function from a client or from a RevWorks perspective? That would be one example. Another example in the back-end, particularly as it relates to -- touches around denial management and denial follow-up claims, follow-up with respect to the timeliness of when a health plan pays the claim. So are there mechanisms in place where, for example, we can take back-end billing edits, move those upstream and embed those into the workflow, such that those things get addressed as part of the upstream workflows, such as not to create workflow downstream in terms of denials or claims follow-up and things of that nature. Does that makes sense?

Marc G. Naughton - *Cerner Corporation - Executive VP & CFO*

Next question.

Matthew Dale Gillmor - *Robert W. Baird & Co. Incorporated, Research Division - Senior Research Analyst*

Matthew Gillmor with Baird. I just wanted to get an update on the population health strategy. So Marc, you talked about that as being a big growth driver for 2025, and I think some of Ryan's presentation shows where sort of that PMPM breaks down and you got about a dollar today, you need $2 to $3. So where do you stand in terms of building that service organization that will drive the PMPMs higher and the revenue higher?

Ryan Hamilton

Yes. So I'll just talk loud. The advisory services pieces we've launched in August of this -- of 2017. All the new implementations actually have a value component, so it isn't so much the point of registries or care management. It's what is the -- how hard ROIs are trying to achieve at an outcome financial level. And then, using our advisory service to structure those projects around the attainment of the hard ROI using the solutions and services as part of it. We've launched a care management as a service, which is actually a continuum of things. So what are new-age light sort of highest licensure-type engagement model. Sort of get clients active -- -- get consumers activated, get them nudged and moving forward. So things like health coaching and navigation. We're in the final stages of our first client on that. We actually do that today for our own associates and have for a number of years. We're doing it in partnership with Memorial Hermann and [HPE] in Houston as an actual pilot in 2017. So that one's off to a good start. The biggest next opportunity, you would typically hear it called analytics as a service. It's not so much running reports for people as it is, we have a large amount of data and we're able to actually crawl all this historical data from our clients' bases for them. Actually how do we produce inside? So the key questions for them is they're facing pressure, it is, where's my both near- and long-term opportunities? And how do I use my near-term opportunities to generate ROI to fund my long-term opportunities, which Bill talked about kind of in our value creation offices? So we see that, as the next big push, is really around the data and the inside pieces of that as well.

Marc G. Naughton - *Cerner Corporation - Executive VP & CFO*

Somebody toward the back, maybe?

Unidentified Analyst

Just following up on the pop health topic, if you can. Can you maybe talk about what percentage of revenue at a typical hospital client is in a risk-based program now? Like what was that percentage a couple of years ago? What do you expect it to be like 5 years from now. And have you seen a slowdown in demand at all over the past 3 years for pop health-related solutions, given that [Tom Price] was in office and he put the brakes on a couple of these different CMS programs? And just any thoughts around demand that you're seeing. Thanks.

Marc G. Naughton - *Cerner Corporation - Executive VP & CFO*

Just for the financial side. Most of our engagements today are PMPM or there's a fixed fee relative to an analytics population. So there is not really an at-risk element to most of the money that's coming in today. That's more of a future thought. If you want to talk about just the marketplace, which is actually -- grew about 50% last year on the bookings side.

Ryan Hamilton

Yes. We're actually not seeing it slow down. There's a lot more insecurity about which financial arrangements they need to be under. But most of our clients that we're interacting with and targeting are actually knowing that is coming out and they're doing something. I mean, they are sort of always at risk, even for things like readmissions. They're using other programs. And as I talked about, using the longitudinal data intelligence, we're able to get in there and start using those tools and technologies to help them solve some problem they have today. So things like HCC or wrap optimization and Medicare Advantage, particularly things like enterprise analytics, kind of span the entire continuum network leakage, works on both sides. So we're able to find opportunities to do the value piece today. How much of the revenue is at risk in sort of value-based care is highly regionally dependent. Certain areas are much more dominated, other areas are very light. I think the industry average is somewhere around 90/10, but you see much higher concentration in the larger client bases and the smaller concentration as you go sort of down market. That said, if you look at all of the stats from the major payors. They'll say they're at somewhere in 50%, growing pretty rapidly. I don't know exactly how to [dish] that out, if those are regional differences and some of those kinds of things. What you did see at the federal level was people worried less about bundled payments and shifted more back towards like MIPS. And what they thought was going to MIPS/MACRA and some of the reporting piece of it. The good news for us is the same data management tools, ability to run measures, analytics, the same sort of tool sets apply. Maybe just -- may be doing it on a different population or a different cohort. We are excited with the moves they did announce this week. Details are a bit fuzzy, but they are certainly pushing interoperability agenda and getting data flowing more freely. They're pushing for things like consumer empowerment and price transparency, which we think are all good things to accelerate the market forward and generate additional demand.

