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

SCHEDULE 14A

**Proxy Statement Pursuant to Section 14(a) of
the Securities Exchange Act of 1934**

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material Pursuant to §240.14a-12

Medidata Solutions, Inc.

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.
 - 1) Title of each class of securities to which transaction applies:

 - 2) Aggregate number of securities to which transaction applies:

 - 3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

 - 4) Proposed maximum aggregate value of transaction:

 - 5) Total fee paid:

- Fee paid previously with preliminary materials.
- Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.
 - 1) Amount Previously Paid:

 - 2) Form, Schedule or Registration Statement No.:

 - 3) Filing Party:

 - 4) Date Filed:



April 19, 2018

Dear Stockholders:

We are pleased to invite you to attend the 2018 annual meeting of stockholders of Medidata Solutions, Inc., which will be held at 10:00 a.m., Eastern Daylight Time, on May 30, 2018. As a leading provider of cloud-based technology solutions, we are pleased that this year's annual meeting will again be a completely virtual meeting of stockholders, held over the Internet. You will be able to participate in the annual meeting, vote your shares electronically and submit your questions during the live webcast of the meeting by visiting www.virtualshareholdermeeting.com/medidata2018 and entering your 16-digit control number.

At the meeting, we will ask you to elect seven directors, constituting the entire board of directors, to serve for the ensuing year; to approve an amendment to our 2017 Long-Term Incentive Plan ("LTIP") to increase by 1,300,000 the number of shares of common stock authorized for issuance under the LTIP; to approve an amendment to our Second Amended and Restated 2014 Employee Stock Purchase Plan ("ESPP") to increase by 1,000,000 the number of shares of common stock authorized for issuance under the ESPP; and to ratify the appointment of Deloitte & Touche LLP as our independent registered public accounting firm for the year ending December 31, 2018. In addition, we will hold an advisory vote on the compensation of the named executive officers (commonly referred to as the "say on pay vote").

The meeting also will provide us an opportunity to review with you our business and affairs since our last annual meeting.

Your vote is important to us and to our business. Whether or not you plan to participate in the live webcast of our annual meeting, we hope you will vote as soon as possible. You may vote over the Internet, as well as by telephone or by mailing a proxy or voting instruction card. Voting over the Internet, by telephone or by written proxy will ensure your representation at the annual meeting regardless of whether you participate in our live webcast. Please review the instructions on the proxy or voting instruction card regarding each of these voting options.

We look forward to your participation at our virtual annual meeting.

Sincerely,

A handwritten signature in black ink, appearing to read "Tarek Sherif", written over a thin horizontal line.

Tarek A. Sherif
Chairman and Chief Executive Officer

**Important Notice Regarding the Availability of Proxy Materials
for the Annual Meeting of Stockholders
To Be Held on May 30, 2018**

This proxy statement, along with our 2017 annual report to stockholders, is available free of charge at the following website: www.proxyvote.com.

TABLE OF CONTENTS

TABLE OF CONTENTS

	<u>Page</u>
<u>NOTICE OF 2018 ANNUAL MEETING OF STOCKHOLDERS</u>	<u>iii</u>
<u>PROXY STATEMENT FOR 2018 ANNUAL MEETING OF STOCKHOLDERS</u>	<u>1</u>
<u>GENERAL INFORMATION</u>	<u>1</u>
<u>INTERNET AVAILABILITY OF ANNUAL MEETING MATERIALS</u>	<u>1</u>
<u>PARTICIPATING IN THE VIRTUAL ANNUAL MEETING</u>	<u>1</u>
<u>Who is entitled to vote?</u>	<u>2</u>
<u>How many shares must be present or represented to conduct business at the Annual Meeting?</u>	<u>2</u>
<u>Why was I mailed a notice regarding the Internet availability of proxy materials instead of a full set of printed proxy materials?</u>	<u>2</u>
<u>What are my voting choices and what is the voting requirement to approve each of the proposals?</u>	<u>3</u>
<u>How can I vote my shares?</u>	<u>3</u>
<u>What if I am a beneficial owner and do not give voting instructions to my broker?</u>	<u>4</u>
<u>Can I change my vote or revoke my proxy?</u>	<u>4</u>
<u>How are proxies solicited and who will bear the cost?</u>	<u>4</u>
<u>Where can I find the voting results of the Annual Meeting?</u>	<u>4</u>
<u>PROPOSAL 1 ELECTION OF DIRECTORS</u>	<u>5</u>
<u>Nominees for Election</u>	<u>5</u>
<u>Vote Required</u>	<u>7</u>
<u>Board Recommendation</u>	<u>7</u>
<u>CORPORATE GOVERNANCE AND BOARD MATTERS</u>	<u>8</u>
<u>Director Independence</u>	<u>8</u>
<u>Board of Directors and Committees</u>	<u>8</u>
<u>Majority Voting in Director Elections</u>	<u>10</u>
<u>Consideration of Director Candidates</u>	<u>10</u>
<u>Board Meetings and Attendance</u>	<u>11</u>
<u>Board Leadership Structure</u>	<u>11</u>
<u>Lead Independent Director</u>	<u>12</u>
<u>Board's Role in Risk Oversight</u>	<u>12</u>
<u>Meetings of Independent Directors</u>	<u>13</u>
<u>Outside Advisors</u>	<u>13</u>
<u>Board Effectiveness</u>	<u>13</u>
<u>Corporate Governance Guidelines</u>	<u>13</u>
<u>Code of Business Conduct and Ethics</u>	<u>13</u>
<u>Stockholder Communications with the Board</u>	<u>13</u>
<u>Compensation Committee Interlocks and Insider Participation</u>	<u>14</u>
<u>Director Compensation</u>	<u>14</u>
<u>PROPOSAL 2 ADVISORY VOTE TO APPROVE THE COMPENSATION OF THE NAMED EXECUTIVE OFFICERS (THE "SAY ON PAY VOTE")</u>	<u>16</u>
<u>Board Recommendation</u>	<u>16</u>
<u>PROPOSAL 3 APPROVAL OF AN AMENDMENT TO OUR 2017 LONG-TERM INCENTIVE PLAN</u>	<u>17</u>
<u>General</u>	<u>17</u>
<u>Why Should You Vote to Approve the Amendment to the 2017 LTIP?</u>	<u>18</u>
<u>Equity Incentive Program Metrics</u>	<u>19</u>
<u>Summary of the 2017 LTIP</u>	<u>19</u>
<u>Certain U.S. Income Tax Consequences</u>	<u>22</u>
<u>New Plan Benefits</u>	<u>23</u>
<u>Vote Required</u>	<u>23</u>
<u>Board Recommendation</u>	<u>23</u>

TABLE OF CONTENTS

	<u>Page</u>
<u>PROPOSAL 4 APPROVAL OF AN AMENDMENT TO THE SECOND AMENDED AND RESTATED 2014 EMPLOYEE STOCK PURCHASE PLAN</u>	<u>24</u>
<u>General</u>	<u>24</u>
<u>Summary of the ESPP</u>	<u>24</u>
<u>Certain U.S. Income Tax Consequences</u>	<u>26</u>
<u>New Plan Benefits</u>	<u>26</u>
<u>Vote Required</u>	<u>27</u>
<u>Board Recommendation</u>	<u>27</u>
<u>Executive Officers</u>	<u>28</u>
<u>Compensation Discussion and Analysis</u>	<u>29</u>
<u>Risks Presented by Compensation Programs</u>	<u>46</u>
<u>Compensation Committee Report</u>	<u>46</u>
<u>2017 Summary Compensation Table</u>	<u>47</u>
<u>2017 Grants of Plan-Based Awards Table</u>	<u>48</u>
<u>Outstanding Equity Awards at December 31, 2017 Table</u>	<u>49</u>
<u>2017 Option Exercises and Stock Vested Table</u>	<u>51</u>
<u>Securities Authorized for Issuance under Equity Compensation Plans</u>	<u>51</u>
<u>Potential Payments upon Termination of Employment or a Change of Control</u>	<u>51</u>
<u>CEO Pay Ratio</u>	<u>53</u>
<u>SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE</u>	<u>55</u>
<u>COMMON STOCK OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT</u>	<u>56</u>
<u>RELATED PERSON TRANSACTIONS</u>	<u>58</u>
<u>Policy and Procedure for Approval of Related Person Transactions</u>	<u>58</u>
<u>Transactions with Related Persons</u>	<u>58</u>
<u>PROPOSAL 5 RATIFICATION OF APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM</u>	<u>59</u>
<u>Vote Required</u>	<u>59</u>
<u>Board Recommendation</u>	<u>59</u>
<u>Fees Paid to Independent Registered Public Accounting Firm</u>	<u>59</u>
<u>Audit Committee Report</u>	<u>59</u>
<u>Policy on Audit Committee Pre-Approval of Audit and Permissible Non-Audit Services of Independent Auditors</u>	<u>60</u>
<u>ADDITIONAL INFORMATION</u>	<u>61</u>
<u>Stockholder Proposals and Nominations</u>	<u>61</u>
<u>Transaction of Other Business</u>	<u>61</u>
<u>Annual Report on Form 10-K</u>	<u>61</u>
<u>Incorporation by Reference</u>	<u>61</u>
<u>Householding</u>	<u>62</u>
<u>Exhibit A-Medidata Solutions, Inc. Amended and Restated 2017 Long-Term Incentive Plan</u>	
<u>Exhibit B-Medidata Solutions, Inc. Third Amended and Restated 2014 Employee Stock Purchase Plan</u>	

MEDIDATA SOLUTIONS, INC.
NOTICE OF 2018 ANNUAL MEETING OF STOCKHOLDERS
To Be Held on May 30, 2018

The annual meeting of stockholders of Medidata Solutions, Inc. will be held virtually (that is, over the Internet) on May 30, 2018, at 10:00 a.m., Eastern Daylight Time, for the following purposes:

1. To elect seven directors, constituting the entire board of directors, to hold office until the next annual meeting of stockholders or until their respective successors have been elected and qualified.
2. To hold an advisory vote to approve the compensation of the named executive officers (the “say on pay vote”).
3. To approve an amendment to our 2017 Long-Term Incentive Plan (“LTIP”) to increase by 1,300,000 the number of shares of common stock authorized for issuance under the LTIP.
4. To approve an amendment to our Second Amended and Restated 2014 Employee Stock Purchase Plan (“ESPP”) to increase by 1,000,000 the number of shares of common stock authorized for issuance under the ESPP.
5. To ratify the appointment of Deloitte & Touche LLP as our independent registered public accounting firm for the year ending December 31, 2018.
6. To transact such other business as may properly come before the meeting or at any and all adjournments or postponements thereof.

Attached to this notice is a proxy statement setting forth information with respect to the above items and certain other information. As a leading provider of cloud-based technology solutions, we are pleased that this year’s annual meeting will again be a completely virtual meeting of stockholders, held over the Internet. You will be able to attend the annual meeting, vote your shares electronically and submit your questions during the live webcast of the meeting by visiting www.virtualshareholdermeeting.com/medidata2018 and entering your 16-digit control number.

If you owned our common stock at the close of business on April 2, 2018, you may participate in and vote at the meeting. A list of stockholders eligible to vote at the meeting will be available for review for any purpose related to the meeting, both during our regular business hours at our headquarters in New York, New York for the ten days prior to the meeting, and online during the Annual Meeting, accessible at www.virtualshareholdermeeting.com/medidata2018.

In accordance with Securities and Exchange Commission rules, we are furnishing these proxy materials and our 2017 Annual Report to Stockholders over the Internet. We believe that posting these materials on the Internet enables us to provide stockholders with the information that they need more quickly, while lowering our costs of printing and delivery and reducing the environmental impact of our annual meeting. Stockholders may request mailed paper copies if preferred. On or about April 19, 2018 we will mail to stockholders as of the record date a notice containing instructions on how to access our Annual Meeting materials and vote via the Internet, mail or telephone. You may also vote electronically during the live webcast of the virtual meeting.

Your vote is very important to us and to our business. Whether or not you plan to participate in our virtual annual meeting, we encourage you to read this proxy statement and submit your proxy or voting instructions as soon as possible.

By order of the board of directors,



Michael Otner

Executive Vice President, General Counsel and Secretary

April 19, 2018
350 Hudson Street, 9th Floor
New York, New York 10014

**PROXY STATEMENT
FOR
2018 ANNUAL MEETING OF STOCKHOLDERS**

GENERAL INFORMATION

This proxy statement is furnished in connection with the solicitation of proxies by our board of directors for use at the 2018 annual meeting of stockholders to be held on May 30, 2018 (the “Annual Meeting”), or at any adjournments or postponements of the Annual Meeting, at the time and for the purposes specified in the accompanying notice.

Our board of directors has made these proxy materials available to you via the Internet or, upon your request, has delivered printed versions of these materials to you by mail. We are furnishing this proxy statement in connection with the solicitation by our board of directors of proxies to be voted at our Annual Meeting. The Annual Meeting will be held on May 30, 2018 at 10:00 a.m. Eastern Daylight Time, or at any adjournment thereof. As a leading provider of cloud-based technology solutions, we are pleased that this year’s annual meeting will again be a completely virtual meeting of stockholders, held over the Internet.

INTERNET AVAILABILITY OF ANNUAL MEETING MATERIALS

We are making this proxy statement and our 2017 Annual Report to Stockholders for the year ended December 31, 2017, including our Annual Report on Form 10-K for the year ended December 31, 2017, available to our stockholders on the Internet. On or about April 19, 2018, we will mail our stockholders a Notice of Internet Availability of Proxy Materials containing instructions on how to access our proxy materials, including this proxy statement and our 2017 Annual Report, and vote. If you received a Notice of Internet Availability of Proxy Materials by mail, you will not receive a printed copy of the proxy materials in the mail unless you specifically request these materials. Other stockholders, in accordance with their prior requests, have received e-mail notification of how to access our proxy materials and vote over the Internet, or have been mailed paper copies of our proxy materials and a proxy card or a vote instruction form from their bank or broker.

Internet distribution of proxy materials is designed to expedite receipt by stockholders, lower the cost of our Annual Meeting, and reduce the environmental impact of our Annual Meeting. However, if you received a Notice of Internet Availability of Proxy Materials by mail and would like to receive a printed copy of our proxy materials, please follow the instructions for requesting such materials contained on the Notice of Internet Availability of Proxy Materials. If you have previously elected to receive our proxy materials electronically, you will continue to receive these materials via e-mail unless you elect otherwise.

PARTICIPATING IN THE VIRTUAL ANNUAL MEETING

Medidata Solutions will be hosting this year’s Annual Meeting live over the Internet at www.virtualshareholdermeeting.com/medidata2018. This year’s Annual Meeting will be a completely virtual meeting of stockholders. A summary of the information you need to participate in our Annual Meeting online is provided below:

- Any stockholder can attend and listen to the Annual Meeting live over the Internet at www.virtualshareholdermeeting.com/medidata2018;
- Only stockholders as of the record date for the Annual Meeting, by using their 16-digit control number, may vote or submit questions while participating in the live webcast of the Annual Meeting;
- Instructions on how to participate in the Annual Meeting are posted at www.virtualshareholdermeeting.com/medidata2018;
- Questions regarding how to participate in the Annual Meeting will be answered by calling 1-855-449-0991 on the meeting date; and
- A webcast replay of the Annual Meeting will be available online until May 30, 2019.

In this proxy statement, the terms “our company,” “Medidata,” “we,” “us” and “our” refer to Medidata Solutions, Inc. and its consolidated subsidiaries and their predecessors. The mailing address of our principal executive office is Medidata Solutions, Inc., 350 Hudson Street, 9th Floor, New York, New York 10014.

TABLE OF CONTENTS

All shares entitled to vote and represented by properly executed proxies delivered pursuant to this solicitation, and not later revoked, will be voted at the Annual Meeting in accordance with the instructions given in the proxy. If no instructions are indicated on a properly executed proxy, the shares represented by that proxy will be voted in accordance with the recommendations of the board of directors as follows:

- FOR the election of the seven director nominees;
- FOR the approval of the compensation of the named executive officers on an advisory basis (the “say on pay vote”);
- FOR the approval of an amendment to our 2017 Long-Term Incentive Plan (“LTIP”) to increase by 1,300,000 the number of shares of common stock authorized for issuance under the LTIP;
- FOR the approval of an amendment to our Second Amended and Restated 2014 Employee Stock Purchase Plan (“ESPP”) to increase by 1,000,000 the number of shares of common stock authorized for issuance under the ESPP;
- FOR the ratification of Deloitte & Touche LLP as our independent registered public accounting firm for the year ending December 31, 2018;
- in the discretion of the named proxies with respect to any other matters presented at the Annual Meeting.

