


# ***TOMORROW***



# TOMORROW TODAY



At Cerner, we do more than just anticipate the future of health care – we work together with our clients to create it. With 38 years of experience building successful health care platforms, we know how to build innovative solutions to answer tomorrow’s challenges today. In a world where technology changes by the millisecond and health care needs grow by the hour, we are moving from the now to the next. Join us. Because health care is too important to stay the same.

*Our front, back and inside cover features Christine, a Cerner on-site health clinic physician, and her daughter Cara.*

**Cerner Corporation**  
2016 Annual Report

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## Board of Directors

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**Neal L. Patterson**

Chairman of the Board, Chief Executive Officer  
and Co-founder, Cerner Corporation

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**Clifford W. Illig**

Vice Chairman and Co-founder, Cerner Corporation

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**Gerald E. Bisbee Jr., Ph.D.**

Chairman, Chief Executive Officer and Co-founder,  
The Health Management Academy  
Former Chairman, Chief Executive Officer and President,  
ReGen Biologics, Inc., 1998-2011

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**Denis A. Cortese, M.D.**

Emeritus President and Chief Executive Officer, Mayo Clinic  
Foundation Professor, Arizona State University College of  
Health Solutions  
Director of Arizona State University's Health Care Delivery  
& Policy Program  
President of the Healthcare Transformation Institute

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**The Honorable John C. Danforth**

Partner, Dowd Bennett LLP  
Partner, Bryan Cave LLP, 1995-2014  
Ambassador to the United Nations, 2004-2005  
U.S. Senator, Missouri, 1976-1995

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**Mitchell E. Daniels Jr.**

President, Purdue University  
Governor of the State of Indiana, 2005-2013

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**Linda M. Dillman**

Former Chief Information Officer, QVC, Inc., 2012-2016  
Senior Vice President of Enterprise Services/Global Functions IT,  
Hewlett-Packard Company, 2009-2012  
Executive Vice President of Benefits and Risk Management,  
Wal-Mart Stores, Inc., 2006-2009  
Executive Vice President and Chief Information Officer,  
Wal-Mart Stores, Inc., 2002-2006

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**Julie L. Gerberding**

Executive Vice President and Chief Patient Officer,  
Strategic Communications, Global Public Policy and Population  
Health, Merck & Co., Inc.  
Executive Vice President for Strategic Communications, Global  
Public Policy and Population Health, Merck & Co., Inc., 2015-2016  
President, Merck Vaccines, 2010-2015  
Director of U.S. Centers for Disease Control and Prevention,  
2002-2009

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**William B. Neaves, Ph.D.**

President Emeritus and Director, The Stowers Institute for  
Medical Research

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**William D. Zollars**

Former Chairman, Chief Executive Officer and President,  
YRC Worldwide (now YRC Freight), 1999-2011

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## Leadership

<b>Neal L. Patterson</b>	Chairman of the Board, Chief Executive Officer and Co-founder
<b>Clifford W. Illig</b>	Vice Chairman of the Board and Co-founder
<b>Zane M. Burke</b>	President
<b>Marc G. Naughton</b>	Executive Vice President and Chief Financial Officer
<b>Michael R. Nill</b>	Executive Vice President and Chief Operating Officer
<b>John T. Peterzalek</b>	Executive Vice President, Client Relationships
<b>Jeffrey A. Townsend</b>	Executive Vice President and Chief of Staff
<b>Julia M. Wilson</b>	Executive Vice President and Chief People Officer
<b>Joanne M. Burns</b>	Senior Vice President and Chief Strategy Officer
<b>John P. Glaser</b>	Senior Vice President, Population Health
<b>Randy D. Sims</b>	Senior Vice President, Chief Legal Officer and Secretary
<b>Donald D. Trigg</b>	Senior Vice President and President, Cerner Health Ventures
<b>Michael R. Battaglioli</b>	Vice President and Chief Accounting Officer
<b>Emil E. Peters</b>	President, Cerner Global

## Cerner's Long-Term Performance

This table provides a view of our growth over the last 10 years and over our 30 years as a publicly traded company.

				Compound Annual Growth Rates				
				Previous Decade	Since Going Public			
				2006-2016	1986-2016			
				1986	2006	2016		
Top Line	Bookings	\$18	\$1,469	\$5,446	14%	21%		
	Revenue	\$17	\$1,378	\$4,796	13%	21%		
	Domestic Revenue	\$17	\$1,171	\$4,245	14%	20%		
	Global Revenue	\$0.2	\$207	\$551	10%	30%		
	Revenue Backlog	\$11	\$2,664	\$15,927	20%	27%		
Bottom Line	Adjusted Operating Earnings <sup>1</sup>	\$3	\$185	\$1,133	20%	22%		
	Adjusted Operating Margin <sup>1</sup>	14.8%	13.4%	23.6%				
	Adjusted Net Earnings <sup>1</sup>	\$2	\$114	\$790	21%	22%		
	Adjusted Diluted Earnings Per Share <sup>1</sup>	\$0.01	\$0.35	\$2.30	21%	20%		
Balance Sheet	Total Assets	\$26	\$1,491	\$5,630	14%	20%		
	Cash and Investments	\$8	\$309	\$466	4%	15%		
	Days Sales Outstanding	161	87	69	-2%	-3%		
	Total Debt	\$1	\$208	\$564	10%	24%		
	Equity	\$16	\$918	\$3,928	16%	20%		
Cash Flow	Operating Cash Flow	\$1	\$233	\$1,156	17%	27%		
	Free Cash Flow <sup>1</sup>	-\$1	\$40	\$402	26%	NM		
Investment in Growth	Capital Expenditures	\$1	\$131	\$459	13%	23%		
	R&D Spending	\$2	\$262	\$705	10%	22%		
	Associate Headcount	149	7,419	24,400	13%	19%		
Market Performance	Cerner Stock Price	\$0.24	\$11.38	\$47.37	15%	19%		
	Market Capitalization	\$45	\$3,567	\$15,615	16%	22%		
	NASDAQ Composite Index	349	2,415	5,383	8%	10%		
	S&P 500 Index	242	1,418	2,239	5%	8%		

**NOTES**  
Dollars are in millions except adjusted diluted earnings per share and stock prices.  
Free Cash Flow represents cash flows from operating activities less capital purchases and capitalized software development costs.  
NM = Not Meaningful

<sup>1</sup>Adjusted operating earnings, adjusted operating margin, adjusted net earnings, adjusted diluted earnings per share, and free cash flow reflect adjustments compared to results reported on a Generally Accepted Accounting Principles (GAAP) basis. Non-GAAP results should not be substituted as a measure of our performance but instead should be used along with GAAP results as a supplemental measure of financial performance. Non-GAAP results are used by management along with GAAP results to analyze our business, to make strategic decisions, to assess long-term trends on a comparable basis, and for management compensation purposes. Please see the appendix following "A Letter to Our Shareholders, Clients and Associates" for a reconciliation of these items to GAAP results.

## A Letter to Our Shareholders, Clients and Associates

I like to say that the intersection of health care and information technology (IT) is a great place to wake up every morning. Our environment has always been influenced by the trends, changes and pressures of both environments. Considered separately, they are two of the largest, fastest moving, most complex currents in the economy. The interplay between them creates unique challenges and opportunities. 2016 saw health care trying to assert itself—temporarily at least—as the stronger stream.

2016 was a mixed year for Cerner, with positives and negatives coexisting in a transitional health care environment. We competed extremely well in our core and emerging markets, but we also faced an uncertain health care policy and regulatory environment that decreased our clients' urgency to buy technology within a specific timeframe. This contributed to health IT stocks in aggregate declining 32% for the year.<sup>2</sup> While our overall pipeline remained strong, and we saw bookings growth in the majority of our businesses, we had disappointing performance against our own *Cerner ITWorks*<sup>SM</sup> and technology resale projections that impacted our ability to deliver all aspects of our financial plan and contributed to us missing guidance for some metrics. As a result of these industry-wide and company-specific factors, 2016 was a disappointing year for Cerner shareholders, with Cerner stock price decreasing 21% over the year. As you can see from the table on the preceding page, however, the value of Cerner stock has had an impressive run over the past 10 years and over our 30 years as a publicly traded company. It was tough to see that momentum broken during 2016, but I remain optimistic about our growth prospects. We have always focused on investing in long-term growth, doing what is right for clients, and managing the company, not the stock price, and this approach has resulted in very good returns for shareholders over time. If there is one thing I know after four decades at “the intersection,” it is that these currents *move*. I will use the later parts of this letter to communicate what I think is coming, and the role I believe Cerner will play.

First, here are some facts and highlights from the year. Other than the core financials, what you get out of this might depend on how well you know Cerner's lines of business and how long you have followed our progress:

- Revenue was \$4.8 billion, up 8% against 2015, a year when we grew 30%.
- Our GAAP diluted earnings per share increased 20% and our adjusted diluted earnings per share<sup>1</sup> grew 9% over 2015.
- New business bookings were a record \$5.45 billion, just past the \$5.43 billion in bookings we achieved in 2015. Apart from the disappointments in hardware and *Cerner ITWorks*, 2016 bookings were otherwise solid, especially considering 2015 bookings had grown 28% over 2014, creating a difficult comparable.
- We competed extremely well in our core electronic health record (EHR) marketplace, with a win rate over 50% against competitors up and down market. This led to strong contributions from new client footprints, with 35% of bookings coming from outside of our installed base, nearly matching record levels of new business established in 2015. All told, Cerner added nearly 400 facilities with more than 50,000 beds to our market share over the past two years.
- We continued to grow our acute care EHR market share and continue to have share comparable to that of our primary competitor. That competitor positioned itself for much of the past decade as the clear market leader; now it is in a more defensive stance and has to fight hard for every win against Cerner.
- In the replacement acute care EHR marketplace, we displaced others but did not see a single competitive displacement within the *Cerner Millennium*<sup>®</sup> acute care client base in 2016.
- Continuing a multi-year trend, 2016 was an excellent year for *Cerner*<sup>®</sup> software release quality and system availability. 98% of all *Cerner* service packages implemented in 2016 were defect-free, up from 97.1% in 2015, and our full-year system availability (Service Level Agreement uptime percentage) for *CernerWorks*<sup>SM</sup>—including remote hosting, cloud infrastructure and datacenter operations—was 99.9891%.
- Twenty new patents were issued to Cerner in 2016, bringing our total to more than 350. We filed more than 80 new patent applications during the year.



- Despite not signing the expected number of new *Cerner ITWorks* clients, we did sign our first *Cerner ITWorks* client outside the U.S., and we had strong sales back into our existing *Cerner ITWorks* client base. The resulting 28% year-over-year increase in *Cerner ITWorks* revenue in an “off” year confirms the latent potential of this highly aligned form of service offering, which grows out of relationships with existing EHR clients.
- Ambulatory had 28 displacements of our primary ambulatory competitors.
- Cerner’s revenue cycle solutions and services had a strong growth year, driven both by new EHR client footprints and increased penetration of revenue cycle within our EHR installed base.
- On the global health IT front, we gained new footprints in the United Kingdom, France and the Middle East, and displaced our primary competitor in the Middle East.
- In September, England’s National Health Service (NHS) announced its Global Digital Exemplar sites, 12 acute care trusts recognized for being the most advanced digital hospitals in the NHS. A full half of the 12 were Cerner clients, with no other competitor representing more than one. The 12 are meant to be reference sites for other trusts seeking to go digital, and each of the Exemplar sites is eligible to receive up to £10 million in funds for additional digital infrastructure projects.

None of this changes the fact that it was a somewhat challenging year for health IT, which was already coming down off the compressed-buying-activity high of the mandated Meaningful Use era when it ran smack into late-year concerns about the potential health care impacts of an unexpected presidential election result. While we

believe Cerner weathered the year better than most in our peer group, we are very critical of our own shortcomings relative to our financial plan. We can and must do better in 2017.

Before I go further, I’ll say a few things about other significant happenings that colored our year. They are a little too complex to make the highlight reel in the requisite sentence or two:

First, I want to provide an update on the Health Services acquisition. In October 2016 we completed the integration of the Health Services business with Cerner, including data centers, software development operations, field consulting, and client-facing organizations. We like our new Cerner Health Services associates a lot, and several of the associates have been integrated into the highest levels of Cerner’s leadership structures. Early on, we combined our revenue cycle teams, and a number of the more advanced *Soarian*® solution capabilities are now being leveraged by *Cerner Millennium*. We like our new clients, too. In 2016, more than 75% of clients migrating from one of the legacy Health Services platforms chose *Cerner Millennium* as their future platform. Those remaining on one of the legacy platforms have benefited from on-time software releases, including Meaningful Use 3 requirements for *Soarian*® clinical systems. Cerner Health Services hosting uptimes have hit new high water marks in line with industry-best *CernerWorks* hosting, and we have successfully launched new service offerings based on existing *Cerner Millennium* service models. There is plenty of work yet to do to responsibly serve and migrate these clients, but I consider the acquisition and integration a success.

Second, I want to comment on our project work for the U.S. Department of Defense (DoD). In 2015, together with Leidos and our other partners, we were awarded the contract to modernize the DoD’s

## 1979

Neal Patterson, Paul Gorup and Cliff Illig leave Arthur Andersen & Co. to form their own company

## 1982

*PathNet*® is installed in the lab at St. John Medical Center in Tulsa, OK

## 1984

Cerner secures \$1.5 million venture capital funding from First Chicago Capital Corporation

## 1986

Cerner goes public and is listed on NASDAQ (CERN)  
\$17 million of revenue  
149 associates

health IT capabilities. Throughout 2016, our team worked with our partners to design, configure and test the initial phases of the MHS Genesis system, the unified electronic health record built on the *Cerner Millennium* platform. The system had its successful first go-live at Fairchild Air Force Base in February 2017. Additional fixed-facility deployments will occur in 2017, and work is underway on complex environments like theater hospitals, forward resuscitative sites, naval surface ships and submarines. There is a real feeling of pride in being able to bring modern health IT to our nation's military personnel and their families. It is a huge responsibility and an honor.

And third, many of you are aware that I was diagnosed with cancer at the beginning of 2016. I gave an update on it in this letter last year. Although treatable, the treatments were physically difficult. Fortunately, I have had a career-long practice of surrounding myself with a *great* team that is not dependent upon me to move Cerner forward. Together with Cerner's Board of Directors and co-founder Cliff Illig, they kept me up to date on the essentials and let me focus on treatment and healing as needed. I made a surprise return to the public eye in front of 14,000 people at our annual Cerner Health Conference in October, where I spoke about my experience.

At Cerner, we teach that health care ultimately becomes personal for each of us, fueling our work. We encourage each other to bring our stories to work and make them part of our mission. My sister-in-law Linda's tragic death from sepsis in 2006 became the catalyst for a life-saving cloud-based surveillance solution we developed in 2010. A peer-reviewed study just published in the *American Journal of Medical Quality* in February found that the St. John Sepsis Surveillance Agent performs better than the best national protocol

for sepsis detection.<sup>3</sup> It identifies roughly three times the number of individuals who are on a path for sepsis to occur, and identifies them quicker, sometimes prior to the infection taking hold, and two to three hours before the national protocol algorithm triggers, on average. And because it has been deployed in the cloud to over 550 hospitals, 750,000 to 1 million patients had their care altered last year because of the agent. Each client is different, but a published report from one 284-bed hospital that implemented the agent indicated they had a 30% reduction in the risk of adverse outcomes after one year.<sup>4</sup> Our clients tell us the agent helps save a lot of lives. This is incredibly meaningful to me on a personal level, because my sister-in-law's death from sepsis is what prompted our work in this area. We can't go back in time and save Linda, but my family is powerfully moved knowing that "her" agent has helped doctors and nurses prevent the same devastation from happening to other families.

In another personal example, my wife Jeanne's 10-year journey with metastatic breast cancer and her experience carrying bags of her own health records around helped propel our intense focus on interoperability. This led to Cerner's co-founding of CommonWell Health Alliance, a not-for-profit trade association of companies working together to provide patient-centered interoperability of health records, regardless of location, provider or software. Four years after launching, more than 20 care settings now are represented by its 60-plus members, which include the majority of acute care EHR companies. Up to this year, enrollment and access to patients' health records via CommonWell has been done through the 5,000-plus doctors' offices and other health care sites live nationwide on CommonWell services. In August, CommonWell announced that people would now be able to self-enroll in CommonWell, link to their health records

## 1987

Cerner listed as one of *Inc.* magazine's 100 fastest-growing companies

## 1990

Revenues surpass \$50 million

## 1992

2 for 1 stock split (May 12)  
Cerner Vision Center opens  
Revenues surpass \$100 million

## 1993

2 for 1 stock split (March 1)

## 1994

1,000 associates

in the places they receive care, and view their records on the network. We are making progress.

And now, I am using my own encounters as a cancer patient inside the gears of the health system to bring new focus to the role of the person in care delivery. The provision of health care is incredibly complex, and conditions like cancer require large teams of caregivers to work in a coordinated fashion. Sometimes the coordination breaks down, and the patient suffers the effects and is left patching up the pieces. These breakdowns can have real impacts on outcomes. It is time for the patient to be part of the team, and for their experience to be a more seamless one. All of our clients are focused on improving the patient experience and patient engagement. I believe there is much Cerner can do to improve people's experiences with health care, as well as their outcomes.

Throughout Cerner's history, we have grown by adding new rings around what we already do. We started in the laboratory—the nexus of a single complex, interconnected health care enterprise—and expanded. Today we still do lab, but we also do integrated delivery networks, national systems of health care, and employer- and consumer-focused work. Our pattern is to grow outward—deeper into the complexity of the multi-trillion dollar health care industry—without ever leaving our clients and their missions behind.

In the rest of this letter, I want to explore where else this journey might lead us. But to understand the direction, it's important to discuss some realities in our health care environment. Let's take a look.

## THE MADNESS OF MARCH AND THE DRIVERS OF HEALTH CARE SPENDING

Here is a little disclosure that will mean more to U.S. basketball fans: I make an annual practice of working on this letter during March Madness.

This particular March seems unusually *mad*, and it has nothing to do with basketball. That's because here in the U.S., we are 60-something days into the first 100 days of the Trump presidency, and the political rhetoric on both sides around the potential repeal, replace or reform of the Patient Protection and Affordable Care Act (widely known as "Obamacare") has reached a fevered pitch. As I write this, the Republican-sponsored American Health Care Act of 2017 vote has recently been pulled for lack of support, and the nation seems to be in a suspended state of uncertainty about the future legislative direction of health care. The simplified political rhetoric sometimes obfuscates the real forces that drive health care spending in the U.S., which also are the essential drivers for health IT.

For those interested in reading the tea leaves about health IT, I suggest it's good to look past the rhetoric and "FUD" (fear, uncertainty and doubt) for a moment and lay out the base case for a growing future business:

1. We have an unsustainable cost curve. In the U.S., growth in health care spending has outpaced the overall growth in the economy for a half century. Stated differently, health care is taking a bigger piece of the American pie every year. The Centers for Medicare and Medicaid Services (CMS) indicates that almost 18% of the U.S. gross domestic product (GDP) is already spent on health care, and that percentage is only going up. As a point of reference, the \$3 trillion we spend as a nation on health care far exceeds, say, the \$600 billion we spend on defense. Out-of-pocket spending is high and rising. The Medicare population spends well above the average of \$10,000 per person, nearly all of which is paid for by the federal government. And no economics expert alive today has been able to reverse the trend, regardless of which political party has been in

### 1995

2 for 1 stock split (Aug. 7)

### 1999

HNA Millennium® Phase 1 is completed  
Cerner makes *Fortune* magazine's list of Best 100 Companies to Work For

### 2000

3,000 associates

### 2001

Revenues surpass \$500 million

### 2002

4,000 associates

power. It is not sustainable, and yet so far it has been unstoppable. It will create the demand for fundamental change. The heart of the cost issue is neither *access* nor *insurance reform*, although those get a lot of attention. The heart of the cost problem is how to actually stop spending as much money to achieve the desired results. Although the U.S. has the highest level of spending, other developed nations face a similar predicament, so it really is a global challenge.

2. The populous baby boom generation (born 1946-1964) is reaching retirement age. The first boomer turned 65 in 2011. As has been well-chronicled, the impact of Boomers on health care delivery and cost will continue to grow at the same time their contributions to Medicare (through the tax rolls) will decline. Further stressing the system, people are living longer lives than they were when the system was designed.
3. Chronic conditions—ranging from diabetes to heart disease—account for 85% of health care spending, and obesity-related chronic conditions have increased at alarming rates. The top six cancers are said to be preventable. Prediction, prevention and intervention can play a real role in reducing costs.
4. The broken health care payment system is driving costs. In the U.S., doctors still mostly get paid based on the volume of visits and procedures they generate, not based on keeping people well. As Cerner Board member Denis Cortese, M.D., has written, we have “a system inherently and unavoidably designed to drive and incentivize high cost, not great value or customer care.”<sup>5</sup> Our payment system drives workflow pain points such as excessive documentation to achieve E&M codes<sup>6</sup> and patient care pain points such as professionals “practicing at the top of license” and limiting any form of patient contact that can be performed by a lesser professional.

5. Any stakeholder with a brain will raise the, “What are we getting for our money?”, a/k/a “Prove the Quality”, argument. The U.S. has the most expensive health care system in the world but is ranked behind many other nations on measures of infant mortality, mortality amenable to medical care, and mortality at age 60.
6. Over the last several decades (and particularly the last seven years of Meaningful Use), health IT has been recognized by members of both political parties as a means of increasing quality while reducing cost. The core content of U.S. health care has been digitized through EHRs. While there is grueling work still to be done—particularly for interoperability, usability and patient safety—digitization can now be assumed. Throughout the rest of the world, varying states of digitization exist.
7. The second and third order impacts of achieving a fully digitized state will be profound and create far bigger opportunities than any we have seen in the current EHR era. Think of similar impacts that occurred after music, books and banking were digitized. The largest impacts were on the middlemen. In the music industry, there is more music being created and consumed today, but with almost no brick-and-mortar music stores. This is what I expect to happen in health care.
8. Even though health care processes are now automated in a basic sense, the current systems still contain many inefficiencies—such as fragmentation of care and high administrative costs—as well as opportunities to make better use of the explosion of scientific and medical knowledge.
9. While health care is ripe for major transformation, system-level innovation—changing both health and care—requires scale. Doing it around the world requires *global scale*.

## 2003

Cerner and Atos Origin awarded UK National Health Services Choose and Book contract

## 2004

Cerner ranks third among software companies in *The Wall Street Journal's* Top 50 Returns over a five-year period  
5,000 associates

## 2005

Revenues surpass \$1 billion  
Nearly 7,000 associates

## 2006

2 for 1 stock split (Jan. 10)  
Introduced *CareAware*® device architecture and line of devices  
Cerner signs contract with BT for London region of NHS program  
First *Cerner Millennium*® site in France  
Opened Cerner Healthe Clinic at our World Headquarters

10. Following the trend of other industries, health information systems of the future will become more natural to use, intelligently anticipating and simplifying workflows, and cognizant of all factors—clinical, social, environmental and geographic—that affect health and personal engagement in managing health.

Regardless of where you stand, consider that the dialogue around Obamacare and its Republican alternatives is actually quite alike in that its main focus seems to be access and insurance reform, not care delivery reform. The most discussed cost elements are related to the lack of a shared pool to spread the healthy in with the sick. Other than pricing on medications, there isn't much of a discussion around cost of care delivery. My point is, whether Washington decides to replace or revise core elements of Obamacare, the cost implications of the ten forces above will continue to pile up, even accelerate. To think otherwise would be the real March Madness. Absent rationing care or patently denying care to the sick and vulnerable—two things most politicians claim to be against—the State and Federal deficits will continue to mount. The hunger for new solutions—and new enterprise entrants—will grow with it.

To an entrepreneur, the opportunity to elevate quality and decrease cost is massive. In my view, the race is on. It is a race between technology-driven transformation — and budgeting to limit care through a single-payer system. For the sake of future generations, I know which of the two alternatives I want to win. The money to transform

the system is in the system itself. Information technology is the single biggest lever to drive cost down and quality up. An innovative health information technology company—with deep clinical knowledge, proven platforms, global reach, and an enormous technological moat<sup>7</sup>—could make a real impact.

### MACRA: IS A TRANSFORMED PAYMENT SYSTEM PART OF THE ANSWER?

Even though Obamacare and its alternatives have become heavily politicized, there is one bit of bipartisan reform passed and signed in 2015 that has a chance of reshaping care delivery in a powerful way.

To explain the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA), a little background is needed. Some 55 million U.S. citizens are on Medicare, the Federal safety net insurance program for people over retirement age and younger people with disabilities. In the 1990s, after years of unsustainable growth in Medicare spending, the Balanced Budget Act of 1997 attempted to fix the problem by introducing the Medicare Sustainable Growth Rate (SGR), a formula that tied Medicare spending growth to U.S. GDP growth. Unfortunately, because health care spending routinely outpaced growth in the GDP, the SGR formula eventually resulted in unreasonable annual payment cuts for the doctors who cared for Medicare patients. Seventeen times between 2003 and 2014, Congress passed temporary “Doc Fix” legislation to prevent the

## 2007

- Revenues surpass \$1.5 billion
- Shipped first production units of *RxStation*® medication dispensing devices; 25 clients purchase *CareAware iBus*® device connectivity
- Delivered new *Cerner ProVision*® PACS Workstation
- Opened new Data Center at World Headquarters
- Signed first clients in Spain and Egypt; opened office in Dublin, Ireland
- Acquired Etreby Computer Company (retail pharmacy solutions)

## 2008

- Free cash flow surpasses \$100 million
- Smart Semi, a mobile hospital room of the future, introduced and made 93 stops, hosting nearly 9,000 client attendees
- Signed first agreement for the *Cerner Smart Room*™
- Expanded footprint in Middle East with signing of Ministry of Health in United Arab Emirates
- Signed first hosted client in France
- Signed first client in Latin America

## 2009

- American Recovery & Reinvestment Act becomes law and includes \$35 billion in incentives for the adoption of healthcare IT
- First two *Cerner ITWorks*™ contracts signed
- University of Missouri and Cerner create Tiger Institute for Health Innovation
- Announced acquisition of IMC Health Care
- Cerner clients connect with HHS and CDC to fight spread of influenza
- Introduced *uCern*® suite of social collaboration tools for clients and associates
- Cerner added to NASDAQ 100 Index



cuts from being applied. In 2015, Congress passed MACRA, also known as the “Permanent Doc Fix”, with broad bipartisan support.

MACRA repealed the flawed SGR, but it also introduced significant changes in the future payment model for Medicare physicians. Instead of authorizing traditional fee-for-service payments, MACRA mandates that future payments to physicians who serve Medicare patients be based on one of two value-based payment schemes.

Inside Cerner, we believe that MACRA could be the government’s next Meaningful Use—in other words, a program that will impact buying behavior. Unlike Meaningful Use, which mandated EHR adoption without requiring proof of better outcomes, MACRA is a competitive mandate that will reward providers who achieve better outcomes and penalize providers who do not. Most providers are thin-margin organizations, and a 2% penalty on half of their revenues is a major event. As the payer for roughly 50% of care, Washington knows how to change health care using the carrot and the stick. Now that the core system is digital, they can demand the measurements to continuously move the meters toward higher quality, lower cost care.

Broadly, CMS has been using its status as the largest health care buyer in the world to move the market toward outcomes-focused, risk-based payment, with former Secretary Burwell calling for 50% of all Medicare payments to be value-based by 2018.

With the change in presidential administration, we will see a predictable review and perhaps even a little drama. However, policymakers seem confident that MACRA will continue as planned. It is difficult to predict the direction of policymakers, but based on the forces and pressures that drive health care spending ever upward, it is hard to imagine ignoring the power of shifting from fee-for-service to a value-based system inside the competitive marketplace.

### TOMORROW, TODAY: WHAT CERNER DOES

There is a reproducible formula for how value and results are created at Cerner, one that starts with *vision* and then flows downstream to *mission, strategy, structure, process, tools, effort* and finally *results*. The “water” can be muddied at any point along the stream, but can ultimately only be as pure as what preceded it. Whenever we don’t like our results, or perhaps their trend or variance, we stop and examine every level in the formula, starting at the top.

I consider the most important executive functions to be the ability to develop vision, mission and strategy. Together, they’re the art of working on tomorrow, today. Vision is based on contemplating a desirable future state, of connecting dots to mentally solve a problem that exists in the future. Once we have clear vision of the compelling future state and have identified an actionable mission to get there, it is time to choose the strategies that will accomplish the mission. One of our dependable growth strategies is to build world-class information technology platforms that address the future need. There is art in the timing.

## 2010

Announced new mission statement, “To contribute to the systemic improvement of health care delivery and the health of communities”

Introduced *HealthIntent*<sup>SM</sup> cloud-based platform

Patient Protection and Affordable Care Act becomes law in an effort to reform how health care is delivered in the U.S.

Announced agreement with CareFusion to better integrate medical devices and electronic health records

Fisher-Titus Medical Center and Magruder Hospital partner with Cerner to become first all-digital, smart hospitals in the U.S.

First two Cerner *RevWorks*<sup>SM</sup> contracts signed

Cerner honored as one of the best employers for healthy lifestyles by The National Business Group on Health

Neal Patterson recognized by *Forbes* as one of America’s Best-Performing Bosses for providing shareholders with the “biggest bang for the buck”

Cerner added to S&P 500 index

8,000 associates

## 2011

2 for 1 stock split (June 27)

Acquired Resource Systems (long-term care solutions)

Acquired Clairvia (workforce management solutions)

Revenue and bookings surpass \$2 billion

Introduced new logo and tagline: Health care is too important to stay the same.<sup>TM</sup>

Launched *Cerner Skybox*<sup>SM</sup> suite of cloud services

Signed first *Cerner QualityWorks*<sup>SM</sup> client

Cerner associates shed more than 20,000 pounds during Slimdown Throwdown weight-loss competition

Cerner clients begin receiving stimulus funds related to achieving Meaningful Use

## 2012

Surpassed \$3 billion in annual bookings, including over \$1 billion in Q4

Announced \$170 million Share Repurchase Program

Acquisition of behavioral health company, Anasazi Software

86% of clients attested or in process of attesting for Stage 1 Meaningful Use

Nearly double the number of client sites achieved HIMSS Analytics Electronic Medical Records Adoption Model<sup>SM</sup> Stage 6 or 7 in 2012 than our closest competitor; most stage 6 or 7 clients outside the U.S. as well

*PowerChart+Touch*<sup>TM</sup> went live at 13 early adopter clients

Advocate Health Care partnership led to more than 20% improvement in ability to predict readmissions

Partnered with NBA to provide *HealtheAthlete*<sup>®</sup> an organization-wide automated health care management system

Kicked off Healthy Nevada project to cultivate a culture of health, digitize health care and establish integrated communication among all providers in the community

## A Vision, Mission and Strategy for Population Health Management

Last year, I spent considerable space in this letter on the evolution of population health management and why value-based-payment was necessary to drive it. Without rehashing all of that, at a very simplified level, population health management is a model of care provision where a group of providers take on financial risk and responsibility for the health of a defined population, and they actively work to improve the health of every person in that population so that costs are controlled and outcomes are improved. In our view, population health management is going to have to be the answer to the question of how to curb the drivers of health care spending. Payment reform adds a missing ingredient, the immediate “*Why now?*” that gives providers the incentive to transition to risk-based, population-based, outcome-based models of care.

As the market emerges for population health management systems, we like where we’re at and what we’ve got. We started with a compelling vision for population health management. We defined the mission in 2012, and we began building it. Our *HealthIntent*<sup>SM</sup> platform is entirely cloud-based and is designed to manage the health of defined populations whose boundaries are not limited to a single health care enterprise. Its sources of data are boundless, including numerous EHR platforms, insurance claims, prescription data, consumer-contributed social data, GPS and environmental data. The data aggregation platform went live in 2013 and now has a growing family of solutions sitting on top of it. By the end of 2016, we had

more than 100 clients, including some of our primary competitor’s EHR clients, and the database contained more than 6PB of aggregated data from more than 88 million persons. Another core growth strategy after building world-class information technology platforms is to add high-value services to leverage the technology and extend its benefits. The era of population health management will provide many opportunities for value-added services that make use of the power of the *HealthIntent* platform. Like with *Cerner Millennium*, it could very much end up being about being at the right place at the right time with the right stuff.

## WHAT DOES HEALTH IT BECOME WHEN CARS DRIVE THEMSELVES?

Health care is incredibly complex. Consider for a moment the fact that, in 1950, the total body of published medical knowledge likely progressed at a rate sufficient to double every 50 years.<sup>8</sup> By 2020, however, the doubling rate for new medical knowledge is projected to be every 73 days.<sup>9</sup> That’s crazy, but it might not be too much of a problem as long as all of the new knowledge gets diffused into practice quickly. Unfortunately, it doesn’t. A famous study by Balas and Boren showed that it takes 17 years for a mere 14% of new evidence published in medical journal articles to work its way into practice 50% of the time.<sup>10</sup> With the help of information technology, though, these and other hard realities can become opportunities. IT is the only lever strong enough to change health care.

### 2013

2 for 1 stock split (July 1)  
Annual bookings grew 20% to \$3.8 billion  
Total assets surpass \$4 billion  
Completed \$170 million Share Repurchase Program and announced another \$217 million Share Repurchase Program  
Announced partnership with Intermountain Healthcare for clinical systems, revenue cycle and population health  
Signed first client in Brazil, Hospital Israelita Albert Einstein  
Acquisitions of wellness company PureWellness and laboratory automation company Labotix  
Associates who manage and support our clients’ IT systems moved into new Continuous Campus facility  
Purchased 237 acres of land for a new campus in Kansas City, MO, for long-term plan to add 16,000 associates  
Released *HealthRegistries*<sup>SM</sup> on Cerner’s cloud-based population health platform  
#4 on Top 100 Healthiest Companies in America  
#13 on *Forbes* list of World’s Most Innovative Companies, ahead of Google and Apple  
14,000 associates

### 2014

Annual revenue grew 17% to \$3.4 billion  
Repurchased \$217 million of stock under our Share Repurchase Program  
First place on *Kansas City Business Journal’s* list of Healthiest Employers for companies employing over 3,500 people  
CEO Neal Patterson recognized with Industry Leader Award by CHIME  
Named to top 25 of *Forbes* list of World’s Most Innovative Companies  
Named to *Fortune* magazine’s list of World’s Most Admired Companies and #1 Most Admired in Health Care industry  
15,800 associates

### 2015

Revenue grew 30% to \$4.4 billion  
Surpassed \$5 billion in annual bookings  
Completed \$1.4 billion acquisition of Siemens Health Services  
Repurchased \$345 million of stock under Share Repurchase Programs  
Awarded Department of Defense Healthcare Management System Modernization contract as part of Leidos Partnership  
22,200 associates  
Board member Mitch Daniels named as one of *Fortune* magazine’s Top 50 World’s Greatest Leaders  
Chilmark Research gave Cerner’s population health management solutions the best product overall grade and market overall grade

## The Journey from Raw Data to Understanding

The British science fiction writer Arthur C. Clarke once wrote,

“The Information Age offers much to mankind, and I would like to think that we will rise to the challenges it presents. But it is vital to remember that information — in the sense of raw data — is not knowledge, that knowledge is not wisdom, and that wisdom is not foresight. But information is the first essential step to all of these.”<sup>11</sup>

He’s right. What he’s describing is a sequence, a series of transformations. Solving big problems in health care requires this exact sequence, and that is what is at the heart of the most sophisticated branches of IT—artificial intelligence (AI) and cognitive computing. I want to share some examples of what we are already doing using cognitive techniques, and reflect on the tremendous promise they hold for the future.