Unidentified Analyst

Sounds good.

Anne Elizabeth Samuel - *JP Morgan Chase & Co, Research Division - Analyst*

Anne Samuel, JPMorgan. You highlighted some increased partnerships recently and a willingness to start looking at acquisitions. Can you speak to maybe what you liked about some of the partnership that you recently announced? And looking forward, what you're looking for in future partnerships?

Marc G. Naughton - *Cerner Corporation - Executive VP & CFO*

Sure. Zane or Ryan, Zane, why don't you grab, start.

Zane M. Burke - *Cerner Corporation - President*

Sure, so we just announced Salesforce piece and Ryan talked about that as part of his conversation. There's some great market opportunity, wanted to -- it's a great marriage of really moving to the consumer side, taking and helping on the average piece of the core capabilities that salesforce has and allow us to invest our dollars in things that are really meaningful for us. So instead of recreating another CRM solution and investing our dollars that way, we can leverage best-in-class capabilities, and then actually marry that with what we're doing and control the data because if this one works, we're actually -- we control the relationship, control the data and kind of create a unique opportunity. So I think you'll see the AWS as another example of that. Ryan, you may want to touch on that, but we've been doing work with them for about 4 years?

Ryan Hamilton

Yes.

Zane M. Burke - *Cerner Corporation - President*

About 4 years to date. They have been a great experience for us. It's a great opportunity for us to leverage some of the services there in terms of what they're doing from a hosting perspective in other countries, in particular and what they do from an AI perspective. And so again, I think you'll see us look for ways where, if it already exists and it's not going to be core to who we need to be, then why wouldn't we use our dollars to invest in things that are meaningful on a go-forward basis? So those are -- that's kind of how we're thinking about these different spaces. And I think you're going to see more of these kind of partnerships as we go forward. And allow us to invest our dollars in the things that there's -- the good news is we have a lot of opportunities. The challenge -- and as Michael said, every single one of them sounds like a really good project to do. We have to prioritize those dollars. And so we're going to focus our energies on what is going to get the highest and best yield for our clients and our shareholders at the end of the day. And doing these kind of partnerships really allows us to do that.

Ryan Hamilton

Let's amplify the details a little bit. Amazon, the big ones for us there are, as Zane talked about, we get to write business logic, not a lot of platforms and technology pieces, which concentrates our energy in things that provide business value. It's helping us reach around the globe quickly and at a price point that's comparable to the size. So instead of installing a large data center for the first client, we can only procure and provision on demand as much as we need. And it actually helps us sort of speed market entry as part of that as well. Five years ago, clouds and health care was kind of allergic reaction. It's not anymore. Clients are moving that way. People are worried it's very logistical now from a health care perspective, how do I run it? What it means to me? How does it work financially for me? What's the security pieces? It's not an allergic reaction piece. The key one, I think, that's going to, not only for us, and it speeds us in there, is AI and sort of machine learning and all that hype. Everyone's trying to be part of the AI revolution. You can't locally install those toolkits. Those are mostly available in the public cloud providers, and you're going to have move data. That's interestingly creating an opportunity for us and get my data ready for AI business, which isn't a traditional business for us. Salesforce. I would sort of code that down to 3 things: one, health care institutions are having to manage their brand, much like a retail organization does, both on fee-for-service and value-based care and sort of that high-deductible mix. They're looking for tools to come from sales and retail-type organizations, which is where those tools are natively grown. They're very good if you use Amazon Prime, you go to buy one thing, it tells you, you need to buy the next thing. Pretty damn good at picking the thing I do want to buy. How do we use those kind of tools? Pop health doesn't matter at the end of the day if you can't get the consumer to change their behavior. So how do we look at other industries and other toolsets to create activation and motivation and nudges? So that's sort of the macro piece of it.