All shares of our common stock represented by properly executed and unrevoked proxies will be voted if such proxies are received in time for the meeting.

Who is entitled to vote?

As of the close of business on April 2, 2018, the record date for determination of stockholders entitled to vote at the Annual Meeting, there were outstanding 59,198,095 shares of our common stock (excluding treasury shares, which cannot be voted), all of which are entitled to vote with respect to all matters to be acted upon at the Annual Meeting. Each stockholder of record is entitled to one vote for each share of common stock held by such stockholder. No shares of preferred stock of the company were outstanding as of April 2, 2018.

How many shares must be present or represented to conduct business at the Annual Meeting?

The required quorum for the transaction of business at the meeting is a majority of the total outstanding shares of our common stock entitled to vote at the meeting, either voted electronically during the live webcast or represented by proxy. Both abstentions and broker non-votes are counted for the purpose of determining the presence of a quorum.

Why was I mailed a notice regarding the Internet availability of proxy materials instead of a full set of printed proxy materials?

Pursuant to the “notice and access” rules adopted by the Securities and Exchange Commission (“SEC”), we have elected to provide stockholders access to our proxy materials over the Internet. Accordingly, we sent a Notice of Internet Availability of Proxy Materials to all of our stockholders as of the record date. The Notice of Internet Availability of Proxy Materials includes instructions on how to access our proxy materials over the Internet and how to request a printed copy of these materials. In addition, by following the instructions in the Notice of Internet Availability of Proxy Materials, stockholders may request to receive proxy materials in printed form by mail or electronically by email on an ongoing basis.

Choosing to receive your future proxy materials by email will save us the cost of printing and mailing documents to you and will reduce the impact of our annual meetings on the environment. If you choose to receive future proxy materials by email, you will receive an email next year with instructions containing a link to those materials and a link to the proxy voting site. Your election to receive proxy materials by email will remain in effect until you terminate it.

TABLE OF CONTENTS

What are my voting choices and what is the voting requirement to approve each of the proposals?

The following chart describes the proposals to be considered at the meeting, the voting choices for each proposal, the vote required to elect directors and to adopt each other proposal, and the manner in which votes will be counted:

<u>Proposal</u>	<u>Voting Options</u>	<u>Vote Required to Adopt the Proposal</u>	<u>Effect of Abstentions</u>	<u>Effect of “Broker Non-Votes”</u>
1. Election of directors	For, against, or abstain on each nominee.	A director nominee will be elected to the board of directors if the votes cast “for” the nominee’s election exceed the votes cast “against” such nominee’s election.	No effect.	No broker discretion to vote.
2. Advisory vote to approve named executive compensation (the “say on pay vote”)	For, against, or abstain.	The affirmative vote of a majority of the shares of common stock represented at the annual meeting and entitled to vote thereon.	Counted as vote. Same effect as votes against.	No broker discretion to vote.
3. Approval of amendment to the 2017 Long-Term Incentive Plan	For, against, or abstain.	The affirmative vote of a majority of the shares of common stock represented at the annual meeting and entitled to vote thereon.	Counted as vote. Same effect as votes against.	No broker discretion to vote.
4. Approval of an amendment to the Second Amended and Restated 2014 Employee Stock Purchase Plan	For, against, or abstain.	The affirmative vote of a majority of the shares of common stock represented at the annual meeting and entitled to vote thereon.	Counted as vote. Same effect as votes against.	No broker discretion to vote.
5. Ratification of selection of Deloitte & Touche LLP	For, against, or abstain.	The affirmative vote of a majority of the shares of common stock represented at the annual meeting and entitled to vote thereon.	Counted as vote. Same effect as votes against.	Brokers have discretion to vote.

How can I vote my shares?

By proxy. Whether you hold shares directly as the stockholder of record or beneficially in street name, you may direct how your shares are voted without participating in our online Annual Meeting. If you are a stockholder of record, you may vote by submitting a proxy. If you hold shares beneficially in street name, you may vote by submitting voting instructions to your broker, trustee or nominee. For directions on how to vote, please refer to the instructions on your Notice of Internet Availability of Proxy Materials or proxy card or, for shares held beneficially in street name, the voting instruction card provided by your broker, trustee or nominee.

At our virtual Annual Meeting. Whether you are a stockholder of record or hold your shares in “street name,” you may vote electronically during the live webcast of our Annual Meeting. You will need to enter your 16-digit control number (included in your Notice of Internet Availability of Proxy Materials, your proxy card or the voting instructions that accompanied your proxy materials) to vote your shares at the Annual Meeting. *Even if you plan to participate in our virtual Annual Meeting, we recommend that you also submit your proxy or voting instructions as described above so that your vote will be counted if you are unable to, or later decide not to, participate in the live webcast of the meeting.*

TABLE OF CONTENTS

If any matters are properly presented for consideration at the Annual Meeting, including, among other things, consideration of a motion to adjourn the Annual Meeting to another time (including, without limitation, for the purpose of soliciting additional proxies), the persons named in the proxy card and acting thereunder will have discretion to vote on those matters in accordance with their best judgment. We do not currently anticipate that any other matters will be raised at the Annual Meeting.

What if I am a beneficial owner and do not give voting instructions to my broker?

As a beneficial owner, in order to ensure your shares are voted in the way you would like, you must provide voting instructions to your bank, broker or other nominee by the deadline provided in the materials you receive from your bank, broker or other nominee. If you do not provide voting instructions to your bank, broker or other nominee, whether your shares can be voted by such person depends on the type of item being considered for vote.

Non-Discretionary Items. The election of directors, advisory “say on pay” vote, vote to approve an amendment to our 2017 Long-Term Incentive Plan, and vote to approve an amendment to our Second Amended and Restated 2014 Employee Stock Purchase Plan are non-discretionary items and may not be voted on by brokers, banks or other nominees who have not received specific voting instructions from beneficial owners. In tabulating the voting result for any particular proposal, shares that constitute broker non-votes are not considered votes cast on that proposal. Thus, broker non-votes will not affect the outcome of any matter being voted on at the Annual Meeting, assuming that a quorum is obtained.

Discretionary Item. The ratification of the appointment of Deloitte & Touche LLP as our independent registered public accounting firm is a discretionary item. Generally, brokers, banks and other nominees that do not receive voting instructions from beneficial owners may vote on this proposal in their discretion. We encourage you to provide instructions to your broker regarding the voting of your shares.

Can I change my vote or revoke my proxy?

Any holder of our common stock has the right to revoke his or her proxy at any time prior to the voting thereof at the Annual Meeting by (1) filing a written revocation with the Secretary prior to the voting of such proxy, (2) giving a duly executed proxy bearing a later date or (3) participating in and voting electronically during the live webcast of the Annual Meeting. If you hold your shares in the name of a bank, broker or other nominee, you should follow the instructions provided by your bank, broker or nominee in revoking your previously granted proxy.

How are proxies solicited and who will bear the cost?

We will bear the cost of the solicitation of proxies. In addition to solicitation by mail, our directors, officers and employees may solicit proxies from stockholders by telephone, e-mail or in person. In accordance with SEC regulations, banks, brokers and other custodians, nominees and fiduciaries also will be reimbursed by us, as necessary, for their reasonable expenses for sending proxy solicitation materials to the beneficial owners of our common stock. If warranted, we may engage the services of a proxy solicitor in connection with this solicitation, and would pay customary fees and expenses for these services.

Where can I find the voting results of the Annual Meeting?

We will announce preliminary voting results at the Annual Meeting. Voting results will also be disclosed on a Form 8-K filed with the SEC within four business days after the Annual Meeting, which will be available on our website.

PROPOSAL 1

ELECTION OF DIRECTORS

At the Annual Meeting, seven directors, constituting the entire board of directors, are to be elected to hold office until the next annual meeting of stockholders or until their respective successors have been elected and qualified. The seven nominees for election at the Annual Meeting are listed below with their biographies. The board of directors, after careful consideration, approved the nomination of each of our currently serving directors. We are not aware of any reason why any nominee would be unable to serve as a director. If any nominee is unable to serve, the shares represented by all valid proxies will be voted for the election of such other person as the board of directors may nominate as a substitute.

The board of directors, acting through its nominating and governance committee, is responsible for nominating a slate of director nominees that collectively have the complementary experience, qualifications, skills and attributes to guide the company and function effectively as a board.

The nominating and governance committee seeks directors with established strong professional reputations and experience in areas relevant to the strategy and operations of our company's business. The nominees for director include individuals who hold or have held senior executive positions in organizations operating in a variety of industries and individuals who have experience serving on boards of directors and board committees of other companies. In these positions, they have gained experience in core management skills, such as strategic and financial planning, public company financial reporting, compliance, risk management and oversight, leadership development and corporate governance practices and trends.

The nominating and governance committee believes that each of the nominees has other key attributes that are important to an effective board: integrity, candor, analytical skills, the willingness to engage management and each other in a constructive and collaborative fashion, and the ability and commitment to devote significant time and energy to service on the board of directors and its committees. The nominating and governance committee takes into account diversity considerations in determining the company's slate and planning for director succession and believes that, as a group, the nominees bring a diverse range of perspectives to the deliberations of the board of directors. Each of the nominees, other than Messrs. Sherif and de Vries, co-founders of the company, is also independent of the company and management. We believe the atmosphere of our board of directors is collegial and that all directors are engaged in their responsibilities. For additional information about our director independence requirements, consideration of director candidates, leadership structure of our boards of directors and other corporate governance matters, see "Corporate Governance and Board Matters" beginning on page [8](#) of this proxy statement.

In addition to the above, the nominating and governance committee also considered the specific experience described in the biographical details that follow in determining to nominate the individuals set forth below for election as directors.

Nominees for Election

Tarek A. Sherif is one of our founders. Mr. Sherif has served as our chief executive officer since 2001 and as a member of our board of directors since 2000. Prior to forming Medidata, Mr. Sherif co-managed and managed equity funds focused on public and private technology and life sciences companies, as well as holding various positions in finance. Mr. Sherif holds a B.A. in economics from Yale College and an M.B.A. in business administration and finance from Columbia University.

Mr. Sherif brings to our board of directors detailed knowledge and unique perspective and insights regarding the strategic and operational opportunities and challenges, economic and industry trends, and competitive and financial positioning of our business. In addition, his leadership as chief executive officer of our company and his knowledge of the company's industry and business as a co-founder and chief executive officer position him well to serve as our chairman.

TABLE OF CONTENTS

Director since 2000

Age 55

Glen M. de Vries is one of our founders. Mr. de Vries has served as our president since February 2008 and as a member of our board of directors since 1999. From 2000 to 2008, Mr. de Vries served as our chief technology officer. Mr. de Vries has over 20 years of experience in medical software development, including electronic health records and consumer-targeted products. Previously, he served as a research assistant at Columbia University focusing on both research science and creating a paperless clinical data management system. Mr. de Vries holds a B.S. in molecular biology and genetics from Carnegie Mellon University.

Mr. de Vries' significant experience as the company's co-founder, former chief technology officer and president provides our board of directors with unique perspectives and insights regarding the company's innovation and strategic vision.

Director since 1999

Age 45

Carlos Dominguez has served as president and chief operating officer of Sprinklr Inc., a privately held social media management software company, since January 2015. Prior to joining Sprinklr, Mr. Dominguez held various executive positions at Cisco Systems, Inc. and served as its senior vice president, office of the chairman and chief executive officer, from January 2008 to January 2015. Mr. Dominguez joined Cisco in 1992 and previously served as senior vice president of its Worldwide Service Provider Operations group from 2004 to 2008 and as a vice president for U.S. Service Provider Sales from 1999 to 2004.

Mr. Dominguez brings to our board of directors significant managerial experience, which gives him the ability to address complex management issues at the most senior levels and provide critical insights into the operational requirements of global technology companies.

Director since 2008

Age 59

Neil M. Kurtz, M.D. served as president and chief executive officer of Golden Living, LLC, a privately held skilled nursing, hospice, home healthcare and institutional pharmacy company, from August 2008 to December 2017. Prior to joining Golden Living, Dr. Kurtz served as president and chief executive officer and a member of the board of directors of TorreyPines Therapeutics, Inc., a clinical-stage biopharmaceutical company, since 2002. Dr. Kurtz co-founded Worldwide Clinical Trials, a contract research organization, where he held the positions of president and chief executive officer until its acquisition by United Health Group, or UHG, in 1999. After the acquisition, Dr. Kurtz became president of Ingenix Pharmaceutical Services, a division of UHG, and also served as a member of the UHG Executive Board until joining TorreyPines Therapeutics, Inc. Dr. Kurtz's career includes senior positions with Boots Pharmaceuticals, Bayer Corporation, Bristol-Myers Squibb and Merck. He currently serves on the board of directors of Team Health Holdings Inc., a leading provider of outsourced physician staffing solutions for hospitals, and Golden Gate National Senior Care Holdings, and served previously on the board of directors of NeurogesX, Inc., a specialty pharmaceutical company. Dr. Kurtz holds a B.A. in psychology from New York University and an M.D. from the Medical College of Wisconsin.

Dr. Kurtz brings to our board of directors significant operational, regulatory, and financial experience as a senior executive and director in the healthcare industry.

Director since 2002

Age 67

George W. McCulloch is currently a partner at Level Equity Management, LLC, a private investment firm he co-founded in 2009. Previously Mr. McCulloch served as a managing director at Insight Venture Partners, which he joined in 2003. Mr. McCulloch holds a B.A. in history from Stanford University.

Mr. McCulloch brings to our board of directors significant operational, financial, and investment experience from his involvement in Level Equity and Insight and their numerous portfolio companies.

TABLE OF CONTENTS

Director since 2004

Age 41

Lee A. Shapiro is currently managing partner and co-founder of 7wire Ventures, a private investment firm that seeks and invests in innovative ideas and entrepreneurs mostly in the areas of healthcare and education. Previously, Mr. Shapiro was president of Allscripts Healthcare Solutions, Inc., a provider of innovative technology solutions, from 2002 to December 2012, where he oversaw the company's strategy, international operations, health plan initiatives and entrepreneurial business investments, and was a consultant to Allscripts from December 2012 to June 2013. Prior to joining Allscripts, he was the chief operating officer of Douglas Elliman-Beitler, a commercial office management and development company, where he directed all business activities throughout the United States. Mr. Shapiro's career also includes serving as president of SES Properties, Inc., vice chairman of City Financial Bancorp and practicing commercial law at Barack, Ferrazzano, Kirschbaum, Perlman & Nagelberg. Mr. Shapiro was also appointed to the Economic Recovery Commission of the State of Illinois during its seating in 2009-2010. He is a member of the board of directors of Tivity Health, Inc., and Aptus Health, a Merck subsidiary. He is also active with the 7wire portfolio and serves on the boards of Livongo Health, Ayogo Health (Chairman), ConsejoSano, Carebox, Zest Health (past Chairman), Modern Teacher and Education Funding Partners, as well as the National Board of the American Heart Association. Mr. Shapiro holds a J.D. degree from The University of Chicago Law School and a B.S. in Accounting from the University of Illinois Urbana-Champaign.

Mr. Shapiro brings to our board of directors significant experience in directing strategic initiatives at a global public healthcare technology company, including mergers and acquisitions, international expansion, business development and partnerships, and business activities in the areas of analytics and information services. Our board of directors also benefits from Mr. Shapiro's experience serving on the boards of several private and not-for-profit companies.

Director since 2011

Age 62

Robert B. Taylor, currently our lead director, served as senior vice president for finance and administration of The Colonial Williamsburg Foundation from January 2001 to December 2014. Prior to joining The Colonial Williamsburg Foundation, Mr. Taylor previously served as vice president and treasurer of Wesleyan University from 1985 to 2001. Mr. Taylor also previously served on the board of directors of Zygo Corporation from 1988 to 2013, including as a member of its corporate governance/nominating committee and chairman of its audit committee. Mr. Taylor holds a B.A. from St. Lawrence University.

Mr. Taylor brings to his role as lead director significant experience in accounting and finance, which qualifies him as our "financial expert," and operational, investment and governance experience from his role as a senior executive and chief financial officer of two large enterprises. Our board of directors also benefits from Mr. Taylor's experience serving on the boards of for profit and not-for-profit companies, including as chair of the audit committee of another public company.

Director since 2008

Age 70

Vote Required

If a quorum is present at the Annual Meeting, directors will be elected by a majority of the votes cast by the holders of the shares of common stock voting electronically during the live webcast or by proxy at the meeting, meaning that a director nominee will be elected to the board of directors if the votes cast "for" the nominee's election exceed the votes cast "against" such nominee's election. Abstentions and broker non-votes are not counted as votes cast for purposes of the election of directors and, therefore, will have no effect on the outcome of such election.