The very name “Cerner” is related to the concepts of discernment and understanding. We created our first AI-based solution, *Discern Expert*<sup>®</sup>, in 1988. *Discern Expert* was (and remains) an event-driven, rule-based decision support software application that allows its users to define clinical and management rules that get applied to ongoing clinical event data captured in other parts of the system. Its uses are really only limited by a clinician’s imagination; for example, it can be used to send out alerts if a relevant lab result has returned a certain predetermined value so that a physician can determine whether to stop a surgery from occurring. The HTML-based *Discern Advisor*<sup>®</sup>

solution was added in the mid-2000s to focus on medication usage criteria, automation of complex decision trees, patient scoring systems and clinical calculators in support of complex clinical decision-making.

Today we have numerous *Discern*<sup>®</sup>, *CareDecisions*<sup>™</sup>, *Cerner Math*<sup>™</sup> and *HealthIntent*<sup>SM</sup> solutions that use a variety of machine learning techniques. Some are auto-adaptive, while others require more human curation to tune their effectiveness. Some are aimed at accomplishing difficult data mapping tasks at tremendous scale, while others are laser-sighted on assisting in the prediction and prevention of a specific cost, consequence or condition. In aggregate, they are aimed at helping to solve big problems in health care.

Prior to her sudden and tragic death from strep pneumonia sepsis, my sister-in-law Linda was a kindergarten teacher in rural Kansas. A challenging feature in her case, not unusual in rural environments, was her movement between different care venues as her condition deteriorated. It was only days later in the final location, an ICU an hour away from home, that her true condition was recognized at last and antibiotic treatment was initiated—too late, unfortunately, to save her. Each venue—whether rural primary care, rural emergency room, ambulance, larger hospital, or ICU—had generated its own *data* about her, but there was no common connection among the venues sufficient to create *wisdom* about her condition, much less *foresight* about what to do about it. When Cerner engineers sought to create a solution capable of helping to save the next “Linda,” they had to solve the big problem of how to collect various types

## 2016

Revenue grew 8% to \$4.8 billion

Solutions now in more than 25,000 facilities in over 35 countries and 15 languages

Over 100 *HealthIntent* clients

Over 150 *CommunityWorks*<sup>SM</sup> clients

Repurchased \$700 million of stock under Share Repurchase Programs

24,400 associates

### Cerner Awards

- #1 on Black Book Rankings' list of EHR vendors for community hospitals for fifth straight year
- #1 on Black Book Rankings' list of HIE suppliers for inpatient and ambulatory EHRs for fourth straight year
- #1 on Black Book Rankings' list of ambulatory EMRs for interoperability, communications and connectivity
- Named to *Fortune* magazine's list of World's Most Admired Companies in Health Care: Pharmacy and Other Services category for second year in a row
- Named to Healthiest Employers, LLC's list of Healthiest Workplaces in America for third year in a row
- Named to *Forbes* list of World's Most Innovative Companies for fifth year in a row
- Named to Glassdoor's list of Best Places to Interview in 2016
- Awarded Children's Innovation Award for the advancement and innovation of pediatric care by Children's National Health System
- Recognized on *Forbes* list of America's Best Employers for second straight year
- CEO Neal Patterson named one of *Harvard Business Review*'s best-performing CEOs in the world for second year in a row

of data from different venues, gather it into the cloud, and transform it into a single understandable record that could become the basis for taking further actions such as monitoring and generating alerts. They did this with help from cognitive techniques such as ontology mapping and adaptive knowledge processing. Inspired by the cross-venue complexity of Linda’s story and others like it, the standards-based longitudinal person record is now an important foundational building block within *HealthIntent*, our platform that accepts data from an unlimited number of sources, including multiple venues using disparate EHRs.

As of today, we don’t make any cognitive systems meant to replace humans, but we use cognitive techniques to automate tasks that are too big or repetitive for humans to handle, and we use AI-based machine learning to provide adaptive, embedded forms of assistance we call “cognitive moments”—discrete information-based predictions and interactions that help advise and assist a physician or other clinician at the moment of decision. They are adaptive in the sense of *reading contextual clues* present in the myriad combinations of roles, actions, events, venues and conditions; and then consulting models to identify which patterns exist that might inform what should happen next. When appropriate, our *Cerner Math* data scientists leverage machine learning to build predictive mathematical models for use within *CareDecisions* and elsewhere. To date, they have built more than 50 predictive models.

### **The Importance of Good Sources of Data**

Given the Arthur C. Clarke quote, it shouldn’t be a surprise that the raw data you feed your AI models matters a great deal.

Last year, Microsoft launched Tay, an AI-based Twitter chatbot that had been built using “relevant public data” that was said to be “modeled, cleaned and filtered.” That certainly sounds like a good diet. But once it was turned on and fed a supplemental diet of sarcastic and abusive tweets, it went from saying “Humans are super cool” to voicing racist and misogynistic opinions in less than 24 hours. Needless to say, it was turned off.

At Cerner, we believe we have a near-perfect diet for our clinical AI-based models. The discovery, development and validation of our *Cerner Math* predictive models have primarily been performed using Cerner’s own *Health Facts*® data warehouse.

This will get a little technical, but bear with me. *Health Facts* is a HIPAA-compliant, de-identified, privacy-protected, EHR-derived, ontology-mapped, longitudinally Enterprise Master Patient Index (eMPI)-linked repository of the serial care-episode health records of the patients cared for at nearly 700 U.S. health institutions that have established data-rights agreements with Cerner. Begun on January 1, 2000, and expanded daily since then, *Health Facts* currently contains more than 150 million distinct persons’ longitudinal records, more than 400 million episodes of care, and more than 5 billion clinical events. *Health Facts* is not a context-poor “claims” database. Instead, it includes the majority of the content in patients’ EHR records, including medications, lab results, procedures, problem list entries, diagnoses, and claims—with each data element or transaction time-stamped with minute-level precision and each successive episode for a given person longitudinally linked via a key that is encrypted from the eMPI.

When we want to “teach” one of our machine learning based AI models, we might begin with a cohort of 20,000 or more cases and a comparable number of controls, and give it several hundred input variables. From there it gets even more technical. Compare this to a traditional clinical trial where you have a cohort of perhaps 100 or 200 patients and you hold all variables constant except one. This is a very different way of finding patterns and evidence. We are studying what is actually occurring versus a staged activity, and looking at large numbers of cases. This type of access to big data can bring to light patterns that have never previously been known, leading to further investigation and modeling. If we can use that new pattern to accurately predict the next cases, then we know we have found something of real value.

### **Looking to the Future**

We have known for a long time that cognitive techniques hold a lot of promise for health care. They are beginning to deliver on the promise. As we look to the future, we see a number of logical next steps. Many of these are aimed at helping caregivers deal with the increasing complexity of health care and the rising expectations to be aware of “everything,” even when “everything” is beyond the ability of one person to comprehend.

A natural follow-up to the standards-based longitudinal person record will be the so-called “contextualization” of the record so that each



member of the care team gets a perspective of the person's record that meets the needs of their role and venue. We can manually curate content for single-condition needs, but the comorbid cases—those involving two or more coexisting medical conditions—require a significant *knowledge discovery* and curation effort. We plan to use machine learning techniques to take a more systematized approach to discover such content, yet verified by our informatics and clinical personnel. This type of data-driven approach to derive knowledge will help create more cognitive moments for providers and researchers that are both contextual and adaptive in nature. We can also use techniques similar to those used to create the longitudinal person record to help assimilate the rapidly expanding body of new medical knowledge into what we call model practice and model outcomes.

The cognitive techniques that are transforming other industries are also transforming the provision of health care. Given the relative complexity of health care, it will take time to figure out which techniques will be most impactful and build them out. It is an exciting time to be involved in health IT.

## CONCLUSION

Cerner believes in innovation. A large part of our value proposition to our clients is that we establish and maintain our technology leadership, remaining contemporary so that our clients receive benefits from meaningful advances in computing. Never in the history of IT has the rate of change moved this fast nor had such a ubiquitous impact on almost everyone in our society. The old concept of rising expectations is at work, down in the complexities of health care. The cognitive era of health care will happen, and we will lead.

To our shareholders new and old, thanks for your continued confidence. I continue to be amazed by the amount of growth potential there is in health IT. The future is not guaranteed, but I like our chances of being the ones who can positively impact the delivery of care.

Sincerely,



NEAL L. PATTERSON  
Chairman of the Board, Chief Executive Officer  
& Co-founder

<sup>2</sup>32% represents the average decline for the following publicly traded health IT stocks: Allscripts Healthcare Solutions, Inc. (MDRX), which was down 34%; Athenahealth, Inc. (ATHN), which was down 35%; Cerner Corporation (CERN), which was down 21%; Computer Programs and Systems, Inc. (CPSI), which was down 53%; and Quality Systems, Inc. (QSII), which was down 18%.

<sup>3</sup>Robert C. Amland and Bharat B. Sutariya, MD. "Quick Sequential [Sepsis-Related] Organ Failure Assessment (qSOFA) and St. John Sepsis Surveillance Agent to Detect Patients at Risk of Sepsis: An Observational Cohort Study." *American Journal of Medical Quality*, February 2017.

<sup>4</sup>Robert C. Amland, James M. Haley, MD, and Jason J. Lyons, MD. "A Multidisciplinary Sepsis Program Enabled by a Two-Stage Clinical Decision Support System." *American Journal of Medical Quality*, November 2016.

<sup>5</sup>Anthony Bell and Denis A. Cortese, MD. *Rescuing Healthcare: A Leadership Prescription to Make Healthcare What We All Want It to Be*, 2017.

<sup>6</sup>Evaluation and management (E&M) coding is required in the United States to be reimbursed by Medicare, Medicaid and private insurance.

<sup>7</sup>I use *moat* here in the Warren Buffett sense of a defensive barrier in the form of a durable competitive advantage that cannot be easily replicated by competitors.

<sup>8</sup>Peter Densen, MD. "Challenges and Opportunities Facing Medical Education." *Transactions of the American Clinical and Climatological Association*, 2011.

<sup>9</sup>*Id.*

<sup>10</sup>E. Andrew Balas and Suzanne A. Boren. "Managing clinical knowledge for health care improvement." *Yearbook of Medical Informatics 2000: Patient-Centered Systems*, 2000.

<sup>11</sup>Sir Arthur C. Clarke. "Humanity Will Survive Information Deluge." *OneWorld South Asia*, 2003.



## Appendix: Reconciliation of GAAP Results to Non-GAAP Results\*

Adjusted Operating Earnings	1986		2006		2016	
	Operating Earnings	Operating Margin %	Operating Earnings	Operating Margin %	Operating Earnings	Operating Margin %
<i>(\$ in millions)</i>						
Operating earnings (GAAP)	\$3	14.8%	\$166	12.1%	\$911	19.0%
Share-based compensation expense			19		81	
Health Services acquisition-related amortization					81	
Acquisition-related deferred revenue adjustment					20	
Other acquisition-related adjustments					4	
Voluntary separation plan expense					36	
Adjusted Operating Earnings (non-GAAP)	\$3	14.8%	\$185	13.4%	\$1,133	23.6%
<b>Adjusted Net Earnings and Adjusted Diluted Earnings Per Share</b>						
	1986		2006		2016	
	Net Earnings	Diluted Earnings Per Share	Net Earnings	Diluted Earnings Per Share	Net Earnings	Diluted Earnings Per Share
<i>(\$ in millions, except per share data)</i>						
Net earnings (GAAP)	\$2	\$0.01	\$110	\$0.34	\$636	\$1.85
Pre-tax adjustments for Adjusted Net Earnings:						
Share-based compensation expense			19		81	
Health Services acquisition-related amortization					81	
Acquisition-related deferred revenue adjustment					20	
Other acquisition-related adjustments					4	
Voluntary separation plan expense					36	
After-tax adjustments for Adjusted Net Earnings:						
Income tax effect of pre-tax adjustments			(7)		(68)	
Tax benefits unrelated to the current period			(8)			
Adjusted Net Earnings (non-GAAP)	\$2	\$0.01	\$114	\$0.35	\$790	\$2.30
<b>Free Cash Flow</b>						
			1986	2006	2016	
<i>(\$ in millions)</i>						
Cash flows from operating activities (GAAP)			\$1	\$233	\$1,156	
Capital purchases			(1)	(131)	(459)	
Capitalized software development costs			(1)	(61)	(294)	
Free Cash Flow (non-GAAP)			(\$1)	\$40	\$402	
Cash flows from investing activities (GAAP)			(\$2)	(\$178)	(\$790)	
Cash flows from financing activities (GAAP)			(\$1)	(\$1)	(\$587)	

\*More detail on these adjustments and management's use of non-GAAP results is in our 2016 annual report on Form 10-K and our current reports on Form 8-K.

**Cerner Corporation**  
2016 Annual Report  
Form 10-K

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

**FORM 10-K**

**(X) ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended: December 31, 2016

OR

**( ) TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number: 0-15386

**CERNER CORPORATION**

(Exact name of registrant as specified in its charter)

**Delaware**

(State or other jurisdiction of incorporation or organization)

**43-1196944**

(I.R.S. Employer Identification Number)

**2800 Rockcreek Parkway  
North Kansas City, MO**

(Address of principal executive offices)

**64117**

(Zip Code)

**(816) 201-1024**

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

<u>Title of each class</u>	<u>Name of each exchange on which registered</u>
Common Stock, \$0.01 par value per share	The NASDAQ Stock Market LLC (NASDAQ Global Select Market)

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes  No

As of July 2, 2016, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was \$17.6 billion based on the closing sale price as reported on the NASDAQ Global Select Market. Shares of common stock held by each executive officer, director and holder of 10% or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status for purposes of this calculation is not intended as a conclusive determination of affiliate status for other purposes.

Indicate the number of shares outstanding of the issuer's classes of common stock, as of the latest practicable date.

Class	Outstanding at February 1, 2017
Common Stock, \$0.01 par value per share	329,719,501 shares

#### DOCUMENTS INCORPORATED BY REFERENCE

Document

Portions of the registrant's Proxy Statement for the Annual Shareholders' Meeting to be held May 24, 2017

Parts into Which Incorporated

Part III

## PART I.

### Item 1. Business

#### Overview

Cerner Corporation started doing business as a Missouri corporation in 1980 and was merged into a Delaware corporation in 1986. Unless the context otherwise requires, references in this report to “Cerner,” the “Company,” “we,” “us” or “our” mean Cerner Corporation and its subsidiaries.

Our corporate world headquarters is located in a Company-owned office park in North Kansas City, Missouri, with our principal place of business located at 2800 Rockcreek Parkway, North Kansas City, Missouri 64117. Our telephone number is 816.201.1024. Our Web site, which we use to communicate important business information, can be accessed at: [www.cerner.com](http://www.cerner.com). We make our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and all amendments to those reports available free of charge on or through this Web site as soon as reasonably practicable after such material is electronically filed with or furnished to the Securities and Exchange Commission (“SEC”). We do not intend for information contained in our website to be part of this annual report on Form 10-K.

Cerner is a leading supplier of health care information technology (“HCIT”). Our mission is to contribute to the improvement of health care delivery and the health of communities. We offer a wide range of intelligent solutions and services that support the clinical, financial and operational needs of organizations of all sizes. We have systems in more than 25,000 facilities worldwide, including hospitals, physician practices, laboratories, ambulatory centers, behavioral health centers, cardiac facilities, radiology clinics, surgery centers, extended care facilities, retail pharmacies, and employer sites.

Cerner solutions are offered on the unified *Cerner Millennium*<sup>®</sup> architecture and on the *HealthIntent*<sup>™</sup> cloud-based platform. *Cerner Millennium* is a person-centric computing framework, which includes integrated clinical, financial and management information systems. This architecture allows providers to securely access an individual’s electronic health record (“EHR”) at the point of care, and it organizes and proactively delivers information to meet the specific needs of physicians, nurses, laboratory technicians, pharmacists, front- and back-office professionals and consumers. Our *HealthIntent* platform is a cloud-based platform designed to scale at a population level while facilitating health and care at a person and provider level. On the *HealthIntent* platform, we offer EHR-agnostic solutions that help health care systems aggregate, transform and reconcile data across the continuum of care, manage the health of populations they serve, improve outcomes and lower costs.

On February 2, 2015, Cerner acquired Siemens Health Services (now referred to as “Cerner Health Services”). Cerner Health Services offers a portfolio of enterprise-level clinical and financial health care information technology solutions, as well as departmental, connectivity, population health, and care coordination solutions globally.

We offer a broad range of services, including implementation and training, remote hosting, operational management services, revenue cycle services, support and maintenance, health care data analysis, clinical process optimization, transaction processing, employer health centers, employee wellness programs and third party administrator (“TPA”) services for employer-based health plans.

In addition to software and services, we offer a wide range of complementary hardware and devices, both directly from Cerner and as a reseller for third parties.



The following table presents our consolidated revenues by major solutions and services and by segment, as a percentage of total revenues:

	For the Years Ended		
	2016	2015	2014
<i>Revenues by Solutions &amp; Services</i>			
System sales	26%	29%	28%
Support and maintenance	21%	22%	21%
Services	51%	47%	48%
Reimbursed travel	2%	2%	3%
	100%	100%	100%
<i>Revenues by Segment</i>			
Domestic	89%	88%	89%
Global	11%	12%	11%
	100%	100%	100%

### **Health Care and Health Care IT Industry**

Health care expenditures continue to consume an increasing portion of most economies. In the U.S., health care spending increased 5.5 percent to \$3.20 trillion in 2015, growing to 17.8 percent of the U.S.'s Gross Domestic Product ("GDP"). The Centers for Medicare and Medicaid Services ("CMS") estimates U.S. health care spending in 2016 at \$3.35 trillion, or 18.1 percent of GDP, and projects it to be 20.1 percent of GDP by 2025. We believe this trajectory is unsustainable and that health care IT can play an important role in facilitating a shift from a high-cost health care system that incents volume to a proactive system that incents health, quality and efficiency.

For this change to occur, traditional fee-for-service ("FFS") reimbursement models must shift to value-based approaches that are more aligned with quality, outcomes, and efficiency. The largest signal of this shift occurred in January of 2015 when the U.S. Department of Health & Human Services laid out a plan to shift 50 percent of Medicare payments to value-based payment models by the end of 2018, and to tie 90 percent of the remaining traditional FFS payments to quality measures.

A further step towards a value-based model occurred in 2016 with the passage of The Medicare Access and CHIP Reauthorization Act ("MACRA"), which enacts significant reforms to the payment programs under the Medicare Physician Fee Schedule and consolidated three current value-based programs into one. We believe that MACRA and other government and private models aligning payment with value, quality and outcomes will drive major changes in the way health care is provided in the next decade, and we expect a much greater focus on patient engagement, wellness and prevention. As health care providers become accountable for proactively managing the health of the populations they serve, we expect them to need ongoing investment in sophisticated information technology solutions that will enable them to predict when intervention is needed so they can improve outcomes and lower the cost of providing care.

The increasingly complex and more clinical outcomes-based reimbursement environment is also contributing to a heightened demand for revenue cycle solutions and services and a desire for these solutions and services to be closely aligned with clinical solutions. We believe this trend is positive for Cerner because our *Cerner Millennium* revenue cycle solutions and services are integrated with our clinical solutions, creating a clinically driven revenue cycle solution that has had significant adoption in recent years.

Over the past several years, we have also seen a shift in the U.S. marketplace towards a preference for a single platform across inpatient and ambulatory settings. The number of physicians employed by hospitals has increased as hospitals have acquired physician groups, and health systems are recognizing the benefit of having a single patient record at the hospital and the physician office. We are benefiting from this trend due to our unified *Cerner Millennium* platform, which spans multiple venues, and significant enhancements we have made to our physician solutions in recent years.

While health care providers are showing a preference for a single platform across multiple venues, there is also an increased push for interoperability across disparate systems to address the reality that no patient's record will only have information from a single health care IT system. We believe health information should be shareable and accessible among primary care physicians, specialists, and hospital physicians.

As a result, Cerner has led or been a key participant in nearly every major industry effort to advance interoperability and system openness. One example is Cerner's role as a founding member of the CommonWell Health Alliance, an open, not-for-profit industry consortium that brought health care IT firms together for the purpose of enabling safe nationwide interoperability. The vision of CommonWell is for a patient to be able to visit a new doctor, give their consent, and, within moments, have his or her lifetime record available from all the prior places he or she has visited.

CommonWell members represent about 70 percent of the acute care market and about 30 percent of the ambulatory market. CommonWell membership also spans a diverse range of clinical care settings beyond acute and ambulatory, including health IT market leaders in imaging, perinatal, emergency department, laboratory, retail pharmacy, oncology, care management, patient portal, post-acute care, and state and federal government agencies. In 2016, CommonWell and CareQuality, another national interoperability framework, announced an agreement to work together and leverage the respective strengths of each organization to create a level interoperability playing field for all provider organizations that wish to share clinical information using standards-based queries. This agreement is expected to create near-universal connectivity that establishes a baseline query capability for all providers, regardless of their EHR supplier.

Outside the United States, we believe Cerner's growth opportunities are good, as most countries are also dealing with health care expenditures growing faster than their economies, which is leading to a focus on controlling costs while also improving quality of care.

### **Cerner Vision and Growth Strategy**

For over three decades, Cerner has been continuously building intelligent solutions for the health care industry. Together with our clients, we are creating a future where the health care system works to improve the well-being of individuals and communities. Our vision has always guided our large investments in research and development (R&D), which have created strong levels of organic growth throughout our history. Our proven ability to innovate has led to what we believe to be industry-leading architectures and an unmatched breadth and depth of solutions and services. The strength of our solutions and services has led to our ability to gain market share in recent years, which has contributed to our growth. We believe we are positioned to continue gaining share in coming years as regulatory requirements and industry shifts continue to pressure health care providers to improve quality while lowering costs, which we believe will require having more sophisticated information technology than many of our competitors provide.

In addition to growth by gaining market share, we believe we have a significant opportunity to grow revenues by expanding our solution footprint with existing clients. For example, less than 35 percent of our *Cerner Millennium* EHR clients have implemented Cerner revenue cycle solutions. This penetration has been growing in recent years and we expect it to continue because of the preference for having EHR and revenue cycle systems provided on the same platform. There is also opportunity to expand penetration of other solutions, such as women's health, anesthesiology, imaging, clinical process optimization, critical care, health care devices, device connectivity, emergency department and surgery.

We also have an opportunity to grow by expanding penetration of services we offer that are targeted at capturing a larger percentage of our clients' existing IT spending. These services leverage our proven operational capabilities and the success of our *CernerWorks*<sup>SM</sup> managed services business, where we have demonstrated the ability to improve our clients' service levels at a cost that is at or below amounts they were previously spending. One of these services is *Cerner ITWorks*<sup>SM</sup>, a suite of solutions and services that improves the ability of hospital IT departments to meet their organization's needs while also creating a closer alignment between Cerner and our clients. A second example is *Cerner RevWorks*<sup>SM</sup>, which includes solutions and services to help health care organizations improve their revenue cycle functions.

We have made progress over the past several years at reducing the total cost of our solutions, which expands our end market opportunities by allowing us to offer lower-cost, higher-value solutions and services to smaller community hospitals, critical access hospitals and physician practices. For example, our *CommunityWorks*<sup>TM</sup> offering leverages a shared instance of the *Cerner Millennium* platform across multiple clients, which decreases the total cost for these clients.

We also expect to drive growth over the course of the next decade through initiatives outside the core HCIT market. For example, we offer clinic, pharmacy, wellness and third-party administrator services directly to employers. These offerings have been shaped by what we have learned from changes we have implemented at Cerner. We have removed our third-party administrator and become self-administered, launched an on-site clinic and pharmacy, incorporated biometric measurements for our associate population, realigned the economic incentives for associates in our health plan, and implemented a data-driven wellness management program. These changes have had a positive impact on the health of our associates while also keeping our health care costs below industry averages.

As discussed below, another significant opportunity for future growth, and a large area of investment for Cerner, is leveraging the vast amounts of data being created as the health care industry is digitized and using this data to help providers and employers manage the health of populations.

### **Population Health**

Population Health Management involves a shift from solely automating health systems to managing a person's health. Getting there requires complete, accurate patient data and meaningfully using that data to engage individuals, exchange information between providers and ultimately drive better outcomes at a lower cost. This shift will shape the future of health care and enable a system driven by accountability, transparency and value.

Cerner's approach to population health is to enable organizations to:

- **KNOW** what is happening and predict what will happen within their population through solutions for data exchange, longitudinal record, enterprise data warehouse, analytics and quality and regulatory reporting;
- **ENGAGE** providers and patients in health and care delivery through personal health portals and solutions for care management, home care, long-term care, and retail pharmacy; and
- **MANAGE** health and improve care with capacity and workforce management, clinical research, predictive modeling, health registries, and contract and network management.

These solutions are enabled by Cerner's *HealthIntent* platform, which is a multi-purpose, programmable platform designed to scale at a population level while facilitating health and care at a person and provider level. This cloud-based platform enables organizations to aggregate, transform and reconcile data across the continuum of care, and helps improve outcomes and lower costs.

*HealthIntent* is scalable, secure and can be accessed anywhere, anytime. It is able to receive data from any EHR, existing HCIT system and other data sources, such as pharmacy benefits managers or insurance claims. *HealthIntent* collects data from multiple, disparate sources in near real-time, providing clarity to millions of data points in an actionable and programmable workflow. It enables organizations to identify, score and predict the risks of individual patients, allowing them to match the right care programs to the right individuals. The EHR-agnostic nature of our *HealthIntent* platform allows us to offer our solutions to the entire marketplace, not just existing Cerner clients.

We have created a series of initial solutions on the *HealthIntent* platform, including the following solutions that are generally available or being released soon:

- **Longitudinal Record** - provides clinicians and the patient a view of their consolidated clinical record, gathered and normalized from multiple sources.
- **Registries** - identifies and automatically segments patients by disease, guides interventions according to clinical best practice, provides visibility to quality measures for provider's population, produces client-defined performance scorecards, and tracks their health and their interventions according to clinical best practice.
- **Analytics** - allows the integrated data to be analyzed for the purpose of population health management and research.
- **Provider Performance Management** - creates visibility for providers on their performance against key clinical and operation metrics and can be aligned with payment models that incentivize high quality and efficient care.
- **Patient/Member Engagement** - an enhanced patient portal complemented by engagement services to help health care organizations create more meaningful interactions and engagement with the members they serve, and provides the ability to target individuals at risk of becoming chronically ill.
- **Care Management** - provides a person-centric approach of proactive surveillance, coordination and facilitation of health services across the care continuum to achieve optimal health status, quality and costs.
- **Population Health Programs** - leverages evidence-based guidelines and the contextual information within *HealthIntent* to provide identification, prediction and management of a condition at the population, provider and person level and facilitates a personalized plan of care for each member.
- **Contract Network Management** - for managing provider networks, modeling to inform payer negotiations, determining appropriate business models, and managing contract performance in near real-time.

In less than three years since the first *HealthIntent* solution went live at our alpha client, more than 100 additional clients have purchased *HealthIntent* solutions. The broad addressable market for population health solutions is reflected in the diversity of these clients, which include health systems, physician groups, employers, health plans, state governments, and accountable care organizations. The initial adoption by a large number of clients is encouraging and positions us for larger

contributions to revenue from *HealthIntent* solutions as these initial clients and others transition away from FFS models to value-based and at-risk models that require population health solutions and services.

In summary, we believe our comprehensive architectural approach to population health is differentiated in the marketplace. We expect population health to be a large contributor to our long-term growth as health care continues to evolve towards a model that incentivizes keeping people healthy.

### **Software Development**

We commit significant resources to developing new health information system solutions and services. As of the end of 2016, approximately 6,100 associates were engaged in research and development activities. Total expenditures for the development and enhancement of our software solutions were \$705 million, \$685 million and \$467 million during the 2016, 2015 and 2014 fiscal years, respectively. These figures include both capitalized and non-capitalized portions and exclude amounts amortized for financial reporting purposes.

As discussed above, continued investment in R&D remains a core element of our strategy. This will include ongoing enhancement of our core solutions and development of new solutions and services.

### **Intellectual Property**

We have a broad portfolio of intellectual property rights to protect the proprietary interests in our solutions, services, devices and brands. Our solutions constitute works of authorship protected by copyrights in the U.S. and globally. We own valuable trade secrets embodied in, or related to, our solutions, services and devices and protect these rights through a number of technical and legal measures. We have registered or applied to register certain trademarks and service marks in a number of countries with particular emphasis on the Cerner branding elements. We continue to develop our patent portfolio and own more than 350 issued patents with hundreds of patent applications pending. We do not consider any of our businesses to be dependent upon any one patent, copyright, trademark, or trade secret, or any family or families of the same.

Our solutions, devices and services incorporate or rely on intellectual property rights licensed from third parties, including software subject to open source software licenses. Certain technologies licensed to Cerner are also important for internal use in running our business and supporting our clients. Although replacing any existing licenses could be inconvenient, based on our experiences, existing contractual relationships, and the incentives of our technology suppliers, we believe that Cerner will continue to obtain these technologies or suitable alternatives for commercially reasonable prices on commercially reasonable terms or under open source software licenses acceptable to Cerner.

### **Sales and Marketing**

The markets for Cerner HCIT solutions, health care devices and services include integrated delivery networks, physician groups and networks, managed care organizations, hospitals, medical centers, free-standing reference laboratories, home health agencies, blood banks, imaging centers, pharmacies, pharmaceutical manufacturers, employers, governments and public health organizations. The majority of our sales are clinical and revenue cycle solutions and services to hospitals and health systems, but our solutions and services are highly scalable and sold to organizations ranging from physician practices, to community hospitals, to complex integrated delivery networks, to local, regional and national government agencies. Sales to large health systems typically take approximately nine to 18 months, while the sales cycle is often shorter when selling to smaller hospitals and physician practices.

Our executive marketing management is located at our Realization Campus in Kansas City, Missouri (formerly known as our Innovations Campus), while our client representatives are deployed across the United States and globally. In addition to the United States, through our subsidiaries, we have sales associates and/or offices giving us a presence in more than 35 countries.

We support our sales force with technical personnel who perform demonstrations of Cerner solutions and services and assist clients in determining the proper hardware and software configurations. Our primary direct marketing strategy is to generate sales contacts from our existing client base and through presentations at industry seminars and tradeshows. We market the *PowerWorks*<sup>®</sup> solutions, offered on a subscription basis, directly to the physician practice market using lead generation activities and through existing acute care clients that are looking to extend Cerner solutions to affiliated physicians. We attend a number of major tradeshows each year and sponsor executive user conferences, which feature industry experts who address the HCIT needs of large health care organizations.

### **Client Services**

Substantially all of Cerner's clients that buy software solutions also enter into software support agreements with us for maintenance and support of their Cerner systems. In addition to immediate software support in the event of problems, these agreements allow clients to access new releases of the Cerner solutions covered by support agreements. Each client has 24-hour access to the applicable client support teams, including those located at our world headquarters in North Kansas City, Missouri, our Continuous Campus in Kansas City, Kansas, our campus in Malvern, Pennsylvania, and our global support organizations in Germany, England and Ireland.

Most clients who buy hardware through Cerner also enter into hardware maintenance agreements with us. These arrangements normally provide for a fixed monthly fee for specified services. In the majority of cases, we utilize subcontractors to meet our hardware maintenance obligations. We also offer a set of managed services that include remote hosting, operational management services and disaster recovery.

### **Backlog**

At the end of 2016, we had a revenue backlog of \$15.9 billion, which compares to \$14.2 billion at the end of 2015. Such backlog represents contracted revenue that has not yet been recognized. We currently estimate that approximately 26% percent of the backlog at the end of 2016 will be recognized as revenue during 2017.

### **Competition**

The market for HCIT solutions, devices and services is intensely competitive, rapidly evolving and subject to rapid technological change. Our principal competitors in the health care solutions and services market each offer a suite of software solutions that compete with many of our software solutions and services. These competitors include, but are not limited to:

- Allscripts Healthcare Solutions, Inc.
- athenahealth, Inc.
- Epic Systems Corporation
- Evident Health Services, LLC
- GE Healthcare
- Healthland, Inc.
- McKesson Corporation
- MEDHOST, Inc.
- Medical Information Technology, Inc.

Other competitors focus on only a portion of the market that we address. For example, we deem the following competitors, which offer HCIT services that compete directly with some of our service offerings, as principal competitors in the HCIT services space:

- Deloitte Consulting, LLP (Deloitte)
- Encore Health Resources, LLC
- HCI Group
- IBM Corporation (IBM)
- Impact Advisors
- S&P Consultants
- The Advisory Board Company (Advisory Board)
- Xerox Corporation, Ltd.

We view the following competitors that offer solutions to the ambulatory market (but do not currently have a significant presence in the broader health systems and independent hospital market) as principal competitors in this market:

- AmazingCharts.com, Inc.
- eClinicalWorks, LLC
- e-MDs, Inc.
- Greenway Health, LLC
- Netsmart Technologies
- Practice Fusion, Inc.
- Quality Systems, Inc.
- SRSsoft
- Vitera Healthcare Solutions

Cerner partners with third parties as a reseller of devices and markets its own competing proprietary health care devices. We view our principal competitors in the health care device market to include, without limitation:

- Becton, Dickinson and Company
- Connexall Company, Ltd.
- Nanthealth, LLC
- Omnicell, Inc.
- PerfectServe, Inc.
- Philips N.V.
- Qualcomm, Inc.
- Siemens AG
- Vocera Communication, Inc.

We view our principal competitors in the health care revenue cycle and transaction services market to include, without limitation:

- Accretive Health, Inc.
- Conifer Health Solutions
- Dell, Inc.
- Deloitte
- Emdeon Corporation
- Experian plc
- MedAssets, Inc.
- Optum, Inc. (Optum)
- Quadramed Corporation

We view our competitors in the population health market to range from small niche competitors, to large health insurance companies including, without limitation:

- Advisory Board
- Enli Health Intelligence
- Evolent Health, LLC
- i2i, Inc.
- IBM
- Influence Health, Inc.
- Lightbeam Health Solutions
- Lumeris, Inc.
- Optum
- WellCentive, Inc.

In addition, we expect that major software information systems companies, large information technology consulting service providers and system integrators, start-up companies, managed care companies, healthcare insurance companies, accountable care organizations and others specializing in the health care industry may offer competitive software solutions, devices or services. The pace of change in the HCIT market is rapid and there are frequent new software solutions, devices or services introductions, enhancements and evolving industry standards and requirements. We believe that the principal competitive factors in this market include the breadth and quality of solution and service offerings, the stability of the solution provider, the features and capabilities of the information systems and devices, the ongoing support for the systems and devices and the potential for enhancements and future compatible software solutions and devices.

#### ***Number of Employees (Associates)***

At the end of 2016, we employed approximately 24,400 associates worldwide.

#### ***Operating Segments***

Information about our operating segments, which are geographically based, may be found in Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations” below and in Note (18) of the notes to consolidated financial statements.



### ***Executive Officers of the Registrant***

The following table sets forth the names, ages, positions and certain other information regarding the Company's executive officers as of February 1, 2017. Officers are elected annually and serve at the discretion of the Board of Directors.