Marc G. Naughton - *Cerner Corporation - Executive VP & CFO*

Thank you. Next question. Ryan gets very excited about what he does. Back there -- right there would be good.

Robert Patrick Jones - *Goldman Sachs Group Inc., Research Division - VP*

Bob Jones, Goldman Sachs. Looking at the nearly $2 billion of rev cycle you have in the long-term model by 2025, I was wondering if maybe you can give us some sense of how much of that is software-related versus more RevWorks managed service-related? And then, if we think about that relative to the mix today, that would be helpful just to get some perspective. And then I guess, bigger picture on manage -- managed services. Obviously, an area a lot of people are focused on. What really differentiates Cerner today on things like RevWorks and ITWorks? And how will you continue to kind of stay ahead of the crowd as we move forward?

Jeffery Hurst - *Cerner Corporation - Senior VP of Revenue Cycle Management & President of Revworks*

Yes. From the model, fairly, it includes both the solutions and the services. The lion's share of the growth will come from the services side of that business, obviously. About 60% of our clients are still looking for their rev cycles decision. So if you're on Cerner, that's going to be a rev cycle decision at that point in the future. So we should see good growth in the rev cycle solutions space. But to get to that big number you're really looking at the RevWorks side. And I think, as Bill has talked about and as Jeff has talked about, the environment for being willing to go outsource those things that are not necessarily strategic but we -- but can be done maybe more efficiently and drive some of the benefits that Bill talked about in his graph. I mean, $450 million of clinical and financial benefits is huge for an organization like Adventist. So I think we're going to continue to see the growth. The market is interested in it. And it's -- I mean, literally, when we talked about it being a $90 billion opportunity. Zane?

Zane M. Burke - *Cerner Corporation - President*

It is kind of our strategic advantage is really the technology, so the tech-enabled services piece of that go lock-in on the revenue cycle side and then go look for ways that we can go automate pieces of that workflow in a meaningful way. And given that we have the technology to go do that, it's unique from others that are trying to be in the space. So that technology, I think, services provided, that's not really so interesting to us. Being a tech-enabled services company, that's pretty interesting for us. And that's the same thing we think we can do around revenue cycle, that's what we do around ITWorks, that's what to do around population health services. So you kind of think about our strategy as really along those lines as looking for areas where the technology can really go -- dramatically change the workflow and the cost model as we move forward. And the fact that health care is under such pressure, as Bill talked about, actually means there's a ton of opportunities and people are willing to start to think about some things in a different way.

Marc G. Naughton - *Cerner Corporation - Executive VP & CFO*

We've got about 5 minutes left. Take another question.

David Michael Grossman - *Stifel, Nicolaus & Company, Incorporated, Research Division - MD*

David Grossman from Stifel. So Marc, you gave the free cash flow conversion targets, and they're going up but in a fairly wide range. So can you help us better understand how mix impacts that range? And perhaps specifically speak to the ramp of the works business and the VA contract? And perhaps help us better understand the evolution of those relationships and how it impacts cash flow?

Marc G. Naughton - *Cerner Corporation - Executive VP & CFO*

Well, we usually take cash in payment. So yes. Clearly, from a net cash flow, obviously, the works businesses, to the extent that the services-only components early on before we get to the tech-enabled services component of that business, those are pretty low margin. So from a free cash flow perspective, it's not going to throw off a whole lot of the free cash. But that's embedded in our models relative to what we expect. Basically, we -- the key for us is how much we're going to spend in CapEx, right? Because you're going to continue to see certainly in our earnings, just to be able to continue to be able to grow earnings, that drops pretty quickly to cash. The key is how much are we going to invest in the business. And we invested pretty heavily in the last few years. And certainly, some of that has been hard assets, it's been campuses, to put people on as we start growing some of these service-oriented businesses. Once again, as those businesses start maturing, as we centralize and (inaudible) a lot of that infrastructure in Kansas City we're creating is centralizing people that are outside of that area and eventually, the opportunity is that is a more efficient workforce, centralized billing offices and other strategies and kind of allows us to lever those costs. So the mix, it will be dependent. I mean, that's -- that was an earlier question, how is your contribution margin? How is your cash flow? How is everything? It ties to the mix. And I think going forward, we have good opportunity to see a mix of Works businesses, of the SaaS business and the pop health space and actually continued growth in our core business, which is a pretty strong contribution margin if you look at all the elements that are in that. So -- and I'm not sure that, that's answering your question directly, but that's all the business that is going to contribute to. Obviously, each one based on those contribution margins we will have the same impact on the free cash flow.