Board Recommendation

Our board of directors recommends a vote FOR the election to the board of directors of each of the foregoing nominees.

CORPORATE GOVERNANCE AND BOARD MATTERS

Director Independence

The board of directors has affirmatively determined that each of the director nominees standing for election, except Tarek Sherif as chief executive officer and Glen de Vries as president, has no relationship that, in the opinion of the board of directors, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and is “independent” within the meaning of the director independence standards of the company, The Nasdaq Stock Market Inc. (“NASDAQ”) and the Securities and Exchange Commission (“SEC”). Furthermore, the board of directors has determined that each member of the audit committee, the compensation committee, and the nominating and governance committee is independent within the meaning of applicable committee independence standards of the company, NASDAQ and the SEC, including Rule 10A-3(b)(1) under the Exchange Act of 1934, as amended (“Exchange Act”). In making that determination, the board of directors considered all relevant facts and circumstances, including (but not limited to) the director’s commercial, industrial, banking, consulting, legal, accounting, charitable and familial relationships.

At least annually, the board of directors evaluates all relationships between the company and each director in light of relevant facts and circumstances for the purposes of determining whether a material relationship exists that might signal a potential conflict of interest or otherwise interfere with such director’s ability to satisfy his or her responsibilities as an independent director. Based on this evaluation, the board of directors makes an annual determination of whether each director is independent within the meaning of the independence standards of the company, NASDAQ and the SEC.

Board of Directors and Committees

Our board of directors currently consists of seven members. If all of the director nominees are elected at the Annual Meeting, our board of directors will continue to consist of seven members. The board of directors is responsible for oversight of our business and affairs. To assist the board of directors in carrying out its duties, the board has delegated certain authority to four standing committees: the audit committee, the compensation committee, the nominating and governance committee, and the strategic investment and acquisition committee.

The membership of each of the audit committee, the compensation committee, and the nominating and governance committee is composed entirely of independent directors and the membership of the strategic investment and acquisition committee is composed of at least half independent directors. In determining the independence of compensation committee members, the board of directors considers the source and amount of compensation received by the members and whether the member is affiliated with the company. In addition, the members of the audit committee meet the heightened standards of independence for audit committee members required by SEC rules and NASDAQ rules.

The committee membership and the responsibilities of each of the committees are described below.

Name	Audit	Nominating and Governance	Compensation	Strategic Investment and Acquisition
Tarek A. Sherif	—	—	—	
Glen M. de Vries	—	—	—	
Carlos Dominguez ⁽¹⁾	—			—
Neil M. Kurtz, M.D. ⁽¹⁾		—		—
George W. McCulloch ⁽¹⁾		—		
Lee A. Shapiro ⁽¹⁾			—	
Robert B. Taylor ^{(1)(L)}			—	—

 Chairman

 Member

⁽¹⁾ Independent director

^(L) Lead director

TABLE OF CONTENTS

The board of directors has adopted a written charter for each of the four standing committees. Each committee charter is available free of charge in the Corporate Governance section of our website at <http://investor.mdsol.com> or by writing to Medidata Solutions, Inc., 350 Hudson Street, 9th Floor, New York, New York 10014, c/o Corporate Secretary.

Audit Committee

Messrs. Taylor, Kurtz, McCulloch and Shapiro currently serve on the audit committee. Mr. Taylor is the chairman of our audit committee. The board of directors has determined that each member of the audit committee is independent within the meaning of the director independence standards of the company and NASDAQ as well as the heightened director independence standards of the SEC for audit committee members, including Rule 10A-3(b)(1) under the Exchange Act. The board of directors has also determined that each of the members of the audit committee is financially sophisticated and is able to read and understand consolidated financial statements and that Mr. Taylor is an “audit committee financial expert” as defined in the Exchange Act.

The composition and responsibilities of the audit committee and the attributes of its members, as reflected in the charter, are intended to be in accordance with applicable requirements for corporate audit committees. The audit committee charter will be reviewed, and amended if necessary, on an annual basis.

The audit committee assists the board in fulfilling its oversight responsibility relating to our financial statements and the disclosure and financial reporting process, our system of internal controls, our internal audit function, the qualifications, independence and performance of our independent registered public accounting firm, compliance with our code of ethics and legal and regulatory requirements. The audit committee has the sole authority to appoint, retain, terminate, compensate and oversee the work of the independent registered public accounting firm, as well as to pre-approve all audit and non-audit services to be provided by the independent registered public accounting firm.

Compensation Committee

Messrs. Kurtz, Dominguez and McCulloch currently serve on the compensation committee. Dr. Kurtz is the chairman of our compensation committee. The board of directors has determined that each member of the compensation committee is a “non-employee” director within the meaning of Rule 16b-3 of the Exchange Act and independent within the meaning of the director independence standards of the company and NASDAQ. In addition, each member of the compensation committee is an “outside director” for purposes of Section 162(m) of the Internal Revenue Code. In determining the independence of our compensation committee members, the board of directors considered several relevant factors, including but not limited to the source and amount of compensation received by the members and whether the member is affiliated with the company.

The compensation committee reviews and approves our general compensation strategy and on an annual basis reviews and evaluates our executive officers’ performance, and makes recommendations to the board of directors concerning compensation arrangements for all of our executive officers, including our chief executive officer. The Compensation Discussion and Analysis (“CD&A”) included in this proxy statement includes additional information regarding the compensation committee’s processes and procedures for considering and determining executive officer compensation.

The compensation committee is also responsible for, among other things, administering any incentive compensation plans, equity-based compensation plans and other benefit plans and making recommendations to the board of directors with respect to such plans; reviewing and recommending compensation programs for our non-employee directors; reviewing and approving the CD&A and compensation committee report that the SEC requires in our annual proxy statement; and reviewing the succession planning for our executive officers. In addition, the compensation committee is responsible for making recommendations with respect to the frequency of say on pay votes and for reviewing the results of the say on pay votes. The compensation committee has the authority to engage independent advisors to assist it in carrying out its responsibilities and to approve any such advisor’s fees and other retention terms, as well as the responsibility for oversight of the work of any independent compensation consultant or other advisor it has retained.

Nominating and Governance Committee

Messrs. Taylor, Dominguez and Shapiro currently serve on the nominating and governance committee. Mr. Taylor is the chairman of our nominating and governance committee. The board of directors has determined

TABLE OF CONTENTS

that each member of the nominating and governance committee is independent within the meaning of the director independence standards of the company, NASDAQ and the SEC.

The nominating and governance committee is responsible for, among other things: reviewing board composition, procedures and committees, and making recommendations on these matters to the board of directors; reviewing, soliciting and making recommendations to the board of directors and stockholders with respect to candidates for election to the board; and overseeing compliance by the board of directors and management with our corporate governance principles and ethics standards and code of conduct.

Strategic Investment and Acquisition Committee

Messrs. Sherif, de Vries, McCulloch and Shapiro currently serve on the strategic investment and acquisition committee. Mr. Sherif is the chairman of our strategic investment and acquisition committee.

The strategic investment and acquisition committee is responsible for assisting the board in overseeing acquisitions, joint ventures and strategic investments made by the Company.

Majority Voting in Director Elections

Our bylaws include a majority voting standard in uncontested elections of directors, providing that a nominee for director shall be elected to the board if the votes cast for such nominee's election exceed the votes cast against such nominee's election. This standard applies to the election of directors at the Annual Meeting. In contested director elections, that is, when the number of director nominees exceeds the number of directors to be elected, the voting standard will be a plurality of votes cast.

Our corporate governance guidelines include a director resignation policy providing that, with respect to director nominations, the board shall nominate for election or reelection as director only (i) candidates who agree to tender, promptly following the stockholders' meeting at which they are elected as director or (ii) incumbent directors who have tendered, in advance of such nomination, irrevocable resignations that in each case will be effective upon the failure of such director to receive the required vote at the next stockholders' meeting at which they face reelection and board acceptance of such resignation.

If an incumbent director fails to receive the required vote for reelection, the nominating and governance committee shall make a recommendation to the board as to whether to accept or reject such director's resignation as previously tendered pursuant to our corporate governance guidelines or whether other action should be taken. The nominating and governance committee and the board may consider any factors they deem relevant in deciding whether to accept or reject a director's resignation or whether other action should be taken. Within 90 days from the date the election results are certified, we will publicly disclose the board's decision and the rationale behind such decision.

Consideration of Director Candidates

Director Qualifications. The nominating and governance committee has not formally established any specific, minimum qualifications that must be met by each candidate for the board of directors or specific qualities or skills that are necessary for one or more of the members of the board of directors to possess.

Identifying Nominees. The nominating and governance committee has two primary methods for identifying director candidates (other than those proposed by our stockholders, as discussed below). First, the nominating and governance committee will solicit ideas for possible candidates from a number of sources, including members of the board of directors and Medidata executives. Second, the nominating and governance committee is authorized to use its authority under its charter to retain at the company's expense one or more search firms to identify candidates (and to approve such firms' fees and other retention terms).

Stockholder Candidates. The nominating and governance committee will consider candidates for nomination as a director submitted by stockholders. Although the nominating and governance committee does not have a separate policy that addresses the consideration of director candidates recommended by stockholders, the board of directors does not believe that such a separate policy is necessary because our bylaws permit stockholders to nominate candidates and one of the duties set forth in the nominating and governance committee charter is to consider director candidates submitted by stockholders in accordance with our bylaws. The nominating and governance committee will evaluate individuals recommended by stockholders for nomination as directors according to the criteria discussed above and in accordance with our bylaws and the procedures described under "Stockholder Proposals and Nominations" on page [61](#) of this proxy statement.

TABLE OF CONTENTS

Review of Director Nominees. In evaluating proposed director candidates, the nominating and governance committee may consider, in addition to any minimum qualifications and other criteria for board of directors membership approved by the board of directors from time to time, all facts and circumstances that it deems appropriate or advisable, including, among other things, the proposed director candidate's understanding of the company's business and industry on a technical level, his or her judgment and skills, his or her depth and breadth of professional experience or other background characteristics, his or her independence, his or her willingness to devote the time and effort necessary to be an effective board member, and the needs of the board of directors. We do not have a formal policy with regard to the consideration of diversity in identifying director nominees. However, the board of directors believes that it is essential that its members represent diverse viewpoints, with a broad array of experiences, professions, skills, geographic representation and backgrounds that, when considered as a group, provide a sufficient mix of perspectives to allow the board of directors to best fulfill its responsibilities to the long-term interests of our stockholders. The nominating and governance committee considers at least annually, and recommends to the board of directors suggested changes to, if any, the size, composition, organization and governance of the board of directors and its committees.

Board Meetings and Attendance

The board of directors meets on a regularly scheduled basis during the year to review significant developments affecting us and to act on matters requiring their approval. It also holds special meetings when an important matter requires action between scheduled meetings. Members of senior management regularly attend meetings to report on and discuss their areas of responsibility. Executive sessions, excluding management, are also regularly scheduled (see section "Meetings of Independent Directors" below).

During 2017, the board of directors held seven meetings, the audit committee held seven meetings, the compensation committee held six meetings, the nominating and governance committee held three meetings, and the strategic investment and acquisition committee held three meetings. In addition, the board of directors and its committees act by unanimous written consent from time to time.

Each director attended at least 75% of all board of directors and applicable committee meetings. Directors are expected to attend meetings of the board of directors and meetings of committees on which they serve and to spend as much time and meet as frequently as necessary to properly discharge their responsibilities. In addition, directors are encouraged to attend annual meetings of our stockholders; all directors participated in our 2017 virtual annual meeting and all directors intend to participate in the 2018 virtual annual meeting.

Board Leadership Structure

Under our corporate governance guidelines, the board of directors does not have a policy on whether or not the role of the chairman of the board and chief executive officer should be separate or combined and, if it is to be separate, whether the chairman should be selected from the non-employee directors or be an employee. The board of directors believes that Mr. Sherif's dual role as both chairman of the board and chief executive officer serves the best interests of both the company and its stockholders. His combined role enables decisive leadership, ensures clear accountability, and enhances the company's ability to communicate its message and strategy clearly and consistently to the company's stockholders, employees, customers and suppliers. Mr. Sherif possesses detailed and in-depth knowledge of the issues, opportunities and challenges facing the company and its businesses and is thus best positioned to develop agendas that ensure that the time and attention of the board of directors are focused on the most critical matters. This structure also enables our chief executive officer to act as a bridge between management and the board of directors, helping both to act with a common purpose.

The board of directors appreciates that the advantages gained by having a single chairman and chief executive officer must be viewed in light of potential independence concerns. The board considers, however, that we have adequate safeguards in place to address those concerns. In accordance with our corporate governance guidelines, our board of directors consists of a supermajority of independent directors. In addition, our audit, compensation and nominating and governance committees, which oversee critical matters such as the integrity of our financial statements, the compensation of executive management, the selection and evaluation of directors, and the development and implementation of corporate governance policies, each consist entirely of independent directors.

TABLE OF CONTENTS

Lead Independent Director

Robert B. Taylor, a director of the company since 2008 and the current chairman of the audit committee and the nominating and governance committee, has served as lead director since July 2015. Mr. Taylor's duties and responsibilities as lead director are set forth in our corporate governance guidelines and include (but are not limited to) presiding at all meetings of the board of directors at which the chairman is not present, including executive sessions of the independent directors; serving as a liaison between the chairman and the independent directors; leading the annual CEO evaluation process; and, when appropriate, consulting and directly communicating with stockholders.

Board's Role in Risk Oversight

Our board of directors as a whole has responsibility for risk oversight, with reviews of certain areas conducted by the relevant committees that report on their deliberations to the board of directors. The oversight responsibility of the board of directors and its committees is enabled by management reporting processes that are designed to provide visibility to the board of directors about the identification, assessment and management of critical risks and management's risk mitigation strategies. Areas of focus include competitive, economic, operational, financial (accounting, credit, liquidity and tax), legal, regulatory, compliance, safety and reputational risks. The board of directors and its committees oversee risks associated with their respective principal areas of focus, as summarized below.

<u>Board/Committee</u>	<u>Primary Areas of Risk Oversight</u>
Full Board of Directors	Strategic, financial and execution risks and exposures associated with the annual operating plan, and strategic planning (including matters affecting capital allocation); and other matters that may present material risk to the company's operations, plans, prospects or reputation; and acquisitions and divestitures (including through post-closing reviews) other than as overseen by the strategic investment and acquisition committee.
Audit Committee	Enterprise risk management oversight, including risks and exposures associated with financial matters (particularly financial reporting, tax, accounting, disclosure, internal control over financial reporting, financial policies, investment guidelines and credit and liquidity matters) and cyber risks.
Nominating and Governance Committee	Risks and exposures relating to our programs and policies relating to corporate governance; and director succession planning.
Compensation Committee	Risks and exposures associated with leadership assessment, management development and succession planning, and executive and employee compensation programs and arrangements, including incentive plans. The compensation committee reviews compensation arrangements and programs to ensure that they do not create incentives for employees to take excessive or inappropriate risks that could have a material adverse effect on the company.
Strategic Investment and Acquisition Committee	Oversight of strategic investments, acquisitions and joint ventures in which the company participates.

TABLE OF CONTENTS

Meetings of Independent Directors

Our governance guidelines provide that the independent directors of the company meet in regularly scheduled executive sessions without management participation, which sessions typically occur in conjunction with the regularly scheduled meetings of the board of directors. Mr. Taylor, as lead director, presides at these meetings.

Outside Advisors

Our board of directors and each of its committees may retain outside advisors and consultants of their choosing at our expense. The board of directors need not obtain management's consent to retain outside advisors.

Board Effectiveness

Our board of directors performs an annual self-assessment, led by Mr. Taylor in his capacity as lead director, to evaluate its effectiveness in fulfilling its obligations.

Corporate Governance Guidelines

Our board of directors adopted corporate governance guidelines to assist and guide the directors in the exercise of their responsibilities. These guidelines should be interpreted in accordance with any requirements imposed by applicable federal or state law or regulation, NASDAQ and our certificate of incorporation and bylaws. Our corporate governance guidelines are available in the corporate governance section of our website at <http://investor.mdsol.com>. Although these guidelines have been approved by the board of directors, it is expected that these guidelines will evolve over time as customary practice and legal requirements change. In particular, guidelines that encompass legal, regulatory or exchange requirements as they currently exist will be deemed to be modified as and to the extent such legal, regulatory or exchange requirements are modified. In addition, the guidelines may also be amended by the board of directors at any time as it deems appropriate.