<b><u>Name</u></b>	<b><u>Age</u></b>	<b><u>Positions</u></b>
Neal L. Patterson	67	Chairman of the Board of Directors and Chief Executive Officer
Clifford W. Illig	66	Vice Chairman of the Board of Directors
Zane M. Burke	51	President
Marc G. Naughton	61	Executive Vice President and Chief Financial Officer
Michael R. Nill	52	Executive Vice President and Chief Operating Officer
Randy D. Sims	56	Senior Vice President, Chief Legal Officer and Secretary
Jeffrey A. Townsend	53	Executive Vice President and Chief of Staff
Julia M. Wilson	54	Executive Vice President and Chief People Officer

Neal L. Patterson, co-founder of the Company, has been Chairman of the Board of Directors and Chief Executive Officer of the Company for more than five years. Mr. Patterson served as President of the Company from July 2010 to September 2013, which position he also held from March of 1999 until August of 1999.

Clifford W. Illig, co-founder of the Company, has been a Director of the Company for more than five years. He previously served as Chief Operating Officer of the Company until October 1998 and as President of the Company until March of 1999. Mr. Illig was appointed Vice Chairman of the Board of Directors in March of 1999.

Zane M. Burke joined the Company in September 1996. Since that time, he has held a variety of client-facing sales, implementation and support roles, including Corporate Controller and Vice President of Finance. He was promoted to President of the Company's West region in 2002 and Senior Vice President of National Alignment in 2006. He was further promoted to Executive Vice President - Client Organization in July 2011 and to President of the Company in September 2013.

Marc G. Naughton joined the Company in November 1992 as Manager of Taxes. In November 1995 he was named Chief Financial Officer and in February 1996 he was promoted to Vice President. He was promoted to Senior Vice President in March 2002 and promoted to Executive Vice President in March 2010.

Michael R. Nill joined the Company in November 1996. Since that time he has held several positions in the Technology, Intellectual Property and *CernerWorks* Client Hosting Organizations. He was promoted to Vice President in January 2000, promoted to Senior Vice President in April 2006 and promoted to Executive Vice President and named Chief Engineering Officer in February 2009. Mr. Nill was appointed Chief Operating Officer in May 2011.

Randy D. Sims joined the Company in March 1997 as Vice President and Chief Legal Officer and was promoted to Senior Vice President in March 2011. Prior to joining the Company, Mr. Sims worked at Farmland Industries, Inc. for three years where he last served as Associate General Counsel. Prior to Farmland, Mr. Sims was in-house legal counsel at The Marley Company for seven years, holding the position of Assistant General Counsel when he left to join Farmland.

Jeffrey A. Townsend joined the Company in June 1985. Since that time he has held several positions in the Intellectual Property Organization and was promoted to Vice President in February 1997. He was appointed Chief Engineering Officer in March 1998, promoted to Senior Vice President in March 2001, named Chief of Staff in July 2003 and promoted to Executive Vice President in March 2005.

Julia M. Wilson first joined the Company in July 1990. Since that time, she has held several positions in the Functional Group Organization. She was promoted to Vice President and Chief People Officer in August 2003, to Senior Vice President in March 2007 and to Executive Vice President in March 2013.

## Item 1A. Risk Factors

### Risks Related to our Business

***We may incur substantial costs related to product-related liabilities.*** Many of our software solutions, health care devices or services (including life sciences/research services) are intended for use in collecting, storing and displaying clinical and health care-related information used in the diagnosis and treatment of patients and in related health care settings such as admissions, billing, etc. We attempt to limit by contract our liability; however, the limitations of liability set forth in the contracts may not be enforceable or may not otherwise protect us from liability for damages. We may also be subject to claims that are not covered by contract. Although we maintain liability insurance coverage, there can be no assurance that such coverage will cover any particular claim that has been brought or that may be brought in the future, that such coverage will prove to be adequate or that such coverage will continue to remain available on acceptable terms, if at all. A successful material claim or series of claims brought against us, if uninsured or under-insured, could materially harm our business, results of operations and financial condition. Product-related claims, even if not successful, could damage our reputation, cause us to lose existing clients, limit our ability to obtain new clients, divert management's attention from operations, result in significant revenue loss, create potential liabilities for our clients and us and increase insurance and other operational costs.

***We may be subject to claims for system errors and warranties.*** Our software solutions and health care devices are very complex and may contain design, coding or other errors, especially when first introduced. It is not uncommon for HCIT providers to discover errors in software solutions and/or health care devices after their introduction to the market. Similarly, the installation of our software solutions and health care devices is very complex and errors in the implementation and configuration of our systems can occur. Our software solutions and health care devices are intended for use in collecting, storing, and displaying clinical and health care-related information used in the diagnosis and treatment of patients and in related health care settings such as admissions, billing, etc. Therefore, users of our software solutions and health care devices have a greater sensitivity to errors than the market for software products and devices generally. Our client agreements typically provide warranties concerning material errors and other matters. If a client's Cerner software solution or health care devices fail to meet these warranties or leads to faulty clinical decisions or injury to patients, it could 1) constitute a material breach under the client agreement, allowing the client to terminate the agreement and possibly obtain a refund or damages or both, or require us to incur additional expense in order to make the software solution or health care device meet these criteria; or 2) subject us to claims or litigation by our clients or clinicians or directly by the patient. Additionally, such failures could damage our reputation and could negatively affect future sales. Our client agreements generally limit our liability arising from such claims but such limits may not be enforceable in certain jurisdictions or circumstances. Although we maintain liability insurance coverage, there can be no assurance that such coverage will cover any particular claim that has been brought or that may be brought in the future, that such coverage will prove to be adequate or that such coverage will continue to remain available on acceptable terms, if at all. A successful material claim or series of claims brought against us, if uninsured or under-insured, could materially harm our business, results of operations and financial condition.

***We may experience interruptions at our data centers or client support facilities, which could interrupt clients' access to their data, exposing us to significant costs and reputational harm.*** Our business relies on the secure electronic transmission, data center storage and hosting of sensitive information, including protected health information, personally identifiable information, financial information and other sensitive information relating to our clients, company and workforce. We perform data center and/or hosting services for certain clients, including the storage of critical patient and administrative data and support services through various client support facilities. If any of these systems are interrupted, damaged or breached by an unforeseen event or actions of a Cerner associate or contractor or a third party or fail for any extended period of time, it could have a material adverse impact on our results of operations. Complete failure of all local public power and backup generators; impairment of all telecommunications lines; a concerted denial of service attack; a significant system, network or data breach; damage, injury or impairment (environmental, accidental or intentional) to the buildings, the equipment inside the buildings housing our data centers, the personnel operating such facilities or the client data contained therein; or errors by the personnel trained to operate such facilities could cause a disruption in operations and negatively impact clients who depend on us for data center and system support services. We offer our clients disaster recovery services for additional fees to protect clients from isolated data center failures, leveraging our multiple data center facilities; however only a small percentage of our hosted clients choose to contract for these services. Additionally, Cerner's core systems are disaster tolerant as we have implemented redundancy across physically diverse data centers. Any interruption in operations at our data centers and/or client support facilities could damage our reputation, cause us to lose existing clients, hurt our ability to obtain new clients, result in significant revenue loss, create potential liabilities for our clients and us and increase insurance and other operating costs.

***If our IT security is breached, we could be subject to increased expenses, exposure to legal claims and regulatory actions, and clients could be deterred from using our solutions and services.*** We are in the information technology business, and in providing our products and services, we store, retrieve, process and manage our clients' information and data (and that of their patients), as well as our own data. We believe we have a reputation for secure and reliable solution offerings and related services, and we have invested a great deal of time and resources in protecting the security, confidentiality, integrity and availability of our solutions, services and the internal and external data that we manage. At times, we encounter attempts by third parties to identify and exploit solution and service vulnerabilities, penetrate or bypass our security measures, and gain unauthorized access to our or our clients', partners' and suppliers' software, hardware and cloud offerings, networks and systems, any of which could lead to the compromise of personal information or the confidential information or data of Cerner, our clients or their patients.

High-profile security breaches at other companies have increased in recent years, and security industry experts and government officials have warned about the risks of hackers and cyber-attacks targeting information technology products and businesses. Although this is an industry-wide problem that affects other software and hardware companies, we may be targeted by computer hackers because we are a prominent health care IT company. These risks will increase as we continue to grow our cloud offerings and store and process increasingly large amounts of data, including personal health information, and our clients' confidential information and data, and host or manage parts of our clients' businesses in cloud-based IT environments.

The costs we would incur to address and fix these security incidents would increase our expenses, and our efforts to address these problems may not be successful and could result in interruptions, delays, cessation of service and loss of existing or potential clients that may impede our sales, development of solutions, provision of services or other critical functions. If a cyber-attack or other security incident described above were to allow unauthorized access to or modification of our clients' or suppliers' data, our own data or our IT systems, or if our solutions or services are perceived as having security vulnerabilities, we could suffer significant damage to our brand and reputation. This in turn could lead to fewer clients using our solutions and services and result in reduced revenue and earnings. These types of security incidents could also lead to lawsuits, regulatory investigations and claims and increased legal liability, including in some cases contractual costs related to notification and fraud monitoring of impacted persons.

***Our proprietary technology may be subject to claims for infringement or misappropriation of intellectual property rights of others, or our intellectual property rights may be infringed or misappropriated by others.*** We rely upon a combination of confidentiality practices and policies, license agreements, confidentiality provisions in employment agreements, confidentiality agreements with third parties and technical security measures to maintain the confidentiality, exclusivity and trade secrecy of our proprietary information. We also rely on trademark and copyright laws to protect our intellectual property rights in the U.S. and abroad. We continue to develop our patent portfolio of U.S. and global patents, but these patents do not provide comprehensive protection for the wide range of solutions, devices and services we offer. Despite our protective measures and intellectual property rights, we may not be able to adequately protect against theft, copying, reverse-engineering, misappropriation, infringement or unauthorized use or disclosure of our intellectual property, which could have an adverse effect on our competitive position.

In addition, we are routinely involved in intellectual property infringement or misappropriation claims, and we expect this activity to continue or even increase as the number of competitors, patents and patent enforcement organizations in the HCIT and broader IT market increases, the functionality of our software solutions, devices and services expands, the use of open-source software increases and we enter new geographies and new market segments. These claims, even if unmeritorious, are expensive to defend and are often incapable of prompt resolution. If we become liable to third parties for infringing or misappropriating their intellectual property rights, we could be required to pay a substantial damage award, develop alternative technology, obtain a license or cease using, selling, offering for sale, licensing, implementing or supporting the applicable solutions, devices and services.

***Many of our solutions and services contain open source software that may pose particular risks to our proprietary software, solutions, and services in a manner that could have a negative effect on our business.*** We rely upon open source software in our solutions and services. The licensing terms applicable for certain open source software have not been interpreted by U.S. or foreign courts and could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to provide and support our solutions or services.

Additionally, we may encounter claims from third parties claiming ownership of the software purported to be licensed under the open source terms, demanding release of derivative works of open source software, which could include our proprietary source code, or otherwise seeking to enforce the terms of the applicable open source licenses. These claims could result in

litigation and, even if unmeritorious, could be expensive to defend and incapable of prompt resolution. If we become liable to third parties for such claims, we could be required to make our software source code available under the applicable open source license, utilize or develop alternative technology, or cease using, selling, offering for sale, licensing, implementing or supporting the applicable solutions or services. In addition, use of certain open source software may pose greater risks than use of third-party commercial software, as most open source licensors and distributors do not provide commercial warranties or indemnities or controls on the origin of software.

***We may become subject to legal proceedings that could have a material adverse impact on our business, results of operations and financial condition.*** From time to time and in the ordinary course of our business, we and certain of our subsidiaries may become involved in various legal proceedings. All such legal proceedings are inherently unpredictable and, regardless of the merits of the claims, litigation may be expensive, time-consuming and disruptive to our operations and distracting to management. If resolved against us, such legal proceedings could result in excessive verdicts, injunctive relief or other equitable relief that may affect how we operate our business. Similarly, if we settle such legal proceedings, it may affect how we operate our business. Future court decisions, alternative dispute resolution awards, business expansion or legislative activity may increase our exposure to litigation and regulatory investigations. In some cases, substantial non-economic remedies or punitive damages may be sought. Although we maintain liability insurance coverage, there can be no assurance that such coverage will cover any particular verdict, judgment or settlement that may be entered against us, that such coverage will prove to be adequate or that such coverage will continue to remain available on acceptable terms, if at all. If we incur liability that exceeds our insurance coverage or that is not within the scope of the coverage in legal proceedings brought against us, it could have a material adverse effect on our business, results of operations and financial condition.

***We are subject to risks associated with our global operations.*** We market, sell and support our solutions, devices and services globally. We have established offices around the world, including in the Americas, Europe, the Middle East and the Asia Pacific region. Our acquisition of the Cerner Health Services business increased our assets and operations within Europe and, accordingly, our exposure to economic conditions in Europe. We plan to continue to expand our non-U.S. operations and enter new global markets. This expansion will require significant management attention and financial resources to develop successful direct and indirect non-U.S. sales and support channels. Our business is generally transacted in the local functional currency. In some countries, our success will depend in part on our ability to form relationships with local partners. There is a risk that we may sometimes choose the wrong partner. For these and other reasons, we may not be able to maintain or increase non-U.S. market demand for our solutions, devices and services.

Non-U.S. operations are subject to inherent risks, and our business, results of operations and financial condition, including our revenue growth and profitability, could be adversely affected by a variety of uncontrollable and changing factors. These include, but are not limited to:

- Greater difficulty in collecting accounts receivable and longer collection periods;
- Difficulties and costs of staffing and managing non-U.S. operations;
- The impact of global economic and political market conditions;
- Effects of sovereign debt conditions, including budgetary constraints;
- Unfavorable or volatile foreign currency exchange rates;
- Legal compliance costs or business risks associated with our global operations where: i) local laws and customs differ from, or are more stringent than those in the U.S., such as those relating to data protection and data security or ii) risk is heightened with respect to laws prohibiting improper payments and bribery, including without limitation the U.S. Foreign Corrupt Practices Act, the U.K. Anti-Bribery Act and similar laws and regulations in foreign jurisdictions;
- Certification, licensing or regulatory requirements and unexpected changes to those requirements;
- Changes to or reduced protection of intellectual property rights in some countries;
- Potentially adverse tax consequences as a result of changes in tax laws or otherwise, and difficulties associated with repatriating cash generated or held abroad in a tax-efficient manner;
- Different or additional functionality requirements or preferences;
- Trade protection measures;
- Export control regulations;
- Health service provider or government spending patterns or government-imposed austerity measures;
- Natural disasters, war or terrorist acts;
- Labor disruptions that may occur in a country; or



- Political unrest which may impact sales or threaten the safety of associates or our continued presence in these countries and the related potential impact on global stability.

**Fluctuations in foreign currency exchange rates could materially affect our financial results.** Our consolidated financial statements are presented in U.S. dollars. In general, the functional currency of our subsidiaries is the local currency. For each subsidiary, assets and liabilities denominated in foreign currencies are translated into U.S. dollars at the exchange rates in effect at the balance sheet dates and revenues and expenses are translated at the average exchange rates prevailing during the month of the transaction. Therefore, increases or decreases in the value of the U.S. dollar against other major currencies affect our revenues, net earnings and the value of balance sheet items denominated in foreign currencies. Future fluctuations in foreign currency exchange rates, particularly the strengthening of the U.S. dollar against major currencies, could materially affect our financial results.

**We are subject to tax legislation in numerous countries; tax legislation initiatives or challenges to our tax positions could adversely affect our business, results of operations and financial condition.** We are a global corporation with a presence in more than 35 countries. As such, we are subject to tax laws, regulations and policies of the U.S. federal, state and local governments and of comparable taxing authorities in other country jurisdictions. From time to time, various legislative initiatives may be proposed that could adversely affect our tax positions and/or our tax liabilities. There can be no assurance that our effective tax rate, tax payments, tax credits or incentives will not be adversely affected by these initiatives. In addition, U.S. federal, state and local, as well as other countries' tax laws and regulations are extremely complex and subject to varying interpretations. There can be no assurance that our tax positions will not be challenged by relevant tax authorities or that we would be successful in any such challenge, which could result in additional taxation, penalties and interest payments.

**The vote by the United Kingdom (UK) to leave the European Union (EU) could adversely affect our financial results.** In June 2016, UK voters approved a referendum to withdraw the UK's membership from the EU, which is commonly referred to as "Brexit". The referendum was advisory, and the terms of any withdrawal are subject to a negotiation period after the government of the UK formally initiates a withdrawal process. We have operations in the UK and the EU, and as a result, we face risks associated with the potential uncertainty and disruptions that may lead up to and follow Brexit, including with respect to volatility in exchange rates and interest rates and potential material changes to the regulatory regime applicable to our operations in the UK. Brexit could adversely affect European or worldwide political, regulatory, economic or market conditions and could contribute to instability in global political institutions, regulatory agencies and financial markets. For example, depending on the terms of Brexit, the UK could also lose access to the single EU market and to the global trade deals negotiated by the EU on behalf of its members. Disruptions and uncertainty caused by Brexit may also cause our clients to closely monitor their costs and reduce their spending budget on our solutions and services. Any of these effects of Brexit, and others we cannot anticipate or that may evolve over time, could adversely affect our business, results of operations and financial condition.

**Our success depends upon the recruitment and retention of key personnel.** To remain competitive in our industries, we must attract, motivate and retain highly skilled managerial, sales, marketing, consulting and technical personnel, including executives, consultants, programmers and systems architects skilled in the HCIT, health care devices, health care transactions, population health management, revenue cycle and life sciences industries and the technical environments in which our solutions, devices and services are offered. Competition for such personnel in our industries is intense in both the U.S. and abroad. Our failure to attract additional qualified personnel to meet our needs could have a material adverse effect on our prospects for long-term growth. In addition, we invest significant time and expense in training our associates, which increases their value to clients and competitors who may seek to recruit them and increases the cost of replacing them. Our success is dependent to a significant degree on the continued contributions of key management, sales, marketing, consulting and technical personnel. The unexpected loss of key personnel could have a material adverse impact on our business, results of operations and financial condition, and could potentially inhibit development and delivery of our solutions, devices and services and market share advances.

**We depend on strategic partners and third party suppliers and our revenue and operating earnings could suffer if we fail to manage these relationships properly.** To be successful, we must continue to maintain our existing strategic relationships and establish additional strategic relationships as necessary with leaders in the markets in which we operate. We believe that these relationships contribute to our ability to further build our brand, extend the reach of our solutions and services, and generate additional revenues and cash flows. If we were to lose critical strategic relationships, this could have a material adverse impact on our business, results of operations and financial condition.

We license or purchase certain intellectual property and technology (such as software, hardware and content) from third parties, including some competitors, and depend on such third party intellectual property and software, hardware or content

in the operation and delivery of our solutions, devices and services. Additionally, we sell or license third party intellectual property and software, hardware or content in conjunction with our solutions, devices and services. For instance, we currently depend on Microsoft, Oracle and IBM technologies for portions of the operational capabilities of our *Millennium* solutions. Our remote hosting and cloud services businesses also rely on a limited number of suppliers for certain functions of these businesses, such as Oracle database technologies, CITRIX technologies and Cisco networking technologies. Additionally, we rely on Dell EMC, Hewlett-Packard Enterprise, HP Inc., NetApp, IBM and others for our hardware technology platforms.

Most of our third party software license support contracts expire within one to five years, can be renewed only by mutual consent and may be terminated if we breach the terms of the license and fail to cure the breach within a specified period of time. Most of these third party software licenses are non-exclusive; therefore, our competitors may obtain the right to use any of the technology covered by these licenses and use the technology to compete directly with us.

If any of our third party suppliers were to change product offerings, cease actively supporting the technologies, fail to update and enhance the technologies to keep pace with changing industry standards, encounter technical difficulties in the continuing development of these technologies, significantly increase prices, terminate our licenses or supply contracts, suffer significant capacity or supply chain constraints or suffer significant disruptions, we would need to seek alternative suppliers and incur additional internal or external development costs to ensure continued performance of our solutions, devices and services. Such alternatives may not be available on attractive terms, or may not be as widely accepted or as effective as the intellectual property or technology provided by our existing suppliers. If the cost of licensing, purchasing or maintaining our third party intellectual property or technology significantly increases, our operating earnings could significantly decrease. In addition, interruption in functionality of our solutions, devices or services as a result of changes in third party suppliers could adversely affect our commitments to clients, future sales of solutions, devices and services, and negatively affect our revenue and operating earnings.

***We may encounter difficulties as we continue to integrate our Cerner Health Services business into our business or fail to realize the long-term anticipated benefits of the acquisition of the Cerner Health Services business.*** The integration of two independent businesses is a complex, costly and time-consuming process and involves numerous risks, including difficulties in the assimilation of operations, services, solutions and personnel, the diversion of management's attention from other business concerns, the expansion into markets in which we have little or no direct prior experience, and the potential inability to maintain the goodwill of existing clients. Potential difficulties that we may encounter as part of the integration process, which may preclude us from fully realizing the anticipated benefits of the acquisition, including the anticipated synergies, growth opportunities and cost savings, include, among other factors:

- managing a larger company;
- integrating two business cultures;
- creating uniform standards, controls, procedures, policies and information systems and minimizing the costs associated with such matters;
- preserving client, supplier, research and development, distribution, marketing, promotion and other important relationships;
- commercializing "go forward" solutions under development and increasing revenues from existing marketed solutions; and
- integrating complex technologies and solutions from different businesses in a manner that is seamless to clients.

Any of the above difficulties could adversely affect our ability to maintain relationships with clients, partners, suppliers and associates or our ability to achieve the anticipated benefits of the Cerner Health Services acquisition, or could reduce our earnings or otherwise adversely affect our business, results of operations and financial condition.

***We intend to continue strategic business acquisitions and other combinations, which are subject to inherent risks.***

In order to expand our solutions, device offerings and services and grow our market and client base, we may continue to seek and complete strategic business acquisitions and other combinations that we believe are complementary to our business. Acquisitions have inherent risks which may have a material adverse effect on our business, results of operations, financial condition or prospects, including, but not limited to: 1) failure to successfully integrate the business and financial operations, services, intellectual property, solutions or personnel of an acquired business and to maintain uniform standard controls, policies and procedures; 2) diversion of our management's attention from other business concerns; 3) entry into markets in which we have little or no direct prior experience; 4) failure to achieve projected synergies and performance targets; 5) loss of clients or key personnel; 6) incurrence of debt or assumption of known and unknown liabilities; 7) write-off of software development costs, goodwill, client lists and amortization of expenses related to intangible assets; 8) dilutive issuances of equity securities; and, 9) accounting deficiencies that could arise in connection with, or as a result of, the acquisition of an



acquired company, including issues related to internal control over financial reporting and the time and cost associated with remedying such deficiencies. If we fail to successfully integrate acquired businesses or fail to implement our business strategies with respect to these acquisitions, we may not be able to achieve projected results or support the amount of consideration paid for such acquired businesses.

***We could suffer losses due to asset impairment charges.*** We assess our goodwill for impairment during the second quarter every year and on an interim date should events or changes in circumstances indicate the carrying value of goodwill may not be recoverable in accordance with provisions of Accounting Standards Codification Topic 350, *Intangibles – Goodwill and Other*. Declines in business performance or other factors could cause the fair value of a reporting unit to be revised downward and could result in a non-cash impairment charge. This could negatively affect our reported net earnings.

***Volatility and disruption resulting from global economic or market conditions could negatively affect our business, results of operations and financial condition.*** Our business, results of operations, financial condition and outlook may be impacted by the health of the global economy. Volatility and disruption in global capital and credit markets may lead to slowdowns or declines in client spending which could adversely affect our business and financial performance. Our business and financial performance, including new business bookings and collection of our accounts receivable, may be adversely affected by current and future economic conditions (including a reduction in the availability of credit, higher energy costs, rising interest rates, financial market volatility and lower than expected economic growth) that cause a slowdown or decline in client spending. Reduced purchases by our clients or changes in payment terms could adversely affect our revenue growth and cause a decrease in our cash flow from operations. Bankruptcies or similar events affecting clients may cause us to incur bad debt expense at levels higher than historically experienced. Further, volatility and disruption in global financial markets may also limit our ability to access the capital markets at a time when we would like, or need, to raise capital, which could have an impact on our ability to react to changing economic and business conditions. Accordingly, if global financial and economic volatility continues or worsens, our business, results of operations and financial condition could be materially and adversely affected.

***If we are unable to manage our growth in the new markets in which we offer solutions, health care devices or services, our business, results of operations and financial condition could suffer.*** Our future financial results will depend in part on our ability to profitably manage our business in the new markets that we enter. Over the past several years, we have engaged in the identification of, and competition for, growth and expansion opportunities in the areas of analytics, revenue cycle and population health. In order to achieve those initiatives, we will need to, among other things, recruit, train, retain and effectively manage associates, manage changing business conditions and implement and improve our technical, administrative, financial control and reporting systems for offerings in those areas. Difficulties in managing future growth in new markets could have a material adverse impact on our business, results of operations and financial condition.

***Our work with government clients exposes us to additional risks inherent in the government contracting environment.*** Our clients include national, provincial, state and local governmental entities. Our government work carries various risks inherent in the government contracting process. These risks include, but are not limited to, the following:

- Government entities, particularly in the U.S., often reserve the right to audit our contracts and conduct inquiries and investigations of our business practices with respect to government contracts. U.S. government agencies conduct reviews and investigations and make inquiries regarding our systems in connection with our performance and business practices with respect to our government contracts. Negative findings from audits, investigations or inquiries could affect our future sales and profitability by preventing us, by operation of law or in practice, from receiving new government contracts for some period of time.
- If a government client discovers improper or illegal activities in the course of audits or investigations, we may become subject to various civil and criminal penalties, including those under the civil U.S. False Claims Act, and administrative sanctions, which may include termination of contracts, suspension of payments, fines and suspensions or debarment from doing business with other agencies of that government. The inherent limitations of internal controls may not prevent or detect all improper or illegal activities.
- U.S. government contracting regulations impose strict compliance and disclosure obligations. Disclosure is required if certain company personnel have knowledge of “credible evidence” of a violation of federal criminal laws involving fraud, conflict of interest, bribery or improper gratuity, a violation of the civil U.S. False Claims Act or receipt of a significant overpayment from the government. Failure to make required disclosures could be a basis for suspension and/or debarment from federal government contracting in addition to breach of the specific contract and could also

impact contracting beyond the U.S. federal level. Reported matters also could lead to audits or investigations and other civil, criminal or administrative sanctions.

- Government contracts are subject to heightened reputational and contractual risks compared to contracts with commercial clients. For example, government contracts and the proceedings surrounding them are often subject to more extensive scrutiny and publicity. Negative publicity, including allegations of improper or illegal activity, poor contract performance, deficiencies in services or other deliverables, or information security breaches, regardless of accuracy, may adversely affect our reputation.
- Terms and conditions of government contracts also tend to be more onerous and are often more difficult to negotiate.
- Government entities typically fund projects through appropriated monies. While these projects are often planned and executed as multi-year projects, government entities usually reserve the right to change the scope of or terminate these projects for lack of approved funding and/or at their convenience. Changes in government or political developments, including budget deficits, shortfalls or uncertainties, government spending reductions (e.g., Congressional sequestration of funds under the Budget Control Act of 2011) or other debt constraints could result in our projects being reduced in price or scope or terminated altogether, which also could limit our recovery of reimbursable expenses. Furthermore, if insufficient funding is appropriated to the government entity to cover termination costs, we may not be able to fully recover our investments.

The occurrences or conditions described above could affect not only our business with the particular government entities involved, but also our business with other entities of the same or other governmental bodies or with certain commercial clients, and could have a material adverse effect on our business, results of operations and financial condition.

***There are risks associated with our outstanding and future indebtedness.*** We have customary restrictive covenants in our current debt agreements, which may limit our flexibility to operate our business. These covenants include limitations on priority debt, liens, mergers, asset dispositions, and transactions with affiliates, and require us to maintain certain leverage and interest coverage ratios. Failure to comply with these covenants could result in an event of default that, if not cured or waived, could result in reduced liquidity for the Company and could have a material adverse effect on our business, results of operations and financial condition. Additionally, our ability to pay interest and repay the principal for our indebtedness is dependent upon our ability to manage our business operations, generate sufficient cash flows to service such debt and the other factors discussed in this section. There can be no assurance that we will be able to manage any of these risks successfully.

#### **Risks Related to the Health Care Information Technology, Health Care Device, Health Care Transaction, Revenue Cycle Management and Population Health Management Industries**

***The health care industry is subject to changing political, economic and regulatory influences, which could impact the purchasing practices and operations of our clients and increase our costs to deliver compliant solutions and services.*** For example, the Health Insurance Portability and Accountability Act of 1996 (as modified by The Health Information Technology for Economic and Clinical Health Act (HITECH) provisions of the American Recovery and Reinvestment Act of 2009) (collectively, HIPAA) continues to have a direct impact on the health care industry by requiring national provider identifiers and standardized transactions/code sets, operating rules and necessary security and privacy measures in order to ensure the appropriate level of privacy of protected health information. These regulatory factors affect the purchasing practices and operation of health care organizations.

Many health care providers are consolidating to create integrated health care delivery systems with greater market power. These providers may try to use their market power to negotiate price reductions for our solutions, health care devices and services. As the health care industry consolidates, our client base could be eroded, competition for clients could become more intense and the importance of landing new client relationships becomes greater.

The Patient Protection and Affordable Care Act, which was amended by the Health Care and Education Reconciliation Act of 2010, became law in 2010. This comprehensive health care reform legislation included provisions to control health care costs, improve health care quality, and expand access to affordable health insurance. Together with ongoing statutory and budgetary policy developments at a federal level, this health care reform legislation could include changes in Medicare and Medicaid payment policies and other health care delivery administrative reforms that could potentially negatively impact our business and the business of our clients. The results of the November 8, 2016, elections create uncertainty for the future of the Affordable Care Act and other health care-related legislation. Because of that uncertainty, because not all the administrative rules implementing health care reform under current legislation have been finalized, and because of ongoing federal fiscal

budgetary pressures yet to be resolved for federal health programs, we cannot predict the full effect of health care legislation on our business at this time. There can be no assurances that health care reform initiatives will not adversely impact either our operational results or the manner in which we operate our business, including changes to existing regulatory oversight that may impact operating expenses and increase compliance risk. Purchasers of HCIT may respond to the uncertainty by reducing their investments or postponing investment decisions, including investments in our devices, solutions and services. Future legislation and regulation may ultimately impact the fiscal stability and sustainability of HCIT purchasers. A lower amount of regulatory incentives and/or near-term compliance deadlines that contribute to demand for our solutions and services could impact our financial results. There can be no certainty that incentives will be offered in regard to our solutions and services, nor can there be any assurance that any legislation that may be adopted would be favorable to our business. We cannot predict whether or when future health care reform initiatives at the federal or state level or other initiatives affecting our business will be proposed, enacted or implemented or what impact those initiatives may have on our business, results of operations and financial condition.

***The health care industry is highly regulated, and thus, we are subject to a number of laws, regulations and industry initiatives, non-compliance with certain of which could materially adversely affect our operations or otherwise adversely affect our business, results of operations and financial condition.*** As a participant in the health care industry, our operations and relationships, and those of our clients, are regulated by a number of U.S. federal, state, local and foreign governmental entities. The impact of these regulations on us is direct, to the extent that we are ourselves subject to these laws and regulations, and is also indirect, both in terms of the level of government reimbursement available to our clients and because, in a number of situations, even though we may not be directly regulated by specific health care laws and regulations, our solutions, devices and services must be capable of being used by our clients in a way that complies with those laws and regulations. There is a significant and wide-ranging number of regulations both within the U.S. and abroad, such as regulations in the areas of health care fraud, e-prescribing, claims processing and transmission, health care devices, the security and privacy of patient data and interoperability standards, that may be directly or indirectly applicable to our operations and relationships or the business practices of our clients. Specific risks include, but are not limited to, the following:

***Health Care Fraud.*** U.S. federal and state governments continue to enhance regulation of and increase their scrutiny over practices involving health care fraud, waste and abuse perpetuated by health care providers and professionals whose services are reimbursed by Medicare, Medicaid and other government health care programs. Our health care provider clients, as well as our provision of products and services to government entities, subject our business to laws and regulations on fraud and abuse which, among other things, prohibit the direct or indirect payment or receipt of any remuneration for patient referrals, or arranging for or recommending referrals or other business paid for in whole or in part by these federal or state health care programs. U.S. federal enforcement personnel have substantial funding, powers and remedies to pursue suspected or perceived fraud and abuse. The effect of this government regulation on our clients is difficult to predict. Many of the regulations applicable to our clients and that may be applicable to us, including those relating to marketing incentives offered in connection with health care device sales, are vague or indefinite and have not been interpreted by the courts. They may be interpreted or applied by a prosecutorial, regulatory or judicial authority in a manner that could broaden their applicability to us or require our clients to make changes in their operations or the way in which they deal with us. If such laws and regulations are determined to be applicable to us and if we fail to comply with any applicable laws and regulations, we could be subject to civil and criminal penalties, sanctions or other liability, including exclusion from government health programs, which could have a material adverse effect on our business, results of operations and financial condition. Even an unsuccessful challenge by a regulatory or prosecutorial authority of our activities could result in adverse publicity, require a costly response from us and adversely affect our business, results of operations and financial condition.

***Preparation, Transmission and Submission of Medical Claims for Reimbursement.*** Our solutions are capable of electronically transmitting claims for services and items rendered by a physician to many patients' payers for approval and reimbursement. We also provide revenue cycle management services to our clients that include the coding, preparation and submission of claims for medical service to payers for reimbursement. Such claims are governed by U.S. federal and state laws. U.S. federal law provides civil liability to any persons that knowingly submit, or cause to be submitted, a claim to a payer, including Medicare, Medicaid and private health plans, seeking payment for any services or items that overbills or bills for services or items that have not been provided to the patient. U.S. federal law may also impose criminal penalties for intentionally submitting such false claims. We have policies and procedures in place that we believe result in the accurate and complete preparation, transmission, submission and collection of claims, provided that the information given to us by our clients is also accurate and complete. The HIPAA security, privacy and transaction standards, as discussed below, also have a potentially significant effect on our claims preparation, transmission and submission services, since those services must be structured and provided in a way that supports our clients' HIPAA compliance obligations. In connection with these laws, we may be subjected to U.S. federal or state government investigations and possible penalties may be imposed upon us; false claims actions may have to be defended; private payers may file claims against us; and we may be excluded from Medicare, Medicaid

or other government-funded health care programs. Any investigation or proceeding related to these laws, even if unwarranted or without merit, may have a material adverse effect on our business, results of operations and financial condition.

*Regulation of Health Care Devices.* The U.S. Food and Drug Administration ("FDA") has determined that certain of our solutions are medical devices that are actively regulated under the Federal Food, Drug and Cosmetic Act ("Act") and amendments to the Act. Other countries have similar regulations in place related to medical devices, that now or may in the future apply to certain of our solutions. If other of our solutions are deemed to be actively regulated medical devices by the FDA or similar regulatory agencies in countries where we do business, we could be subject to extensive requirements governing pre- and post-marketing activities including pre-market notification clearance. Complying with these medical device regulations on a global perspective is time consuming and expensive and could be subject to unanticipated and significant delays. Further, it is possible that these regulatory agencies may become more active in regulating software and devices that are used in health care. If we are unable to obtain the required regulatory approvals for any such solutions or health care devices, our short and long term business plans for these solutions or health care devices could be delayed or canceled.