David Michael Grossman - *Stifel, Nicolaus & Company, Incorporated, Research Division - MD*

And just a quick follow up then. Do you have some visibility right now on the CapEx requirements on the VA contract over the next 12 to 24 months?

Marc G. Naughton - *Cerner Corporation - Executive VP & CFO*

I don't have the specifics that I would share with you but I have a pretty good idea what they are. The primary investment there is in data center. And I think for the most part, if you look at our relationship with, like, AWS, as we look to put more and more of our data center, certainly, housed assets into the cloud, that will free up space in the data center so the need to have to go build additional data centers or data center space, at least in the near term, should be mitigated by that move as we move more to AWS. And so I think that's part of our strategy, right? How do I minimize some of my CapEx in that space? And some of that is going to be able to take things that need to be in my data center, such as the DoD and VA, and move things that don't necessarily need to be there to the cloud.

No question? All right. Over here. Sarah behind you. Right there. There you go.

Sean William Wieland - *Piper Jaffray Companies, Research Division - MD and Senior Research Analyst*

Sean Wieland with Piper. So my is question is on revenue cycle. You're still -- you're supporting 2 patient accounting platforms out there. I think that, that's created a little bit of confusion in the end market. Just wanted to -- I've heard feedback that there's lot of your customers are waiting for you to "get it right." And I wanted to just get your perspective on that. What are the fixes that need to happen on the software side to deliver the -- a viable product there?

Marc G. Naughton - *Cerner Corporation - Executive VP & CFO*

Well, I think we have delivered a viable product. Clearly, and I'll let Jeff talk and answer in a minute. But I think that a lot of the speak in the marketplace tends to be 3-, 4-year-old data -- data points. And certainly, we've been very upfront that revenue cycle was a new area for us, we put a lot of investment into it, but we're a little bit newer to the game than people have been doing it for 30 or 40 years. So -- but the good news is we've got major clients such as Adventist. We're working with them, we're learning a lot as we go, we're optimizing the software for the needs of the clients in a way that is using a clinically driven revenue cycle, so it's all connected. It's pretty key. So I think I will ask Jeff to comment further on our preparedness for the marketplace here.

Jeffery Hurst - *Cerner Corporation - Senior VP of Revenue Cycle Management & President of Revworks*

Yes. So I agree with Marc. I think there's a lot of noise in the market and even some of the client satisfaction surveys that you often read are anywhere from 12 to 24 months old. Obviously, we're growing very rapidly and we're executing very rapidly in terms of improving our overall performance. From a client count perspective, we actually have 228 clients live today on Millennium, with another 75-or-so slotted for implementation in 2018. So by the end of '18, we'll have over 300 clients live on Millennium. I personally think people vote with their pocketbook, I think that's a good indication of what our broader client base thinks in terms of our performance in the revenue cycle space. And the last thing I would say is, or talk about is, the connectivity between the RevWorks side of the business and the solutions side of the business. I think, is a critical component of how we advance at an accelerated pace going forward. When you're running revenue cycle on a daily basis across multiple clients, it creates, in some respects, a living lab opportunity for us to see firsthand what's working very well with our solutions? And where we have opportunities to further improve them from an innovation standpoint? So I kind of look at it as a push-pull strategy where our solutions executives are kind of pushing the innovation and our portfolio, and then our services executives are simultaneously pulling those solutions forward in terms of what we need to better manage the overall business from a RevWorks perspective.

Marc G. Naughton - *Cerner Corporation - Executive VP & CFO*

Thanks for the questions. Our time is expired so -- and thank you all for coming today. We appreciate it, and we look forward to talking to you in the future. Thanks.