Code of Business Conduct and Ethics

Our board of directors adopted a "code of ethics" as defined by regulations promulgated under the Securities Act of 1933, as amended ("Securities Act"), and the Exchange Act, which was updated during 2017, that applies to all of our employees, officers and directors, including those officers responsible for financial reporting. The code of ethics is designed to codify the ethical standards that we believe are reasonably designed to deter wrong-doing and to promote, among other things, adherence to the following principles:

- honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships;
- full, fair, accurate, timely and understandable financial statements;
- compliance with applicable governmental laws, rules and regulations;
- prompt internal reporting of violations of the code; and
- accountability for adherence to the code.

We have established procedures to ensure that suspected violations of the code may be reported anonymously. A current copy of our code of ethics is available at <http://investor.mdsol.com>. A copy may also be obtained, free of charge, from us upon a request directed to Medidata Solutions, Inc., 350 Hudson Street, 9th Floor, New York, New York 10014, c/o Corporate Secretary. We intend to disclose any amendments to or waivers of a provision of the code of ethics granted to directors and officers by posting such information on our website available at www.mdsol.com and/or in our public filings with the SEC.

Stockholder Communications with the Board

Stockholders and other interested parties may make their concerns known confidentially to the board of directors or the independent directors by submitting a communication in an envelope addressed to the "Board of Directors," a specifically named independent director or the "Independent Directors" as a group, in care of the Secretary. All such communications will be conveyed, as applicable, to the full board of directors, the lead director, the specified independent director or the independent directors as a group.

[TABLE OF CONTENTS](#)

Compensation Committee Interlocks and Insider Participation

During 2017, Messrs. Dominguez, Kurtz and McCulloch served as members of our compensation committee. No member of the compensation committee has been an officer or employee of the company, or had any other relationship with us requiring disclosure herein. None of our executive officers serves on the board of directors or compensation committee of a company that has an executive officer that serves on our board of directors or compensation committee.

Director Compensation

The compensation committee has adopted a compensation structure that is applicable to all of our non-employee directors under which each such non-employee director receives the following compensation for service on our board of directors:

- an annual cash retainer of \$45,000;
- an additional annual cash retainer of \$30,000 for serving as chair of the audit committee, and \$12,000 for serving as a member of the audit committee;
- an additional annual cash retainer of \$22,500 for serving as chair of the compensation committee and \$10,000 for serving as a member of the compensation committee;
- an additional annual cash retainer of \$12,500 for serving as chair of the nominating and governance committee and \$7,000 for serving as a member of the nominating and governance committee;
- an additional annual cash retainer of \$7,000 for serving as a member of the strategic investment and acquisition committee; and
- upon first joining our board of directors and at each subsequent annual meeting of stockholders, an equity award valued at \$225,000 (with the Lead Director receiving an additional annual equity award valued at \$20,000). The equity awards made to the non-employee directors in 2017 consisted entirely of restricted stock, with the number of awarded shares based upon the average closing price of our common stock for the 30 trading days immediately preceding our 2017 annual meeting of stockholders. Since our directors are elected to a one-year term of office, their annual equity awards vest in full one year after the date of grant, provided the director continues to serve through such date. Such awards provide for immediate vesting upon expiration of a director's scheduled board term in the event that the director is not nominated for re-election at the next annual meeting of stockholders or is nominated for re-election but is not elected.

In addition, we reimburse our directors for all reasonable expenses incurred for attending meetings and service on our board of directors.

Our non-employee directors are covered by stock ownership guidelines. Under these guidelines, non-employee directors are required to obtain ownership of common stock equal to three times the amount of the annual cash retainer paid to non-employee directors for their service as directors within three years from their date of appointment. All non-employee directors are in compliance with these guidelines as of April 2, 2018. The director stock ownership guidelines are part of our Corporate Governance Guidelines and are available at <http://investor.mdsol.com>.

TABLE OF CONTENTS

Other than as provided below, there were no other arrangements pursuant to which any director was compensated during the year ended December 31, 2017 for service as a director. We do not provide any retirement benefits or other perquisites to our directors. Neither of our employee-directors received compensation during 2017 for service as a member of our board.

<u>Name</u>	<u>Fees Earned or Paid in Cash (\$)</u>	<u>Stock Awards⁽¹⁾⁽²⁾ (\$)</u>	<u>Option Awards (\$)</u>	<u>All Other Compensation (\$)</u>	<u>Total (\$)</u>
Carlos Dominguez	62,000	237,014	—	—	299,014
Neil M. Kurtz	79,500	237,014	—	—	316,514
George W. McCulloch	74,000	237,014	—	—	311,014
Lee A. Shapiro	71,000	237,014	—	—	308,014
Robert B. Taylor	87,500	258,057	—	—	345,557

- (1) At December 31, 2017, the directors named in the table above held unvested restricted stock as follows: Messrs. Dominguez, Kurtz, McCulloch and Shapiro, 3,334 shares; and Mr. Taylor, 3,630 shares. In addition, at that date, the following directors held options to purchase shares of our common stock as follows: Messrs. Dominguez and Mr. McCulloch, 28,672; and Mr. Shapiro, 9,708.
- (2) The value of the stock awards has been computed in accordance with Financial Accounting Standards Board, or FASB, Accounting Standard Codification, or ASC, 718 (Compensation—Stock Compensation), which requires that we recognize as compensation expense the value of all stock-based awards granted to directors in exchange for services over the vesting period. For information on the assumptions used to calculate the value of the awards, refer to Note 11 to the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2017, as filed with the Securities and Exchange Commission on February 28, 2018.

PROPOSAL 2

**ADVISORY VOTE TO APPROVE THE COMPENSATION OF THE NAMED EXECUTIVE OFFICERS
(THE “SAY ON PAY VOTE”)**

As we do each year, we included a non-binding advisory vote to approve the compensation of the named executive officers (also referred to as a “say on pay vote”) in our 2017 proxy statement. We are gratified that at our 2017 annual meeting of stockholders, our stockholders overwhelmingly approved the proposal, with approximately 95% of the votes cast voting in favor of the proposal.

In accordance with Section 14A of the Exchange Act, this year we are again asking our stockholders to vote “For” the compensation of our named executive officers as disclosed in this proxy statement. In considering their vote, stockholders may wish to carefully review our compensation policies and decisions regarding our named executive officers, as described in the Compensation Discussion and Analysis and related executive compensation information beginning on page [29](#).

We believe that our overall compensation program and philosophy support and help drive long-term value creation, business strategy and operating performance objectives. We ask you to indicate your support for the compensation of our named executive officers as described in the Compensation Discussion and Analysis, the compensation tables and the narrative disclosures set forth in this proxy statement.

The board of directors recommends that stockholders vote FOR the following resolution:

“RESOLVED, that the stockholders approve, on an advisory basis, the compensation of the company’s named executive officers, as disclosed in this proxy statement, including the Compensation Discussion and Analysis, the executive compensation tables, and the related narrative.”

Because your vote is advisory, it will not be binding upon the board of directors or the compensation committee. However, the board of directors values our stockholders’ opinions, and the compensation committee will take into account the outcome of the vote when considering future executive compensation arrangements.

Board Recommendation

Our board of directors recommends an advisory vote FOR the approval of the compensation of the named executive officers.

PROPOSAL 3

**APPROVAL OF AN AMENDMENT TO THE
2017 LONG-TERM INCENTIVE PLAN**

General

Our board of directors, based on the recommendation of the compensation committee, has approved an amendment to the 2017 Long-Term Incentive Plan (the “2017 LTIP”), subject to approval by our stockholders at the Annual Meeting, to authorize an additional 1,300,000 shares under the 2017 LTIP. In connection with its review of this proposal, the board of directors and compensation committee considered the information described below, as well as the favorable recommendation of Radford (Aon Hewitt’s technology compensation consulting group), the compensation committee’s independent compensation consultant.

In May 2017, our stockholders approved the 2017 LTIP, which replaced the 2009 Long-Term Incentive Plan (the “2009 LTIP”). Under the 2017 LTIP we are authorized to issue up to 1,200,000 shares of our common stock, plus the number of shares, if any, that cease to be subject to outstanding awards made under the 2009 LTIP without the issuance of shares (for example, due to forfeiture, stock-based withholding, termination or cash settlement). This year, we are asking our stockholders to approve an amendment to the 2017 LTIP that will, subject to stockholder approval, increase the number of shares of common stock that we may issue under the 2017 LTIP by 1,300,000 shares, from 1,200,000 to 2,500,000 shares.

Stockholder approval of the amendment to the 2017 LTIP would allow us to continue making various forms of equity- and cash-based incentive compensation awards to our officers, employees and other eligible personnel. Our ability to make such awards has been and would continue to be a material element of our overall compensation program. As of April 2, 2018, assuming all of the outstanding awards are fully settled in shares, we would only be able to grant awards for approximately 753,960 shares. If the amendment to the 2017 LTIP is approved by our stockholders, it will become immediately effective as of May 30, 2018, with approximately 2,025,000 shares remaining available for issuance pursuant to new awards under the 2017 LTIP. This excludes any shares that may become available again in connection with forfeited or terminated awards, including shares that are withheld by the company to satisfy any tax withholding obligations with respect to vesting of a restricted stock or restricted stock unit award (but not for exercise of stock options or stock appreciation rights). We expect that if the amendment to the 2017 LTIP is approved by our stockholders, the additional shares under the 2017 LTIP will be sufficient to allow us to make equity awards in the amounts we believe are necessary for the remainder of 2018 and the next calendar year (through December 31, 2019).

Medidata operates in a challenging marketplace in which its success depends to a great extent on its ability to attract and retain employees of the highest caliber. Long-term equity and other forms of incentive compensation are key components of our overall compensation program. The board of directors believes that our ability to grant equity-based incentive compensation under the 2017 LTIP enables us to meet several objectives that are important to the success and growth of our business, including, for example, fostering an ownership mentality that aligns the interests of our leadership, employees and other personnel with those of our stockholders, and enabling us to attract, motivate, reward and retain talented individuals whose skills, experience and efforts are essential to the continuing success and development of our business and the enhancement of stockholder value. In determining the number of shares being requested, we considered our historical burn rate, as well as the publicly disclosed views and guidelines of independent shareholder advisory firms and compensation professionals.

We believe that our equity share reserve increase proposal reflects a judicious use of equity for compensation purposes and is reasonable based on the equity practices of comparable technology companies focused on attracting talent to grow their businesses. We have been advised that proxy advisory firms like Institutional Shareholder Services Inc. (“ISS”) and Glass Lewis will use our Global Industry Classification Standard (“GICS”) group (3510 - Health Care Equipment & Services) to evaluate our equity practices. The vast majority of companies in our GICS group are engaged in entirely different and unrelated businesses. The companies in the 3510 GICS group contain only a very small sample of our selected peer group companies and other technology companies against whom we compete for talent. Accordingly, we encourage stockholders to consider our proposal based on the annual burn rates, total dilution, and equity expenses of comparable technology companies, which we believe are more meaningful than comparisons to the GICS group that may be used by proxy advisory firms.

TABLE OF CONTENTS

If the amendment to the 2017 LTIP is not approved, we will soon run out of shares available under our 2017 LTIP and lose what has become an indispensable part of our compensation program. The board of directors believes we would therefore face serious challenges to our ability to attract and retain key executives, employees and other key personnel which, if not otherwise addressed, would adversely affect our business. In short, the board of directors believes strongly that approval of the amendment to the 2017 LTIP is in the best interests of our company and our stockholders and that, if the amendment to the 2017 LTIP is not approved, our business and the interests of our stockholders may be harmed.

Why Should You Vote to Approve the Amendment to the 2017 LTIP?

The board of directors recommends that our stockholders vote for the approval of the amendment to the 2017 LTIP for the reasons summarized below.

- ***We must attract, retain and motivate high-performers.*** The ability to issue equity is fundamental to our growth strategy. Our success is dependent, in large part, on our ability to use market relevant compensation to attract, retain and motivate the most high-performing employees who ultimately drive company performance. We also believe that equity incentives are necessary in connection with potential acquisitions and will help us to attract, retain and motivate talented individuals who are also being recruited by other technology companies.
- ***We have a disciplined annual share granting practice.*** We actively manage our long-term stockholder dilution by limiting the number of equity incentive awards granted annually. Our compensation committee carefully reviews our burn rate and total dilution levels in order to maximize stockholder value by granting only the number of equity incentive awards that it believes are necessary and appropriate to attract, reward and retain our employees.

The following table sets forth information regarding historical awards granted for the 2015-17 period and the corresponding burn rate, which is defined as the number of shares subject to options and time-based restricted stock and PBRsUs (at target) granted each year divided by the weighted-average number of shares of common stock outstanding for that year.

Year	Options Granted (in thousands)	Time-Based Restricted Stock & PBRsUs Granted (in thousands)	Weighted Average Common Shares Outstanding (in thousands)	Burn Rate
2017	105	1,098	56,473	2.13%
2016	163	1,431	55,492	2.87%
2015	171	950	53,717	2.09%
			3-Year Average	2.36%

- ***We use equity compensation to align employee and stockholder interests.*** Equity compensation is a critical means of aligning the interests of our employees with those of our stockholders. Our employees, particularly our senior executives, whose equity is tied to Company and individual performance, are motivated under our current equity compensation plans to drive the business to maximize returns over the long-term. We believe that equity awards motivate our key employees to act as owners of the business, which contributes to the long-term value we are creating for our stockholders. Our stock price as of the April 2, 2018 record date for the 2018 annual meeting of stockholders was \$61.93, which reflects an almost 785% increase from our IPO price of \$7.00 (as adjusted) on June 24, 2009. Our one-year and three-year total shareholder return, or TSR, as of December 31, 2017 on a compound annual growth basis was 27.58% and 32.71% respectively.
- ***A significant majority of the annual equity awards to our executive officers in 2017 and 2018 are performance-based.*** 57% of the annual equity awards granted to our executive officers in 2017 and 2018 are performance-based awards and will vest only if we achieve challenging relative TSR and net income goals. All or a portion of these awards will be forfeited if the performance goals are not met. These performance metrics are designed to encourage conduct that drives long-term strategic decisions suited to the creation of stockholder value. We intend to continue to emphasize performance-based compensation programs for our executive officers' equity awards in the future. In the case of these performance based awards, we are required to reserve against future issuance a number of shares sufficient to fund the maximum performance level, even though the performance targets are established

TABLE OF CONTENTS

so that the achievement of the maximum performance levels can only be attained when business results are exceptional. As a consequence, we are unable to utilize shares that have been reserved in excess of our actual needs until our performance relative to the applicable criteria has been finally determined. This reduces the equity otherwise available for grant, and necessitates that our shareholders approve additional shares for grant under our equity plans.

- ***We have equity ownership requirements.*** We have adopted meaningful equity ownership guidelines applicable to our executive officers to ensure a significant ownership stake in the company. For more information, see “Executive Stock Ownership Guidelines” on page 44. These requirements further align the interests of our executive officers with those of our stockholders.
- ***We would avoid increasing the cash-based component of our compensation program to substitute for shares.*** If the amendment is not approved, in order to remain competitive, we would likely be compelled to alter our compensation program to increase the cash-based component, which we do not believe is appropriate for our business. Cash-based awards do not provide the same benefits as equity, such as retention and alignment with stockholder interest. In addition, if this proposal is not approved, and as a result we are compelled to increase the cash-based component of our compensation programs, we believe that the amount of free cash flow we will have available for other purposes could be negatively affected.

Equity Incentive Program Metrics

The following table provides certain additional information regarding our equity incentive program, excluding our employee stock purchase plan.

	As of April 2, 2018
Total number of shares of common stock subject to outstanding stock options	1,351,370
Weighted average exercise price of outstanding stock options	\$23.22
Weighted average remaining term	4.16 years
Total number of shares of common stock subject to outstanding full value awards	2,527,305
Total number of shares of common stock available for grant under our 2017 LTIP	753,960
Total number of shares of common stock outstanding	59,198,095

Summary of the 2017 LTIP

A summary of the principal features of the 2017 LTIP is set forth below. This summary is qualified in its entirety by reference to the full text of the 2017 LTIP, as it is proposed to be amended, set forth in [Exhibit A](#).

Purpose. The purpose of the 2017 LTIP is to enable us to provide equity-based and other incentive compensation opportunities to recruit, motivate, reward and retain key executives, employees and other qualified persons who contribute or are expected to contribute to the success and growth of our company.