There have been eight FDA inspections at various Cerner sites since 2003. Inspections conducted at our Headquarters Campus and Realization Campus (formerly known as our Innovations Campus) in 2010 resulted in the issuance of an FDA Form 483 observation to which we responded promptly. The FDA has taken no further action with respect to the Form 483 observation that was issued in 2010. The remaining FDA inspections, including inspections at our Headquarters Campus in 2006, 2007 and 2014, resulted in no issuance of a Form 483. We remain subject to periodic FDA inspections and we could be required to undertake additional actions to comply with the Act and any other applicable regulatory requirements. Our failure to comply with the Act and any other applicable regulatory requirements could have a material adverse effect on our ability to continue to manufacture, distribute and deliver our solutions, services and devices. The FDA has many enforcement tools including recalls, product corrections, seizures, injunctions, refusal to grant pre-market clearance of products, civil fines and criminal prosecutions. Any of the foregoing could have a material adverse effect on our business, results of operations and financial condition.

*Security and Privacy of Patient Information.* U.S. federal, state and local and foreign laws regulate the confidentiality of personal information, how that information may be used, and the circumstances under which such information may be released. These regulations govern both the disclosure and use of confidential personal and patient medical record information and require the users of such information to implement specified security and privacy measures. U.S. regulations currently in place governing electronic health data transmissions continue to evolve and are often unclear and difficult to apply. Laws in non-U.S. jurisdictions are also evolving and may have similar or even stricter requirements related to the treatment of personal or patient information.

In the U.S., HIPAA regulations apply national standards for some types of electronic health information transactions and the data elements used in those transactions to ensure the integrity, security and confidentiality of health information and standards to protect the privacy of individually identifiable health information. Covered entities under HIPAA, which include health care organizations such as our clients, our employer clinic business and our claims processing, transmission and submission services, are required to comply with HIPAA privacy standards, transaction regulations and security regulations. Moreover, the HITECH provisions of ARRA, and associated regulatory requirements, extend many of the HIPAA obligations, formerly imposed only upon covered entities, to business associates as well. As a business associate of our clients who are covered entities, we were in most instances already contractually required to ensure compliance with the HIPAA regulations as they pertain to handling of covered client data. However, the extension of these HIPAA obligations to business associates by law has created additional liability risks related to the privacy and security of individually identifiable health information.

Evolving HIPAA and HITECH-related laws or regulations in the U.S. and data privacy and security laws or regulations in non-U.S. jurisdictions could restrict the ability of our clients to obtain, use or disseminate patient information. This could adversely affect demand for our solutions if they are not re-designed in a timely manner in order to meet the requirements of any new interpretations or regulations that seek to protect the privacy and security of patient data or enable our clients to execute new or modified health care transactions. We may need to expend additional capital, software development and other resources to modify our solutions and devices to address these evolving data security and privacy issues. Furthermore, our failure to maintain confidentiality of sensitive personal information in accordance with the applicable regulatory requirements could damage our reputation and expose us to claims, fines and penalties.

In Europe, we are subject to EU data protection legislation, including the 1995 Data Protection Directive, which requires member states to impose minimum restrictions on the collection and use of personal data that, in some respects, are more stringent, and impose more significant burdens on subject businesses, than current privacy standards in the U.S. The EU directives establish several obligations that organizations must follow with respect to use of personal data, including a



prohibition on the transfer of personal information from the EU to other countries whose laws do not adequately protect the privacy and security of personal data to European standards. In addition to this EU-wide legislation, certain member states have adopted more stringent data protection standards. We have addressed these requirements, relative to data transfers, by self-certifying our compliance with the EU-U.S. Privacy Shield Framework to the U.S. Department of Commerce International Trade Administration ("ITA"). The ITA has approved our self-certification. However, continued criticism of the Privacy Shield by officials in Europe casts uncertainty as to the long-term effectiveness of the Privacy Shield to support EU-U.S. transfers of personal data. For that reason, we are pursuing alternative methods of compliance, but those methods also may be subject to scrutiny by data protection authorities in European member states.

On April 14, 2016, the European Parliament approved the General Data Protection Regulation ("GDPR"). The GDPR will replace the 1995 Data Protection Directive and will become enforceable on May 24, 2018. The GDPR will have significant impacts on how businesses, including both us and our clients, can collect and process the personal data of EU individuals. We may incur increased development costs and delays in delivering solutions as we need to update our software, devices or health care devices to enable our European clients to comply with these varying and evolving standards to the extent that they differ from the standards of the previous 1995 Data Protection Directive. In addition, delays in interpreting the GDPR's standards may result in postponement or cancellation of our clients' decisions to purchase our solutions or health care devices. The costs of compliance with, and other burdens imposed by, such laws, regulations and policies, or modifications thereto, that are applicable to us may limit the use and adoption of our solutions and could have a material adverse impact on our business, results of operations and financial condition.

Both the 1995 Data Protection Directive and the GDPR grant broad enforcement powers to regulatory agencies to investigate and enforce our compliance with their data privacy and security requirements. Governmental enforcement personnel, particularly in the EU, have substantial funding, powers and remedies to pursue suspected or perceived violations. If we fail to comply with any applicable laws or regulations, we could be subject to civil penalties, sanctions or other liability. Enforcement investigations, even if meritless, could have a negative impact on our reputation, cause us to lose existing clients or limit our ability to attract new clients.

*Interoperability Standards.* Our clients are concerned with and often require that our software solutions and health care devices be interoperable with other third party HCIT suppliers. Market forces or governmental/regulatory authorities could create software interoperability standards that would apply to our solutions, health care devices or solutions, and if our software solutions, health care devices or services are not consistent with those standards, we could be forced to incur substantial additional development costs to conform. The Office of the National Coordinator for Health Information Technology (ONC) has developed a comprehensive set of criteria for the functionality, interoperability and security of various software modules in the HCIT industry. ONC, however, continues to modify and refine those standards. Achieving certification is becoming a competitive requirement. We may incur increased software development and administrative expense and delays in delivering solutions if we need to update our software, devices or health care devices to conform to these varying and evolving requirements. In addition, delays in interpreting these standards may result in postponement or cancellation of our clients' decisions to purchase our solutions or health care devices. If our software solutions, devices or health care devices are not compliant with these evolving standards, our market position and sales could be impaired and we may have to invest significantly in changes to our software solutions, devices or health care devices.

*Federal Requirements for Certified Health Information Technology.* Various U.S. federal and state and non-U.S. government agencies are also developing standards for the use of information technology that in some cases have become prerequisite to or mandatory as requirements for providing health care services to beneficiaries of federal health insurance programs that are paid for by these agencies. Hospitals and physicians participating in the statutory ARRA HITECH program for "meaningful use of certified electronic health record technology ("CEHRT")" first started receiving stimulus funds in 2011 as incentive payments for adoption of EHRs from the U.S. federal government. In most cases, these incentives have now evolved into negative payment adjustments for providers who do not adopt CEHRT. In the last year, the requirements for adoption of CEHRT have expanded to be linked to other federal statutory and regulatory requirements for providers to participate in "alternative payment models" for Medicare as the federal government moves to adopt more "value" (or quality) based payment methods in lieu of traditional "fee for service" payment methodologies. The use of CEHRT has also been folded into the physician payment reforms adopted under MACRA, for which the federal government has adopted final regulations that will go into effect starting in 2017. Regulations have been issued that identify standards and implementation specifications and establish the certification standards for qualifying electronic health record technology to become CEHRT. Nevertheless, these standards and specifications are subject to interpretation by the entities designated to certify such technology. While a combination of our solutions have been certified as meeting the 2011 and 2014 editions of the CEHRT standards, the regulatory requirements to achieve certification continue to evolve, and we will need to meet the requirements set forth in the 2015 edition of these standards applicable to Stage 3 and other federal programs by January 1, 2018.

We may incur increased development costs and delays in delivering solutions as we need to update our software, devices or health care devices to be in compliance with these varying and evolving standards. In addition, delays in interpreting these standards may result in postponement or cancellation of our clients' decisions to purchase our solutions or health care devices. If our software solutions, devices or health care devices are not compliant with these evolving standards, our market position and sales could be impaired and we may have to invest significantly in changes to our software solutions, devices or health care devices. Further, we bear potential financial risks where we have entered into agreements with clients to warrant their ability to meet future stage meaningful use certification requirements. While a client's ability to meet future stage meaningful use attestation requirements may be dependent on such client's ability to adopt, rollout and attain sufficient use of our certified solutions on a timely basis, we may face risks that come from issues in full adoption of our certified solutions, which in turn could lead to a client missing its attestation targets. These risks are enhanced when we are under agreements to provide application management services to our clients that place responsibilities on us for application configuration and implementation as a prerequisite to or impactful to meaningful use attainment ordinarily borne by the client in other circumstances.

***We operate in intensely competitive and dynamic industries, and our ability to successfully compete and continue to grow our business depends on our ability to respond quickly to market changes and changing technologies and to bring competitive new solutions, devices, features and services to market in a timely fashion.*** The market for health care information systems, health care solutions and services to the health care industry is intensely competitive, dynamically evolving and subject to rapid technological and innovative changes. Development of new proprietary technology or services is complex, entails significant time and expense and may not be successful. We cannot guarantee that the market for our solutions, devices and services will develop as quickly as expected. We cannot guarantee that we will be able to introduce new solutions, devices or services on schedule, or at all, nor can we guarantee that such solutions, devices or services will achieve market acceptance. Moreover, we cannot guarantee that errors will not be found in our new solution releases, devices or services before or after commercial release, which could result in solution, device or service delivery redevelopment costs, harm to our reputation, lost sales, license terminations or renegotiations, product liability claims, diversion of resources to remedy errors and loss of, or delay in, market acceptance.

Certain of our competitors have greater financial, technical, product development, marketing or other resources than us and some of our competitors offer software solutions, devices or services that we do not offer. Our principal existing competitors are set forth above under Part I, Item 1 "Competition".

In addition, we expect that major software information systems companies, large information technology consulting service providers and system integrators, start-up companies and others specializing in the health care industry may offer competitive software solutions, devices or services. As we continue to develop new health care devices and services to address areas such as analytics, transaction services, HCIT and device integration, revenue cycle and population health management, we expect to face new competitors, and these competitors may have more experience in these markets, better brand recognition and/or more established relationships with prospective clients. We face strong competition and often face downward price pressure, which could adversely affect our results of operations or liquidity. Additionally, the pace of change in the health care information systems market is rapid and there are frequent new software solution introductions, software solution enhancements, device introductions, device enhancements and evolving industry standards and requirements. There are a limited number of hospitals and other health care providers in the U.S. market and in recent years, the health care industry has been subject to increasing consolidation. If we are unable to recognize the impact of industry consolidation, falling costs and technological advancements in a timely manner, or we are too inflexible to rapidly adjust our business models, our prospects and financial results could be negatively affected materially.

***Long sales cycles for our solutions and services could have a material adverse impact on our future results of operations.*** Some of our solutions have long sales cycles, ranging from several months to eighteen months or more beginning at initial contact with the client through execution of a contract. How and when to implement, replace, or expand an information system, or modify or add business processes, are major decisions for health care organizations. Many of the solutions we provide require a substantial capital investment and time commitments by the client or prospective client. Any decision by our clients or prospective clients to delay a purchasing decision could have a material adverse impact on our results of operations.



## Risks Related to Our Common Stock

***Our quarterly operating results may vary, which could adversely affect our stock price.*** Our quarterly operating results have varied in the past and may continue to vary in future periods, including variations from guidance, expectations or historical results or trends. Quarterly operating results may vary for a number of reasons including demand for our solutions, devices and services, the financial condition of our current and potential clients, our long sales cycle, potentially long installation and implementation cycles for larger, more complex systems, accounting policy changes and other factors described in this section and elsewhere in this report. As a result of health care industry trends and the market for our solutions, a large percentage of our revenues are generated by the sale and installation of larger, more complex and higher-priced systems. The sales process for these systems is lengthy and involves a significant technical evaluation and commitment of capital and other resources by the client. Sales may be subject to delays due to changes in clients' internal budgets, procedures for approving large capital expenditures, competing needs for other capital expenditures, additions or amendments to U.S. federal, state or local regulations, availability of personnel resources or by actions taken by competitors. Delays in the expected sale, installation or implementation of these large systems may have a significant negative impact on our anticipated quarterly revenues and consequently our earnings, since a significant percentage of our expenses are relatively fixed. Because of the complexity and value of our contracts, the loss of even a small number of clients could have a significant negative effect on our financial results.

Revenue recognized in any quarter may depend upon our or our clients' abilities to meet project milestones. Delays in meeting these milestone conditions or modification of the project plan could result in a shift of revenue recognition from one quarter to another and could have a material adverse effect on results of operations for a particular quarter.

Our revenues from system sales historically have been lower in the first quarter of the year and greater in the fourth quarter of the year, primarily as a result of clients' year-end efforts to make final capital expenditures for the then-current year.

***Our sales forecasts may vary from actual sales in a particular quarter.*** We use a "pipeline" system, a common industry practice, to forecast sales and trends in our business. Our sales associates monitor the status of all sales opportunities, such as the date when they estimate that a client will make a purchase decision and the potential dollar amount of the sale. These estimates are aggregated periodically to generate a sales pipeline. We compare this pipeline at various points in time to evaluate trends in our business. This analysis provides guidance in business planning and forecasting, but these pipeline estimates are by their nature speculative. Our pipeline estimates are not necessarily reliable predictors of revenues in a particular quarter or over a longer period of time, partially because of changes in the pipeline and in conversion rates of the pipeline into contracts that can be very difficult to estimate. A negative variation in the expected conversion rate or timing of the pipeline into contracts, or in the pipeline itself, could cause our plan or forecast to be inaccurate and thereby adversely affect business results. For example, a slowdown in information technology spending, adverse economic conditions, new or changed U.S. federal, state or local regulations related to our industry or a variety of other factors can cause purchasing decisions to be delayed, reduced in amount or cancelled, which would reduce the overall pipeline conversion rate in a particular period of time. Because a substantial portion of our contracts are completed in the latter part of a quarter, we may not be able to adjust our cost structure quickly enough in response to a revenue shortfall resulting from a decrease in our pipeline conversion rate in any given fiscal quarter.

***The trading price of our common stock may be volatile.*** The market for our common stock may experience significant price and volume fluctuations in response to a number of factors including actual or anticipated variations in operating results, articles or rumors about our performance or solutions, devices or services, announcements of technological innovations or new services or products by our competitors or us, changes in expectations of future financial performance or estimates of securities analysts, governmental regulatory action, health care reform measures, client relationship developments, economic conditions and changes occurring in the securities markets in general and other factors, many of which are beyond our control. For instance, our quarterly operating results have varied in the past and may continue to vary in future periods, due to a number of reasons including, but not limited to, demand for our solutions, devices and services, the financial condition of our current and potential clients, our long sales cycle, potentially long installation and implementation cycles for larger, more complex and higher-priced systems, key management changes, accounting policy changes and other factors described herein. As a matter of policy, we do not generally comment on our stock price or rumors.

Furthermore, the stock market in general, and the markets for software, health care devices, other health care solutions and services and information technology companies in particular, have experienced extreme volatility that often has been unrelated to the operating performance of particular companies. These broad market and industry fluctuations may adversely affect the trading price of our common stock, regardless of actual operating performance.

***Our Directors have authority to issue preferred stock and our corporate governance documents contain anti-takeover provisions.*** Our Board of Directors has the authority to issue up to 1,000,000 shares of preferred stock and to determine the preferences, rights and privileges of those shares without any further vote or action by the shareholders. The rights of the holders of common stock may be harmed by rights granted to the holders of any preferred stock that may be issued in the future and issuances of preferred stock could be used to delay or hinder a change of control of the Company.

In addition, some provisions of our Certificate of Incorporation and Bylaws could make it more difficult for a potential acquirer to acquire a majority of our outstanding voting stock or otherwise effect a change of control of the Company. These include provisions that provide for a classified board of directors, require advance notice of stockholder proposals at stockholder meetings, prohibit shareholders from taking action by written consent and restrict the ability of shareholders to call special meetings. We are also subject to provisions of Delaware law that prohibit us from engaging in any business combination with any interested shareholder for a period of three years from the date the person became an interested shareholder, unless certain conditions are met, which could have the effect of delaying or preventing a change of control.

***Changes in accounting standards issued by the Financial Accounting Standards Board ("FASB") or other standard-setting bodies may adversely affect our financial statements.*** Our financial statements are subject to the application of U.S. GAAP, which is periodically revised and/or expanded. From time to time, we are required to adopt new or revised accounting standards issued by recognized authoritative bodies, including the FASB and the SEC. It is possible that future accounting standards we are required to adopt, such as amended guidance for revenue recognition, leases, and share based payments, may require changes to the current accounting treatment that we apply to our consolidated financial statements and may require us to make significant changes to our systems. Such changes could result in a material adverse impact on our business, results of operations and financial condition.

### **Cautions about Forward-looking Statements**

Statements made in this report, the Annual Report to Shareholders of which this report is made a part, other reports and proxy statements filed with the SEC, communications to shareholders, press releases and oral statements made by representatives of the Company that are not historical in nature, or that state the Company's or management's intentions, hopes, beliefs, expectations, plans, goals or predictions of future events or performance, may constitute "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Forward-looking statements can often be identified by the use of forward-looking terminology, such as "could," "should," "will," "intended," "continue," "believe," "may," "expect," "hope," "anticipate," "goal," "forecast," "plan," "guidance," "opportunity," "prospects" or "estimate" or the negative of these words, variations thereof or similar expressions. Forward-looking statements are not guarantees of future performance or results. They involve risks, uncertainties and assumptions. It is important to note that any such performance and actual results, financial condition or business, could differ materially from those expressed in such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in this Item 1A. Risk Factors and elsewhere herein or in other reports filed with the SEC. Other unforeseen factors not identified herein could also have such an effect. Any forward-looking statements made in this report speak only as of the date of this report. Except as required by law, we undertake no obligation to update or revise forward-looking statements to reflect changed assumptions, the occurrence of unanticipated events or changes in our business, results of operations, financial condition or business over time.

### **Market and Industry Data**

This Annual Report on Form 10-K contains market, industry and government data and forecasts that have been obtained from publicly available information, various industry publications and other published industry sources. We have not independently verified the information and cannot make any representation as to the accuracy or completeness of such information. None of the reports and other materials of third party sources referred to in this Annual Report on Form 10-K were prepared for use in, or in connection with, this Annual Report.

### **Item 1B. Unresolved Staff Comments**

None

## Item 2. Properties

Our properties consist mainly of owned and leased office and data center facilities.

Our corporate world headquarters is located in a Company-owned office park (the Headquarters Campus) in North Kansas City, Missouri. The Headquarters Campus and two other nearby locations, collectively contain approximately 2.22 million gross square feet of useable space situated on 278 acres of land. The Headquarters Campus and the nearby properties primarily house office space, but also include space for other business needs, such as our Health Clinic and our Headquarters Campus data centers.

Company-owned office space, known as the Realization Campus (formerly known as our Innovations Campus), primarily houses associates from our intellectual property organization and consists of 830,000 gross square feet of useable space located in Kansas City, Missouri.

Company-owned office space known as the Continuous Campus, primarily houses associates who manage and support our clients' IT systems and consists of 650,000 gross square feet of useable space located in Kansas City, Kansas.

Company-owned office space known as the Malvern Campus, houses associates who joined Cerner in connection with our acquisition of Siemens Health Services on February 2, 2015, and consists of approximately 110 acres of property in Malvern, Pennsylvania. This property includes approximately 675,000 gross square feet of office space, and a 100,000 square foot data center.

Our Cerner-operated data center facilities, which are used to provide remote hosting, disaster recovery and other services to our clients, are located at the Headquarters Campus, Malvern Campus and office space in Lee's Summit, Missouri, known as the Lee's Summit Tech Center. The Lee's Summit Tech Center consists of 550,000 gross square feet and houses data center space and certain third-party tenants in a multi-tenant office building.

We have purchased approximately 286 acres of land located in Kansas City, Missouri, known as the Innovations Campus (formerly known as our Trails Campus). Construction on the Innovations Campus began in November 2014. The first two phases of the project include approximately 859,000 gross square feet of office space, and were completed in January of 2017.

In November 2016, we purchased approximately 700,000 gross square feet of useable office and warehouse space located in Kansas City, Missouri. Such space was acquired to accommodate our anticipated growth, and is located adjacent to our Realization Campus.

As of the end of 2016, we leased additional domestic office space in the following locations:

- Brooklyn, New York
- Burlington, Vermont
- Carlsbad, California
- Columbia, Missouri
- Costa Mesa, California
- Culver City, California
- Denver, Colorado
- Downingtown, Pennsylvania
- Durham, North Carolina
- Franklin, Tennessee
- Kansas City, Missouri
- Mason, Ohio
- Minneapolis, Minnesota
- Nevada, Missouri
- New Concord, Ohio
- New York, New York
- North Kansas City, Missouri
- Rochester, Minnesota
- Salt Lake City, Utah
- Tempe, Arizona
- Waltham, Massachusetts

Globally, we also leased office space in the following locations:

- Abu Dhabi, United Arab Emirates
- Augsburg, Germany
- Bangalore, India
- Berlin, Germany
- Brasov, Romania
- Brisbane, Australia
- Cairo, Egypt
- Doha, Qatar
- Dubai, United Arab Emirates
- Dublin, Ireland
- Erlangen, Germany
- Essen, Germany
- Gmund, Austria
- Gothenburg, Sweden
- Hamburg, Germany
- Idstein, Germany
- Kolkata, India
- Kosice, Slovakia
- Kuala Lumpur, Malaysia
- Lisbon, Portugal
- London, England
- Madrid, Spain
- Melbourne, Australia
- Oslo, Norway
- Paris, France
- Perth, Australia
- Peterborough, Ontario, Canada
- Riyadh, Saudi Arabia
- Sao Paulo, Brazil
- Singapore
- St. Wolfgang, Germany
- Stockholm, Sweden
- Sydney, Australia
- The Hague, Netherlands
- Toronto, Ontario, Canada
- Vienna, Austria

### **Item 3. Legal Proceedings**

We are not a party to and none of our property is subject to any material pending legal proceedings, other than ordinary routine litigation incidental to our business.

### **Item 4. Mine Safety Disclosures**

Not applicable

## Part II

### Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Our common stock trades on the NASDAQ Global Select Market<sup>SM</sup> under the symbol CERN. The following table sets forth the high, low and last sales prices for the fiscal quarters of 2016 and 2015 as reported by the *NASDAQ Global Select Market*.

	2016			2015		
	High	Low	Last	High	Low	Last
First Quarter	\$ 59.92	\$ 49.59	\$ 54.08	\$ 74.83	\$ 63.19	\$ 72.77
Second Quarter	59.14	52.84	58.91	75.72	65.67	68.48
Third Quarter	67.50	57.59	61.75	75.00	57.42	61.34
Fourth Quarter	62.53	47.01	47.37	68.31	55.82	60.17

At February 1, 2017, there were approximately 960 owners of record. To date, we have paid no cash dividends and we do not intend to pay cash dividends in the foreseeable future. We believe it is in the shareholders' best interest for us to reinvest funds in the operation of the business.

The following table provides information with respect to Common Stock purchases by the Company during the fourth fiscal quarter of 2016:

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (a)	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs (a)
October 2, 2016 - October 29, 2016	—	\$ —	—	\$ 100,000,000
October 30, 2016 - November 26, 2016	7,742,399	50.15	7,742,399	211,730,000
November 27, 2016 - December 31, 2016	2,238,243	49.92	2,238,243	100,000,000
Total	<u>9,980,642</u>	\$ 50.10	<u>9,980,642</u>	

- (a) As announced on March 8, 2016, our Board of Directors authorized a share repurchase program for an aggregate purchase of up to \$300 million of our common stock, excluding transaction costs. That program was completed in November 2016. As announced on November 14, 2016, our Board of Directors authorized a new share repurchase program for an aggregate purchase of up to \$500 million of our common stock, excluding transaction costs. As of December 31, 2016, \$100 million remained available for repurchase. No time limit has been set for the completion of the program. During 2016, the Company repurchased 13.7 million shares for total consideration of \$700 million pursuant to Rule 10b5-1 plans. Refer to Note (14) of the notes to consolidated financial statements for further information regarding our share repurchase programs.

See Part III, Item 12 for information relating to securities authorized for issuance under our equity compensation plans.

## Item 6. Selected Financial Data

(In thousands, except per share data)

	2016	2015 <sup>(1)</sup>	2014	2013 <sup>(2)</sup>	2012
<b>Statement of Operations Data:</b>					
Revenues	\$ 4,796,473	\$ 4,425,267	\$ 3,402,703	\$ 2,910,748	\$ 2,665,436
Operating earnings	911,013	781,136	763,084	576,012	571,662
Earnings before income taxes	918,434	781,380	774,174	588,054	587,708
Net earnings	636,484	539,362	525,433	398,354	397,232
Earnings per share:					
Basic	1.88	1.57	1.54	1.16	1.16
Diluted	1.85	1.54	1.50	1.13	1.13
Weighted average shares outstanding:					
Basic	337,740	343,178	342,150	343,636	341,861
Diluted	343,653	350,908	350,386	352,281	351,394
<b>Balance Sheet Data:</b>					
Working capital	\$ 773,960	\$ 1,049,967	\$ 1,714,471	\$ 1,121,276	\$ 1,210,394
Total assets	5,629,963	5,561,984	4,530,565	4,098,364	3,704,468
Long-term debt and capital lease obligations, excl. current installments	537,552	563,353	62,868	111,717	136,557
Shareholders' equity	3,927,947	3,870,384	3,565,968	3,167,664	2,833,650

(1) In 2015 we acquired Siemens Health Services, as further described in Note 2 of the notes to consolidated financial statements.

(2) Includes a pre-tax settlement charge of \$106 million.



## Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following Management Discussion and Analysis (MD&A) is intended to help the reader understand our results of operations and financial condition. This MD&A is provided as a supplement to, and should be read in conjunction with, our financial statements and the accompanying notes to the financial statements (Notes).

Our fiscal year ends on the Saturday closest to December 31. Fiscal years 2016 and 2015 each consisted of 52 weeks and ended on December 31, 2016 and January 2, 2016, respectively. Fiscal year 2014 consisted of 53 weeks and ended on January 3, 2015. The additional week in fiscal year 2014 impacts the results of operations discussion below. All references to years in this MD&A represent fiscal years unless otherwise noted.

### **Management Overview**

Our revenues are primarily derived by selling, implementing and supporting software solutions, clinical content, hardware, devices and services that give health care providers and other stakeholders secure access to clinical, administrative and financial data in real or near-real time, helping them to improve quality, safety and efficiency in the delivery of health care.

Our fundamental strategic focus is the creation of organic growth by investing in research and development (R&D) to create solutions and services for the health care industry. This strategy has driven strong growth over the long-term, as reflected in five- and ten-year compound annual revenue growth rates of 13% or more. This growth has also created an important strategic footprint in health care, with *Cerner*<sup>®</sup> solutions in more than 25,000 facilities worldwide, including hospitals, physician practices, laboratories, ambulatory centers, behavioral health centers, cardiac facilities, radiology clinics, surgery centers, extended care facilities, retail pharmacies, and employer sites. Selling additional solutions and services back into this client base is an important element of our future revenue growth. We are also focused on driving growth through market share expansion by strategically aligning with health care providers that have not yet selected a supplier and by displacing competitors in health care settings that are looking to replace their current supplier. We may also supplement organic growth with acquisitions.

We expect to drive growth through solutions and services that reflect our ongoing ability to innovate and expand our reach into health care. Examples of these include our *CareAware*<sup>®</sup> health care device architecture and devices, *Cerner ITWorks* services, revenue cycle solutions and services, and *HealthIntent* population health solutions and services. Finally, we believe there is significant opportunity for growth outside of the United States, with many non-U.S. markets focused on health care information technology as part of their strategy to improve the quality and lower the cost of health care.

Beyond our strategy for driving revenue growth, we are also focused on earnings growth. Similar to our history of growing revenue, our net earnings have increased at compound annual rates of 15% or more over the most recent five- and ten-year periods. We expect to drive continued earnings growth through ongoing revenue growth coupled with margin expansion, which we expect to achieve through efficiencies in our implementation and operational processes and by leveraging R&D investments and controlling general and administrative expenses.

We are also focused on continuing to deliver strong levels of cash flow, which we expect to do by continuing to grow earnings and prudently managing capital expenditures.

### **Siemens Health Services**

On February 2, 2015, we acquired the Cerner Health Services business, as further described in Note (2) of the notes to consolidated financial statements. The addition of this business impacts the comparability of our 2015 consolidated financial statements in relation to the comparative periods presented herein.

### **Results Overview**

The Company delivered good levels of bookings, revenues, earnings and operating cash flows in 2016.

New business bookings revenue, which reflects the value of executed contracts for software, hardware, professional services and managed services, was flat year-over-year at \$5.4 billion in both 2016 and 2015, but we still view 2016 bookings as solid given 2015 had grown 28% over 2014, creating a difficult comparable.

Revenues for 2016 increased 8% to \$4.8 billion compared to \$4.4 billion in 2015. The increase in revenue reflects ongoing demand for Cerner's core solutions and services driven by our clients' needs to keep up with regulatory requirements; contributions from *Cerner ITWorks* and revenue cycle solutions and services; and attaining new clients.

Our 2016 net earnings were \$636 million compared to \$539 million in 2015. Diluted earnings per share were \$1.85 in 2016 compared to \$1.54 in 2015. The overall increase in net earnings and diluted earnings per share was primarily a result of increased revenues, combined with a decline in costs associated with our acquisition of the Cerner Health Services business in 2015.

We had cash collections of receivables of \$5.2 billion in 2016 compared to \$4.4 billion in 2015. Days sales outstanding was 69 days for the 2016 fourth quarter compared to 76 days for the 2016 third quarter and 80 days for the 2015 fourth quarter. Operating cash flows for 2016 were \$1.2 billion compared to \$948 million in 2015.

### **Health Care Information Technology Market Outlook**

We have provided an assessment of the health care information technology market under "Health Care and Health Care IT Industry" in Part I, Item 1 "Business," which is incorporated herein by reference.

### **Results of Operations**

#### **Fiscal Year 2016 Compared to Fiscal Year 2015**

<i>(In thousands)</i>	2016	% of Revenue	2015	% of Revenue	% Change
<b>Revenues</b>					
System sales	\$ 1,265,962	26%	\$ 1,281,890	29%	(1)%
Support and maintenance	1,015,811	21%	975,701	22%	4 %
Services	2,426,155	51%	2,094,874	47%	16 %
Reimbursed travel	88,545	2%	72,802	2%	22 %
<b>Total revenues</b>	<b>4,796,473</b>	<b>100%</b>	<b>4,425,267</b>	<b>100%</b>	<b>8 %</b>
<b>Costs of revenue</b>					
Costs of revenue	779,116	16%	750,781	17%	4 %
<b>Total margin</b>	<b>4,017,357</b>	<b>84%</b>	<b>3,674,486</b>	<b>83%</b>	<b>9 %</b>
<b>Operating expenses</b>					
Sales and client service	2,071,926	43%	1,838,600	42%	13 %
Software development	551,418	11%	539,799	12%	2 %
General and administrative	392,454	8%	423,424	10%	(7)%
Amortization of acquisition-related intangibles	90,546	2%	91,527	2%	(1)%
<b>Total operating expenses</b>	<b>3,106,344</b>	<b>65%</b>	<b>2,893,350</b>	<b>65%</b>	<b>7 %</b>
<b>Total costs and expenses</b>	<b>3,885,460</b>	<b>81%</b>	<b>3,644,131</b>	<b>82%</b>	<b>7 %</b>
<b>Operating earnings</b>	<b>911,013</b>	<b>19%</b>	<b>781,136</b>	<b>18%</b>	<b>17 %</b>
Other income, net	7,421		244		
Income taxes	(281,950)		(242,018)		
<b>Net earnings</b>	<b>\$ 636,484</b>		<b>\$ 539,362</b>		<b>18 %</b>

### **Revenues & Backlog**

Revenues increased 8% to \$4.8 billion in 2016, as compared to \$4.4 billion in 2015.

- System sales, which include revenues from the sale of licensed software (including perpetual license sales and software as a service), technology resale (hardware, devices, and sublicensed software), deployment period

licensed software upgrade rights, installation fees, transaction processing and subscriptions, decreased 1% from 2016 to 2015. The decrease in system sales was primarily driven by a decline in technology resale.

- Support and maintenance revenues increased 4% to \$1.0 billion in 2016 compared to \$976 million in 2015. This increase was primarily attributable to continued success selling *Cerner Millennium* applications and implementing them at client sites.
- Services revenue, which includes professional services (excluding installation) and managed services, increased 16% to \$2.4 billion in 2016 from \$2.1 billion in 2015. This increase was driven by a \$207 million increase in professional services due to growth in implementation and consulting activities and growth in managed services of \$124 million as a result of continued demand for our hosting services.

Revenue backlog, which reflects contracted revenue that has not yet been recognized as revenue, increased 12% to \$15.9 billion in 2016 compared to \$14.2 billion in 2015. This increase was driven by solid levels of new business bookings revenue during the past four quarters, including strong levels of managed services bookings that typically have longer contract terms.

### Costs of Revenue

Costs of revenue as a percent of total revenues were 16% in 2016 compared to 17% in 2015. The lower costs of revenue as a percent of total revenues was primarily driven by a lower mix of technology resale, which carries a higher cost of revenue.

Costs of revenue includes the cost of reimbursed travel expense, sales commissions, third party consulting services and subscription content and computer hardware, devices and sublicensed software purchased from manufacturers for delivery to clients. It also includes the cost of hardware maintenance and sublicensed software support subcontracted to the manufacturers. Such costs, as a percent of total revenues, typically have varied as the mix of revenue (software, hardware, devices, maintenance, support, services and reimbursed travel) carrying different margin rates changes from period to period. Costs of revenue does not include the costs of our client service personnel who are responsible for delivering our service offerings. Such costs are included in sales and client service expense.

### Operating Expenses

Total operating expenses increased 7% to \$3.1 billion in 2016, compared with \$2.9 billion in 2015.