Types of Award; Eligibility. The 2017 LTIP would enable us to grant non-qualified stock options, stock appreciation rights, restricted stock, restricted stock units, other forms of equity-based awards and performance-based cash incentive awards to our and any of our subsidiaries’ employees, non-employee directors, consultants, independent contractors and other service providers and to grant “incentive stock options” (within the meaning of Section 422 of the Code) to our and any of our subsidiaries’ employees. We estimate that, as of March 31, 2018, the total number of eligible employees and directors was approximately 1,730; and a total of 876 employees and directors hold outstanding equity awards.

Authorized Shares; Share-Counting Rules. If the proposed amendment is approved, we would be able to issue up to 2,500,000 shares of our common stock under the 2017 LTIP, plus the number of shares, if any, that cease to be subject to outstanding awards made under the 2009 LTIP without the issuance of shares (for example, due to forfeiture, share-based withholding, termination or cash settlement). The following share counting rules will apply to determine the number of shares that are available at any time for issuance of awards under the 2017 LTIP:

- the total number of shares covered by an award of stock appreciation rights that is settled in shares (and not just the number of shares issued in settlement of the award) will be deemed to have been issued and will not be available for future awards under the 2017 LTIP;

TABLE OF CONTENTS

- shares purchased by us with cash received from the exercise of an option will not be added to the aggregate share reserve and will not be available for future awards under the 2017 LTIP;
- shares that are used or withheld to satisfy the exercise price or tax withholding obligations under stock options or stock appreciation rights will be deemed to have been issued under the 2017 LTIP and will not be available for future awards; and
- the following shares will be deemed not to have been issued and will remain available for new awards under the 2017 LTIP: (a) shares covered by stock options or stock appreciation rights that are forfeited or otherwise terminated or canceled for any reason other than exercise; (b) shares covered by restricted stock, restricted stock unit or other awards that are forfeited; (c) shares that are used or withheld to satisfy withholding obligations with respect to awards other than stock options and stock appreciation rights; (d) shares covered by an award that is settled in cash or that otherwise terminates without shares being issued; and (e) shares issued pursuant to awards that are assumed, converted or substituted as a result of the acquisition of another company or a combination with another company.

The maximum number of shares that may be issued pursuant to “incentive stock options” (within the meaning of Section 422 of the Code) is 1,000,000.

Individual Award Limitations. No more than 300,000 shares may be covered by awards granted to any individual in any calendar year. The maximum performance-based cash incentive award that may be earned by any individual for any calendar year is \$4,000,000.

Adjustments for Capital Changes. In the event of a stock split, reverse stock split, stock dividend, extraordinary cash dividend or other capital change involving the outstanding shares of our common stock, the aggregate number of shares that may be issued under the 2017 LTIP, the number of Shares that may be issued pursuant to “incentive stock options,” the calendar year share limitation on individual awards, the number, class and exercise price of shares covered by outstanding awards and performance goals expressed in or with respect to shares will be subject to equitable adjustment in order to avoid undue dilution or enlargement of the benefits available under the 2017 LTIP and any outstanding awards.

Administration. In general, subject to the terms of the 2017 LTIP, the compensation committee of the board of directors, acting in its discretion, has full authority and responsibility for administering the 2017 LTIP. The compensation committee may select the persons who receive awards, determine the types of awards to be granted, and prescribe the terms and conditions of such awards. The compensation committee is also responsible for construing, interpreting and applying the provisions of the 2017 LTIP and of any award made under the 2017 LTIP. We will indemnify the members of the compensation committee and others to whom authority is delegated for claims they may incur in connection with the administration of the 2017 LTIP, unless attributable to fraud or willful misconduct. Decisions and determinations of the compensation committee under the 2017 LTIP will be final and binding on all persons. Each award made under the 2017 LTIP must have a vesting period of at least one year from the date the award is granted, provided that the compensation committee may prescribe a shorter vesting period with respect to awards covering up to 5% of the shares issuable under the plan.

Stock Options. Stock options granted under the 2017 LTIP may be classified as “incentive stock options” (within the meaning of Section 422 of the Internal Revenue Code) or as non-qualified options (i.e., options which do not qualify as “incentive stock options”). The exercise price of any stock option granted under the 2017 LTIP must be at least equal to the fair market value of our common stock on the date the option is granted (110% of fair market value in the case of “incentive stock options” granted to ten percent stockholders). The maximum term permitted for an option granted under the 2017 LTIP is ten years (five years in the case of “incentive stock options” granted to ten percent stockholders). Participants who hold stock options have no rights as a stockholder with respect to the underlying shares unless and until such shares are acquired pursuant to the exercise of the options.

Stock Appreciation Rights. A stock appreciation right provides the recipient with the right to receive the appreciation in the fair market value of our common stock between the date the stock appreciation right is granted and the date it is exercised. Settlement of a vested stock appreciation right will be made in the form of

TABLE OF CONTENTS

shares of our common stock and/or cash. The maximum term of a stock appreciation right granted under the 2017 LTIP is ten years. Participants who hold stock appreciation rights have no rights as a stockholder with respect to the underlying shares unless, until and except to the extent such shares are acquired pursuant to the exercise of the stock appreciation rights.

Restricted Stock. The compensation committee may grant restricted stock awards under the 2017 LTIP, pursuant to which shares of our common stock are issued to the recipient subject to specified vesting and other terms and conditions. In general, the holder of restricted shares has the right to vote such shares and does not have the right to receive dividends on unvested shares, although the compensation committee may award dividend equivalents subject to the same vesting, forfeiture and payment terms and conditions that apply to the restricted shares. In general, if the recipient of a restricted stock award terminates employment or service, any unvested shares will be forfeited.

Restricted Stock Units. The compensation committee may grant restricted stock units representing a contingent right to receive shares of our common stock in the future, subject to specified vesting and other terms and conditions. Vested restricted stock units may be settled in cash and/or shares of our common stock. The holder of restricted stock units may not vote or receive dividends with respect to the underlying shares before the units become vested and the shares are issued. The compensation committee may provide for the crediting of dividend equivalents with respect to restricted stock units, subject to the same vesting and payment conditions applicable to the corresponding restricted stock units. In general, if the recipient of restricted stock units terminates employment or service, any unvested restricted stock units (and related dividend equivalents) will be forfeited.

Other Forms of Stock Award; Performance-Based Cash Incentive Awards. The compensation committee may grant other forms of award under the 2017 LTIP that are denominated or payable in, valued in whole or in part by reference to, or otherwise based upon or related to, shares of our common stock, including, for example, performance share awards, performance unit awards, stock bonus awards and dividend equivalent awards. Any such other awards will be settled in the form of cash and/or shares and will be subject to any vesting and other terms and conditions prescribed by the compensation committee. In addition, the 2017 LTIP authorizes the compensation committee to make annual and/or long-term cash incentive awards that are contingent on the achievement of pre-established performance goals and such other conditions as the compensation committee may prescribe.

Transferability of Awards. In general, awards made under the 2017 LTIP may not be transferred or assigned, except under certain circumstances as may be permitted by the compensation committee.

No Repricing of Awards. Without the approval of our stockholders, we may not (a) reduce the exercise price of options or stock appreciation rights, (b) cancel outstanding options or stock appreciation rights in exchange for options or stock appreciation rights with a lower exercise price or (c) cancel options or stock appreciation rights in exchange for cash or securities at a time when the per share exercise price is higher than the per share fair market value of our common stock.

Payment of Exercise Price and Tax Withholding. In general, the exercise price under a stock option and tax withholding obligation resulting from the exercise or settlement of an option or other award may be satisfied in cash and/or in such other ways as the compensation committee may permit, including, for example, by the participant's delivery of previously-owned shares, broker-assisted cashless exercise or by our issuing a net number of shares pursuant to which we hold back shares that would otherwise be issued in connection with such exercise or settlement.

Change in Control. If, in connection with a "change in control" (as defined in the 2017 LTIP), existing awards are substituted by or converted into substantially equivalent awards for stock of the successor or acquiring company, then the substitute or converted awards will generally remain governed by the vesting and other terms and conditions of the original awards, subject to special rules applicable to performance-based earnout and vesting conditions. Vesting of such substitute or converted awards will accelerate, however, if, within two years after the change in control, the participant's employment is terminated by the successor or acquiring company without "cause" (as defined in the 2017 LTIP). If an existing award is not so substituted or converted in connection with a change in control, then the existing award will become fully vested immediately prior to the change in control, subject to special rules in the case of performance-based earnout and vesting conditions. To

TABLE OF CONTENTS

the extent not previously exercised or settled, an award that is not substituted or converted will be canceled at the time of the change in control in exchange for the right to receive the change in control transaction value of the award over the exercise price under the award, if any.

Amendment and Termination. The board of directors may amend or terminate the 2017 LTIP, provided such action does not have an adverse effect on any then outstanding awards. Amendments to the 2017 LTIP will be subject to stockholder approval if such approval is necessary in order to satisfy applicable legal or stock exchange listing requirements. Unless sooner terminated, the 2017 LTIP will expire on May 30, 2027 (the tenth anniversary of the date of its approval by our stockholders). Awards outstanding at the time of the termination or expiration of the 2017 LTIP will remain outstanding in accordance with their terms.

Certain U.S. Income Tax Consequences

The following is a general summary under current law of material federal income tax consequences applicable to awards made under our 2017 LTIP. This summary does not address other tax considerations, such as state, local and foreign taxes. The 2017 LTIP is not subject to any provisions of the Employee Retirement Income Security Act of 1974. This discussion is intended for general informational purposes only and not as tax advice or guidance to any participant or other person.

Non-qualified Stock Options. A non-qualified stock option is an option that does not qualify as an “incentive stock option” under Section 422 of the Internal Revenue Code. The grant of a nonqualified stock option is not a taxable event. In general, a participant who exercises a nonqualified stock option will realize ordinary income on the date the option is exercised equal to the excess of the value of the shares acquired on that date over the option exercise price paid for the shares, and we will be entitled to a corresponding deduction. The participant’s tax basis for the shares will be equal to the value of the shares on the date the option is exercised, and the participant’s holding period for the shares will begin on that date. Gain or loss on a subsequent sale of the shares will be long- or short-term capital gain or loss, depending on whether the sale occurs more than one year after the participant’s holding period begins.

Incentive Stock Options. In general, no taxable event will occur upon either the grant or exercise of an option that qualifies as an “incentive stock option” under Section 422 of the Internal Revenue Code (although the exercise may have alternative minimum tax consequences to the participant). A participant will realize taxable income (or loss) when shares acquired upon the exercise of an “incentive stock option” are subsequently sold. If the participant sells the shares more than two years after the date the option is granted and more than one year after the date the option is exercised, any gain or loss realized on the sale will be long-term capital gain or loss, and we will not be entitled to a deduction. If the participant sells the shares before the end of either of those two holding periods, any gain realized on the sale will be taxable as ordinary income to the extent that the value of the shares on the date the option is exercised exceeds the option exercise price paid for the shares, and any remaining gain will be capital gain. In general, we will be entitled to a deduction equal to any ordinary income realized by the participant upon the sale of the shares.

Stock Appreciation Rights. The grant of a stock appreciation right is not a taxable event. In general, a participant will realize ordinary income when a stock appreciation right is exercised, equal to the value of the shares of our Common Stock and/or the amount of cash received by the participant in connection with such exercise, and we will be entitled to a corresponding deduction.

Restricted Stock. In general, a participant who receives shares of restricted stock will not realize taxable income unless and until the shares become vested, at which time the participant will realize ordinary income equal to the then fair market value of the vested shares and we will be entitled to a corresponding deduction. The participant’s tax basis for the shares will be equal to their fair market value on the vesting date and, upon a subsequent sale of the vested shares, the participant will realize long- or short-term capital gain or loss, depending on whether the sale occurs more than one year after the vesting date (when ordinary income was realized). A participant may make an early income election within 30 days after he or she receives an award of restricted stock, in which case the participant will realize ordinary income on the date of the award equal to the fair market value of the shares on that date, and we would be entitled to a corresponding deduction. If an early income election is made, no income would be realized if and when the shares become vested. Gain realized upon a subsequent sale of vested shares that were covered by an early income election—equal to the difference

TABLE OF CONTENTS

between the selling price and the fair market value of the shares on the date of the restricted stock award—will be treated as long- or short-term capital gain, depending on whether the sale occurs more than one year after the award date. Special rules may limit the deductibility of a loss if the selling price is less than the fair market value of the shares on the original award date.

Restricted Stock Units and Other Awards. In general, a participant who receives shares of our Common Stock and/or cash in settlement of a restricted stock unit award will realize ordinary income equal to the then value of the shares and/or the amount of cash he or she received, and we will have a corresponding deduction. Similarly, if a participant receives cash and/or shares pursuant to a performance unit, performance share or other form of award under 2017 LTIP, he or she will realize ordinary income upon such receipt equal to the then fair market value of the shares and/or the amount of cash received, and we will be entitled to a corresponding deduction. A participant's tax basis in any such shares will generally be equal to the value of the shares on the date that ordinary income is realized, and the participant's tax holding period for the shares will generally begin on that date. Gain or loss on a subsequent sale of the shares will be long- or short-term capital gain or loss, depending on whether the sale occurs more than one year after the participant's holding period begins.

Section 162(m) of the Internal Revenue Code. For 2017, Section 162(m) of the Internal Revenue Code imposed a \$1 million deduction limit on compensation paid by a publicly held company to its chief executive officer and each of the company's three other most highly compensated named executive officers (other than the chief financial officer). This deduction limit did not apply to certain "performance-based compensation" (within the meaning of Section 162(m)). It is anticipated that stock options and stock appreciation rights granted under the 2017 LTIP will qualify for the performance-based compensation exemption from the deduction limitation. In addition, the 2017 LTIP contains provisions that would allow the compensation committee to grant performance-based and other forms of stock and cash awards that are intended qualify for the exemption. The 2017 tax legislation amended Section 162(m), effective for taxable years beginning after December 31, 2017. The amendments include the elimination of the performance-based compensation exemption from the \$1 million deduction limit and the expansion of the number of executives covered by the \$1 million limit. These amendments are discussed in more detail in the Compensation Discussion and Analysis starting on page [29](#) below.

Section 409A of the Internal Revenue Code. If an award is subject to Section 409A of the Internal Revenue Code (which relates to nonqualified deferred compensation plans), and if the requirements of Section 409A are not met, the taxable events as described above could apply earlier than described, and could result in the imposition of additional taxes and penalties to the participants. It is anticipated that all awards made in compliance with the terms of the 2017 LTIP will be exempt from the application of Section 409A or will comply with the requirements of Section 409A in order to avoid such early taxation and penalties.

New Plan Benefits

Future grants under the 2017 LTIP will be made at the discretion of the compensation committee and, accordingly, are not yet determinable. In addition, benefits under the 2017 LTIP will depend on a number of factors, including the fair market value of our common stock on future dates. Consequently, it is not possible to determine the benefits that might be received by participants in connection with grants under the 2017 LTIP.

Vote Required

Approval of the amendment to our 2017 Long-Term Incentive Plan requires the affirmative vote of a majority of the shares of common stock present (including electronically) or represented by proxy and entitled to vote on the matter. Abstentions from voting on this proposal will have the practical effect of a vote against this proposal because an abstention results in one less vote for the proposal. Broker non-votes will have no effect on this proposal.

Board Recommendation

Our board of directors recommends that the stockholders approve the amendment to the 2017 Long-Term Incentive Plan.

PROPOSAL 4

APPROVAL OF AN AMENDMENT TO
THE SECOND AMENDED AND RESTATED 2014 EMPLOYEE STOCK PURCHASE PLAN

General

On April 16, 2018, our board of directors adopted an amendment to the company's Second Amended and Restated 2014 Employee Stock Purchase Plan ("ESPP"), subject to approval by our stockholders at the Annual Meeting. We are asking our stockholders to approve the amendment, which would increase the number of shares available for issuance under the ESPP by 1,000,000, representing approximately 1.7% of our shares of common stock outstanding as of April 2, 2018. If approved by our stockholders, the amendment to our ESPP will become effective on the date of such approval.

The ESPP is a broad-based employee plan under which employees may elect to purchase a limited number of shares of our common stock at a discount. The ESPP is designed to comply with the requirements of Section 423 of the Internal Revenue Code relating to tax-qualified employee stock purchase programs. As of April 2, 2018, only 103,080 shares of our common stock remained available for future issuance under the ESPP. If this proposal is approved, an additional 1,000,000 shares will be added to the ESPP's share reserve. Our ESPP has been very well received by our employees since its adoption in 2014. The board of directors believes that, because of its broad-based nature, the ESPP has served and, if the proposal is approved, will continue to serve as a meaningful part of our compensation program. Indeed, the number of employees eligible to participate in the ESPP has increased by approximately 464 since the company adopted the ESPP and, as indicated below, more than 99% of the ESPP participants are non-executive employees. Our board of directors believes that, if the amendment is not approved, we will lose a key and relatively inexpensive contributor to our ability to motivate and retain our employees through stock ownership opportunities.