- Sales and client service expenses as a percent of total revenues were 43% in 2016, compared to 42% in 2015. These expenses increased 13% to \$2.1 billion in 2016, from \$1.8 billion in 2015. Sales and client service expenses include salaries and benefits of sales, marketing, support, and services personnel, depreciation and other expenses associated with our managed services business, communications expenses, unreimbursed travel expenses, expense for share-based payments, and trade show and advertising costs. The growth in services expense and increase as a percent of total revenues reflects hiring of services personnel to support the strong growth in services revenue.
- Software development expenses as a percent of total revenues were 11% in 2016, compared to 12% in 2015. Expenditures for software development include ongoing development and enhancement of the *Cerner Millennium* and *HealthIntent* platforms, with a focus on supporting key initiatives to enhance physician experience, revenue cycle and population health solutions. A summary of our total software development expense in 2016 and 2015 is as follows:

(In thousands)	For the Years Ended	
	2016	2015
Software development costs	\$ 704,882	\$ 685,260
Capitalized software costs	(290,911)	(262,177)
Capitalized costs related to share-based payments	(2,785)	(2,479)
Amortization of capitalized software costs	140,232	119,195
Total software development expense	\$ 551,418	\$ 539,799

- General and administrative expenses as a percent of total revenues were 8% in 2016, compared to 10% in 2015. These expenses decreased 7% to \$392 million in 2016, from \$423 million in 2015. General and administrative expenses include salaries and benefits for corporate, financial and administrative staffs, utilities, communications

expenses, professional fees, depreciation and amortization, transaction gains or losses on foreign currency, expense for share-based payments, acquisition costs and related adjustments. The decrease as a percent of total revenues was primarily the result of decreased expenses in 2016 related to acquisition costs and related adjustments associated with our acquisition of the Cerner Health Services business and our voluntary separation plans. General and administrative expenses in 2016 and 2015 include acquisition costs and related adjustments associated with our Cerner Health Services business of \$4 million and \$46 million, respectively. General and administrative expenses in 2016 and 2015 include costs associated with our voluntary separation plans of \$36 million and \$46 million, respectively. We expect expenses in 2017 for acquisition costs and related adjustments associated with our acquisition of the Cerner Health Services business to be de minimis. We do not expect to record expenses in 2017 associated with our voluntary separation plans. At the end of 2016, our voluntary separation plans were complete. Refer to Note (1) of the notes to consolidated financial statements for further detail regarding the voluntary separation plans.

- Amortization of acquisition-related intangibles as a percent of total revenues was 2% in both 2016 and 2015. These expenses decreased 1% to \$91 million in 2016, from \$92 million in 2015. Amortization of acquisition-related intangibles includes the amortization of customer relationships, acquired technology, trade names, and non-compete agreements recorded in connection with our business acquisitions. The decrease in amortization of acquisition-related intangibles includes the impact of certain intangible assets becoming fully amortized.

#### Non-Operating Items

- Other income, net was \$7 million in 2016 compared to less than \$1 million in 2015. This increase is primarily due to increased capitalization of interest on construction in process, primarily related to our Innovations Campus (office space development located in Kansas City, Missouri, formerly referred to as our Trails Campus).
- Our effective tax rate was 31% in both 2016 and 2015. Refer to Note (12) of the notes to consolidated financial statements for further information regarding our effective tax rate.

#### Operations by Segment

We have two operating segments: Domestic and Global. The Domestic segment includes revenue contributions and expenditures associated with business activity in the United States. The Global segment includes revenue contributions and expenditures linked to business activity in Aruba, Australia, Austria, the Bahamas, Belgium, Bermuda, Brazil, Canada, Cayman Islands, Chile, Denmark, Egypt, England, Finland, France, Germany, Guam, India, Ireland, Kuwait, Luxembourg, Malaysia, Mexico, Netherlands, Norway, Portugal, Qatar, Romania, Saudi Arabia, Singapore, Slovakia, Spain, Sweden, Switzerland and the United Arab Emirates. Refer to Note (18) of the notes to consolidated financial statements for further information regarding our reportable segments.

The following table presents a summary of our operating segment information for the years ended 2016 and 2015:

<i>(In thousands)</i>	<b>2016</b>	<b>% of Revenue</b>	<b>2015</b>	<b>% of Revenue</b>	<b>% Change</b>
<b>Domestic Segment</b>					
Revenues	\$ 4,245,097	100%	\$ 3,904,454	100%	9%
Costs of revenue	676,437	16%	651,826	17%	4%
Operating expenses	1,774,146	42%	1,577,594	40%	12%
Total costs and expenses	2,450,583	58%	2,229,420	57%	10%
Domestic operating earnings	1,794,514	42%	1,675,034	43%	7%
<b>Global Segment</b>					
Revenues	551,376	100%	520,813	100%	6%
Costs of revenue	102,679	19%	98,955	19%	4%
Operating expenses	246,243	45%	233,047	45%	6%
Total costs and expenses	348,922	63%	332,002	64%	5%
Global operating earnings	202,454	37%	188,811	36%	7%
Other, net	(1,085,955)		(1,082,709)		—%
Consolidated operating earnings	\$ 911,013		\$ 781,136		17%

#### *Domestic Segment*

- Revenues increased 9% to \$4.2 billion in 2016 from \$3.9 billion in 2015. This increase was primarily driven by growth in services revenue.
- Costs of revenue as a percent of revenues were 16% in 2016 compared to 17% in 2015. The lower costs of revenue as a percent of revenues was primarily driven by a lower mix of technology resale, which carries a higher cost of revenue.
- Operating expenses as a percent of revenues were 42% in 2016 compared to 40% in 2015. The increase as a percent of revenues reflects a higher mix of services during 2016 that was driven by services revenue growth.

#### *Global Segment*

- Revenues increased 6% to \$551 million in 2016 from \$521 million in 2015. This increase was driven by growth across most of our business.
- Costs of revenue as a percent of revenues were 19% in both 2016 and 2015.
- Operating expenses as a percent of revenues were 45% in both 2016 and 2015.

#### *Other, net*

Operating results not attributed to an operating segment include expenses, such as software development, general and administrative expenses, acquisition costs and related adjustments, share-based compensation expense, and certain amortization and depreciation. These expenses were flat at \$1.1 billion in both 2016 and 2015.



## Fiscal Year 2015 Compared to Fiscal Year 2014

<i>(In thousands)</i>	2015	% of Revenue	2014	% of Revenue	% Change
<b>Revenues</b>					
System sales	\$ 1,281,890	29%	\$ 945,858	28%	36 %
Support and maintenance	975,701	22%	724,840	21%	35 %
Services	2,094,874	47%	1,642,119	48%	28 %
Reimbursed travel	72,802	2%	89,886	3%	(19)%
Total revenues	4,425,267	100%	3,402,703	100%	30 %
<b>Costs of revenue</b>					
Costs of revenue	750,781	17%	604,377	18%	24 %
Total margin	3,674,486	83%	2,798,326	82%	31 %
<b>Operating expenses</b>					
Sales and client service	1,838,600	42%	1,395,568	41%	32 %
Software development	539,799	12%	392,805	12%	37 %
General and administrative	423,424	10%	233,393	7%	81 %
Amortization of acquisition-related intangibles	91,527	2%	13,476	—%	579 %
Total operating expenses	2,893,350	65%	2,035,242	60%	42 %
Total costs and expenses	3,644,131	82%	2,639,619	78%	38 %
Operating earnings	781,136	18%	763,084	22%	2 %
Other income, net	244		11,090		
Income taxes	(242,018)		(248,741)		
Net earnings	\$ 539,362		\$ 525,433		3 %

### Revenues & Backlog

Revenues increased 30% to \$4.4 billion in 2015, as compared to \$3.4 billion in 2014.

- System sales increased 36% to \$1.3 billion in 2015 from \$946 million in 2014. The increase in system sales was primarily driven by contributions from the Cerner Health Services business.
- Support and maintenance revenues increased 35% to \$976 million in 2015 compared to \$725 million in 2014. This increase was primarily attributable to contributions from the Cerner Health Services business.
- Services revenue increased 28% to \$2.1 billion in 2015 from \$1.6 billion in 2014. This increase was driven by contributions from the Cerner Health Services business.

Revenue backlog increased 34% to \$14.2 billion in 2015 compared to \$10.6 billion in 2014. This increase was driven by growth in new business bookings during the past four quarters, including continued strong levels of managed services, *Cerner ITWorks* and Cerner revenue cycle services bookings that typically have longer contract terms, coupled with contributions from the Cerner Health Services business.

### Costs of Revenue

Costs of revenue as a percent of total revenues were 17% in 2015 compared to 18% in 2014. The lower costs of revenue as a percent of total revenues was primarily driven by a lower mix of technology resale, which carries a higher cost of revenue.

### Operating Expenses

Total operating expenses increased 42% to \$2.9 billion in 2015, compared with \$2.0 billion in 2014.

- Sales and client service expenses as a percent of total revenues were 42% in 2015, compared to 41% in 2014. These expenses increased 32% to \$1.8 billion in 2015, from \$1.4 billion in 2014. The increase was primarily driven by the addition of the Cerner Health Services business.
- Software development expenses as a percent of total revenues were 12% in both 2015 and 2014. Expenditures for software development reflect ongoing development and enhancement of the *Cerner Millennium* and *HealthIntent* platforms, with a focus on supporting key initiatives to enhance physician experience, revenue cycle, and population health solutions. Software development expenses in 2015 also include expenditures related to the Cerner Health Services solutions. A summary of our total software development expense in 2015 and 2014 is as follows:

(In thousands)	For the Years Ended	
	2015	2014
Software development costs	\$ 685,260	\$ 467,158
Capitalized software costs	(262,177)	(175,262)
Capitalized costs related to share-based payments	(2,479)	(2,538)
Amortization of capitalized software costs	119,195	103,447
Total software development expense	\$ 539,799	\$ 392,805

- General and administrative expenses as a percent of total revenues were 10% in 2015, compared to 7% in 2014. These expenses increased 81% to \$423 million in 2015 from \$233 million in 2014. The increase in general and administrative expenses was primarily driven by the addition of the Cerner Health Services business. General and administrative expenses in 2015 and 2014 include acquisition costs and related adjustments associated with our Cerner Health Services business of \$46 million and \$16 million, respectively. General and administrative expenses in 2015 also include \$46 million of costs associated with our 2015 voluntary separation plan.
- Amortization of acquisition-related intangibles increased 579% to \$92 million in 2015 from \$13 million in 2014. The increase in amortization of acquisition-related intangibles was driven by the acquisition of the Cerner Health Services business in the first quarter of 2015. Refer to Note (2) of the notes to consolidated financial statements for further detail regarding intangible assets recorded in connection with our acquisition of the Cerner Health Services business.

#### Non-Operating Items

- Other income, net was less than \$1 million in 2015 and \$11 million in 2014. This decline was primarily due to increased interest expense as a result of the issuance of Senior Notes in January 2015, as further discussed in Note (9) of the notes to consolidated financial statements. Interest income also declined in 2015 due to lower average investment balances throughout the year. Refer to Note (11) of the notes to consolidated financial statements for further detail on the composition of other income.
- Our effective tax rate was 31% in 2015 compared to 32% in 2014. The rates include net favorable permanent differences recognized in both periods. Refer to Note (12) of the notes to consolidated financial statements for further information regarding our effective tax rate.

The research and development credit expired on December 31, 2013, but in the fourth quarter of 2014, was retroactively reinstated from January 1, 2014 to December 31, 2014. We recognized the research and development tax credit related to 2014 in the fourth quarter of 2014. In the fourth quarter of 2015, the research and development credit was made permanent for amounts paid or incurred after December 31, 2014. We recognized the research and development tax credit related to 2015 in the fourth quarter of 2015.

## Operations by Segment

The following table presents a summary of our operating segment information for the years ended 2015 and 2014:

<i>(In thousands)</i>	2015	% of Revenue	2014	% of Revenue	% Change
<b>Domestic Segment</b>					
Revenues	\$ 3,904,454	100%	\$ 3,021,790	100%	29%
Costs of revenue	651,826	17%	542,210	18%	20%
Operating expenses	1,577,594	40%	1,163,413	39%	36%
Total costs and expenses	2,229,420	57%	1,705,623	56%	31%
Domestic operating earnings	1,675,034	43%	1,316,167	44%	27%
<b>Global Segment</b>					
Revenues	520,813	100%	380,913	100%	37%
Costs of revenue	98,955	19%	62,167	16%	59%
Operating expenses	233,047	45%	182,965	48%	27%
Total costs and expenses	332,002	64%	245,132	64%	35%
Global operating earnings	188,811	36%	135,781	36%	39%
Other, net	(1,082,709)		(688,864)		57%
Consolidated operating earnings	\$ 781,136		\$ 763,084		2%

### *Domestic Segment*

- Revenues increased 29% to \$3.9 billion in 2015 from \$3.0 billion in 2014. This increase was primarily driven by contributions from the Cerner Health Services business.
- Costs of revenue as a percent of revenues were 17% in 2015 compared to 18% in 2014. The lower costs of revenue as a percent of revenues was primarily driven by a lower mix of technology resale, which carries a higher cost of revenue.
- Operating expenses as a percent of revenues were 40% in 2015 compared to 39% in 2014. The slight increase as a percent of revenues was primarily driven by the addition of the Cerner Health Services business.

### *Global Segment*

- Revenues increased 37% to \$521 million in 2015 from \$381 million in 2014. This increase was primarily driven by contributions from the Cerner Health Services business.
- Costs of revenue as a percent of revenues were 19% in 2015 compared to 16% in 2014. The higher costs of revenue as a percent of revenue in 2015 were primarily driven by a higher amount of third party resources utilized for support and services.
- Operating expenses increased 27% to \$233 million in 2015 from \$183 million in 2014, due primarily to the addition of the Cerner Health Services business.

### *Other, net*

These expenses increased 57% to \$1.1 billion in 2015 from \$689 million in 2014. This increase is primarily due to the addition of corporate and development personnel from our acquisition of the Cerner Health Services business. Additionally, 2015 included amortization of acquisition-related intangibles associated with our Cerner Health Services business, acquisition costs and related adjustments, and costs related to our voluntary separation plan of \$79 million, \$46 million, and \$46 million, respectively. Our 2014 fiscal year includes acquisition costs and related adjustments of \$16 million.

## Liquidity and Capital Resources

Our liquidity is influenced by many factors, including the amount and timing of our revenues, our cash collections from our clients and the amount we invest in software development, acquisitions, capital expenditures, and in recent years, our share repurchase programs.

Our principal sources of liquidity are our cash, cash equivalents, which primarily consist of money market funds and time deposits with original maturities of less than 90 days, and short-term investments. At the end of 2016, we had cash and cash equivalents of \$171 million and short-term investments of \$186 million, as compared to cash and cash equivalents of \$402 million and short-term investments of \$111 million at the end of 2015.

The non-U.S. subsidiaries for which we have elected to indefinitely reinvest earnings outside the U.S. held approximately 45% of our aggregate cash, cash equivalents and short-term investments at December 31, 2016. As part of our current business strategy, we plan to indefinitely reinvest the earnings of these foreign operations; however, should the earnings of these foreign operations be repatriated, we would accrue and pay tax on such earnings, which may be material.

We maintain a \$100 million multi-year revolving credit facility, which expires in October 2020. The facility provides an unsecured revolving line of credit for working capital purposes, which includes a letter of credit facility. We have the ability to increase the maximum capacity to \$200 million at any time during the facility's term, subject to lender participation. As of the end of 2016, we had no outstanding borrowings under this facility; however, we had \$32 million of outstanding letters of credit, which reduced our available borrowing capacity to \$68 million. Refer to Note (9) of the notes to consolidated financial statements for additional information regarding our credit facility.

We believe that our present cash position, together with cash generated from operations, short-term investments and, if necessary, our available line of credit, will be sufficient to meet anticipated cash requirements during 2017.

The following table summarizes our cash flows in 2016, 2015 and 2014:

	For the Years Ended		
	2016	2015	2014
<i>(In thousands)</i>			
Cash flows from operating activities	\$ 1,155,612	\$ 947,526	\$ 847,027
Cash flows from investing activities	(789,774)	(1,405,943)	(284,567)
Cash flows from financing activities	(586,652)	236,249	(120,324)
Effect of exchange rate changes on cash	(10,447)	(10,913)	(9,310)
Total change in cash and cash equivalents	(231,261)	(233,081)	432,826
Cash and cash equivalents at beginning of period	402,122	635,203	202,377
Cash and cash equivalents at end of period	\$ 170,861	\$ 402,122	\$ 635,203
Free cash flow (non-GAAP)	\$ 402,489	\$ 320,738	\$ 392,643

### Cash from Operating Activities

	For the Years Ended		
	2016	2015	2014
<i>(In thousands)</i>			
Cash collections from clients	\$ 5,184,252	\$ 4,419,650	\$ 3,480,591
Cash paid to employees and suppliers and other	(3,755,617)	(3,340,551)	(2,483,559)
Cash paid for interest	(18,484)	(13,164)	(5,682)
Cash paid for taxes, net of refunds	(254,539)	(118,409)	(144,323)
Total cash from operations	\$ 1,155,612	\$ 947,526	\$ 847,027

Cash flow from operations increased \$208 million in 2016 compared to 2015, due primarily to a reduction in cash used to fund working capital requirements, along with an increase in cash impacting earnings. Cash flow from operations increased \$100 million in 2015 compared to 2014, due primarily to an increase in cash impacting earnings. During 2016, 2015 and 2014, we received total client cash collections of \$5.2 billion, \$4.4 billion and \$3.5 billion, respectively. Days sales outstanding was 69 days in the fourth quarter of 2016, compared to 76 days for the 2016 third quarter and 80 days for the 2015 fourth

quarter. Revenues provided under support and maintenance agreements represent recurring cash flows. We expect these revenues to continue to grow as the base of installed systems grows.

### Cash from Investing Activities

(In thousands)	For the Years Ended		
	2016	2015	2014
Capital purchases	\$ (459,427)	\$ (362,132)	\$ (276,584)
Capitalized software development costs	(293,696)	(264,656)	(177,800)
Sales and maturities of investments, net of purchases	(18,179)	720,406	190,810
Acquisition of businesses	—	(1,478,129)	(7,476)
Purchases of other intangibles	(18,472)	(21,432)	(13,517)
Total cash flows from investing activities	\$ (789,774)	\$ (1,405,943)	\$ (284,567)

Cash flows from investing activities consist primarily of capital spending, short-term investment, and acquisition activities.

Our capital spending in 2016 was driven by capitalized equipment purchases primarily to support growth in our managed services business, investments in a cloud infrastructure to support cloud-based solutions, building and improvement purchases to support our facilities requirements and capitalized spending to support our ongoing software development initiatives. Capital purchases are expected to decrease in 2017, as we completed the first two phases of construction on our Innovations Campus in January of 2017.

Short-term investment activity historically consists of the investment of cash generated by our business in excess of what is necessary to fund operations. The 2014 activity is impacted by a change in investment mix, whereas we invested more heavily in cash equivalents versus short-term and long-term investments, as we prepared to fund our acquisition of the Cerner Health Services business in February 2015. The increase in net cash from investments in 2015 is due to the use of proceeds from additional investment sales and maturities to partially fund our acquisition of the Cerner Health Services business. In 2016, we returned to net purchases of investments, which we expect to continue in 2017, as we expect strong levels of cash flow.

During 2015, we paid cash to acquire the Cerner Health Services business and the Lee's Summit Tech Center of \$1.39 billion and \$85 million, respectively. In 2014, we acquired 100% of the outstanding membership interests of InterMedHx, LLC for \$7 million. We expect to continue seeking and completing strategic business acquisitions that are complementary to our business. Refer to Note (2) of the notes to consolidated financial statements for additional information regarding our business acquisitions.

### Cash from Financing Activities

(In thousands)	For the Years Ended		
	2016	2015	2014
Long-term debt issuance	\$ —	\$ 500,000	\$ —
Repayment of long-term debt and capital lease obligations	—	(14,325)	(14,930)
Cash from option exercises (including excess tax benefits)	115,697	107,434	71,411
Treasury stock purchases	(700,275)	(345,057)	(217,082)
Contingent consideration payments for acquisition of businesses	(2,074)	(11,012)	(10,617)
Cash grants	—	—	48,000
Other, net	—	(791)	2,894
Total cash flows from financing activities	\$ (586,652)	\$ 236,249	\$ (120,324)

In January 2015, we issued \$500 million in aggregate principal amount of Senior Notes. Proceeds from the Senior Notes were available for general corporate purposes. Refer to Note (9) of the notes to consolidated financial statements for additional information regarding the Senior Notes.

Cash inflows from stock option exercises are dependent on a number of factors, including the price of our common stock, grant activity under our stock option and equity plans, and overall market volatility. We expect cash inflows from stock option exercises to continue in 2017 based on the number of exercisable options at the end of 2016 and our current stock price.



During 2016, 2015 and 2014, we repurchased 13.7 million shares of our common stock for total consideration of \$700 million, 5.7 million shares of our common stock for total consideration of \$345 million, and 4.1 million shares of our common stock for total consideration of \$217 million, respectively. At the end of 2016, \$100 million remains available for repurchase under our current repurchase program. Although we may continue to repurchase shares, there is no assurance that we will repurchase up to the full amount of shares remaining available under the program. Refer to Note (14) of the notes to consolidated financial statements for further information regarding our share repurchase programs.

During 2016, we paid \$2 million of contingent consideration related to our acquisition of InterMedHx, LLC. In 2015 we paid an aggregate of \$11 million of contingent consideration related to our acquisitions of InterMedHx, LLC and Kaufman & Keen, LLC (doing business as PureWellness). In 2014, we paid \$11 million of contingent consideration related to our acquisition of PureWellness. We expect additional contingent consideration payments in 2017 related to our acquisitions of the Lee's Summit Tech Center and InterMedHx. Refer to Note (2) of the notes to consolidated financial statements for additional information regarding our contingent consideration arrangements.

In January 2014 we received \$48 million of cash grants from the Kansas Department of Commerce for project costs in connection with the construction of our Continuous Campus. Refer to Note (16) of the notes to consolidated financial statements for additional information.

Free Cash Flow (Non-GAAP)

	For the Years Ended		
	2016	2015	2014
<i>(In thousands)</i>			
Cash flows from operating activities (GAAP)	\$ 1,155,612	\$ 947,526	\$ 847,027
Capital purchases	(459,427)	(362,132)	(276,584)
Capitalized software development costs	(293,696)	(264,656)	(177,800)
Free cash flow (non-GAAP)	\$ 402,489	\$ 320,738	\$ 392,643

Free cash flow increased \$82 million in 2016, compared to 2015. This increase is due to an increase in cash flows from operations, partially offset by higher levels of both capital spending to support our growth initiatives and facilities requirements, and capitalized spending to support our ongoing software development initiatives. Free cash flow decreased \$72 million in 2015, compared to 2014. The decrease was due to higher levels of both capital spending to support our growth initiatives and facilities requirements, and capitalized spending to support our ongoing software development initiatives, partially offset by an increase in cash flows from operations.

Free cash flow is a non-GAAP financial measure used by management along with GAAP results to analyze our earnings quality and overall cash generation of the business. We define free cash flow as cash flows from operating activities reduced by capital purchases and capitalized software development costs. The table above sets forth a reconciliation of free cash flow to cash flows from operating activities, which we believe to be the GAAP financial measure most directly comparable to free cash flow. The presentation of free cash flow is not meant to be considered in isolation, nor as a substitute for, or superior to, GAAP results, and investors should be aware that non-GAAP measures have inherent limitations and should be read only in conjunction with our consolidated financial statements prepared in accordance with GAAP. Free cash flow may also be different from similar non-GAAP financial measures used by other companies and may not be comparable to similarly titled captions of other companies due to potential inconsistencies in the method of calculation. We believe free cash flow is important to enable investors to better understand and evaluate our ongoing operating results and allows for greater transparency in the review and understanding of our overall financial, operational and economic performance, because free cash flow takes into account certain capital expenditures necessary to operate our business.

## Contractual Obligations, Commitments and Off Balance Sheet Arrangements

The following table represents a summary of our contractual obligations and commercial commitments at the end of 2016, except short-term purchase order commitments arising in the ordinary course of business.

(In thousands)	Payments Due by Period							Total
	2017	2018	2019	2020	2021	2022 and thereafter		
Balance sheet obligations <sup>(a)</sup> :								
Long-term debt obligations	\$ —	\$ 2,500	\$ —	\$ 1,100	\$ 1,700	\$ 508,621	\$ 513,921	
Interest on long-term debt obligations	15,945	16,377	16,701	16,915	17,057	29,351	112,346	
Capital lease obligations	26,197	11,719	8,718	3,380	430	—	50,444	
Interest on capital lease obligations	1,229	690	292	55	6	—	2,272	
Other obligations:								
Operating lease obligations	30,089	26,898	22,041	16,085	11,147	8,722	114,982	
Purchase obligations	83,002	41,887	19,205	7,677	3,711	26,890	182,372	
<b>Total</b>	<b>\$ 156,462</b>	<b>\$ 100,071</b>	<b>\$ 66,957</b>	<b>\$ 45,212</b>	<b>\$ 34,051</b>	<b>\$ 573,584</b>	<b>\$ 976,337</b>	

(a) At the end of 2016, liabilities for unrecognized tax benefits were \$10 million.

We have no off balance sheet arrangements as defined in Regulation S-K. The effects of inflation on our business during 2016, 2015 and 2014 were not significant.

### Recent Accounting Pronouncements

Refer to Note (1) of the notes to consolidated financial statements for information regarding recently issued accounting pronouncements.

### Critical Accounting Policies

We believe that there are several accounting policies that are critical to understanding our historical and future performance, as these policies affect the reported amount of revenue and other significant areas involving our judgments and estimates. These significant accounting policies relate to revenue recognition, software development, potential impairments of goodwill, and income taxes. These accounting policies and our procedures related to these accounting policies are described in detail below and under specific areas within this MD&A. In addition, Note (1) to the consolidated financial statements expands upon discussion of our accounting policies.

#### Revenue Recognition

We recognize revenue within our multiple element arrangements, including software and software-related services, using the residual method. Key factors in our revenue recognition model are our assessments that implementation services are not essential to the functionality of our software, we can establish vendor specific objective evidence (VSOE) of fair value for any undelivered elements, and the length of time it takes for us to achieve the delivery and implementation milestones for our licensed software. If our business model were to change such that implementation services are deemed to be essential to the functionality of our software, the period of time over which our licensed software revenue would be recognized would lengthen. If VSOE of fair value cannot be established for both the implementation services and the support services, the entire arrangement fee is recognized ratably over the period during which the implementation services are expected to be performed or the support period, whichever is longer, beginning with delivery of the software, provided that all other revenue recognition criteria are met.

We also recognize revenue for certain projects in which services are deemed essential to the functionality of the software using the percentage of completion method. Our revenue recognition is dependent upon our ability to reliably estimate the direct labor hours to complete a project which generally can span several years. We utilize our historical project experience and detailed planning process as a basis for our future estimates to complete current projects. Significant delays in completion of the projects, unforeseen cost increases or penalties could result in significant reductions to revenue and margins on these contracts. The actual project results can be significantly different from the estimated results. When adjustments are identified

near or at the end of a project, the full impact of the change in estimate is recognized in that period. This can result in a material impact on our results for a single reporting period.

#### Software Development Costs

Costs incurred internally in creating computer software solutions and enhancements to those solutions are expensed until completion of a detailed program design, which is when we determine that technological feasibility has been established. Thereafter, all software development costs are capitalized until such time as the software solutions and enhancements are available for general release, and the capitalized costs subsequently are reported at the lower of amortized cost or net realizable value.

Net realizable value is computed as the estimated gross future revenues from each software solution less the amount of estimated future costs of completing and disposing of that product. Because the development of projected net future revenues related to our software solutions used in our net realizable value computation is based on estimates, a significant reduction in our future revenues could impact the recovery of our capitalized software development costs. If we missed our estimates of net future revenues by 10%, the amount of our capitalized software development costs would not be impaired.

Capitalized costs are amortized based on current and expected net future revenue for each software solution with minimum annual amortization equal to the straight-line amortization over the estimated economic life of the software solution. We are amortizing capitalized costs over five years. The five-year period over which capitalized software development costs are amortized is an estimate based upon our forecast of a reasonable useful life for the capitalized costs. Historically, use of our software programs by our clients has exceeded five years and is capable of being used a decade or more.

We expect that major software information systems companies, large information technology consulting service providers and systems integrators and others specializing in the health care industry may offer competitive products or services. The pace of change in the HCIT market is rapid and there are frequent new product introductions, product enhancements and evolving industry standards and requirements. As a result, the capitalized software solutions may become less valuable or obsolete and could be subject to impairment.

#### Goodwill

Goodwill is not amortized but is evaluated for impairment annually or whenever there is an impairment indicator. All goodwill is assigned to a reporting unit, where it is subject to an annual impairment assessment. We assess goodwill for impairment in the second quarter of each fiscal year and evaluate impairment indicators at each quarter end. We assessed our goodwill for impairment as of the second quarters of 2016 and 2015 and concluded that goodwill was not impaired. The assessments consisted of a qualitative analysis in accordance with Accounting Standards Update 2011-08, *Testing for Goodwill Impairment*. A key consideration in conducting those analyses was the significant growth in both the revenues and operating earnings of our reporting units since our last quantitative assessment. Our last quantitative assessment was performed in 2011, in which the fair values of each of our reporting units exceeded their carrying amounts by a significant margin. We used a discounted cash flow analysis utilizing Level 3 inputs, to determine the fair value of the reporting units in 2011. Goodwill amounted to \$844 million and \$799 million at the end of 2016 and 2015, respectively. If future anticipated cash flows from our reporting units that recognized goodwill do not materialize as expected, our goodwill could be impaired, which could result in significant charges to earnings.

#### Income Taxes

We make a number of assumptions and estimates in determining the appropriate amount of expense to record for income taxes. These assumptions and estimates consider the taxing jurisdictions in which we operate as well as current tax regulations. Accruals are established for estimates of tax effects for certain transactions, business structures and future projected profitability of our businesses based on our interpretation of existing facts and circumstances. If these assumptions and estimates were to change as a result of new evidence or changes in circumstances, the change in estimate could result in a material adjustment to the consolidated financial statements.

We have discussed the development and selection of these critical accounting estimates with the Audit Committee of our Board of Directors and the Audit Committee has reviewed our disclosure contained herein.

## **Item 7A. Quantitative and Qualitative Disclosures about Market Risk**

We are exposed to interest rate risk, primarily changes in LIBOR, related to our Series 2015-C Notes issued in January 2015. As of December 31, 2016, the interest rate for the current interest period on our Series 2015-C Notes was 1.90%, based on the three-month floating LIBOR rate. Based on our balance of \$75 million of Series 2015-C Notes as of December 31, 2016, an increase in interest rates of 1.0% would cause a corresponding increase in our annual interest expense of less than \$1 million.

We have global operations, and as a result, we are exposed to market risk related to foreign currency exchange rate fluctuations. Foreign currency fluctuations through December 31, 2016 have not had a material impact on our financial position or operating results. We currently do not use currency hedging instruments, though we actively monitor our exposure to foreign currency fluctuations and may use hedging transactions in the future if management deems it appropriate. We believe most of our global operations are naturally hedged for foreign currency risk as our foreign subsidiaries invoice their clients and satisfy their obligations primarily in their local currencies. There can be no guarantee that the impact of foreign currency fluctuations in the future will not have a material impact on our financial position or operating results.

## **Item 8. Financial Statements and Supplementary Data**

The Financial Statements and Notes required by this Item are submitted as a separate part of this report. See Note (19) to the Consolidated Financial Statements for supplementary financial information.

## **Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

N/A

## **Item 9A. Controls and Procedures**

### **a) Evaluation of Disclosure Controls and Procedures.**

The Company's Chief Executive Officer (CEO) and Chief Financial Officer (CFO) have evaluated the effectiveness of the Company's disclosure controls and procedures (as defined in the Exchange Act Rules 13a-15(e) and 15d-15 (e)) as of the end of the period covered by this Annual Report (the Evaluation Date). They have concluded that, as of the Evaluation Date and based on the evaluation of these controls and procedures required by paragraph (b) of Exchange Act Rule 13a-15 or 15d-15, these disclosure controls and procedures were effective to ensure that material information relating to the Company and its consolidated subsidiaries would be made known to them by others within those entities and would be disclosed on a timely basis. The CEO and CFO have concluded that the Company's disclosure controls and procedures are designed, and are effective, to give reasonable assurance that the information required to be disclosed by the Company in reports that it files under the Exchange Act is recorded, processed, summarized and reported within the time period specified in the rules and forms of the SEC. They have also concluded that the Company's disclosure controls and procedures are effective to ensure that information required to be disclosed in the reports that are filed or submitted under the Exchange Act are accumulated and communicated to the Company's management to allow timely decisions regarding required disclosure.

### **b) Management's Report on Internal Control over Financial Reporting.**

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended). The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2016. In making this assessment, the Company's management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in its Internal Control-Integrated Framework (2013). The Company's management has concluded that, as of December 31, 2016, the Company's internal control over financial reporting is effective based on these criteria. The Company's independent registered public accounting firm that audited the consolidated financial statements included in this annual report has issued an audit report on the effectiveness of the Company's internal control over financial reporting, which is included herein under "Report of Independent Registered Public Accounting Firm".

**c) Changes in Internal Control over Financial Reporting.**

On February 2, 2015, we acquired Siemens Health Services, as further described in Note (2) of the notes to consolidated financial statements. During 2016, we continued to integrate policies, processes, people, technology and operations for our combined operations. Except for any changes in internal controls related to the integration of the Siemens Health Services business into Cerner, there were no other changes in the Company's internal controls over financial reporting during the year ended December 31, 2016, that have materially affected, or are reasonably likely to materially affect, the Company's internal controls over financial reporting.

**d) Limitations on Controls.**

The Company's management, including its CEO and CFO, have concluded that our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance of achieving their objectives and are effective at that reasonable assurance level. However, the Company's management can provide no assurance that our disclosure controls and procedures or our internal control over financial reporting can prevent all errors and all fraud under all circumstances. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been or will be detected. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

**Item 9B. Other Information**

N/A



## **PART III**

### **Item 10. Directors, Executive Officers and Corporate Governance**

The information under "Information Concerning Directors," "Certain Transactions," "Section 16(a) Beneficial Ownership Reporting Compliance," "Corporate Governance: Code of Business Conduct and Ethics" and "Committees of the Board: Audit Committee" set forth in the Company's definitive proxy statement related to its 2017 annual meeting of stockholders (the "Proxy Statement"), which will be filed with the SEC not later than 120 days after the end of the Company's fiscal year pursuant to Regulation 14A, is incorporated herein by reference.

There have been no material changes to the procedures by which security holders may recommend nominees to our Board of Directors since our last disclosure thereof in our 2016 proxy statement.

The information required by this Item 10 regarding our Executive Officers is set forth under the caption "Executive Officers of the Registrant" in Part I above.

### **Item 11. Executive Compensation**

The information under "Committees of the Board: Compensation Committee," "Director Compensation," "2016 Director Compensation Table," "Compensation Committee Report," "Compensation Discussion and Analysis," "Summary Compensation Table," "2016 Grants of Plan-Based Awards," "Outstanding Equity Awards at 2016 Fiscal Year-End," "2016 Option Exercises and Stock Vested," "Employment Agreements & Potential Payments Under Termination or Change in Control" and "Compensation Committee Interlocks and Insider Participation" set forth in the Proxy Statement, which will be filed with the SEC not later than 120 days after the end of the Company's fiscal year pursuant to Regulation 14A, is incorporated herein by reference.

## Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The following table provides information about our common stock that may be issued under our equity compensation plans as of December 31, 2016:

(In thousands, except per share data)

Plan category	Securities to be issued upon exercise of outstanding options and rights <sup>(1)</sup>	Weighted average exercise price per share <sup>(2)</sup>	Securities available for future issuance <sup>(3)</sup>
Equity compensation plans approved by security holders <sup>(4)</sup>	23,955	\$ 40.33	17,448
Equity compensation plans not approved by security holders	—	—	—
<b>Total</b>	<b>23,955</b>		<b>17,448</b>

(1) Includes grants of stock options, time-based and performance-based restricted stock.

(2) Includes weighted-average exercise price of outstanding stock options only.

(3) Excludes securities to be issued upon exercise of outstanding options and rights.

(4) Includes the Stock Option Plan D, Stock Option Plan E, 2001 Long-Term Incentive Plan F, 2004 Long-Term Incentive Plan G and 2011 Omnibus Equity Incentive Plan. All new grants are made under the 2011 Omnibus Equity Incentive Plan, as the previous plans are no longer active.

The information under “Security Ownership of Certain Beneficial Owners and Management” set forth in the Proxy Statement, which will be filed with the SEC not later than 120 days after the end of the Company’s fiscal year pursuant to Regulation 14A, is incorporated herein by reference.

## Item 13. Certain Relationships and Related Transactions, and Director Independence

The information under “Certain Transactions” and “Meetings of the Board and Committees” set forth in the Proxy Statement, which will be filed with the SEC not later than 120 days after the end of the Company’s fiscal year pursuant to Regulation 14A, is incorporated herein by reference.

## Item 14. Principal Accountant Fees and Services

The information under “Relationship with Independent Registered Public Accounting Firm” set forth in the Proxy Statement, which will be filed with the SEC not later than 120 days after the end of the Company’s fiscal year pursuant to Regulation 14A, is incorporated herein by reference.

## PART IV

### Item 15. Exhibits and Financial Statement Schedules

#### a) Financial Statements and Exhibits

##### (1) Consolidated Financial Statements:

[Reports of Independent Registered Public Accounting Firm](#)

[Consolidated Balance Sheets](#) - As of December 31, 2016 and January 2, 2016

[Consolidated Statements of Operations](#) -Years Ended December 31, 2016, January 2, 2016 and January 3, 2015

[Consolidated Statements of Comprehensive Income](#) - Years Ended December 31, 2016, January 2, 2016 and January 3, 2015

[Consolidated Statements of Cash Flows](#) - Years Ended December 31, 2016, January 2, 2016 and January 3, 2015

[Consolidated Statements of Changes in Shareholders' Equity](#) - Years Ended December 31, 2016, January 2, 2016 and January 3, 2015

[Notes to Consolidated Financial Statements](#)

##### (2) See the Index to Exhibits immediately following the signature page of this Annual Report on Form 10-K.

### Item 16. Form 10-K Summary.

None.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

CERNER CORPORATION

Date: February 10, 2017

By: /s/ Neal L. Patterson  
Neal L. Patterson  
Chairman of the Board and  
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

<u>Signature and Title</u>	<u>Date</u>
<u>/s/ Neal L. Patterson</u> Neal L. Patterson, Chairman of the Board and Chief Executive Officer (Principal Executive Officer)	February 10, 2017
<u>/s/ Clifford W. Illig</u> Clifford W. Illig, Vice Chairman and Director	February 10, 2017
<u>/s/ Marc G. Naughton</u> Marc G. Naughton, Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 10, 2017
<u>/s/ Michael R. Battaglioli</u> Michael R. Battaglioli, Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 10, 2017
<u>/s/ Gerald E. Bisbee, Jr.</u> Gerald E. Bisbee, Jr., Ph.D., Director	February 10, 2017
<u>/s/ Denis A. Cortese, M.D.</u> Denis A. Cortese, M.D., Director	February 10, 2017
<u>/s/ John C. Danforth</u> John C. Danforth, Director	February 10, 2017
<u>/s/ Mitchell E. Daniels</u> Mitchell E. Daniels, Director	February 10, 2017
<u>/s/ Linda M. Dillman</u> Linda M. Dillman, Director	February 10, 2017
<u>/s/ William B. Neaves</u> William B. Neaves, Ph.D., Director	February 10, 2017
<u>/s/ William D. Zollars</u> William D. Zollars, Director	February 10, 2017

## INDEX TO EXHIBITS

Incorporated by Reference

Exhibit Number	Exhibit Description	Form	Exhibit(s)	Filing Date SEC File No./Film No.	Filed Herewith
3.1	Third Restated Certificate of Incorporation of Cerner Corporation	10-K	3(a)	2/11/2015	
3.2	Amended & Restated Bylaws as of February 25, 2016	8-K	3.2	2/29/2016	
4	Specimen stock certificate	10-K	4(a)	2/28/2007 000-15386/07658265	
10.1*	2006 Form of Indemnification Agreement for use between the Registrant and its Directors	10-K	10(a)	2/28/2007 000-15386/07658265	
10.2*	2010 Form of Indemnification Agreement for use between the Registrant and its Directors and Section 16 Officers	8-K	99.1	6/3/2010 000-15386/10875957	
10.3*	Amended & Restated Executive Employment Agreement of Neal L. Patterson dated January 1, 2008	10-K	10(c)	2/27/2008 000-15386/08646565	
10.4*	Amended Stock Option Plan D of Registrant dated December 8, 2000	10-K	10(f)	3/30/2001 000-15386/1586224	
10.5*	Amended Stock Option Plan E of Registrant dated December 8, 2000	10-K	10(g)	3/30/2001 000-15386/1586224	
10.6*	Cerner Corporation 2001 Long-Term Incentive Plan F	DEF 14A	Annex I	4/16/2001 000-15386/1603080	
10.7*	Cerner Corporation 2001 Long-Term Incentive Plan F Nonqualified Stock Option Agreement	10-K	10(v)	3/17/2005 000-15386/05688830	
10.8*	Cerner Corporation 2001 Long-Term Incentive Plan F Nonqualified Stock Option Grant Certificate	10-Q	10(a)	11/10/2005 000-15386/051193974	
10.9*	Cerner Corporation 2001 Long-Term Incentive Plan F Director Restricted Stock Agreement	10-K	10(x)	3/17/2005 000-15386/05688830	
10.10*	Cerner Corporation 2001 Long-Term Incentive Plan F Nonqualified Stock Option Director Agreement	10-K	10(w)	3/17/2005 000-15386/05688830	
10.11*	Cerner Corporation 2001 Long-Term Incentive Plan F Performance-Based Restricted Stock Agreement for Section 16 Officers	8-K	99.1	6/4/2010 000-15386/10879084	
10.12*	Cerner Corporation 2004 Long-Term Incentive Plan G (as amended on December 3, 2007)	10-K	10(g)	2/27/2008 000-15386/08646565	
10.13*	Cerner Corporation 2004 Long-Term Incentive Plan G Nonqualified Stock Option Grant Certificate	10-K	10(q)	2/27/2008 000-15386/08646565	
10.14*	Cerner Corporation 2011 Omnibus Equity Incentive Plan (As Amended and Restated May 22, 2015)	8-K	10.2	5/27/2015	
10.15*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Director Restricted Stock Agreement	10-Q	10.1	7/27/2012	
10.16*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Performance Based Restricted Stock Agreement	10-K	10(u)	2/8/2013	
10.17*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Performance Based Restricted Stock Agreement	10-Q	10.3	5/6/2016	



10.18*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Time Based Restricted Stock Agreement	10-Q	10.4	5/6/2016
10.19*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Director Restricted Stock Agreement	10-Q	10.2	5/6/2016
10.20*	Cerner Corporation 2011 Omnibus Equity Incentive Plan-Non-Qualified Stock Option Grant Certificate	10-K	10(v)	2/8/2013
10.21*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Non-Qualified Stock Option Grant Certificate	10-Q	10.2	8/3/2016
10.22*	Cerner Corporation 2001 Associate Stock Purchase Plan as Amended and Restated March 1, 2010 and May 27, 2011	S-8	4.6	5/27/2011 333-174568/11877216
10.23*	Cerner Corporation Performance-Based Compensation Plan (as Amended and Restated May 27, 2016)	8-K/A	10.1	6/1/2016
10.24*	Form of 2016 Executive Performance Agreement-Covered Executives pursuant to the Cerner Corporation Performance-Based Compensation Plan	10-Q	10.1	5/6/2016
10.25*	Cerner Corporation Executive Deferred Compensation Plan as Amended & Restated dated January 1, 2008	10-K	10(k)	2/27/2008 000-15386/08646565
10.26*	Cerner Corporation 2005 Enhanced Severance Pay Plan as Amended & Restated Effective January 4, 2015	10-K	10.3	2/11/2015
10.27*	Exhibit A to the Enhanced Severance Pay Plan - Severance Matrix Effective August 25, 2016	10-Q	10.1	11/2/2016
10.28*	Second Amended and Restated Aircraft Time Sharing Agreement between Cerner Corporation and Neal L. Patterson dated July 24, 2013	10-Q	10.1	7/26/2013
10.29*	Amendment No. 1 to Second Amended and Restated Aircraft Time Sharing Agreement between Cerner Corporation and Neal Patterson dated October 28, 2015	10-K	10.25	2/17/2016
10.30	Interparty Agreement, dated January 19, 2010, among Kansas Unified Development, LLC, OnGoal, LLC and Cerner Corporation	8-K	99.1	1/22/2010 000-153866/10543089
10.31	Real Estate Purchase Agreement between Cerner Property Development, Inc. and Trails Property II, Inc. dated July 30, 2013	8-K	10.1	8/1/2013
10.32	First Amendment to Real Estate Purchase Agreement between Cerner Property Development, Inc. and Trails Property II, Inc. dated December 23, 2013	10-K	10.28	2/11/2015
10.33	Second Amendment to Real Estate Purchase Agreement between Cerner Property Development, Inc. and Trails Property II, Inc. dated October 16, 2014	10-K	10.29	2/11/2015
10.34	Master Sale and Purchase Agreement between Siemens AG and Cerner Corporation dated August 5, 2014	10-Q	2.1	10/24/2014
10.35	Amendment Agreement to the Master Sale and Purchase Agreement between Siemens AG and Cerner Corporation dated February 2, 2015	8-K	10.1	2/2/2015
10.36	Master Note Purchase Agreement between Cerner Corporation and the Purchasers listed in Schedule A thereto dated December 4, 2014	8-K	10.1	12/5/2014

10.37	Third Amended and Restated Credit Agreement, dated October 30, 2015, among Cerner Corporation and U.S. Bank National Association, Bank of America, N.A. and Commerce Bank, N.A.	8-K	10.1	11/3/2015	
21	Subsidiaries of Registrant				X
23	Consent of Independent Registered Public Accounting Firm				X
31.1	Certification of Neal L. Patterson pursuant to Section 302 of Sarbanes-Oxley Act of 2002				X
31.2	Certification of Marc G. Naughton pursuant to Section 302 of Sarbanes-Oxley Act of 2002				X
32.1	Certification of Neal L. Patterson pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of Sarbanes-Oxley Act of 2002				X
32.2	Certification of Marc G. Naughton pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of Sarbanes-Oxley Act of 2002				X
101.INS	XBRL Instance Document				X
101.SCH	XBRL Taxonomy Extension Schema Document				X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document				X
101.LAB	XBRL Taxonomy Extension Labels Linkbase Document				X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document				X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document				X

\* Indicates a management contract or compensatory plan or arrangement required to be identified by Part IV, Item 15(a)(3).

PLEASE NOTE: Pursuant to the rules and regulations of the Securities and Exchange Commission, we have filed or incorporated by reference the agreements referenced above as exhibits to this annual report on Form 10-K. The agreements have been filed to provide investors with information regarding their respective terms. The agreements are not intended to provide any other factual information about the Company or its business or operations. In particular, the assertions embodied in any representations, warranties and covenants contained in the agreements may be subject to qualifications with respect to knowledge and materiality different from those applicable to investors and may be qualified by information in confidential disclosure schedules not included with the exhibits. These disclosure schedules may contain information that modifies, qualifies and creates exceptions to the representations, warranties and covenants set forth in the agreements. Moreover, certain representations, warranties and covenants in the agreements may have been used for the purpose of allocating risk between the parties, rather than establishing matters as facts. In addition, information concerning the subject matter of the representations, warranties and covenants may have changed after the date of the respective agreement, which subsequent information may or may not be fully reflected in the Company's public disclosures. Accordingly, investors should not rely on the representations, warranties and covenants in the agreements as characterizations of the actual state of facts about the Company or its business or operations on the date hereof.

## **Report of Independent Registered Public Accounting Firm**

The Board of Directors and Shareholders  
Cerner Corporation:

We have audited Cerner Corporation and subsidiaries' internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Cerner Corporation and subsidiaries' management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on Cerner Corporation and subsidiaries' internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Cerner Corporation and subsidiaries maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Cerner Corporation and subsidiaries as of December 31, 2016 and January 2, 2016, and the related consolidated statements of operations, comprehensive income, cash flows, and changes in shareholders' equity for each of the years in the three-year period ended December 31, 2016, and our report dated February 10, 2017 expressed an unqualified opinion on those consolidated financial statements.

/s/KPMG LLP  
Kansas City, Missouri  
February 10, 2017

**Report of Independent Registered Public Accounting Firm**

The Board of Directors and Shareholders  
Cerner Corporation:

We have audited the accompanying consolidated balance sheets of Cerner Corporation and subsidiaries as of December 31, 2016 and January 2, 2016, and the related consolidated statements of operations, comprehensive income, cash flows, and changes in shareholders' equity for each of the years in the three-year period ended December 31, 2016. These consolidated financial statements are the responsibility of Cerner Corporation and subsidiaries' management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Cerner Corporation and subsidiaries as of December 31, 2016 and January 2, 2016, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Cerner Corporation and subsidiaries' internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated February 10, 2017 expressed an unqualified opinion on the effectiveness of Cerner Corporation and subsidiaries' internal control over financial reporting.

/s/KPMG LLP  
Kansas City, Missouri  
February 10, 2017

**CERNER CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED BALANCE SHEETS**

As of December 31, 2016 and January 2, 2016

(In thousands, except share data)

	2016	2015
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 170,861	\$ 402,122
Short-term investments	185,588	111,059
Receivables, net	944,943	1,034,084
Inventory	14,740	15,788
Prepaid expenses and other	303,229	264,780
Total current assets	1,619,361	1,827,833
Property and equipment, net	1,552,524	1,309,214
Software development costs, net	719,209	562,559
Goodwill	844,200	799,182
Intangible assets, net	566,047	688,058
Long-term investments	109,374	173,073
Other assets	219,248	202,065
Total assets	<u>\$ 5,629,963</u>	<u>\$ 5,561,984</u>
<b>Liabilities and Shareholders' Equity</b>		
Current liabilities:		
Accounts payable	\$ 238,134	\$ 215,510
Current installments of long-term debt and capital lease obligations	26,197	41,797
Deferred revenue	311,839	278,443
Accrued payroll and tax withholdings	211,554	184,225
Other accrued expenses	57,677	57,891
Total current liabilities	845,401	777,866
Long-term debt and capital lease obligations	537,552	563,353
Deferred income taxes and other liabilities	306,263	324,516
Deferred revenue	12,800	25,865
Total liabilities	1,702,016	1,691,600
Shareholders' Equity:		
Common stock, \$.01 par value, 500,000,000 shares authorized, 353,731,237 shares issued at December 31, 2016 and 350,323,367 shares issued at January 2, 2016	3,537	3,503
Additional paid-in capital	1,230,913	1,075,782
Retained earnings	4,094,327	3,457,843
Treasury stock, 24,089,737 shares at December 31, 2016 and 10,364,691 shares at January 2, 2016	(1,290,665)	(590,390)
Accumulated other comprehensive loss, net	(110,165)	(76,354)
Total shareholders' equity	3,927,947	3,870,384
Total liabilities and shareholders' equity	<u>\$ 5,629,963</u>	<u>\$ 5,561,984</u>

See notes to consolidated financial statements.



**CERNER CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**

For the years ended December 31, 2016, January 2, 2016 and January 3, 2015

	For the Years Ended		
	2016	2015	2014
<i>(In thousands, except per share data)</i>			
<b>Revenues:</b>			
System sales	\$ 1,265,962	\$ 1,281,890	\$ 945,858
Support, maintenance and services	3,441,966	3,070,575	2,366,959
Reimbursed travel	88,545	72,802	89,886
<b>Total revenues</b>	<b>4,796,473</b>	<b>4,425,267</b>	<b>3,402,703</b>
<b>Costs and expenses:</b>			
Cost of system sales	412,066	430,335	314,089
Cost of support, maintenance and services	278,505	247,644	200,402
Cost of reimbursed travel	88,545	72,802	89,886
Sales and client service	2,071,926	1,838,600	1,395,568
Software development (Includes amortization of \$140,232, \$119,195 and \$103,447, respectively)	551,418	539,799	392,805
General and administrative	392,454	423,424	233,393
Amortization of acquisition-related intangibles	90,546	91,527	13,476
<b>Total costs and expenses</b>	<b>3,885,460</b>	<b>3,644,131</b>	<b>2,639,619</b>
<b>Operating earnings</b>	<b>911,013</b>	<b>781,136</b>	<b>763,084</b>
Other income, net	7,421	244	11,090
<b>Earnings before income taxes</b>	<b>918,434</b>	<b>781,380</b>	<b>774,174</b>
Income taxes	(281,950)	(242,018)	(248,741)
<b>Net earnings</b>	<b>\$ 636,484</b>	<b>\$ 539,362</b>	<b>\$ 525,433</b>
Basic earnings per share	\$ 1.88	\$ 1.57	\$ 1.54
Diluted earnings per share	\$ 1.85	\$ 1.54	\$ 1.50
Basic weighted average shares outstanding	337,740	343,178	342,150
Diluted weighted average shares outstanding	343,653	350,908	350,386

**See notes to consolidated financial statements.**

**CERNER CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME**

For the years ended December 31, 2016, January 2, 2016 and January 3, 2015

	<b>For the Years Ended</b>		
	<b>2016</b>	<b>2015</b>	<b>2014</b>
<i>(In thousands)</i>			
Net earnings	\$ 636,484	\$ 539,362	\$ 525,433
Foreign currency translation adjustment and other (net of taxes (benefit) of \$2,092, \$(3,201) and \$(1,111), respectively)	(33,871)	(32,171)	(30,145)
Change in net unrealized holding gain (loss) on available-for-sale investments (net of taxes (benefits) of \$37, \$(46) and \$(331), respectively)	60	(87)	(522)
Comprehensive income	<u>\$ 602,673</u>	<u>\$ 507,104</u>	<u>\$ 494,766</u>

See notes to consolidated financial statements.

**CERNER CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

For the years ended December 31, 2016, January 2, 2016 and January 3, 2015

<i>(In thousands)</i>	For the Years Ended		
	2016	2015	2014
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>			
Net earnings	\$ 636,484	\$ 539,362	\$ 525,433
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Depreciation and amortization	504,236	452,225	302,353
Share-based compensation expense	74,536	70,121	59,292
Provision for deferred income taxes	(11,517)	65,245	106,905
Changes in assets and liabilities (net of businesses acquired):			
Receivables, net	78,258	(160,124)	(74,786)
Inventory	(666)	12,951	8,117
Prepaid expenses and other	(66,658)	(55,363)	(14,625)
Accounts payable	(13,197)	7	2,974
Accrued income taxes	12,170	(690)	(21,764)
Deferred revenue	1,555	9,450	4,346
Other accrued liabilities	(59,589)	14,342	(51,218)
Net cash provided by operating activities	1,155,612	947,526	847,027
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>			
Capital purchases	(459,427)	(362,132)	(276,584)
Capitalized software development costs	(293,696)	(264,656)	(177,800)
Purchases of investments	(482,078)	(487,981)	(1,214,036)
Sales and maturities of investments	463,899	1,208,387	1,404,846
Purchase of other intangibles	(18,472)	(21,432)	(13,517)
Acquisition of businesses	—	(1,478,129)	(7,476)
Net cash used in investing activities	(789,774)	(1,405,943)	(284,567)
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>			
Long-term debt issuance	—	500,000	—
Repayment of long-term debt and capital lease obligations	—	(14,325)	(14,930)
Proceeds from excess tax benefits from share-based compensation	51,903	55,959	39,532
Proceeds from exercise of options	63,794	51,475	31,879
Treasury stock purchases	(700,275)	(345,057)	(217,082)
Contingent consideration payments for acquisition of businesses	(2,074)	(11,012)	(10,617)
Cash grants	—	—	48,000
Other	—	(791)	2,894
Net cash provided by (used in) financing activities	(586,652)	236,249	(120,324)
Effect of exchange rate changes on cash and cash equivalents	(10,447)	(10,913)	(9,310)
Net increase (decrease) in cash and cash equivalents	(231,261)	(233,081)	432,826
Cash and cash equivalents at beginning of period	402,122	635,203	202,377
Cash and cash equivalents at end of period	\$ 170,861	\$ 402,122	\$ 635,203
Summary of acquisition transactions:			
Fair value of tangible assets acquired	\$ (10,200)	\$ 532,625	\$ 184
Fair value of intangible assets acquired	(25,000)	637,980	3,800
Fair value of goodwill	46,940	485,387	16,785
Less: Fair value of liabilities assumed	(11,740)	(176,863)	(1,693)
Less: Fair value of contingent liability payable	—	(1,000)	(11,600)
Net cash used	\$ —	\$ 1,478,129	\$ 7,476

See notes to consolidated financial statements.

**CERNER CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY**

For the years ended December 31, 2016, January 2, 2016 and January 3, 2015

	Common Stock		Additional	Retained	Treasury	Accumulated
	Shares	Amount	Paid-in Capital	Earnings	Stock	Other
	Comprehensive					
(In thousands)	Income (Loss)					
<b>Balance at December 28, 2013</b>	<b>344,338</b>	<b>\$ 3,443</b>	<b>\$ 812,853</b>	<b>\$ 2,393,048</b>	<b>\$ (28,251)</b>	<b>\$ (13,429)</b>
Exercise of stock options (including net-settled option exercises)	2,648	27	21,613	—	—	—
Employee share-based compensation expense	—	—	59,292	—	—	—
Employee share-based compensation net excess tax benefit	—	—	39,688	—	—	—
Other comprehensive income (loss)	—	—	—	—	—	(30,667)
Treasury stock purchases	—	—	—	—	(217,082)	—
Net earnings	—	—	—	525,433	—	—
<b>Balance at January 3, 2015</b>	<b>346,986</b>	<b>3,470</b>	<b>933,446</b>	<b>2,918,481</b>	<b>(245,333)</b>	<b>(44,096)</b>
Exercise of stock options (including net-settled option exercises)	3,337	33	15,647	—	—	—
Employee share-based compensation expense	—	—	70,121	—	—	—
Employee share-based compensation net excess tax benefit	—	—	56,568	—	—	—
Other comprehensive income (loss)	—	—	—	—	—	(32,258)
Treasury stock purchases	—	—	—	—	(345,057)	—
Net earnings	—	—	—	539,362	—	—
<b>Balance at January 2, 2016</b>	<b>350,323</b>	<b>3,503</b>	<b>1,075,782</b>	<b>3,457,843</b>	<b>(590,390)</b>	<b>(76,354)</b>
Exercise of stock options (including net-settled option exercises)	3,408	34	27,747	—	—	—
Employee share-based compensation expense	—	—	74,536	—	—	—
Employee share-based compensation net excess tax benefit	—	—	52,848	—	—	—
Other comprehensive income (loss)	—	—	—	—	—	(33,811)
Treasury stock purchases	—	—	—	—	(700,275)	—
Net earnings	—	—	—	636,484	—	—
<b>Balance at December 31, 2016</b>	<b>353,731</b>	<b>\$ 3,537</b>	<b>\$ 1,230,913</b>	<b>\$ 4,094,327</b>	<b>\$ (1,290,665)</b>	<b>\$ (110,165)</b>

See notes to consolidated financial statements.

**CERNER CORPORATION AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(1) Basis of Presentation, Nature of Operations and Summary of Significant Accounting Policies**

***Basis of Presentation***

The consolidated financial statements include all the accounts of Cerner Corporation ("Cerner," the "Company," "we," "us" or "our") and its subsidiaries. All significant intercompany transactions have been eliminated in consolidation.

The consolidated financial statements were prepared using accounting principles generally accepted in the United States of America ("GAAP"). These principles require us to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities and the reported amounts of revenues and expenses. Actual results could differ from those estimates.

Our fiscal year ends on the Saturday closest to December 31. Fiscal years 2016 and 2015 each consisted of 52 weeks and ended on December 31, 2016 and January 2, 2016, respectively. Fiscal year 2014 consisted of 53 weeks and ended on January 3, 2015. All references to years in these notes to consolidated financial statements represent fiscal years unless otherwise noted.

***Nature of Operations***

We design, develop, market, install, host and support health care information technology, health care devices, hardware and content solutions for health care organizations and consumers. We also provide a wide range of value-added services, including implementation and training, remote hosting, operational management services, revenue cycle services, support and maintenance, health care data analysis, clinical process optimization, transaction processing, employer health centers, employee wellness programs and third party administrator services for employer-based health plans.

***Factors Impacting Comparability of Financial Statements***

**Siemens Health Services**

On February 2, 2015, we acquired Siemens Health Services, as further described in Note (2). The addition of the Siemens Health Services business impacts the comparability of our consolidated financial statements as of and for the year ended January 2, 2016, in relation to the comparative periods presented herein.

**52/53 Week Periods**

Our 2014 fiscal year included 53 weeks, as discussed above. This additional week impacts the comparability of our consolidated financial statements as of and for the year ended January 3, 2015, in relation to the comparative periods presented herein.

***Voluntary Separation Plans***

In the first quarter of 2015, the Company adopted a voluntary separation plan ("2015 VSP") for eligible associates. Generally, the 2015 VSP was available to U.S. associates who met a minimum level of combined age and tenure, excluding, among others, our executive officers. Associates who elected to participate in the 2015 VSP received financial benefits commensurate with their tenure and position, along with vacation payout and medical benefits. The irrevocable acceptance period for most associates electing to participate in the 2015 VSP ended in May 2015. During 2015, we recorded pre-tax charges for the 2015 VSP of \$46 million, which are included in general and administrative expense in our consolidated statements of operations. At the end of 2015, this program was complete.

In the fourth quarter of 2016, the Company adopted a new voluntary separation plan ("2016 VSP") for eligible associates. This 2016 VSP was available to U.S. associates who met a minimum level of combined age and tenure. Associates who elected to participate in the 2016 VSP received financial benefits commensurate with their tenure and position, along with vacation payout and medical benefits. The irrevocable acceptance period for associates electing to participate in the 2016 VSP ended in December 2016. During 2016, we recorded pre-tax charges for the 2016 VSP of \$36 million, which are included

in general and administrative expense in our consolidated statements of operations. At the end of 2016, this program was complete.

### Supplemental Disclosures of Cash Flow Information

(In thousands)	For the Years Ended		
	2016	2015	2014
Cash paid during the year for:			
Interest (including amounts capitalized of \$14,852, \$7,106, and \$1,583, respectively)	\$ 18,484	\$ 13,164	\$ 5,682
Income taxes, net of refunds	254,539	118,409	144,323

### Summary of Significant Accounting Policies

**(a) Revenue Recognition** - We recognize software related revenue in accordance with the provisions of ASC 985-605, *Software – Revenue Recognition* and non-software related revenue in accordance with ASC 605, *Revenue Recognition*. In general, revenue is recognized when all of the following criteria have been met:

- Persuasive evidence of an arrangement exists;
- Delivery has occurred or services have been rendered;
- Our fee is fixed or determinable; and
- Collection of the revenue is reasonably assured.

The following are our major components of revenue:

- System sales – includes the licensing of computer software, software as a service, deployment period upgrades, installation, content subscriptions, transaction processing and the sale of computer hardware and sublicensed software;
- Support, maintenance and service – includes software support and hardware maintenance, remote hosting and managed services, training, consulting and implementation services; and
- Reimbursed travel – includes reimbursable out-of-pocket expenses (primarily travel) incurred in connection with our client service activities.

We provide for several models of procurement of our information systems and related services. The predominant model involves multiple deliverables and includes a perpetual software license agreement, project-related implementation and consulting services, software support and either hosting services or computer hardware and sublicensed software, which requires that we allocate revenue to each of these elements.

#### Allocation of Revenue to Multiple Element Arrangements

For multiple element arrangements that contain software and non-software elements, we allocate revenue to software and software-related elements as a group and any non-software element separately. After the arrangement consideration has been allocated to the non-software elements, revenue is recognized when the basic revenue recognition criteria are met for each element. For the group of software and software-related elements, revenue is recognized under the guidance applicable to software transactions.

Since we do not have vendor specific objective evidence (VSOE) of fair value on software licenses within our multiple element arrangements, we recognize revenue on our software and software-related elements using the residual method. Under the residual method, license revenue is recognized in a multiple-element arrangement when vendor-specific objective evidence of fair value exists for all of the undelivered elements in the arrangement, when software is delivered, installed and all other conditions to revenue recognition are met. We allocate revenue to each undelivered element in a multiple-element arrangement based on the element's respective fair value, with the fair value determined by the price charged when that element is sold separately. Specifically, we determine the fair value of the software support, hardware maintenance, sublicensed software support, remote hosting, subscriptions and software as a service portions of the arrangement based on the substantive renewal price for these services charged to clients; professional services (including training and consulting) portion of the arrangement, based on hourly rates which we charge for these services when sold apart from a software license; and sublicensed software based on its price when sold separately from the software. The residual amount of the fee



after allocating revenue to the fair value of the undelivered elements is attributed to the licenses for software solutions. If evidence of the fair value cannot be established for the undelivered elements of a license agreement using VSOE, the entire amount of revenue under the arrangement is deferred until these elements have been delivered or VSOE of fair value can be established.

We also enter into arrangements that include multiple non-software deliverables. For each element in a multiple element arrangement that does not contain software-related elements to be accounted for as a separate unit of accounting, the following must be met: the delivered products or services have value to the client on a stand-alone basis; and for an arrangement that includes a general right of return relative to the delivered products or services, delivery or performance of the undelivered product or service is considered probable and is substantially controlled by the Company. We allocate the arrangement consideration to each element based on the selling price hierarchy of VSOE of fair value, if it exists, or third-party evidence (TPE) of selling price. If neither VSOE nor TPE are available, we use estimated selling price. After the arrangement consideration has been allocated to the elements, we account for each respective element in the arrangement as described below.

For certain arrangements, revenue for software, implementation services and, in certain cases, support services for which VSOE of fair value cannot be established are accounted for as a single unit of accounting. If VSOE of fair value cannot be established for both the implementation services and the support services, the entire arrangement fee is recognized ratably over the period during which the implementation services are expected to be performed or the support period, whichever is longer, beginning with delivery of the software, provided that all other revenue recognition criteria are met. The revenue recognized from single units of accounting are typically allocated and classified as system sales and support, maintenance and services. In cases where VSOE cannot be established, revenue is classified based on contract value. In instances where VSOE for undelivered elements is established subsequent to the outset of an arrangement, a cumulative adjustment to revenue is recognized in the period VSOE for the undelivered elements is established.

#### *Revenue Recognition Policies for Each Element*

We provide implementation and consulting services. These services vary depending on the scope and complexity of the engagement. Examples of such services may include database consulting, system configuration, project management, testing assistance, network consulting, post conversion review and application management services. Except for limited arrangements where our software requires significant modifications or customization, implementation and consulting services generally are not deemed to be essential to the functionality of the software and, thus, do not impact the timing of the software license recognition. However, if software license fees are tied to implementation milestones, then the portion of the software license fee tied to implementation milestones is deferred until the related milestone is accomplished and related fees become due and payable and non-forfeitable. Implementation fees, for which VSOE of fair value can be determined, are recognized over the service period, which may extend from nine months to several years for multi-phased projects.

Remote hosting and managed services are marketed under long-term arrangements generally over periods of five to 10 years. These services are typically provided to clients that have acquired a perpetual license for licensed software and have contracted with us to host the software in our data center. Under these arrangements, the client generally has the contractual right to take possession of the licensed software at any time during the hosting period without significant penalty and it is feasible for the client to either run the software on its own equipment or contract with another party unrelated to us to host the software. Additionally, these services are not deemed to be essential to the functionality of the licensed software or other elements of the arrangement. As such, in situations for which we have VSOE of fair value for the undelivered items, we allocate the residual portion of the arrangement fee to the software and recognize it once the client has the ability to take possession of the software. The remaining fees in these arrangements, as well as the fees for arrangements where the client does not have the contractual right or the ability to take possession of the software at any time or for situations in which VSOE of fair value does not exist for undelivered elements, are generally recognized ratably over the hosting service period.

We also offer our solutions on a software as a service model, providing time-based licenses for our software solutions available within an environment that we manage from our data centers. The data centers provide system and administrative support as well as processing services. Revenue on these services is combined and recognized on a monthly basis over the term of the contract. We capitalize related pre-contract direct set-up costs consisting of third party costs and direct software installation and implementation costs associated with the initial set up of a software as a service client. These costs are amortized over the term of the arrangement.

Software support fees are marketed under annual and multi-year arrangements and are recognized as revenue ratably over the contractual support term. Hardware and sublicensed software maintenance revenues are recognized ratably over the contractual maintenance term.

Subscription and content fees are generally marketed under annual and multi-year agreements and are recognized ratably over the contractual terms.

Hardware and sublicensed software sales are generally recognized when title and risk of loss have transferred to the client.

The sale of equipment under sales-type leases is recorded as system sales revenue at the inception of the lease. Sales-type leases also produce financing income, which is included in system sales revenue and is recognized at consistent rates of return over the lease term.

Where we have contractually agreed to develop new or customized software code for a client, we utilize percentage-of-completion accounting, labor-hours method.

Revenue generally is recognized net of any taxes collected from clients and subsequently remitted to governmental authorities.

### *Payment Arrangements*

Our payment arrangements with clients typically include an initial payment due upon contract signing and date-based licensed software payment terms and payments based upon delivery for services, hardware and sublicensed software. Revenue recognition on support payments received in advance of the services being performed are deferred and classified as either current or long term deferred revenue depending on whether the revenue will be earned within one year.

We have periodically provided long-term financing options to creditworthy clients through third party financing institutions and have directly provided extended payment terms to clients from contract date. These extended payment term arrangements typically provide for date-based payments over periods ranging from 12 months up to seven years. As a significant portion of the fee is due beyond one year, we have analyzed our history with these types of arrangements and have concluded that we have a standard business practice of using extended payment term arrangements and a long history of successfully collecting under the original payment terms for arrangements with similar clients, product offerings, and economics without granting concessions. Accordingly, in these situations, we consider the fee to be fixed and determinable in these extended payment term arrangements and, thus, the timing of revenue is not impacted by the existence of extended payments.

Some of these payment streams have been assigned on a non-recourse basis to third party financing institutions. We account for the assignment of these receivables as sales of financial assets. Provided all revenue recognition criteria have been met, we recognize revenue for these arrangements under our normal revenue recognition criteria, and if appropriate, net of any payment discounts from financing transactions.

**(b) Cash Equivalents** - Cash equivalents consist of short-term marketable securities with original maturities less than 90 days.

**(c) Investments** – Our short-term investments are primarily invested in time deposits, commercial paper, government and corporate bonds, with maturities of less than one year. Our long-term investments are primarily invested in government and corporate bonds with maturities of less than two years. All of our investments, other than a small portion accounted for under the cost and equity methods, are classified as available-for-sale.

Available-for-sale securities are recorded at fair value with the unrealized gains and losses reflected in accumulated other comprehensive loss until realized. Realized gains and losses from the sale of available-for-sale securities, if any, are determined on a specific identification basis.

We regularly review investment securities for impairment based on both quantitative and qualitative criteria that include the extent to which cost exceeds fair value, the duration of any market decline, and the financial health of and specific prospects for the issuer. Unrealized losses that are other than temporary are recognized in earnings.

Premiums are amortized and discounts are accreted over the life of the security as adjustments to interest income for our investments. Interest income is recognized when earned.

Refer to Note (3) and Note (4) for further description of these assets and their fair value.