Summary of the ESPP

A summary of the ESPP is set forth below. The summary is qualified by the full text of the ESPP, as proposed to be amended, attached to this proxy statement as [Exhibit B](#).

Purpose. The purpose of the ESPP is to provide our employees and employees of our participating subsidiaries with a convenient way to purchase shares of our common stock. The board of directors believes that participation in the ESPP will incentivize employees to exert maximum efforts for the success of the company and, in turn, enhance stockholder value. The ESPP Plan is intended to satisfy the requirements of Section 423 of the Internal Revenue Code.

Administration. The compensation committee of our board of directors, acting in its discretion in accordance with the plan provisions, has full authority and responsibility for administering the ESPP. The committee may delegate to non-committee members such plan-related functions as it deems appropriate. All determinations and decisions made by the compensation committee regarding the administration of the ESPP will be final and binding on all persons.

Eligibility. In general, our employees who (i) customarily work at least 20 hours per week, and (ii) have been employed by the company no less than ten days as of the first day of an offering period are eligible to participate in the ESPP. Employees who own (directly or indirectly) stock representing 5% or more of the total combined voting power or value of all classes of our stock are not allowed to participate. The company estimates that approximately 1,680 employees were eligible to become participants in the ESPP as of April 2, 2018.

Share Reserve. The total number of shares of common stock currently reserved for issuance over the term of the ESPP is 800,000. As of April 2, 2018, an aggregate 696,920 shares of common stock have been issued to employees under the ESPP, and 103,080 shares of common stock remained available for future issuance. Assuming that this proposal is approved by the stockholders, the total number of shares of common stock reserved for issuance under the ESPP will be increased by an additional 1,000,000 shares. The shares of common stock issuable under the ESPP may be made available from authorized but unissued shares of common stock or from shares of common stock we reacquire, including shares of common stock repurchased on the open market. If any right to purchase shares of common stock terminates for any reason without having been exercised, the shares of common stock not purchased under such right will again become available for issuance under the ESPP.

TABLE OF CONTENTS

Annual Purchase Limitation. In general, for each calendar year, no participant may purchase shares having a value of more than \$25,000, based upon the fair market value of our shares at the beginning of the applicable offering period. This limitation is imposed by Section 423 of the Internal Revenue Code and will be administered and applied accordingly.

Participation; Payroll Deductions. Participation in the ESPP is completely voluntary. Eligible employees who wish to become participants may do so by completing an election form authorizing us to withhold a certain amount from their pay and apply such amount to the purchase of shares under the plan. Payroll deductions are made from after-tax pay. In general, payroll deduction elections are made prior to the beginning of an offering period and remain in effect until subsequently changed or terminated by the employee. See “Terms of Offerings” below.

Terms of Offerings.

- *Offering Periods; Purchase Dates.* Since its inception, the ESPP has operated with a series of overlapping offering periods, each with a duration of 24 months. A new 24-month offering period begins on each January 1 and July 1. Existing offering periods terminate early if the fair market value of our shares on the first day of a new offering period is less than the fair market value of our shares on the first day of the existing offering period. An employee may participate in only one offering period at a time.

As the ESPP is currently administered, each offering period has four semi-annual purchase dates when participants’ accumulated payroll deductions will be used to purchase shares. For example, the scheduled purchase dates in the current offering period that began January 1, 2018 are: June 30, 2018, December 31, 2018, June 30, 2019 and December 31, 2019. Purchases will be made on the last trading day of each purchase period. See “Purchase of Shares” below for additional information.

Our compensation committee may change the frequency and duration of offering periods and purchase dates under the ESPP, subject to complying with Section 423 of the Internal Revenue Code.

- *Purchase of Shares.* On each purchase date within an offering period, the amount of a participant’s accumulated payroll deductions will be used to purchase shares of common stock (subject to the \$25,000 annual statutory limit described above). Unless the compensation committee determines a different number, no more than 2,500 shares may be purchased by a participant in any 24-month offering period.

The purchase price per share will be equal to 85% of the fair market value of a share of common stock on the first day of the applicable offering period or, if lower, 85% of the fair market value per share on the applicable purchase date. For this purpose, the fair market value of a share of common stock on any date will be equal to the closing price of a share of common stock on the NASDAQ Global Select Market or, if no shares are traded on that date, the closing price per share on the last preceding date on which such shares are traded. The number of shares purchased by a participant on any purchase date will be equal to the quotient obtained by dividing the amount of the participant’s accumulated and unused payroll deductions by the applicable purchase price per share, rounded down to nearest whole share.

If the fair market value of our common stock on any purchase date during an offering period is less than the fair market value of our common stock on the first day of the offering period, then a participant’s accumulated payroll deductions will be applied to purchase shares of common stock on that purchase date and that offering period will then terminate. In general, the participant will be automatically enrolled for the next succeeding offering period at the same level of payroll deductions in effect for the terminated offering period.

- *Termination of Participation.* In general, employees may elect to withdraw their accumulated contributions before the end of an offering period, in which case they may not again become participants before the beginning of a subsequent offering period. An employee’s participation in the ESPP will automatically terminate if his or her employment terminates. Payroll deductions that have not been used to purchase shares will be returned to a terminated participant without interest.

Capital Changes. In the event of a stock split, stock dividend, spin-off, recapitalization or other change in our capital structure, the compensation committee may make corresponding adjustments, if any, as it may deem

TABLE OF CONTENTS

appropriate to the number and class of shares that may be issued under the ESPP, the maximum number of shares that may be purchased during any offering period or calendar year, and the number and class of shares and the purchase price per share covered by purchase rights that are then outstanding under the plan.

Change in Control. If a change in control (described in the plan as a “Sale Event”) occurs and if the surviving or acquiring company (or a parent of the surviving or acquiring company) does not assume and continue outstanding ESPP purchase rights or convert them into rights to purchase its own securities, the participants’ unused payroll deductions may be applied to purchase shares which, in turn, would participate in the change in control transaction on the same basis as any other outstanding shares. Any such amounts that are not so applied (for example, by reason of applicable plan or legal limitations) will be refunded to the affected participants.

Amendment and Termination of the ESPP. The board of directors and the compensation committee may amend, suspend or terminate the ESPP at any time and for any reason. In general, no such action may adversely affect a participant’s then outstanding right to purchase shares with previously accumulated payroll deductions. Amendments may be made without stockholder approval unless such approval is required in order to comply with Section 423 of the Internal Revenue Code or applicable stock exchange rules. For example, stockholder approval would be required for an amendment increasing the number of our shares that may be issued and sold under the plan (other than increases made as a result of capital changes, as discussed above under the heading “Capital Changes; Change in Control”) or which would expand the classes of employees who are eligible to participate in the plan (other than designations by the compensation committee of subsidiaries whose employees are eligible to participate).

Certain U.S. Income Tax Consequences

The following is a general summary under current law of the material federal income tax considerations associated with the ESPP. This summary does not address other tax considerations, such as state, local and foreign taxes, and is for general information purposes only. The ESPP is intended to qualify as an “employee stock purchase plan” within the meaning of Section 423 of the Internal Revenue Code. The ESPP is not subject to any provisions of the Employee Retirement Income Security Act of 1974.

The money used by participants to purchase shares under the ESPP comes from after-tax payroll deductions (i.e., all of the shares are purchased with previously-taxed dollars). No taxable income is realized by a participant upon the participant’s purchase of shares under the ESPP.

Taxable income (or loss) will be realized, however, when a participant sells ESPP-acquired shares. In general, if the shares are sold more than two years from the first day of the offering period in which the shares are purchased and more than one year from the date of purchase, the participant will realize ordinary income equal to the lesser of (1) the excess of the fair market value of the shares on the date of the sale over the purchase price or (2) 15% of the fair market value of the shares as of the first day of the offering period. Any additional gain will be treated as long-term capital gain. If those shares are sold at a loss (i.e., for less than the purchase price), however, no ordinary income will be realized on the sale and the participant will recognize a long-term capital loss equal to the difference between the sale price and the purchase price.

In general, if a participant sells ESPP-acquired shares before the expiration of the two- and one-year holding periods described above, the participant will realize ordinary income equal to the excess of the fair market value of the ESPP shares on the date the ESPP shares are purchased over the purchase price. If the shares are sold for an amount greater than the fair market value on the purchase date, then the remaining gain will be taxable as capital gain. Conversely, if the shares are sold for an amount that is less than fair market value on the purchase date, the participant will recognize a capital loss equal to the difference (without affecting the amount of ordinary income realized in connection with the sale). In general, we will be entitled to a deduction for the amount of any ordinary income realized by a participant upon the sale of ESPP-acquired shares within the two- and one-year holding periods.

New Plan Benefits

The amounts of future stock purchases under the ESPP are not determinable because, under the terms of the ESPP, purchases are based upon elections made by participants. Future purchase prices are not determinable because they are based upon fair market value of shares of our common stock. For illustrative purposes only, the

TABLE OF CONTENTS

following table sets forth, for those named executive officers who purchased shares under our ESPP during 2017 and the groups identified below, (1) the number of shares of our common stock that were purchased under our ESPP during 2017, and (2) the aggregate purchase price paid:

<u>Name or Group</u>	<u>Number of Shares Purchased (#)</u>	<u>Aggregate Purchase Price (\$)</u>
Tarek A. Sherif	497	\$ 40.25
Glen M. de Vries	373	\$ 40.25
Rouven Bergmann	—	—
Michael Otner	342	\$ 40.25
Michael Pray	—	—
Mary Weger	—	—
Michael L. Capone	527	\$ 40.25
All named executive officers, as a group (7 persons)	1,739	\$ 40.25
All current directors who are not executive officers, as a group (5 persons) ⁽¹⁾	—	—
All current employees, as a group (approx. 1,075 persons)	220,724	\$ 41.68

(1) Directors who are not our employees are not eligible

Vote Required

Approval of the amendment to our ESPP requires the affirmative vote of a majority of the shares of common stock present (including electronically) or represented by proxy and entitled to vote on the matter. Abstentions from voting on this proposal will have the practical effect of a vote against this proposal because an abstention results in one less vote for the proposal. Broker non-votes will have no effect on this proposal.

Board Recommendation

Our board of directors recommends that the stockholders approve the amendment increasing the aggregate number of shares that may be issued under the ESPP.

EXECUTIVE OFFICERS

Executive Officers

The following table sets forth certain information with respect to the persons serving as executive officers of Medidata as of April 2, 2018.

<u>Name</u>	<u>Age</u>	<u>Position</u>
Tarek A. Sherif	55	Chairman, Chief Executive Officer and Director
Glen M. de Vries	45	President and Director
Rouven Bergmann	45	Chief Financial Officer
Michael Otner	47	Executive Vice President – General Counsel and Corporate Secretary
Michael Pray	52	Executive Vice President – General Manager of Global Sales
Daniel Shannon	49	Executive Vice President – Global Professional Services

Set forth below is a brief description of the business experience of our executive officers who are not also directors of Medidata.

Rouven Bergmann joined us as our chief financial officer in May 2015, bringing with him significant software business experience in corporate strategy, managing growth, risk and performance management, and financial planning and reporting. Prior to joining the company, Mr. Bergmann worked in various leadership positions at SAP, most recently serving as chief financial officer of SAP North America from March 2014 to April 2015. Mr. Bergmann previously served as chief operating officer for SAP's global R&D organization (2012-2014), chief financial officer for SAP's technology, innovation and cloud division (2010-2012), chief financial officer for SAP's Business Objects division (2008-2010), chief financial officer for SAP India (2007-2008) and led SAP's corporate financial planning & analysis process (2005-2007). Mr. Bergmann earned masters degrees in mechanical engineering and business administration from Technical University of Kaiserslautern in Germany and a PhD in economics and finance from the University of Munich in Germany.

Michael Otner has served as our general counsel and corporate secretary since November 2007 and was promoted to executive vice president in February 2013. Prior to joining us, Mr. Otner served as associate general counsel, vice president and assistant secretary of The BISYS Group, Inc. from 2005 to 2007, where he was responsible for a broad range of SEC and general corporate matters, as well as legal support for the company's private equity services business. Mr. Otner previously held various counsel roles of increasing responsibility at GlobespanVirata, Inc. and Conexant Systems, Inc., including serving as general counsel at both companies. Mr. Otner began his legal career specializing in corporate and securities law at Olshan (formerly, Olshan Grundman Frome Rosenzweig & Wolosky LLP), a law firm based in New York City. Mr. Otner holds a J.D. from Case Western Reserve University School of Law and a B.B.A. in marketing from the University of Wisconsin-Madison.

Michael Pray has served as our executive vice president—general manager of global sales since October 2016. Mr. Pray is responsible for leading global sales go-to-market strategy and execution, which includes field and technical sales, inside sales, CRO partner sales and professional services sales. Michael brings more than 25 years of technology and sales leadership experience to the company, with a proven track record of scaling global sales organizations that gain market share. Prior to joining us, Mr. Pray served as chief revenue officer of Tangoe from July 2015 to October 2016, where he was responsible for revenue, demand generation, new business development, alliances, client retention, and overall go-to-market strategy. Prior to that, Mr. Pray spent 14 years at IBM where he held several executive positions, including vice president of IBM Analytic Solution Sales, and vice president of Enterprise Content Management Sales for IBM Software Group. Mr. Pray earned a Bachelor's degree from the University of Michigan.

Daniel Shannon has served as our executive vice president – global professional services since October 2014, after serving as our senior vice president – professional services from January 2011 through October 2014, and as our vice president, implementation services, from June 2005 through January 2011. Prior to joining us, Mr. Shannon held positions with IBM Business Consulting Services, PricewaterhouseCoopers Management Consulting and Schering-Plough. Mr. Shannon first began his clinical research career as a scientist designing and delivering preclinical and Phase I trials, followed by several years of consulting pharmaceutical and

[TABLE OF CONTENTS](#)

biotechnology organizations on best practices in clinical development. Mr. Shannon received his BA in chemistry from Rutgers University and holds an MS in environmental science from the New Jersey Institute of Technology and an MBA from the Fuqua School of Business at Duke University.

Compensation Discussion and Analysis

This Compensation Discussion and Analysis (“CD&A”) is intended to assist our stockholders in understanding our executive compensation program by providing an overview of our executive compensation-related philosophy, policies, practices, and decisions. It also explains how we determined the material elements of compensation for our “named executive officers” (as in accordance with SEC rules), who for 2017 were:

- **Tarek A. Sherif**, our Chairman and Chief Executive Officer (our “CEO”);
- **Glen M. de Vries**, our President;
- **Rouven Bergmann**, our Chief Financial Officer (our “CFO”);
- **Michael Otner**, our EVP- General Counsel and Corporate Secretary;
- **Michael Pray**, our EVP- General Manager of Global Sales;
- **Michael Capone**, our former Chief Operating Officer*; and
- **Mary Weger**, our former EVP- Human Resources*.

* Mr. Capone and Ms. Weger entered into a separation agreement with the company in December 2017 and August 2017, respectively. In compliance with SEC rules, information regarding compensation of Mr. Capone and Ms. Weger is being included in this proxy statement because each was one of the three most highly compensated officers (other than our CEO and CFO) in 2017, though not an executive officer at December 31, 2017.

Specifically, this CD&A provides an overview of our executive compensation philosophy, the overall objectives of our executive compensation program, and each compensation element that we provide to our named executive officers. In addition, it explains how and why our compensation committee arrived at specific compensation decisions for 2017 for our named executive officers. It should be read together with the executive compensation tables and related disclosures set forth below. This discussion contains forward-looking statements that are based on our current plans, considerations, expectations and determinations regarding future compensation programs.

To assist our stockholders in locating important information, this CD&A is organized as follows:

CD&A Section	Page
Overview	29
Compensation Philosophy and Guiding Principles	34
CEO and President Compensation	35
Compensation-Setting Process	35
Compensation Elements	38
Post-Employment Compensation	44
Other Compensation Policies	44
Tax Considerations	45
Risks Presented by Compensation Programs	46

Overview

Medidata is focused on clinical development in life sciences, using the latest technology to help our clients bring their new treatments to the public. Our leaders and employees are critical to the achievement of our mission and purpose. Our values include teamwork, integrity and collaboration and are built upon a culture of accountability and results orientation. The goal of our executive compensation program is to attract, motivate and retain industry-best executive talent. We believe that executive compensation should support our company strategy and business objectives and encourage increased stockholder value. We maintain compensation plans and arrangements that link executive compensation to the achievement of key financial measures, including revenue

TABLE OF CONTENTS

and profitability, and other stockholder value creation measures. To achieve our objectives, we use a mix of compensation elements including base salary, performance-based cash incentives, long-term incentive compensation in the form of equity awards and employee benefits.