**(d) Concentrations** - The majority of our cash and cash equivalents are held at three major financial institutions. The majority of our cash equivalents consist of money market funds. Deposits held with banks may exceed the amount of insurance provided on such deposits. Generally these deposits may be redeemed upon demand.

As of the end of 2016, we had a significant concentration of receivables owed to us by Fujitsu Services Limited, which are currently in dispute. Refer to Note (5) for additional information.

**(e) Inventory** - Inventory consists primarily of computer hardware and sublicensed software, held for resale. Inventory is recorded at the lower of cost (first-in, first-out) or net realizable value.

**(f) Property and Equipment** - We account for property and equipment in accordance with ASC 360, *Property, Plant, and Equipment*. Property, equipment and leasehold improvements are stated at cost. Depreciation of property and equipment is computed using the straight-line method over periods of one to 50 years. Amortization of leasehold improvements is computed using a straight-line method over the shorter of the lease terms or the useful lives, which range from periods of one to 15 years.

**(g) Software Development Costs** - Software development costs are accounted for in accordance with ASC 985-20, *Costs of Software to be Sold, Leased or Marketed*. Software development costs incurred internally in creating computer software products are expensed until technological feasibility has been established upon completion of a detailed program design. Thereafter, all software development costs incurred through the software's general release date are capitalized and subsequently reported at the lower of amortized cost or net realizable value. Capitalized costs are amortized based on current and expected future revenue for each software solution with minimum annual amortization equal to the straight-line amortization over the estimated economic life of the solution. We amortize capitalized software development costs over five years.

**(h) Goodwill** - We account for goodwill under the provisions of ASC 350, *Intangibles – Goodwill and Other*. Goodwill is not amortized but is evaluated for impairment annually or whenever there is an impairment indicator. All goodwill is assigned to a reporting unit, where it is subject to an annual impairment assessment. Based on these evaluations, there was no impairment of goodwill in 2016, 2015 or 2014. Refer to Note (7) for more information on goodwill and other intangible assets.

**(i) Intangible Assets** - We account for intangible assets in accordance with ASC 350, *Intangibles – Goodwill and Other*. Amortization of finite-lived intangible assets is computed using the straight-line method over periods of three to 30 years.

**(j) Income Taxes** - Income taxes are accounted for in accordance with ASC 740, *Income Taxes*. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Refer to Note (12) for additional information regarding income taxes.

**(k) Earnings per Common Share** - Basic earnings per share (EPS) excludes dilution and is computed, in accordance with ASC 260, *Earnings Per Share*, by dividing income available to common shareholders by the weighted-average number of common shares outstanding for the period. Diluted EPS reflects the potential dilution that could occur if securities or other contracts to issue stock were exercised or converted into common stock or resulted in the issuance of common stock that then shared in our earnings. Refer to Note (13) for additional details of our earnings per share computations.

**(l) Accounting for Share-based Payments** - We recognize all share-based payments to associates, directors and consultants, including grants of stock options, restricted stock and performance shares, in the financial statements as compensation cost based on their fair value on the date of grant, in accordance with ASC 718, *Compensation-Stock Compensation*. This compensation cost is recognized over the vesting period on a straight-line basis for the fair value of awards that actually vest. Refer to Note (14) for a detailed discussion of share-based payments.

**(m) Voluntary Separation Benefits** - We account for voluntary separation benefits in accordance with the provisions of ASC Topic 712, *Compensation-Nonretirement Postemployment Benefits*. Voluntary separation benefits are recorded to expense when the associates irrevocably accept the offer and the amount of the termination liability is reasonably estimable.

**(n) Foreign Currency** - In accordance with ASC 830, *Foreign Currency Matters*, assets and liabilities of non-U.S. subsidiaries whose functional currency is the local currency are translated into U.S. dollars at exchange rates prevailing at the balance sheet date. Revenues and expenses are translated at average exchange rates during the year. The net exchange differences resulting from these translations are reported in accumulated other comprehensive loss. Gains and losses resulting from foreign currency transactions are included in the consolidated statements of operations.

**(o) Collaborative Arrangements** - In accordance with ASC 808, *Collaborative Arrangements*, third party costs incurred and revenues generated by arrangements involving joint operating activities of two or more parties that are each actively involved and exposed to risks and rewards of the activities are classified in the consolidated statements of operations on a gross basis only if we are determined to be the principal participant in the arrangement. Otherwise, third party revenues and costs generated by collaborative arrangements are presented on a net basis. Payments between participants are recorded and classified based on the nature of the payments.

#### **(p) Recently Issued Accounting Pronouncements**

**Revenue Recognition.** In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2014-09, *Revenue from Contracts with Customers (Topic 606)*, which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. ASU 2014-09 will replace most existing revenue recognition guidance in U.S. GAAP. The new standard introduces a five-step process to be followed in determining the amount and timing of revenue recognition. It also provides guidance on accounting for costs incurred to obtain or fulfill contracts with customers, and establishes disclosure requirements which are more extensive than those required under existing U.S. GAAP.

The FASB has issued the following amendments to ASU 2014-09 from August 2015 through December 2016:

- ASU 2015-14, *Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date*
- ASU 2016-08, *Revenue from Contracts with Customers (Topic 606): Principal versus Agent Consideration (Reporting Revenue Gross versus Net)*
- ASU 2016-10, *Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing*
- ASU 2016-12, *Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients*
- ASU 2016-20, *Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers*

Such amendments provide supplemental and clarifying guidance, as well as amend the effective date of the new standard.

ASU 2014-09, as amended, is effective for the Company in the first quarter of 2018, with early adoption permitted in the first quarter of 2017. The standard permits the use of either the retrospective or modified retrospective (cumulative effect) transition method.

In 2015, we formed a cross-functional implementation team and began our analysis of this new guidance. Such analysis includes assessment of the impact of the new guidance on our consolidated financial statements and related disclosures, as well as related impacts on processes, accounting systems, and internal controls. Based on our analysis to-date, we have reached the following tentative conclusions regarding this new guidance and how we expect it to impact our consolidated financial statements and related disclosures:

- We expect to adopt this new guidance effective with our first quarter of 2018; we will not early adopt.
- We expect to use the cumulative effect transition method. Such method provides that the cumulative effect from prior periods upon applying the new guidance is recognized in our consolidated balance sheets as of the date of adoption, including an adjustment to retained earnings. Prior periods will not be retrospectively adjusted.
- We believe substantially all of our revenue falls within the scope of ASU 2014-09, as amended; substantially all of our revenue is contractual.
- As discussed above, generally, our subscription and content fees revenue is recognized ratably over the respective contract terms (“over time”). Upon adoption of the new guidance, we expect to recognize a license component of certain subscription and content fees revenue upon delivery to the customer (“point in time”) and a non-license

component (i.e. support) of such revenues over the respective contract terms (“over time”). At the date of adoption of this new guidance, we expect to record a cumulative adjustment to our consolidated balance sheet, including an adjustment to retained earnings, to adjust for the impact of certain prior period subscription and content fees revenue, as calculated under the new guidance.

- We have determined the only significant incremental costs incurred to obtain contracts with customers within the scope of ASU 2014-09, as amended, are sales commissions paid to associates. Under current U.S. GAAP we recognize sales commissions as earned, and record such amounts as a component of total costs and expenses in our consolidated statements of operations. We recognized sales commission expense of \$44 million, \$45 million and \$35 million in 2016, 2015, and 2014, respectively. Under the new guidance, we expect to record sales commissions as an asset, and amortize to expense over the related contract performance period. At the date of adoption of this new guidance, we expect to record an asset in our consolidated balance sheets for the amount of unamortized sales commissions for prior periods, as calculated under the new guidance. Such amount will subsequently be amortized to expense over the remaining performance periods of the related contracts with remaining performance obligations.

Our analysis and evaluation of the new standard will continue through the effective date in the first quarter of 2018. A significant amount of work remains, due to the complexity of revenue recognition within our industry, the increased number of judgments and estimates required by this new guidance, and the volume of our contract portfolio which must be examined. We must quantify all impacts of this new guidance, including the topics discussed above, which may be material to our consolidated financial statements and related disclosures. We must also implement any necessary changes/modifications to processes, accounting systems, and internal controls.

**Consolidation.** In February 2015, the FASB issued ASU 2015-02, *Consolidation (Topic 810): Amendments to the Consolidation Analysis*, which provides guidance when evaluating whether to consolidate certain legal entities. The updated guidance modifies evaluation criteria of limited partnerships and similar legal entities, eliminates the presumption that a general partner should consolidate a limited partnership, and affects the consolidation analysis of reporting entities that are involved with variable interest entities, particularly those that have fee arrangements and related party relationships. ASU 2015-02 was effective for the Company in the first quarter of 2016. The adoption of ASU 2015-02 did not have a material impact on our consolidated financial statements and related disclosures.

**Financial Instruments.** In January 2016, the FASB issued ASU 2016-01, *Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities*, which addresses certain aspects of recognition, measurement, presentation, and disclosure of financial instruments. ASU 2016-01 is effective for the Company in the first quarter of 2018, with early adoption permitted. We are currently evaluating the effect that ASU 2016-01 will have on our consolidated financial statements and related disclosures, and we have not determined if we will early adopt.

**Leases.** In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*, which introduces a new model that requires most leases to be reported on the balance sheet and aligns many of the underlying principles of the new lessor model with those in the new revenue recognition standard. The standard requires the use of the modified retrospective (cumulative effect) transition approach. ASU 2016-02 is effective for the Company in the first quarter of 2019, with early adoption permitted. We are currently evaluating the effect that ASU 2016-02 will have on our consolidated financial statements and related disclosures, and we have not determined if we will early adopt.

**Share-Based Compensation.** In March 2016, the FASB issued ASU 2016-09, *Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*. ASU 2016-09 changes several aspects of the accounting for share-based payment award transactions, including: (1) accounting and cash flow classification for excess tax benefits and deficiencies, (2) forfeitures, and (3) tax withholding requirements and cash flow classification. ASU 2016-09 is effective for the Company in the first quarter of 2017. We expect this new guidance to have the following impact on our consolidated financial statements:

- Under current GAAP, when associates exercise stock options, or upon the vesting of restricted stock awards, we recognize any related excess tax benefits or deficiencies (the difference between the deduction for tax purposes and the cumulative compensation cost recognized in the consolidated financial statements) in additional paid-in capital. We recognized excess tax benefits of \$53 million, \$57 million and \$40 million in 2016, 2015, and 2014, respectively. Under the new guidance, all excess tax benefits and tax deficiencies are recognized as a component of income tax expense. They are not estimated when determining the annual estimated effective tax rate; instead, they are recorded as discrete items in the reporting period they occur. This provision of the new guidance may have a significant impact on our future income tax expense, including increased variability in our quarterly effective tax rates, which is dependent



on a number of factors, including the price of our common stock, grant activity under our stock and equity plans, and the timing of option exercises by our associates. This provision of the new guidance is required to be applied prospectively. Upon adoption, prior periods will not be retrospectively adjusted.

- Under current GAAP, we utilize the treasury stock method for calculating diluted earnings per share. This method assumes that any excess tax benefits generated from the hypothetical exercise of dilutive options are used to repurchase outstanding shares. Assumed share repurchases for excess tax benefits included in our 2016, 2015 and 2014 calculations of diluted earnings per share were 2.0 million, 3.2 million and 3.9 million, respectively. Under the new guidance, excess tax benefits generated from the hypothetical exercise of dilutive options are excluded from the calculation of diluted earnings per share. Therefore, the denominator in our diluted earnings per share calculation will increase. We estimate that this provision of the new guidance will reduce our calculation of diluted earnings per share by approximately \$0.01 to \$0.02 for fiscal 2017. This provision of the new guidance is required to be applied prospectively. Upon adoption, prior periods will not be retrospectively adjusted.
- We currently present excess tax benefits in our consolidated statements of cash flows as a cash inflow from financing activities. Under the new guidance, excess tax benefits are to be presented within operating activities. We expect to apply this provision of the new guidance retrospectively. Upon adoption, prior periods will be retrospectively adjusted.
- We currently present cash payments to taxing authorities in connection with shares directly withheld from associates upon the exercise of stock options, or upon the vesting of restricted stock awards, to meet statutory tax withholding requirements (employee withholdings) as a cash outflow from operating activities. Such amounts were \$38 million, \$36 million and \$11 million in 2016, 2015, and 2014, respectively. Under the new guidance, such payments are to be presented within financing activities. This provision of the new guidance is required to be applied retrospectively. Upon adoption, prior periods will be retrospectively adjusted.

**Credit Losses on Financial Instruments.** In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, which provides new guidance regarding the measurement and recognition of credit impairment for certain financial assets. Such guidance will impact how we determine our allowance for estimated uncollectible receivables and evaluate our available-for-sale investments for impairment. ASU 2016-13 is effective for the Company in the first quarter of 2020, with early adoption permitted in the first quarter of 2019. We are currently evaluating the effect that ASU 2016-13 will have on our consolidated financial statements and related disclosures, and we have not determined if we will early adopt.

**Cash Flow Presentation.** In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments*, which includes clarifying guidance regarding the cash flow statement presentation of contingent consideration payments made after business combinations. ASU 2016-15 is effective for the Company in the first quarter of 2018, with early adoption permitted. The standard requires use of the retrospective transition method. The Company adopted the standard early, in the fourth quarter of 2016. The adoption of ASU 2016-15 did not have an impact on our consolidated financial statements.

**Income Taxes.** In October 2016, the FASB issued ASU 2016-16, *Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other than Inventory*, which provides new guidance regarding when an entity should recognize the income tax consequences of certain intra-entity asset transfers. Current U.S. GAAP prohibits entities from recognizing the income tax consequences of intercompany asset transfers, including transfers of intellectual property. The seller defers any net tax effect, and the buyer is prohibited from recognizing a deferred tax asset on the difference between the newly created tax basis of the asset in its tax jurisdiction and its financial statement carrying amount as reported in the consolidated financial statements. ASU 2016-16 requires entities to recognize these tax consequences in the period in which the transfer takes place, with the exception of inventory transfers.

ASU 2016-16 is effective for the Company in the first quarter of 2018, with early adoption permitted in the first quarter of 2017. The standard requires the use of the modified retrospective (cumulative effect) transition approach. We expect to early adopt ASU 2016-16 in the first quarter of 2017. In connection with such adoption, we expect to record a cumulative effect adjustment reducing retained earnings by approximately \$22 million. The cumulative effect adjustment includes recognition of the income tax consequences of intra-entity transfers of assets other than inventory that occurred prior to the adoption date. Prior periods will not be retrospectively adjusted.



**Business Acquisitions.** In January 2017, the FASB issued ASU 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business*, which provides guidance regarding the definition of a business, with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. ASU 2017-01 is effective for the Company in the first quarter of 2018, with early adoption permitted, and prospective application required. The Company adopted the standard early, in the fourth quarter of 2016. The adoption of ASU 2017-01 did not have a material impact on our consolidated financial statements.

## (2) Business Acquisitions

### *Siemens Health Services*

On February 2, 2015, we acquired substantially all of the assets, and assumed certain liabilities of Siemens Health Services, the health information technology business unit of Siemens AG, a stock corporation established under the laws of Germany, and its affiliates. Siemens Health Services offered a portfolio of enterprise-level clinical and financial health care information technology solutions, as well as departmental, connectivity, population health, and care coordination solutions globally. Solutions were offered on the *Soarian*, *Invision*, and *i.s.h.med* platforms, among others. Siemens Health Services also offered a range of complementary services, including support, hosting, managed services, implementation services, and strategic consulting.

We believe the acquisition enhances our organic growth opportunities as it provides us a larger base into which we can sell our combined portfolio of solutions and services. The acquisition also augments our non-U.S. footprint and growth opportunities, increases our ability and scale for R&D investment, and added over 5,000 highly-skilled associates that enhance our capabilities. These factors, combined with the synergies and economies of scale expected from combining the operations of Cerner and Siemens Health Services, are the basis for acquisition and comprise the resulting goodwill recorded.

Consideration for the acquisition was \$1.39 billion of cash, consisting of the \$1.3 billion agreed upon purchase price plus working capital and certain other adjustments under the Master Sale and Purchase Agreement ("MSPA") dated August 5, 2014, as amended.

We incurred pre-tax costs of \$22 million and \$16 million in 2015 and 2014, respectively, in connection with our acquisition of Siemens Health Services, which are included in general and administrative expense in our consolidated statements of operations.

The acquisition of Siemens Health Services was treated as a purchase in accordance with ASC Topic 805, *Business Combinations*, which requires allocation of the purchase price to the estimated fair values of the assets acquired and liabilities assumed in the transaction.

The final allocation of purchase price is as follows:

<i>(in thousands)</i>	Allocation Amount	Estimated Weighted Average Useful Life
Receivables, net of allowances of \$34,191	\$ 226,207	
Other current assets	46,682	
Property and equipment	158,324	20 years
Goodwill	532,327	
Intangible assets:		
Customer relationships	371,000	10 years
Existing technologies	201,990	5 years
Trade names	39,990	8 years
Total intangible assets	612,980	
Other non-current assets	5,212	
Accounts payable	(42,306)	
Deferred revenue (current)	(85,314)	
Other current liabilities	(12,853)	
Deferred revenue (non-current)	(48,130)	
<b>Total purchase price</b>	<b>\$ 1,393,129</b>	

The intangible assets in the table above are being amortized on a straight-line basis over their estimated useful lives, with such amortization included in amortization of acquisition-related intangibles in our consolidated statements of operations.

The fair value measurements of tangible and intangible assets and liabilities were based on significant inputs not observable in the market and thus represent Level 3 measurements within the fair value measurement hierarchy. Level 3 inputs included, among others, discount rates that we estimated would be used by a market participant in valuing these assets and liabilities, projections of revenues and cash flows, client attrition rates, royalty rates, and market comparables.

Property and equipment was valued primarily using the sales comparison method, a form of the market approach, in which the value is derived by evaluating the market prices of assets with comparable features such as size, location, condition and age. Our analysis included multiple property categories, including land, buildings, and personal property and included assumptions for market prices of comparable assets, and physical and economic obsolescence, among others.

Customer relationship intangible assets were valued using the excess earnings method, a form of the income approach, in which the value is derived by estimation of the after-tax cash flows specifically attributable to the customer relationships. Our analysis consisted of two customer categories, order backlog and existing customer relationships and included assumptions for projections of revenues and expenses, contributory asset charges, discount rates, and a tax amortization benefit, among others.

Existing technology and trade name intangible assets were valued using the relief from royalty method, a form of the income approach, in which the value is derived by estimation of the after-tax royalty savings attributable to owning the assets. Assumptions in these analyses included projections of revenues, royalty rates representing costs avoided due to ownership of the assets, discount rates, and a tax amortization benefit.

Deferred revenue was valued using an income approach, in which the value was derived by estimation of the fulfillment cost, plus a normal profit margin (which excludes any selling margin), for performance obligations assumed in the acquisition. Assumptions included estimations of costs incurred to fulfill the obligations, profit margins a market participant would expect to receive, and a discount rate.

The goodwill of \$532 million was allocated among our Domestic and Global operating segments, and is expected to be deductible for tax purposes. Refer to Note (7) for additional information on goodwill.

Our consolidated statements of operations include revenues of approximately \$930 million attributable to the acquired business (now referred to as "Cerner Health Services") in 2015. Disclosure of the earnings contribution from the Cerner Health Services business in 2015 is not practicable, as we had already integrated operations in many areas.

The following table provides unaudited pro forma results of operations for the years ended January 2, 2016 and January 3, 2015, as if the acquisition had been completed on the first day of our 2014 fiscal year.

	For the Years Ended	
	2015	2014
<i>(In thousands, except per share data)</i>		
Pro forma revenues	\$ 4,518,947	\$ 4,549,387
Pro forma net earnings	546,027	463,344
Pro forma diluted earnings per share	1.56	1.32

These pro forma results are based on estimates and assumptions, which we believe are reasonable. They are not the results that would have been realized had we been a combined company during the periods presented, nor are they indicative of our consolidated results of operations in future periods. The pro forma results for the 2015 year include pre-tax adjustments for amortization of intangible assets, fair value adjustments for deferred revenue, and the elimination of acquisition costs of \$7 million, \$6 million and \$22 million, respectively. Pro forma results for the 2014 year include pre-tax adjustments for amortization of intangible assets, fair value adjustments for deferred revenue, and elimination of acquisition costs of \$86 million, \$52 million, and \$16 million respectively.

#### *Lee's Summit Tech Center*

On December 17, 2015, we purchased real estate interests, in-place tenant leases, and certain other assets associated with the property commonly referred to as the Summit Technology Campus, located in Lee's Summit, Missouri. The acquired property (now referred to as the "Lee's Summit Tech Center") consists of a 550,000 square foot multi-tenant office building. We expect to utilize this space to support our data center and office space needs. Consideration for the Lee's Summit Tech Center is expected to total \$86 million, consisting of \$85 million of up-front cash plus contingent consideration not to exceed \$1 million.

The acquisition of the Lee's Summit Tech Center was treated as a purchase in accordance with ASC Topic 805, *Business Combinations*. The final allocation of purchase price resulted in the allocation of \$86 million to property and equipment, net in our consolidated balance sheets. The in-place tenant leases had a de minimis impact on the allocation of purchase price. No goodwill resulted from the transaction.

#### *InterMedHx*

On April 1, 2014, we purchased 100% of the outstanding membership interests of InterMedHx, LLC (InterMedHx). InterMedHx was a provider of health technology solutions in the areas of preventive care, patient administration, and medication history. We believe the addition of InterMedHx solutions provides additional capabilities in the market.

Consideration for the acquisition of InterMedHx is expected to total \$19 million, consisting of up-front cash plus contingent consideration, which is payable at a percentage of the revenue contribution from InterMedHx solutions and services. We valued the contingent consideration at \$12 million based on projections of revenue over the assessment period. We paid \$2 million in both 2016 and 2015 to satisfy a portion of this contingent consideration obligation.

The allocation of purchase price to the estimated fair value of the identified tangible and intangible assets acquired and liabilities assumed resulted in goodwill of \$17 million and \$4 million in intangible assets related to the value of existing technologies. The goodwill was allocated to our Domestic operating segment and is expected to be deductible for tax purposes. Identifiable intangible assets are being amortized over a period of five years.

### (3) Investments

Available-for-sale investments at the end of 2016 were as follows:

<i>(In thousands)</i>	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
<b>Cash equivalents:</b>				
Money market funds	\$ 23,110	\$ —	\$ —	\$ 23,110
Time deposits	11,477	—	—	11,477
Total cash equivalents	34,587	—	—	34,587
<b>Short-term investments:</b>				
Time deposits	40,639	—	—	40,639
Commercial paper	22,325	—	(24)	22,301
Government and corporate bonds	122,729	3	(84)	122,648
Total short-term investments	185,693	3	(108)	185,588
<b>Long-term investments:</b>				
Government and corporate bonds	95,806	—	(438)	95,368
Total available-for-sale investments	\$ 316,086	\$ 3	\$ (546)	\$ 315,543

Available-for-sale investments at the end of 2015 were as follows:

<i>(In thousands)</i>	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
<b>Cash equivalents:</b>				
Money market funds	\$ 126,752	\$ —	\$ —	\$ 126,752
Time deposits	5,677	—	—	5,677
Government and corporate bonds	73	—	—	73
Total cash equivalents	132,502	—	—	132,502
<b>Short-term investments:</b>				
Time deposits	30,989	—	—	30,989
Commercial paper	1,500	—	(2)	1,498
Government and corporate bonds	78,655	20	(103)	78,572
Total short-term investments	111,144	20	(105)	111,059
<b>Long-term investments:</b>				
Government and corporate bonds	156,527	14	(569)	155,972
Total available-for-sale investments	\$ 400,173	\$ 34	\$ (674)	\$ 399,533

Investments reported under the cost method of accounting as of December 31, 2016 and January 2, 2016 were \$12 million and \$16 million, respectively. Investments reported under the equity method of accounting as of December 31, 2016 and January 2, 2016 were \$2 million and \$1 million, respectively.

We sold available-for-sale investments for proceeds of \$245 million and \$293 million in 2016 and 2015, respectively, resulting in insignificant losses in each period.

#### (4) Fair Value Measurements

We determine fair value measurements used in our consolidated financial statements based upon the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy distinguishes between (1) market participant assumptions developed based on market data obtained from independent sources (observable inputs) and (2) an entity's own assumptions about market participant assumptions developed based on the best information available in the circumstances (unobservable inputs). The fair value hierarchy consists of three broad levels, which gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy are described below:

- Level 1 – Valuations based on quoted prices in active markets for identical assets or liabilities that the entity has the ability to access.
- Level 2 – Valuations based on quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable data for substantially the full term of the assets or liabilities.
- Level 3 – Valuations based on inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The following table details our financial assets measured and recorded at fair value on a recurring basis at the end of 2016:

(In thousands)

Description	Balance Sheet Classification	Fair Value Measurements Using		
		Level 1	Level 2	Level 3
Money market funds	Cash equivalents	\$ 23,110	\$ —	\$ —
Time deposits	Cash equivalents	—	11,477	—
Time deposits	Short-term investments	—	40,639	—
Commercial paper	Short-term investments	—	22,301	—
Government and corporate bonds	Short-term investments	—	122,648	—
Government and corporate bonds	Long-term investments	—	95,368	—

The following table details our financial assets measured and recorded at fair value on a recurring basis at the end of 2015:

(In thousands)

Description	Balance Sheet Classification	Fair Value Measurements Using		
		Level 1	Level 2	Level 3
Money market funds	Cash equivalents	\$ 126,752	\$ —	\$ —
Time deposits	Cash equivalents	—	5,677	—
Government and corporate bonds	Cash equivalents	—	73	—
Time deposits	Short-term investments	—	30,989	—
Commercial paper	Short-term investments	—	1,498	—
Government and corporate bonds	Short-term investments	—	78,572	—
Government and corporate bonds	Long-term investments	—	155,972	—

We estimate the fair value of our long-term, fixed rate debt using a Level 3 discounted cash flow analysis based on current borrowing rates for debt with similar maturities. We estimate the fair value of our long-term, variable rate debt using a Level 3 discounted cash flow analysis based on LIBOR rate forward curves. The fair value of our long-term debt, including current maturities, at the end of 2016 and 2015 was approximately \$515 million and \$505 million, respectively. The carrying amount of such debt at the end of both 2016 and 2015 was \$500 million.

## (5) Receivables

Receivables consist of accounts receivable and the current portion of amounts due under sales-type leases. Accounts receivable primarily represent recorded revenues that have been billed. Billings and other consideration received on contracts in excess of related revenues recognized are recorded as deferred revenue. Substantially all receivables are derived from sales and related support and maintenance and professional services of our clinical, administrative and financial information systems and solutions to health care providers.

We perform ongoing credit evaluations of our clients and generally do not require collateral from our clients. We provide an allowance for estimated uncollectible accounts based on specific identification, historical experience and our judgment.

A summary of net receivables is as follows:

<i>(In thousands)</i>	<b>2016</b>	<b>2015</b>
Gross accounts receivable	\$ 958,843	\$ 1,043,069
Less: Allowance for doubtful accounts	43,028	48,119
Accounts receivable, net of allowance	915,815	994,950
Current portion of lease receivables	29,128	39,134
Total receivables, net	<u>\$ 944,943</u>	<u>\$ 1,034,084</u>

A reconciliation of the beginning and ending amount of our allowance for doubtful accounts is as follows:

<i>(in thousands)</i>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Allowance for doubtful accounts - beginning balance	\$ 48,119	\$ 25,531	\$ 36,286
Additions charged to costs and expenses	5,060	2,317	5,274
Additions through acquisitions	—	34,159	—
Deductions <sup>(a)</sup>	(10,151)	(13,888)	(16,029)
Allowance for doubtful accounts - ending balance	<u>\$ 43,028</u>	<u>\$ 48,119</u>	<u>\$ 25,531</u>

<sup>(a)</sup> Deductions in 2014 include a \$14 million reclassification to other non-current assets.

Lease receivables represent our net investment in sales-type leases resulting from the sale of certain health care devices to our clients. The components of our net investment in sales-type leases are as follows:

<i>(In thousands)</i>	<b>2016</b>	<b>2015</b>
Minimum lease payments receivable	\$ 59,171	\$ 101,968
Less: Unearned income	2,253	5,593
Total lease receivables	56,918	96,375
Less: Long-term receivables included in other assets	27,790	57,241
Current portion of lease receivables	<u>\$ 29,128</u>	<u>\$ 39,134</u>



Future minimum lease payments to be received under existing sales-type leases for the next five years are as follows:

<i>(In thousands)</i>	
2017	\$ 30,180
2018	14,155
2019	10,343
2020	3,983
2021	510

During the second quarter of 2008, Fujitsu Services Limited's (Fujitsu) contract as the prime contractor in the National Health Service (NHS) initiative to automate clinical processes and digitize medical records in the Southern region of England was terminated by the NHS. This had the effect of automatically terminating our subcontract for the project. We continue to be in dispute with Fujitsu regarding Fujitsu's obligation to pay the amounts comprised of accounts receivable and contracts receivable related to that subcontract, and we are working with Fujitsu to resolve these issues based on processes provided for in the contract. Part of that process requires final resolution of disputes between Fujitsu and the NHS regarding the contract termination. As of December 31, 2016, it remains unlikely that our matter with Fujitsu will be resolved in the next 12 months. Therefore, these receivables have been classified as long-term and represent less than the majority of other long-term assets at the end of 2016 and 2015. While the ultimate collectability of the receivables pursuant to this process is uncertain, we believe that we have valid and equitable grounds for recovery of such amounts and that collection of recorded amounts is probable. Nevertheless, it is reasonably possible that our estimates regarding collectability of such amounts might materially change in the near term, considering that we do not have complete knowledge of the status of the proceedings between Fujitsu and NHS and their effect on our claim.

During 2016 and 2015, we received total client cash collections of \$5.2 billion and \$4.4 billion, respectively.

## (6) Property and Equipment

A summary of property, equipment and leasehold improvements stated at cost, less accumulated depreciation and amortization, is as follows:

<i>(In thousands)</i>	Depreciable Lives (Yrs)	2016	2015
Computer and communications equipment	1 — 5	\$ 1,363,799	\$ 1,261,338
Land, buildings and improvements	12 — 50	961,550	742,760
Leasehold improvements	1 — 15	226,471	201,155
Furniture and fixtures	5 — 12	102,151	102,681
Capital lease equipment	3 — 5	3,197	3,200
Other equipment	3 — 20	1,398	1,155
		2,658,566	2,312,289
Less accumulated depreciation and leasehold amortization		1,106,042	1,003,075
Total property and equipment, net		\$ 1,552,524	\$ 1,309,214

Depreciation and leasehold amortization expense for 2016, 2015 and 2014 was \$246 million, \$217 million and \$163 million, respectively.

## (7) Goodwill and Other Intangible Assets

The changes in the carrying amounts of goodwill were as follows:

<i>(In thousands)</i>	Domestic	Global	Total
<b>Balance at the end of 2014</b>	\$ 311,170	\$ 9,368	\$ 320,538
Goodwill recorded in connection with the Cerner Health Services acquisition	419,667	65,720	485,387
Foreign currency translation adjustment and other	—	(6,743)	(6,743)
<b>Balance at the end of 2015</b>	730,837	68,345	799,182
Purchase price allocation adjustments for Cerner Health Services	51,827	(4,887)	46,940
Foreign currency translation adjustment and other	—	(1,922)	(1,922)
<b>Balance at the end of 2016</b>	<u>\$ 782,664</u>	<u>\$ 61,536</u>	<u>\$ 844,200</u>

A summary of net intangible assets is as follows:

<i>(In thousands)</i>	2016		2015	
	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Purchased software	\$ 368,174	\$ 225,754	\$ 370,073	\$ 168,024
Customer lists	469,353	153,750	495,328	115,325
Internal use software	87,966	47,325	68,966	36,062
Trade names	40,583	11,156	40,739	5,690
Other	44,844	6,888	43,133	5,080
Total	<u>\$ 1,010,920</u>	<u>\$ 444,873</u>	<u>\$ 1,018,239</u>	<u>\$ 330,181</u>
Intangible assets, net	<u>\$ 566,047</u>		<u>\$ 688,058</u>	

Amortization expense for 2016, 2015 and 2014 was \$118 million, \$116 million and \$36 million, respectively.

Estimated aggregate amortization expense for each of the next five years is as follows:

<i>(In thousands)</i>	
2017	\$ 117,049
2018	102,727
2019	98,734
2020	55,990
2021	49,733

## (8) Software Development

Information regarding our software development costs is included in the following table:

<i>(In thousands)</i>	For the Years Ended		
	2016	2015	2014
Software development costs	\$ 704,882	\$ 685,260	\$ 467,158
Capitalized software development costs	(293,696)	(264,656)	(177,800)
Amortization of capitalized software development costs	140,232	119,195	103,447
Total software development expense	<u>\$ 551,418</u>	<u>\$ 539,799</u>	<u>\$ 392,805</u>

Accumulated amortization as of the end of 2016 and 2015 was \$1.1 billion and \$1.0 billion, respectively.

## (9) Long-term Debt and Capital Lease Obligations

The following is a summary of indebtedness outstanding:

<i>(In thousands)</i>	2016	2015
Senior Notes	\$ 500,000	\$ 500,000
Capital lease obligations	50,444	92,416
Other	13,921	13,450
Debt and capital lease obligations	564,365	605,866
Less: debt issuance costs	(616)	(716)
Debt and capital lease obligations, net	563,749	605,150
Less: current portion	(26,197)	(41,797)
Long-term debt and capital lease obligations	<u>\$ 537,552</u>	<u>\$ 563,353</u>

### Senior Notes

In January 2015, we issued \$500 million aggregate principal amount of unsecured Senior Notes ("Senior Notes"), pursuant to a Master Note Purchase Agreement dated December 4, 2014. The issuance consisted of \$225 million of 3.18% Series 2015-A Notes due February 15, 2022, \$200 million of 3.58% Series 2015-B Notes due February 14, 2025, and \$75 million in floating rate Series 2015-C Notes due February 15, 2022. Interest is payable semiannually on February 15th and August 15th in each year, commencing on August 15, 2015 for the Series 2015-A Notes and Series 2015-B Notes. The Series 2015-C Notes will accrue interest at a floating rate equal to the Adjusted LIBOR Rate (as defined in the Master Note Purchase Agreement), payable quarterly on February 15th, May 15th, August 15th and November 15th in each year, commencing on May 15, 2015. As of December 31, 2016, the interest rate for the current interest period was 1.90% based on the three-month floating LIBOR rate. The debt issuance costs in the table above relate to the issuance of these Senior Notes. The Master Note Purchase Agreement contains certain leverage and interest coverage ratio covenants and provides certain restrictions on our ability to borrow, incur liens, sell assets, and other customary terms. Proceeds from the Senior Notes are available for general corporate purposes.

### Capital Leases

Our capital lease obligations are primarily related to the procurement of hardware and health care devices, and generally have a term of five years.

### Other

Other indebtedness includes estimated amounts payable through September 2025, under an agreement entered into in September 2015.

### Credit Facility

In October 2015, we amended and restated our revolving credit facility. The amended facility provides a \$100 million unsecured revolving line of credit for working capital purposes, which includes a letter of credit facility, expiring in October 2020. We have the ability to increase the maximum capacity to \$200 million at any time during the facility's term, subject to lender participation. Interest is payable at a rate based on prime, LIBOR, or the U.S. federal funds rate, plus a spread that varies depending on the leverage ratios maintained. The agreement provides certain restrictions on our ability to borrow, incur liens, sell assets and pay dividends and contains certain cash flow and liquidity covenants. As of the end of 2016, we had no outstanding borrowings under this facility; however, we had \$32 million of outstanding letters of credit, which reduced our available borrowing capacity to \$68 million.