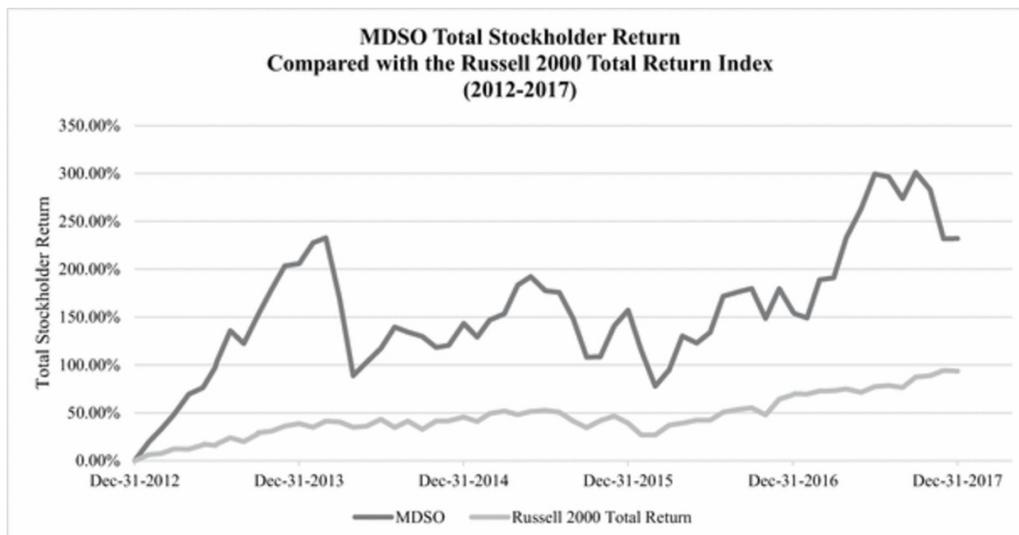
2017 Business Highlights

We demonstrated strong financial and business performance in 2017:

- Revenue grew to a record \$545.5 million (99.2% of target), representing an increase of \$82.1 million or 18% year over year.
- EBITDAO (earnings before interest, taxes, depreciation, amortization and stock-based compensation, as further described below) grew approximately 23% to \$131.8 million (97.6% of target).
- GAAP net income was \$44.4 million, up 53% over 2016.
- Key investments in our platform resulted in strong backlog growth during 2017, providing momentum entering 2018. Total multi-year subscription backlog increased by 39% to a record level of \$1.0 billion at December 31, 2017.

Total Stockholder Return

Our one-year total stockholder return (TSR) (measured by comparing the closing price of our common stock on NASDAQ on December 31, 2017 vs. December 31, 2016) was approximately 27.58%. Our three-year TSR (comparing our closing price on December 31, 2017 vs. December 31, 2014) was approximately 32.71%. As illustrated by the following graph, our five-year TSR (comparing our closing price on December 31, 2017 vs. December 31, 2012) was a very strong 223.48%, significantly outpacing that of the Russell 2000 Total Return Index for the same period (93.58%).



2017 Say-on-Pay Vote

We conducted an advisory vote on the 2016 compensation of our named executive officers (a “say-on-pay” vote) at our 2017 annual meeting of stockholders. Approximately 95% of the shares that were voted on this proposal were cast in favor of our named executive officers’ compensation.

TABLE OF CONTENTS

Executive Compensation Program Decisions for 2017

Based on investor feedback, as well as peer-group benchmarking and other input from our compensation committee advisor, the compensation committee took the following actions related to our executive compensation structure for 2017:

- ✓ **CEO and President Salaries Not Increased** – Despite a strong 2016 performance year, our CEO and President elected not to accept a salary increase for 2017 due to our negative 3-year TSR in the 2014-2016 period. While our TSR performance trend was at the time and continues to be well ahead of the Russell 2000 Total Return Index as a continuous metric, our absolute and relative TSR performance for the 3-year 2014-2016 period was not reflective of our strong long-term performance.
- ✓ **CEO and President Equity Mix Weighted Further Toward Performance-Based** – The ratio of performance-based to time-based equity granted to our CEO and President was increased from 50/50 in 2016 to 60/40 in 2017, thereby continuing to link increased pay to the company’s future performance.
- ✓ **Performance-Based Equity Criteria Broadened** – Responding to investor suggestions to utilize more than one metric in determining PBR SU earnouts, our compensation committee added three-year GAAP net income attainment to the existing metric of three-year TSR relative to the Russell 2000 Index for the 2017 PBR SU awards. GAAP net income and relative TSR will each determine the earnout of 50% of the PBR SU awards at the end of the three-year performance period.

2017 Executive Compensation Summary

Consistent with our performance and compensation philosophy, the compensation committee took the following actions with respect to our named executive officers’ 2017 compensation:

Named Executive Officer ⁽¹⁾	2017 Base Salary Increase from 2016	Annual Bonus Paid in 2018 for 2017 Performance, as a Percentage of Target Bonus	2017 Annual Restricted Stock Award (# of shares)	2017 Annual PBR SU Award at target (total # of units that may be earned in 2020) ⁽²⁾	# of shares of 2015 Annual PBR SU Award earned based on 2016-2017 Performance ⁽³⁾
Tarek A. Sherif	0%	93%	49,904	74,856	44,592
Glen M. de Vries	0%	93%	49,904	74,856	44,592
Rouven Bergmann	5.6%	107%	26,392	26,392	0 ⁽⁴⁾
Michael Otner	2.4%	120%	9,597	9,597	8,920
Michael Pray	0%	100% ⁽⁵⁾	9,597	9,597	0 ⁽⁴⁾

(1) Mr. Capone and Ms. Weger are not included in the above table and certain others because their compensation for 2017 was determined under the terms of their separation arrangements with the company. 2017 compensation for Mr. Capone and Ms. Weger is fully set forth in the Summary Compensation Table and also as appropriate in the discussion below of each primary compensation element.

(2) This column reflects the target number of shares that may be earned based on our relative TSR compared to the Russell 2000 Index for the three-year period from January 1, 2017 through December 31, 2019. Up to 200% of the target number of shares may be earned at the end of the performance period based on our actual performance.

(3) This column reflects the third tranche of the 2015 Annual PBR SU Award earned based on our three-year relative TSR compared to the Russell 2000 Index for the three-year period from January 1, 2015 through December 31, 2017. These PBR SUs were earned at 200% of target based on our relative TSR of 50.54% for that period.

(4) Messrs. Bergmann and Pray joined us after the 2015 Annual PBR SU Awards were made.

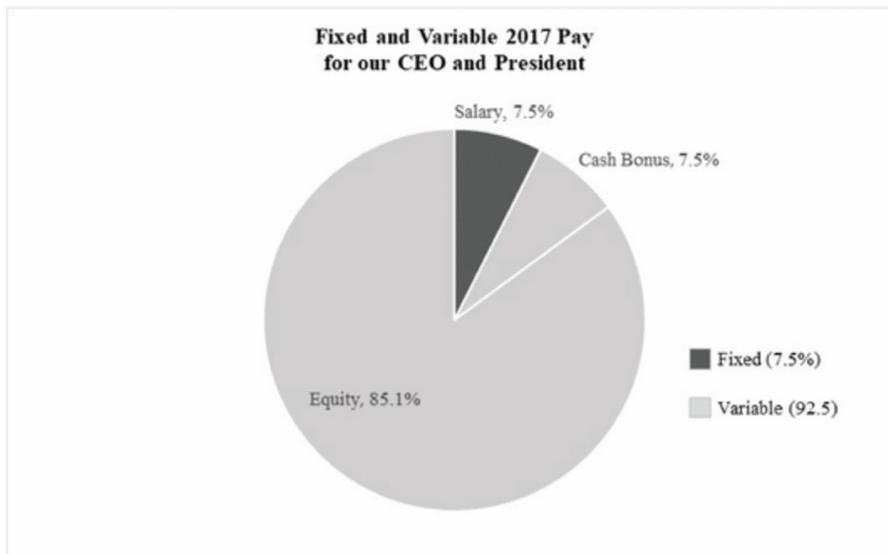
(5) Mr. Pray received a supplemental bonus in the amount of \$118,130 in recognition of his leadership in enhancing the sales management team and the company’s strong 2017 bookings performance in order to bring his aggregate cash bonus to the target level.

Emphasis on Variable and Performance-Based Compensation

The annual compensation earned by our executive officers, including our named executive officers, varies from year to year based on our corporate financial and operational results and individual performance. Consistent with our compensation philosophy, our executive compensation program emphasizes “variable” pay (including an annual cash bonus opportunity under our annual bonus plan and long-term incentive compensation in the form of equity awards for which the value will fluctuate based on our stock price) over “fixed” pay (in the form of base salary) and seeks to balance short-term and long-term incentives, as well as performance-based and time-based incentives to align executive compensation to shareholder interests.

[TABLE OF CONTENTS](#)

As illustrated in the following chart, 92.5% of the target total direct compensation of our CEO and our President in 2017 consisted of variable pay, with only 7.5% classified as fixed pay.



The compensation committee believes that our executive compensation program continues to reflect a strong “pay-for-performance” orientation and is well-aligned with the interests of our stockholders, as reflected in the chart above. A significant portion of the target total direct compensation of our named executive officers is performance-based, with the realization of compensation dependent upon the achievement of our performance objectives designed to enhance stockholder value.

Performance-based pay, consisting of target annual cash bonuses and performance-based restricted stock units (“PBRsUs”), made up approximately 60% of target total direct compensation for each of our CEO and President in 2017. The PBRsUs granted in 2017 (“2017 PBRsU Awards”) will be earned at the end of a three-year performance period, with one-half of the award vesting based on our achievement of performance goals based on the Company’s GAAP Net Income Attainment subject to certain limited adjustments over a three-year performance period ending December 31, 2019 and one-half of the award vesting based on our relative three-year TSR (December 31, 2016 – December 31, 2019) compared to the Russell 2000 Index. Non-performance based pay, consisting of base salary and time-based restricted stock, made up the other approximately 40% of target pay for each of our CEO and President for 2017.

TABLE OF CONTENTS

Similar allocations apply to our other executive officers, including our other named executive officers, except that approximately 50% of their awards are in the form of shares of restricted stock with time-based vesting and the other approximately 50% of their awards are in the form of PBRsUs. The following chart shows the percentages of target performance-based pay versus non-performance-based pay for our CEO and our other named executive officers determined in February 2017:

Named Executive Officer	Non-Performance-Based Pay (Salary + Time-Based Restricted Stock Award Economic Value at Time of Grant) ⁽¹⁾	Non-Performance-Based Pay Percentage of Total	Target Performance-Based Pay (Target Annual Cash Bonus for 2017 + 2017 PBRsU Award at Target Economic Value at Time of Grant) ⁽²⁾	Target Performance-Based Pay Percentage of Total
Tarek A. Sherif	\$ 3,170,000	41.5%	\$ 4,470,000	58.5%
Glen M. de Vries	\$ 3,170,000	41.5%	\$ 4,470,000	58.5%
Rouven Bergmann	\$ 1,850,000	51.7%	\$ 1,731,250	48.3%
Michael Otner	\$ 845,000	55.7%	\$ 672,500	44.3%
Michael Pray	\$ 900,000	50.0%	\$ 900,000	50.0%
Michael Capone	\$ 2,750,000	50.0%	\$ 2,750,000	50.0%

(1) For time-based restricted stock award component, represents dollar amount (economic value) approved by our compensation committee.

(2) For PBRsU award component, represents dollar amount (economic value) approved by our compensation committee.

Executive Compensation Best Practices

We endeavor to maintain best practices in our executive compensation program, including compensation-related corporate governance standards, consistent with our executive compensation philosophy. During 2017, the following executive compensation policies and practices were in place, promoting overall corporate performance and behaviors that serve our stockholders' long-term interests:

What We Do

- ✓ **Compensation Committee Independence** – Our board of directors maintains a compensation committee comprised solely of independent directors who have established effective means for communicating with our stockholders and regularly engage in stockholder outreach regarding their executive compensation ideas and concerns. We conducted our additional investor outreach in 2018 with the following major stockholders (representing more than 25% of our outstanding shares, based on SEC filings as of December 31, 2017).
- ✓ **Compensation Committee Advisor** – The compensation committee engages and retains its own independent advisors. During 2017, the compensation committee engaged Radford, a national executive compensation consulting firm, to assist with its responsibilities.
- ✓ **Annual Compensation Review** – The compensation committee conducts an annual review of our executive compensation philosophy and strategy, including a review of the compensation peer group used for comparative purposes.
- ✓ **Compensation-Related Risk Assessment** – We mitigate undue risk, including the use of multiple performance factors in determining our annual cash bonuses, so that employees do not focus on a single financial measure, and multiple-year vesting of our equity awards to support long-term stockholder value creation.
- ✓ **Emphasize Performance-based Incentive Compensation** – We tie pay to performance. A significant portion of executive pay is not guaranteed. For example, as indicated above, performance-based compensation represented more than 58% of our CEO's total direct compensation opportunity in 2017. We set clear financial goals for corporate performance and differentiate based on individual achievement. The compensation committee regularly reviews how executive pay aligns with our financial performance.

TABLE OF CONTENTS

- ✓ **Emphasize Long-Term Equity Compensation** – The compensation committee uses equity awards to deliver long-term incentive compensation opportunities to our executive officers, including our named executive officers. These equity awards vest or may be earned over multi-year periods, which better serves our long-term value creation goals, our retention objectives and our shareholder interests.
- ✓ **Limited Executive Perquisites** – We provide modest amounts of perquisites or other personal benefits to the named executive officers, which serve a sound business foundation. In addition, the named executive officers participate in our health and welfare benefit programs on the same basis as all our employees.
- ✓ **Stock Ownership Policy** – We have adopted meaningful stock ownership guidelines for our executive officers, which require each to own a specified amount of our common stock, and therefore significantly aligns their interests with our stockholders’ interests.
- ✓ **Executive Incentive Compensation Recoupment Policy** – We have adopted a compensation recovery (“clawback”) policy that provides for the recoupment of cash incentive compensation from our executive officers in the event of a financial restatement resulting from the misconduct of an executive officer.
- ✓ **“Double-Trigger” Change in Control Arrangements** – We have reasonable “double trigger” change in control arrangements, which provide payments and benefits to an eligible executive officer only if there is both the occurrence of a change in control of the company and the involuntary or constructive termination of employment of the individual within a designated protection period.
- ✓ **Prohibitions on Hedging** – All employees are prohibited from engaging in hedging transactions in our common stock shares.
- ✓ **Succession Planning** – Our board of directors annually reviews a comprehensive succession strategy which ensures plans are in place for critical positions, mitigating risks should turnover occur for any reason.

What We Do Not Do

- × **Retirement Programs** – We do not have a retirement plan that provides benefits to our executive officers beyond our broad-based 401(k) plan for employees.
- × **No Tax “Gross-Ups” or Payments** – We do not provide any “gross-ups” or tax payments in connection with any compensation element (other than de minimis amounts relating to travel expenses for employee participants’ partners for our President’s Club sales awards meeting) or any excise tax “gross-up” or tax reimbursement in connection with any change in control payments or benefits.
- × **No Employment Agreements** – We have no employment agreements or multi-year compensation guarantees for any of our named executive officers.
- × **No Stock Option Repricing** – Our equity plan prohibits the repricing of options without stockholder approval.

Compensation Philosophy and Guiding Principles

Our executive compensation programs are designed to:

- attract and retain talented and experienced executives by offering market competitive compensation programs;
- motivate key executives to achieve strategic business initiatives and to reward them for their achievements;
- support a strong “pay-for-performance” environment that differentiates bonus targets among our executives based on their responsibilities and contributions toward company performance; and
- align the interests of our executives with the long-term interests of our stockholders through equity awards whose value over time depends upon the market value of our common stock.

To achieve these objectives, our executive compensation program provides a mix of compensation elements, including base salary, annual cash bonus opportunities, long-term incentive compensation in the form of equity

TABLE OF CONTENTS

awards, and broad-based employee benefits. In addition to these key elements of compensation, our executive compensation program includes “double-trigger” termination change in control protections.