### Covenant Compliance

As of December 31, 2016, we were in compliance with all debt covenants.

Minimum annual payments under existing capital lease obligations and maturities of indebtedness outstanding at the end of 2016 are as follows:

	Capital Lease Obligations					Total
	Minimum Lease Payments	Less: Interest	Principal	Senior Notes	Other	
(In thousands)						
2017	\$ 27,426	\$ 1,229	\$ 26,197	\$ —	\$ —	\$ 26,197
2018	12,409	690	11,719	—	2,500	14,219
2019	9,010	292	8,718	—	—	8,718
2020	3,435	55	3,380	—	1,100	4,480
2021	436	6	430	—	1,700	2,130
2022 and thereafter	—	—	—	500,000	8,621	508,621
Total	\$ 52,716	\$ 2,272	\$ 50,444	\$ 500,000	\$ 13,921	\$ 564,365

## (10) Contingencies

We accrue estimates for resolution of any legal and other contingencies when losses are probable and estimable, in accordance with ASC 450, *Contingencies*.

The terms of our software license agreements with our clients generally provide for a limited indemnification of such clients against losses, expenses and liabilities arising from third party claims based on alleged infringement by our solutions of an intellectual property right of such third party. The terms of such indemnification often limit the scope of and remedies for such indemnification obligations and generally include a right to replace or modify an infringing solution. To date, we have not had to reimburse any of our clients for any judgments or settlements to third parties related to these indemnification provisions pertaining to intellectual property infringement claims. For several reasons, including the lack of a sufficient number of prior indemnification claims and the lack of a monetary liability limit for certain infringement cases under the terms of the corresponding agreements with our clients, we cannot determine the maximum amount of potential future payments, if any, related to such indemnification provisions.

In addition to commitments and obligations in the ordinary course of business, we are subject to various legal proceedings and claims that arise in the ordinary course of business, including for example, employment and client disputes and litigation alleging solution and implementation defects, personal injury, intellectual property infringement, violations of law and breaches of contract and warranties. In addition, we are a defendant in lawsuits filed in federal and state courts brought as putative class or collective actions on behalf of various groups of current and former associates in the U.S alleging that we misclassified associates as exempt from overtime pay under the Fair Labor Standards Act and state wage and hour laws. These proceedings are at various procedural stages and seek unspecified monetary damages, injunctive relief and attorneys' fees. We do not believe any material losses under these claims to be probable or estimable at this time.

No less than quarterly, we review the status of each significant matter and assess our potential financial exposure. We accrue a liability for an estimated loss if the potential loss from any legal proceeding or claim is considered probable and the amount can be reasonably estimated. Significant judgment is required in both the determination of probability and the determination as to whether the amount of an exposure is reasonably estimable, and accruals are based only on the information available to our management at the time the judgment is made. Furthermore, the outcome of legal proceedings is inherently uncertain, and we may incur substantial defense costs and expenses defending any of these matters. Should any one or a combination of more than one of these proceedings be successful, or should we determine to settle any one or a combination of these matters, we may be required to pay substantial sums, become subject to the entry of an injunction or be forced to change the manner in which we operate our business, which could have a material adverse impact on our business, results of operations, cash flows or financial condition.

## (11) Other Income

A summary of other income is as follows:

<i>(In thousands)</i>	For the Years Ended		
	2016	2015	2014
Interest income	\$ 15,252	\$ 11,990	\$ 16,342
Interest expense	(4,479)	(11,820)	(3,993)
Other	(3,352)	74	(1,259)
Other income, net	\$ 7,421	\$ 244	\$ 11,090

## (12) Income Taxes

Income tax expense (benefit) for 2016, 2015 and 2014 consists of the following:

<i>(In thousands)</i>	For the Years Ended		
	2016	2015	2014
Current:			
Federal	\$ 252,795	\$ 140,921	\$ 114,508
State	31,642	18,647	13,504
Foreign	9,030	17,205	13,824
Total current expense	293,467	176,773	141,836
Deferred:			
Federal	(18,014)	60,015	95,057
State	(2,103)	5,680	8,873
Foreign	8,600	(450)	2,975
Total deferred expense (benefit)	(11,517)	65,245	106,905
Total income tax expense	\$ 281,950	\$ 242,018	\$ 248,741

Temporary differences between the financial statement carrying amounts and tax basis of assets and liabilities that give rise to significant portions of deferred income taxes at the end of 2016 and 2015 relate to the following:

<i>(In thousands)</i>	<b>2016</b>	<b>2015</b>
<b>Deferred tax assets:</b>		
Accrued expenses	\$ 25,454	\$ 27,555
Tax credits and separate return net operating losses	27,762	29,265
Share based compensation	81,133	69,555
Contract and service revenues and costs	59,217	—
Other	9,723	16,334
<b>Total deferred tax assets</b>	<b>203,289</b>	<b>142,709</b>
<b>Deferred tax liabilities:</b>		
Software development costs	(275,888)	(216,435)
Depreciation and amortization	(133,424)	(133,242)
Prepaid expenses	(30,255)	(25,655)
Contract and service revenues and costs	—	(10,684)
Other	(3,050)	(3,589)
<b>Total deferred tax liabilities</b>	<b>(442,617)</b>	<b>(389,605)</b>
<b>Net deferred tax liability</b>	<b>\$ (239,328)</b>	<b>\$ (246,896)</b>

At the end of 2016, we had net operating loss carry-forwards subject to Section 382 of the Internal Revenue Code for U.S. federal income tax purposes of \$4 million that are available to offset future U.S. federal taxable income, if any, through 2020. We had net operating loss carry-forwards from foreign jurisdictions of \$37 million that are available to offset future taxable income with no expiration. We had a deferred tax asset for state net operating loss carry-forwards of \$1 million which are available to offset future taxable income, if any, through 2034. In addition, we have a state income tax credit carry-forward of \$13 million available to offset income tax liabilities through 2030, and a foreign jurisdiction tax credit carry-forward available to offset future tax liabilities of \$1 million through 2027. We expect to fully utilize the net operating loss and tax credit carry-forwards in future periods.

At the end of 2016, we had not provided tax on the cumulative undistributed earnings of our foreign subsidiaries of approximately \$111 million, because it is our intention to reinvest these earnings indefinitely. If these earnings were distributed, we would be subject to U.S. federal and state income taxes and foreign withholding taxes, net of U.S. foreign tax credits which may be available. The calculation of this unrecognized deferred tax liability is complex and not practicable.



The effective income tax rates for 2016, 2015, and 2014 were 31%, 31%, and 32%, respectively. These effective rates differ from the U.S. federal statutory rate of 35% as follows:

	For the Years Ended		
	2016	2015	2014
<i>(In thousands)</i>			
Tax expense at statutory rates	\$ 321,452	\$ 273,483	\$ 270,961
State income tax, net of federal benefit	22,644	16,129	19,301
Tax credits	(23,881)	(20,681)	(19,469)
Foreign rate differential	(16,468)	(14,821)	(13,057)
Permanent differences	(20,330)	(14,314)	(12,253)
Other, net	(1,467)	2,222	3,258
Total income tax expense	\$ 281,950	\$ 242,018	\$ 248,741

A reconciliation of the beginning and ending amount of unrecognized tax benefit is presented below:

	2016	2015	2014
<i>(In thousands)</i>			
Unrecognized tax benefit - beginning balance	\$ 4,878	\$ 7,202	\$ 2,100
Gross decreases - tax positions in prior periods	—	(4,323)	(804)
Gross increases - tax positions in prior periods	—	690	5,906
Gross increases - tax positions in current year	6,945	2,824	—
Settlements	(1,859)	(1,299)	—
Currency translation	(195)	(216)	—
Unrecognized tax benefit - ending balance	\$ 9,769	\$ 4,878	\$ 7,202

If recognized, \$6 million of the unrecognized tax benefit will favorably impact our effective tax rate. We do not anticipate that our unrecognized tax benefits will decrease significantly within the next twelve months. During 2016, we filed amended federal returns for 2011, 2012 and 2013. Our 2011 through 2014 federal returns are currently under examination by the Internal Revenue Service. We have various state and foreign returns under examination.

The ending amounts of accrued interest and penalties related to unrecognized tax benefits were less than \$1 million in 2016 and \$1 million in 2015. We classify interest and penalties as income tax expense in our consolidated statement of operations.

The foreign portion of our earnings before income taxes was \$86 million, \$83 million, and \$68 million in 2016, 2015, and 2014 respectively, and the remaining portion was domestic.

## (13) Earnings Per Share

A reconciliation of the numerators and the denominators of the basic and diluted per share computations are as follows:

	2016			2015			2014		
	Earnings (Numerator)	Shares (Denominator)	Per-Share Amount	Earnings (Numerator)	Shares (Denominator)	Per-Share Amount	Earnings (Numerator)	Shares (Denominator)	Per-Share Amount
<i>(In thousands, except per share data)</i>									
<b>Basic earnings per share:</b>									
Income available to common shareholders	\$ 636,484	337,740	\$ 1.88	\$ 539,362	343,178	\$ 1.57	\$ 525,433	342,150	\$ 1.54
<b>Effect of dilutive securities:</b>									
Stock options and non-vested shares	—	5,913		—	7,730		—	8,236	
<b>Diluted earnings per share:</b>									
Income available to common shareholders including assumed conversions	\$ 636,484	343,653	\$ 1.85	\$ 539,362	350,908	\$ 1.54	\$ 525,433	350,386	\$ 1.50

Options to purchase 9.4 million, 2.9 million and 5.7 million shares of common stock at per share prices ranging from \$47.38 to \$73.40, \$50.04 to \$73.40 and \$44.05 to \$66.10, were outstanding at the end of 2016, 2015 and 2014, respectively, but were not included in the computation of diluted earnings per share because they were anti-dilutive.

## (14) Share-Based Compensation and Equity

### Stock Option and Equity Plans

As of the end of 2016, we had five fixed stock option and equity plans in effect for associates and directors. This includes one plan from which we could issue grants, the Cerner Corporation 2011 Omnibus Equity Incentive Plan (the Omnibus Plan); and four plans from which no new grants are permitted, but some awards remain outstanding (Plans D, E, F, and G).

Awards under the Omnibus Plan may consist of stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares, performance units, performance grants and bonus shares. At the end of 2016, 17.4 million shares remain available for awards. Stock options granted under the Omnibus Plan are exercisable at a price not less than fair market value on the date of grant. Stock options under the Omnibus Plan typically vest over a period of five years and are exercisable for periods of up to 10 years.

### Stock Options

The fair market value of each stock option award granted in 2016 is estimated on the date of grant using the Black-Scholes-Merton (BSM) pricing model. The pricing model requires the use of the following estimates and assumptions:

- Expected volatilities under the BSM model are based on an equal weighting of implied volatilities from traded options on our common shares and historical volatility.
- The expected term of stock options granted is the period of time for which an option is expected to be outstanding beginning on the grant date. Our calculation of expected term takes into account the contractual term of the option, as well as the effects of employees' historical exercise patterns; groups of associates (executives and non-executives) that have similar historical behavior are considered separately for valuation purposes.
- The risk-free rate is based on the zero-coupon U.S. Treasury bond with a term consistent with the expected term of the awards.

The weighted-average assumptions used to estimate the fair market value of stock options were as follows:

	For the Years Ended		
	2016	2015	2014
Expected volatility (%)	29.4%	27.6%	29.7%
Expected term (yrs)	7	7	9
Risk-free rate (%)	1.5%	1.8%	2.9%

Stock option activity for 2016 was as follows:

(In thousands, except per share data)	Number of Shares	Weighted-Average Exercise Price	Aggregate Intrinsic Value	Weighted-Average Remaining Contractual Term (Yrs)
Outstanding at beginning of year	24,267	\$ 34.46		
Granted	4,133	55.14		
Exercised	(4,053)	17.46		
Forfeited and expired	(746)	55.71		
Outstanding at end of year	<u>23,601</u>	40.33	\$ 280,586	6.00
Exercisable at end of year	12,662	\$ 26.19	\$ 275,484	4.14

	For the Years Ended		
	2016	2015	2014
(In thousands, except for grant date fair values)			
Weighted-average grant date fair values	\$ 18.31	\$ 21.51	\$ 22.59
Total intrinsic value of options exercised	\$ 177,375	\$ 196,127	\$ 124,828
Cash received from exercise of stock options	63,794	51,475	31,879
Tax benefit realized upon exercise of stock options	64,347	66,868	44,029

As of the end of 2016, there was \$150 million of total unrecognized compensation cost related to stock options granted under all plans. That cost is expected to be recognized over a weighted-average period of 3.18 years.

#### *Non-vested Shares*

Non-vested shares are valued at fair market value on the date of grant and will vest provided the recipient has continuously served on the Board of Directors through such vesting date or, in the case of an associate, provided that performance measures are attained. The expense associated with these grants is recognized over the period from the date of grant to the vesting date, when achievement of the performance condition is deemed probable.

Non-vested share activity for 2016 was as follows:

(In thousands, except per share data)	Number of Shares	Weighted-Average Grant Date Fair Value
Outstanding at beginning of year	557	\$ 59.42
Granted	58	57.22
Vested	(216)	53.74
Forfeited	(45)	70.37
Outstanding at end of year	<u>354</u>	<u>\$ 61.12</u>

(In thousands, except for grant date fair values)	For the Years Ended		
	2016	2015	2014
Weighted average grant date fair values for shares granted during the year	\$ 57.22	\$ 68.57	\$ 55.27
Total fair value of shares vested during the year	\$ 12,221	\$ 13,730	\$ 11,294

As of the end of 2016, there was \$8 million of total unrecognized compensation cost related to non-vested share awards granted under all plans. That cost is expected to be recognized over a weighted-average period of 1.82 years.

#### Associate Stock Purchase Plan

We established an Associate Stock Purchase Plan (ASPP) in 2001, which qualifies under Section 423 of the Internal Revenue Code. Each individual employed by us and associates of our U.S. based subsidiaries, except as provided below, are eligible to participate in the ASPP (Participants). The following individuals are excluded from participation: (a) persons who, as of the beginning of a purchase period under the Plan, have been continuously employed by us or our domestic subsidiaries for less than two weeks; (b) persons who, as of the beginning of a purchase period, own directly or indirectly, or hold options or rights to acquire under any agreement or Company plan, an aggregate of 5% or more of the total combined voting power or value of all outstanding shares of all classes of Company common stock; and, (c) persons who are customarily employed by us for less than 20 hours per week or for less than five months in any calendar year. Participants may elect to make contributions from 1% to 20% of compensation to the ASPP, subject to annual limitations determined by the Internal Revenue Service. Participants may purchase Company common stock at a 15% discount on the last business day of the option period. The purchase of Company common stock is made through the ASPP on the open market and subsequently reissued to Participants. The difference between the open market purchase and the Participant's purchase price is recognized as compensation expense, as such difference is paid by Cerner, in cash.

#### Share-Based Compensation Cost

Our stock option and non-vested share awards qualify for equity classification. The costs of our ASPP, along with participant contributions, are recorded as a liability until open market purchases are completed. The amounts recognized in the consolidated statements of operations with respect to stock options, non-vested shares and ASPP are as follows:

(In thousands)	For the Years Ended		
	2016	2015	2014
Stock option and non-vested share compensation expense	\$ 74,536	\$ 70,121	\$ 59,292
Associate stock purchase plan expense	6,537	5,393	4,603
Amounts capitalized in software development costs, net of amortization	(482)	(588)	(930)
Amounts charged against earnings, before income tax benefit	\$ 80,591	\$ 74,926	\$ 62,965
Amount of related income tax benefit recognized in earnings	<u>\$ 24,749</u>	<u>\$ 23,435</u>	<u>\$ 22,101</u>

## *Preferred Stock*

As of the end of 2016 and 2015, we had 1.0 million shares of authorized but unissued preferred stock, \$0.01 par value.

## *Treasury Stock*

In March 2016, our Board of Directors authorized a share repurchase program that allowed the Company to repurchase shares of our common stock up to \$300 million, excluding transaction costs. That program was completed in November 2016. In November 2016, our Board of Directors authorized a new share repurchase program that allows the Company to repurchase shares of our common stock up to \$500 million, excluding transaction costs. No time limit was set for the completion of the current program. During 2016, we repurchased 13.7 million shares for total consideration of \$700 million under these programs. The shares were recorded as treasury stock and accounted for under the cost method. No repurchased shares have been retired. At December 31, 2016, \$100 million remains available for repurchase under the outstanding program.

In September 2015, our Board of Directors authorized a share repurchase program that allowed the Company to repurchase shares of our common stock up to \$245 million, excluding transaction costs. During 2015, we repurchased 4.1 million shares for total consideration of \$245 million under the program. These shares were recorded as treasury stock and accounted for under the cost method. No repurchased shares have been retired. This program is now complete.

In December of 2013, our Board of Directors authorized a share repurchase program that allowed the Company to repurchase shares of our common stock up to \$217 million, excluding transaction costs. In May 2014, our Board of Directors approved an amendment to the repurchase program that was authorized in December 2013. Under the amendment, the Company was authorized to repurchase shares of our common stock up to an additional \$100 million, for an aggregate of \$317 million, excluding transaction costs. Under this program, we repurchased 1.6 million shares for total consideration of \$100 million, and 4.1 million shares for total consideration of \$217 million, in 2015 and 2014, respectively. These shares were recorded as treasury stock and accounted for under the cost method. No repurchased shares have been retired. This program is now complete.

## **(15) Foundations Retirement Plan**

The Cerner Corporation Foundations Retirement Plan (the Plan) was established under Section 401(k) of the Internal Revenue Code. All associates age 18 and older and who are not a member of an excluded class are eligible to participate. Participants may elect to make pre-tax and Roth (post-tax) contributions from 1% to 80% of eligible compensation to the Plan, subject to annual limitations determined by the Internal Revenue Service. Participants may direct contributions into mutual funds, a stable value fund, a Company stock fund, or a self-directed brokerage account. The Plan has a first tier discretionary match that is made on behalf of participants in an amount equal to 33% of the first 6% of the participant's salary contribution. The Plan's first tier discretionary match expenses amounted to \$28 million, \$30 million and \$18 million for 2016, 2015 and 2014, respectively.

The Plan also provides for a second tier matching contribution that is purely discretionary, the payment of which will depend on overall Company performance and other conditions. If approved by the Compensation Committee, contributions by the Company will be tied to attainment of established financial metric goals, such as earnings per share for the year. Participants who defer 2% of their paid base salary, are actively employed as of the last day of the Plan year and are employed before October 1st of the Plan year are eligible to receive the second tier discretionary match contribution, if any such second tier matching contribution is approved by the Compensation Committee. For the years ended 2016, 2015 and 2014 we expensed \$8 million, \$7 million and \$5 million for the second tier discretionary distributions, respectively.

## **(16) Related Party Transactions**

### *Continuous Campus*

During 2009, as part of our long-term space planning analysis, we determined that we would require additional office space for associates to accommodate our anticipated growth. We evaluated various sites in the Kansas City metropolitan area and negotiated with several different governmental entities regarding available incentives. Upon completion of this review, we decided to proceed with an office development (known as our "Continuous Campus") in Wyandotte County, Kansas. In order to maximize available incentives, we agreed to pursue the office development in conjunction with the development of an 18,000 seat, multi-sport stadium complex and related recreational athletic complex.

The stadium complex was developed by Kansas Unified Development, LLC (the "Developer"), an entity controlled by Neal Patterson, Chairman of the Board of Directors and Chief Executive Officer of the Company, and Clifford Illig, Vice Chairman of the Board of Directors of the Company. Sporting Kansas City ("Sporting KC") is the principal tenant of the stadium complex. OnGoal LLC ("OnGoal"), the owner of the Sporting KC professional soccer club, is also controlled by Messrs. Patterson and Illig.

The Company currently estimates it will receive incentives in the aggregate of \$82 million from the Developer, the Unified Government of Wyandotte County/Kansas City, Kansas (the "Unified Government") and the Kansas Department of Commerce. Components of the \$82 million of incentives are described below:

*Cash Grants* - In January 2014 we received \$48 million of cash grants from the Kansas Department of Commerce for project costs. The State of Kansas has issued bonds in order to fund these incentives and has incurred costs of issuance and debt service obligations. As consideration for the grant, we made certain new job and state payroll tax withholding commitments. Should aggregate state payroll tax withholdings (related to associates at our Continuous Campus) over a 10-year period commencing in January 2014 be less than \$49 million (the \$48 million of cash we received plus amounts representing debt service costs incurred by the State of Kansas), we would be required to repay the shortfall. The \$49 million maximum repayment amount will be adjusted up or down during the 10-year period, based on any future change to Kansas payroll tax withholding rates.

Under a separate agreement, the Developer and OnGoal have agreed to be responsible for certain shortfall payments that may become due. If no payment from Developer or OnGoal becomes due at the end of the 10-year period, the Developer or OnGoal will pay us a success fee of \$4 million.

We recorded the cash grants as an obligation/liability at \$48 million, upon receipt in January 2014. Over time, this liability will accrete, utilizing the effective interest method, up to the maximum repayment amount, offset by reductions based on actual state payroll tax withholdings generated by our Continuous Campus associates. This activity is recognized as a component of operating expense as it occurs over a period not to exceed 10 years. At the end of 2016, the obligation/liability balance was \$28 million, the majority of which is included in deferred income taxes and other liabilities in our consolidated balance sheets.

*Sales Tax Exemptions* - We have received a sales tax exemption on materials and other fixed assets purchased in connection with the construction. As such, we were not required to remit an aggregate of \$11 million of sales tax on these capital purchases.

*State Income Tax Credits* - We expect state income tax credits to aggregate \$19 million. Such credits are available to offset our Kansas state income tax, and are being recognized as a reduction of income tax expense as we are eligible to claim them.

*Land* - We acquired the land for our Continuous Campus from the Unified Government with certain contingencies upon which the office complex was being constructed. The purchase price of the land, equal to the site's fair market value, was paid by the Developer. In the second quarter of 2012, we commenced vertical construction on the office development, which resolved contingencies and the land contributed to the Company from the Unified Government was recorded at its \$4 million appraisal value.

#### *GRAND Construction, LLC*

GRAND Construction, LLC ("Grand") is a limited liability company owned in part by an entity controlled by Messrs. Patterson and Illig. Grand has historically provided construction management and related services to the Company in connection with our office campuses, for which we paid \$2 million in both 2016 and 2015.



## (17) Commitments

### Leases

We are committed under operating leases primarily for office and data center space and computer equipment through October 2027. Rent expense for office and warehouse space for our regional and global offices for 2016, 2015 and 2014 was \$29 million, \$32 million and \$25 million, respectively. Aggregate minimum future payments under these non-cancelable operating leases are as follows:

<i>(In thousands)</i>	<b>Operating Lease Obligations</b>
2017	\$ 30,089
2018	26,898
2019	22,041
2020	16,085
2021	11,147
2022 and thereafter	8,722
	<u>\$ 114,982</u>

### Other Obligations

We have purchase commitments with various vendors, and minimum funding commitments under collaboration agreements through 2037. Aggregate future payments under these commitments are as follows:

<i>(In thousands)</i>	<b>Purchase Obligations</b>
2017	\$ 83,002
2018	41,887
2019	19,205
2020	7,677
2021	3,711
2022 and thereafter	26,890
	<u>\$ 182,372</u>

### Siemens Innovation Alliance

Concurrently with the execution of the MSPA, we entered into an agreement with Siemens AG to create a strategic alliance to jointly invest in innovative projects that integrate health information technology with medical technologies for the purpose of enhancing workflows and improving clinical outcomes. Each company will contribute up to \$50 million to fund projects of shared importance to both companies and their clients, over an initial term of three years, commencing on February 2, 2015. In 2016 and 2015, we contributed \$3 million and less than \$1 million, respectively, to fund approved projects.

## (18) Segment Reporting

We have two operating segments, Domestic and Global. Revenues are derived primarily from the sale of clinical, financial and administrative information systems and solutions. The cost of revenues includes the cost of third party consulting services, computer hardware, devices and sublicensed software purchased from manufacturers for delivery to clients. It also includes the cost of hardware maintenance and sublicensed software support subcontracted to the manufacturers. Operating expenses incurred by the geographic business segments consist of sales and client service expenses including salaries of sales and client service personnel, expenses associated with our managed services business, marketing expenses, communications expenses and unreimbursed travel expenses. "Other" includes expenses that have not been allocated to the operating segments, such as software development, general and administrative expenses, acquisition costs and related adjustments, share-based compensation expense, and certain amortization and depreciation. Performance of the segments is assessed at the operating earnings level by our chief operating decision maker, who is our Chief Executive Officer. Items such as interest, income taxes, capital expenditures and total assets are managed at the consolidated level and thus are not included in our operating segment disclosures. Accounting policies for each of the reportable segments are the same as those used on a consolidated basis.

The following table presents a summary of our operating segments and other expense for 2016, 2015 and 2014:

<i>(In thousands)</i>	<b>Domestic</b>	<b>Global</b>	<b>Other</b>	<b>Total</b>
<b>2016</b>				
Revenues	\$ 4,245,097	\$ 551,376	\$ —	\$ 4,796,473
Cost of revenues	676,437	102,679	—	779,116
Operating expenses	1,774,146	246,243	1,085,955	3,106,344
Total costs and expenses	<u>2,450,583</u>	<u>348,922</u>	<u>1,085,955</u>	<u>3,885,460</u>
Operating earnings (loss)	<u>\$ 1,794,514</u>	<u>\$ 202,454</u>	<u>\$(1,085,955)</u>	<u>\$ 911,013</u>
<i>(In thousands)</i>	<b>Domestic</b>	<b>Global</b>	<b>Other</b>	<b>Total</b>
<b>2015</b>				
Revenues	\$ 3,904,454	\$ 520,813	\$ —	\$ 4,425,267
Cost of revenues	651,826	98,955	—	750,781
Operating expenses	1,577,594	233,047	1,082,709	2,893,350
Total costs and expenses	<u>2,229,420</u>	<u>332,002</u>	<u>1,082,709</u>	<u>3,644,131</u>
Operating earnings (loss)	<u>\$ 1,675,034</u>	<u>\$ 188,811</u>	<u>\$(1,082,709)</u>	<u>\$ 781,136</u>
<i>(In thousands)</i>	<b>Domestic</b>	<b>Global</b>	<b>Other</b>	<b>Total</b>
<b>2014</b>				
Revenues	\$ 3,021,790	\$ 380,913	\$ —	\$ 3,402,703
Cost of revenues	542,210	62,167	—	604,377
Operating expenses	1,163,413	182,965	688,864	2,035,242
Total costs and expenses	<u>1,705,623</u>	<u>245,132</u>	<u>688,864</u>	<u>2,639,619</u>
Operating earnings (loss)	<u>\$ 1,316,167</u>	<u>\$ 135,781</u>	<u>\$ (688,864)</u>	<u>\$ 763,084</u>

**(19) Quarterly Results (unaudited)**

Selected quarterly financial data for 2016 and 2015 is set forth below:

*(In thousands, except per share data)*

	Revenues	Earnings Before Income Taxes	Net Earnings	Basic Earnings Per Share	Diluted Earnings Per Share
<b>2016</b>					
First Quarter	\$ 1,138,135	\$ 217,129	\$ 150,360	\$ 0.44	\$ 0.43
Second Quarter	1,215,962	243,782	166,454	0.49	0.48
Third Quarter	1,184,557	241,808	169,979	0.50	0.49
Fourth Quarter <sup>(a)</sup>	1,257,819	215,715	149,691	0.45	0.44
Total	<u>\$ 4,796,473</u>	<u>\$ 918,434</u>	<u>\$ 636,484</u>		

(a) Fourth quarter results include pre-tax costs related to the 2016 VSP of \$36 million as further described in Note (1).

*(In thousands, except per share data)*

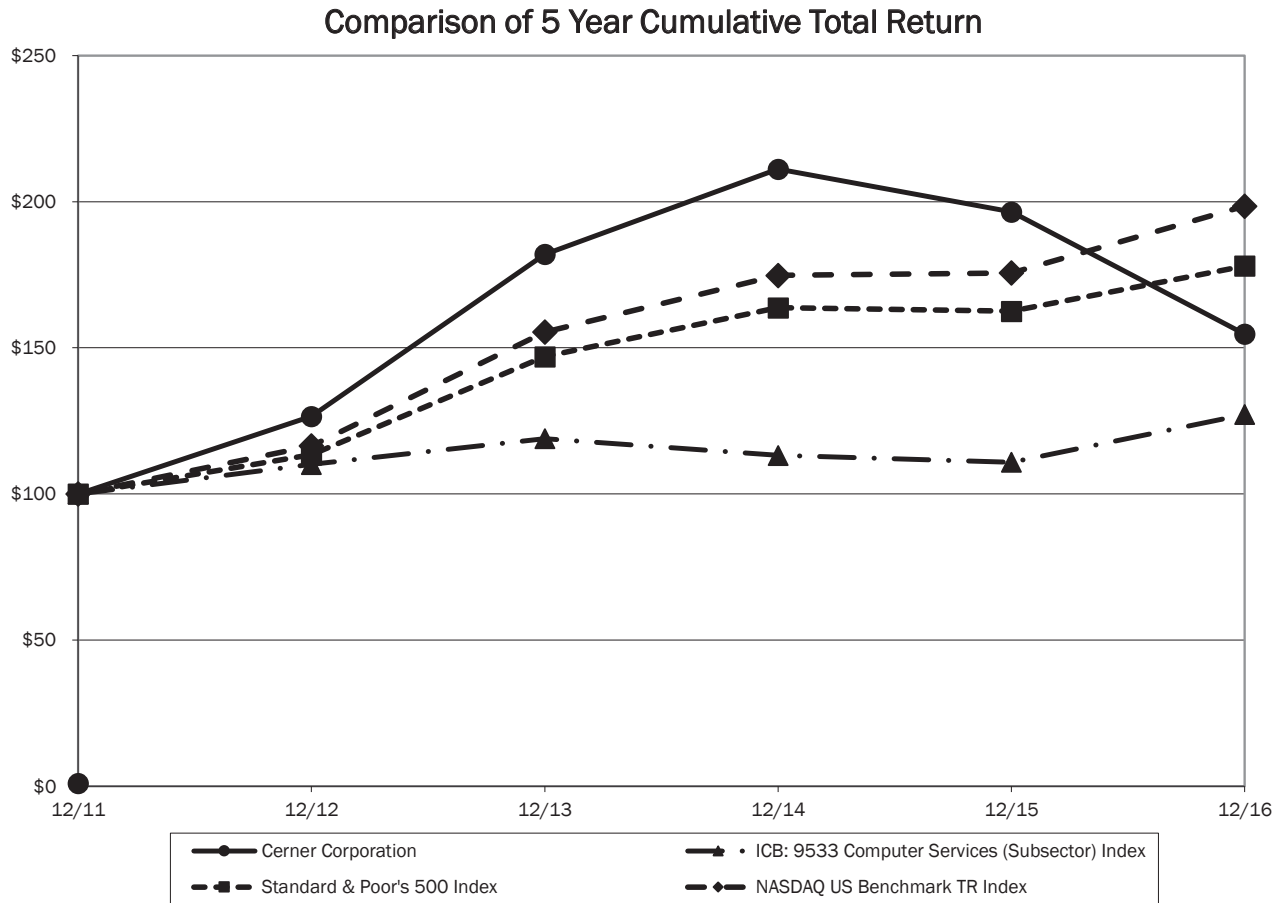
	Revenues	Earnings Before Income Taxes	Net Earnings	Basic Earnings Per Share	Diluted Earnings Per Share
<b>2015</b>					
First Quarter <sup>(b)</sup>	\$ 996,089	\$ 167,120	\$ 110,934	\$ 0.32	\$ 0.32
Second Quarter <sup>(b)(c)</sup>	1,125,997	170,657	115,038	0.33	0.33
Third Quarter <sup>(b)(c)</sup>	1,127,887	215,671	147,282	0.43	0.42
Fourth Quarter <sup>(b)(c)</sup>	1,175,294	227,932	166,108	0.49	0.48
Total	<u>\$ 4,425,267</u>	<u>\$ 781,380</u>	<u>\$ 539,362</u>		

(b) First through Fourth quarter results include pre-tax acquisition costs of \$17 million, \$3 million, \$1 million and \$1 million, respectively, as further described in Note (2).

(c) Second through Fourth quarter results include pre-tax costs related to the 2015 VSP of \$42 million, \$3 million and \$1 million, respectively, as further described in Note (1).

**STOCK PRICE PERFORMANCE GRAPH**

The following graph presents a comparison for the five-year period ended December 31, 2016 of the performance of the Common Stock of the Company with the ICB: 9533 Computer Services (Subsector) Index, the Standard & Poor's 500 Index and the NASDAQ US Benchmark TR Index.



The above comparison assumes \$100 was invested on December 31, 2011 in Common Stock of the Company and in each of the foregoing indices and assumes reinvestment of dividends. The results of each component issuer of each group are weighted according to such issuer's stock market capitalization at the beginning of each year.

# Corporate Information

## **ANNUAL SHAREHOLDERS' MEETING**

The Annual Shareholders' Meeting will be held at 10:00 a.m. local time on Wednesday, May 24, 2017, at The Cerner Round Auditorium in the Cerner Vision Center, located on the Cerner campus at 2850 Rockcreek Parkway, North Kansas City, Missouri, 64117. A formal notice of the Meeting, together with our Proxy Statement and Proxy Card, will be available to each shareholder of record as of March 29, 2017.

## **ANNUAL REPORT/FORM 10-K**

**Publications of interest to current and potential Cerner investors (including our quarterly reports on Form 10-Q and annual reports on Form 10-K, which are filed with the Securities and Exchange Commission) are available at no charge to shareholders. To obtain copies of these materials, you can access them at [www.cerner.com/about/Investor\\_Relations/](http://www.cerner.com/about/Investor_Relations/) or send a written request to:**

**Cerner Corporation  
Investor Relations  
2800 Rockcreek Parkway  
North Kansas City, MO 64117-2551**

Inquiries of an administrative nature relating to shareholder accounting records, stock transfer, change of address and miscellaneous shareholder requests should be directed to our transfer agent and registrar, Computershare Trust Company, N.A. at 1-800-884-4225.

## **TRANSFER AGENT AND REGISTRAR**

Computershare Trust Company, N.A.  
P.O. Box 30170  
College Station, TX 77842-3170  
1-800-884-4225

## **STOCK LISTINGS**

Cerner Corporation's common stock trades on the NASDAQ Global Select Market<sup>SM</sup> under the symbol CERN.

## **INDEPENDENT ACCOUNTANTS**

KPMG LLP  
Kansas City, MO

### **World headquarters**

Cerner Corporation  
2800 Rockcreek Parkway  
Kansas City, MO 64117  
USA  
816.221.1024

### **Worldwide**

with associates in:

Australia	Mexico
Austria	Netherlands
Belgium	Norway
Brazil	Portugal
Canada	Qatar
Chile	Romania
Egypt	Saudi Arabia
Finland	Singapore
France	Slovakia
Germany	Spain
India	Sweden
Ireland	United Arab Emirates
Malaysia	United Kingdom





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