In summary, our “pay-for-performance” philosophy places a much greater emphasis on the at-risk earnings of our named executive officers so that their interests fully align with the interests of our stockholders. The compensation committee therefore awards significant levels of at-risk compensation in the form of performance-based equity awards that are directly tied to our financial performance and the creation of stockholder value. The weighting among the compensation components is structured such that a majority of an executive officer’s target total direct compensation will be incentive-based (annual cash bonuses and equity awards), rather than fixed (base salary). Our compensation committee believes that this structure strongly emphasizes the performance-based, shareholder-aligned nature of our compensation program.

CEO and President Compensation

The compensation committee considers the company fortunate to have, in Messrs. Sherif and de Vries, founders who have provided continuous leadership and guidance as co-leaders of the company. Given the long-term complementary nature of their co-leadership responsibilities, which continues to provide strong vision, purpose, continuity and stability to our company culture and results, the compensation committee has determined that it is appropriate to compensate them at a commensurate level. To reflect this unique management structure and to prevent compensating each of our co-leaders at the higher “chief executive officer” level, when developing compensation recommendations for our CEO and President, the compensation committee considers the average pay of the two highest-paid executives at the companies in our compensation peer group with separate CEO and President positions.

Compensation-Setting Process

At the direction of our board of directors, the compensation committee endeavors to ensure that the compensation programs for the executive officers of the company and its subsidiaries are competitive and consistent with market practice to attract and retain key executives critical to our long-term success. The compensation committee ensures that the compensation is attractive to key executives with the background and experience needed for our future growth. The compensation committee believes that our overall financial performance and long-term stockholder value should be the most important factors in determining the total compensation of our executive officers. At the executive officer level, the compensation committee has a policy that a significant proportion of target total direct compensation should consist of variable, performance-based components, such as PBRU awards and annual cash bonuses, which can increase or decrease to reflect changes in company and individual performance.

The compensation committee evaluates the total compensation of our executive officers, including our named executive officers, in light of information regarding the compensation practices and corporate financial performance of similar companies in our peer group. Market compensation levels are important inputs into the decision-making process. Additional factors considered include job scope, individual skills/experience, relative importance of the individual’s role, internal pay equity, historical pay levels, equity holdings, and recent company performance.

Role of the Compensation Committee

The compensation committee determines all compensation for our CEO and President and (taking into account our CEO’s recommendation) also for our other executive officers, including base salaries, annual cash bonuses and long-term incentive compensation in the form of equity awards. The compensation committee directs management, including our CEO, to prepare reports and recommendations for the review, discussion, modification and final approval by the compensation committee with respect to various aspects of our executive officers’ total compensation. The compensation committee believes, for example, that the executive officers have greater day-to-day insight into the key metrics on which company performance should be evaluated. Consequently, the compensation committee directs our CEO, and for certain matters, our CFO or executive vice president— human resources, to prepare recommendations with respect to appropriate qualitative and quantitative criteria on which our executive officers’ performance might be based. In the case of determining the compensation of our CEO and President, the compensation committee meets outside the presence of our CEO and President.

TABLE OF CONTENTS

The compensation committee considers many factors in setting pay levels. Factors considered in setting the compensation levels for individual executive officers include the executive's experience, role and responsibilities, past performance, expected future contributions, criticality to the organization, competitive market data and internal equity between executives.

When reviewing external market data, the compensation committee generally considers the middle two quartiles (*i.e.*, from the 25th to the 75th percentiles) as the competitive "market," but does not specifically target a specific pay percentile for setting compensation levels because it considers multiple market sources (which do not always agree with one another), and our executive officers' positions and responsibilities do not always match well with the positions referenced in the market data. Rather, the purpose of this analysis is to determine whether the compensation offered to each executive officer, both in total and with respect to each of the constituent components, is competitive with the applicable market comparables that the compensation committee has reviewed for the corresponding period. Where total compensation or a specific component of compensation is not within a competitive range, the compensation committee uses the competitive market data as one factor in making its compensation decision, but may also take into account factors specific to an executive officer as described in the previous paragraph.

The compensation committee considers these reports and recommendations in discharging its duties with respect to reviewing and setting the compensation of our executive officers, including our named executive officers. Other resources that our compensation committee may rely upon include the individual director's respective experience and recommendations, recommendations of Radford, and competitive market data provided by Radford or management.

Role of our CEO and Other Management

Generally, our internal personnel responsible for our compensation analysis attend a portion of each compensation committee meeting and leave before certain executive sessions. No executive officer is present or participates directly in the compensation committee final determinations regarding the amount of any component of his or her own compensation. However, given his responsibilities for managing the performance of our executive officers, our CEO plays a primary role in establishing the performance goals for, and evaluating the performance of, our other executive officers. The compensation committee solicits and considers his evaluations and recommendations, including his recommendations regarding compensation each year.

Role of Compensation Consultant

The compensation committee has the authority under its charter to engage the services of outside advisors, experts and others to assist the committee. For purposes of its 2017 executive compensation review, the compensation committee directly retained the services of Radford, an Aon Hewitt company and a subsidiary of Aon plc, as compensation consultants to assist in its evaluation of executive and director compensation. Radford reviewed and advised on all principal aspects of the executive compensation program, including, but not limited to:

- providing recommendations regarding the composition of our compensation peer group;
- analyzing compensation peer group data, compensation survey data, and other publicly available data (including applying its experience with other companies); and
- reviewing and advising on executive compensation.

For 2017, Radford also assisted the compensation committee with our equity compensation strategy, including the appropriate mix and weight of different equity vehicles. Representatives of Radford attend meetings of the compensation committee as requested and also communicate with the compensation committee outside of meetings. Radford reports to the compensation committee rather than to management, although Radford will meet with members of management for purposes of reviewing the market data it compiles and analyzes, gathering information on current compensation practices and providing feedback to management on proposals that management may make to the compensation committee. As part of its engagement, Radford also assists with reviewing and advising on compensation-related disclosures.

In 2017, management retained Aon plc or its affiliates for consulting services with respect to employee benefits and compensation at an aggregate cost of approximately \$504,000 (\$240,000 was paid directly, with the

TABLE OF CONTENTS

remaining balance paid indirectly by third party employee benefits vendors in the form of commissions. A portion of the commission revenue received by Aon covers the cost of outsourced administration services for our benefits plans in the United States.). Although the compensation committee was aware of the nature of these other services provided by Aon plc or its affiliates and the Radford survey data, the compensation committee did not review and approve such services, as they were reviewed and approved by management in the ordinary course of business. Based on a consideration of various factors, the compensation committee does not believe that its relationship with Radford and the work of Radford and its affiliates on behalf of the compensation committee and management have raised any conflict of interest. The compensation committee reviews these factors and receives written confirmation from Radford stating its belief that it remains an independent compensation consultant to the compensation committee.

The compensation committee may replace Radford or hire additional advisors at any time. Based on the consideration of the various factors as set forth in the rules of the SEC and NASDAQ, the compensation committee has determined that Radford is independent and does not believe that its relationship with Radford and the work of Radford on behalf of the compensation committee have raised any conflict of interest.

Compensation Peer Group

In the course of its deliberations, the compensation committee assesses our executive compensation program and each individual element of compensation against the competitive market, as represented by a group of publicly-traded peer companies. In August 2016, with the assistance of Radford, the compensation committee evaluated and updated our compensation peer group using the following criteria:

- companies with similar revenue and market capitalization as us;
- software, healthcare technology and software-as-a-service companies; and
- companies against which the compensation committee believes we compete for talent and for stockholder investment.

As a result of this process, the compensation committee approved an updated compensation peer group in August 2016 consisting of the following 18 companies:

- Aspen Technology, Inc.
- athenahealth, Inc.
- Blackbaud, Inc.
- Bottomline Technologies, Inc.
- BroadSoft, Inc.
- Comerstone OnDemand, Inc.
- Guidewire Software, Inc.
- Infoblox Inc.
- LogMeIn, Inc.
- Manhattan Associates, Inc.
- NetSuite Inc.
- Omnicell, Inc.
- Proofpoint, Inc.
- RealPage, Inc.
- Synchronoss Technologies, Inc.
- Tableau Software, Inc.
- The Ultimate Software Group, Inc.
- Veeva Systems Inc.

TABLE OF CONTENTS

Revenues of the compensation peer group ranged from \$287 million to \$974 million, with a median of \$480 million, for the four quarters completed as of June 30, 2016; market capitalization of the peer group ranged from \$897 million to \$6.2 billion, with a median of \$2.9 billion, as of July 1, 2016; and headcount of the peer group ranged from 772 to 4,668 employees, with a median of 1,573 employees, as of the end of each company's most recently completed year. Our revenue for the same four quarters was \$404 million, our market capitalization as of July 1, 2016 was \$2.7 billion, and we had 1,254 employees at the time of the 2016 peer group evaluation.

The compensation committee conducted another peer group review, with the assistance of Radford, using similar criteria in September 2017, to be used in connection with its compensation deliberations with respect to 2018. The September 2017 review resulted in the removal of three companies (Infoblox, Netsuite and Synchronoss Technologies) from, and the addition of three companies (Ansys, Commvault Systems and Tyler Technologies) to the peer group, which numbers 18 companies.

The compensation committee intends to continue reviewing the compensation peer group annually, recognizing that our compensation policies and practices must be competitive in the marketplace, aligned to a relevant set of peer companies, and this peer group information is useful in assessing the reasonableness and appropriateness of individual executive compensation elements and of our overall executive compensation packages. This information is only one of several factors that the compensation committee considers, however, in making its decisions with respect to the compensation of our executive officers.

Compensation Elements

The three primary elements of our executive compensation programs are: (1) base salary, (2) annual cash bonus opportunities, and (3) long-term incentive compensation in the form of equity awards, as described below:

Compensation Element	What This Element Rewards	Purpose and Key Features of Element
Base salary	Individual performance, level of experience, expected future performance and contributions.	Provides competitive level of fixed compensation determined by the market value of the position, with actual base salaries established based on the facts and circumstances of each executive officer and each individual position.
Annual cash bonuses	Achievement of pre-established corporate performance objectives for the year (and individual performance objectives for our named executive officers other than the CEO and President).	Motivate executive officers to achieve specific company and individual performance objectives. Generally, performance levels are established to encourage our executive officers to achieve or exceed performance objectives.
Long-term incentive compensation	Achievement of corporate performance objectives designed to enhance long-term stockholder value and attract, retain, motivate, and reward executive officers over extended periods for achieving important corporate objectives. Vesting requirements promote retention of highly valued executive officers.	Time-based equity awards vest over several years, providing a variable "at risk" pay opportunity. Because the ultimate value of these equity awards is directly related to the market price of our common stock, and the awards are only earned over an extended period of time subject to vesting requirements, they serve to focus executive officers on the creation of sustainable long-term stockholder value. In addition, a

[TABLE OF CONTENTS](#)

Compensation Element	What This Element Rewards	Purpose and Key Features of Element
		substantial percentage of each equity award for our executive officers is in the form of Performance-Based Restricted Stock Unit (“PBRSU”) awards, with respect to which shares will be earned only if our performance meets or exceeds criteria established at the time of the PBRSU award, thus further encouraging our executive officers to attain key corporate objectives over time. Starting with our 2016 awards, PBRSU award performance periods have been increased to a full three years.

Base Salary

In 2017, the compensation committee reviewed the base salaries of our executive officers, including our named executive officers, focusing on the competitiveness of these salaries, based on compensation survey data and our select peer group. Based on that information, a review of each named executive officer’s performance, the recommendations of our CEO (other than with respect to his base salary and the base salary of our President), and the factors described above, the compensation committee approved base salary increases for certain of the named executive officers.

The base salaries of our named executive officers for 2017 were set as follows:

Named Executive Officer(1)	2016 Base Salary	2017 Base Salary	Percentage Adjustment
Tarek A. Sherif	\$ 570,000	\$ 570,000	0%
Glen M. de Vries	\$ 570,000	\$ 570,000	0%
Rouven Bergmann	\$ 450,000	\$ 475,000	5.6%
Michael Otner	\$ 336,750	\$ 345,000	2.4%
Michael Pray	\$ 400,000(2)	\$ 400,000	0%
Michael Capone	\$ 475,000	\$ 500,000	5.3%

(1) Ms. Weger is not included in the above table because she joined us in February 2017 at which time her annual base salary was set at \$350,000.

(2) In connection with his appointment as our EVP, General Manager of Global Sales in October 2016, the compensation committee set Mr. Pray’s initial annual base salary at \$400,000.

The base salaries of our named executive officers during 2017 are set forth in the “2017 Summary Compensation Table” below.

Annual Cash Bonuses

Performance-based cash bonuses are paid to our executive officers, including our named executive officers, based on the achievement of corporate performance objectives and a qualitative assessment of the executive officer’s individual performance, each as determined by the compensation committee. These corporate objectives may change from year to year as our company and market conditions continue to evolve and different priorities are established in the discretion of the compensation committee. Annual cash bonuses are paid to reward achievement of critical operating, financial, strategic and individual measures and goals that are expected to contribute to stockholder value creation over time.

The cash bonuses paid for the 2017 performance of our CEO and President were determined by the compensation committee based solely on the achievement of corporate financial performance objectives, the cash

TABLE OF CONTENTS

bonuses for the 2017 performance of our head of sales were determined by the compensation committee based 25% on the achievement of corporate financial performance objectives and 75% on the achievement of individual sales performance objectives, and the cash bonuses for the 2017 performance of each of our other named executive officers were determined by the compensation committee based 75% on the achievement of corporate financial performance objectives and 25% on the achievement of individual performance objectives, which were established based on his or her individual responsibilities. In the case of Mr. Capone's and Ms. Weger's compensation in connection with their 2017 performance was governed by the terms of their separation arrangements.

Target Bonus Opportunities

For 2017, the target cash bonus opportunities for our executive officers were established as a percentage of their annual base salary. The compensation committee used external market data to determine the applicable target cash bonus opportunities for each executive officer. For 2017, the target annual cash bonus opportunities for each of our named executive officers, expressed as a percentage of his annual base salary, were as follows:

<u>Named Executive Officer</u>	<u>Annual Base Salary</u>	<u>Target Bonus Opportunity (as a percentage of base salary)</u>	<u>Target Bonus Opportunity</u>
Tarek A. Sherif	\$ 570,000	100%	\$ 570,000
Glen M. de Vries	\$ 570,000	100%	\$ 570,000
Rouven Bergmann	\$ 475,000	75%	\$ 356,250
Michael Otner	\$ 345,000	50%	\$ 172,500
Michael Pray	\$ 400,000	100%	\$ 400,000
Michael Capone	\$ 500,000	100%	\$ 500,000
Mary Weger	\$ 350,000	50%	\$ 175,000

Corporate Performance Objectives – Financial Bonus Factor

For 2017, the compensation committee selected revenue and EBITDAO (as defined below) as the two measures of our corporate performance objectives to be used in determining the financial bonus factor that is used for the payment of annual cash bonuses. Growth in revenue and profitability are paramount objectives of our strategy and broad indicators of the success of our business. The compensation committee believes that rewarding these strategic imperatives through effective and appropriate compensation and retention tools yield the desired alignment with stockholder interests, including stockholder value creation. Accordingly, the compensation committee uses EBITDAO as its primary profitability measure, which is a non-GAAP measure that represents net income calculated in accordance with GAAP, excluding interest, taxes, depreciation, amortization and stock-based compensation. The compensation committee believes that EBITDAO provides a meaningful measure of core financial performance and supports our short-term and long-term business objectives.

Both corporate financial measures are weighted in determining the total financial bonus factor, with the opportunity to earn an annual cash bonus in excess of that level based on achieving performance superior to the target levels established by the compensation committee. The performance target levels for the annual cash bonuses for 2017 performance were \$550.0 million of revenue (representing a 18.7% increase over actual 2016 revenue) and \$135.0 million of EBITDAO (representing a 26.5% increase over actual 2016 EBITDAO). The compensation committee established a target matrix comparing revenue and EBITDAO at different performance levels, with each combination of revenue and EBITDAO providing for a specific payout level (not to exceed 250%). The matrix was established to ensure that bonuses would be earned for corporate performance only where we substantially achieved our revenue goal for the year while, at the same time, demonstrating a significant level of profitability. To further illustrate the rigorous nature of the required performance levels, 2017 revenue of \$534.0 million (more than 97% of target) combined with 2017 EBITDAO of \$123.0 million (more than 91% of target) would result in a financial bonus factor of only 55%. The bonus factors resulting from each combination of revenue and EBITDAO were, in the judgment of the compensation committee, appropriate, with the higher bonus factors achievable but nevertheless subject to a number of uncertainties and extraneous influences which could prevent their achievement. Earned bonus amounts were subject to decrease (a "negative adjustment") but not increase at the compensation committee's discretion.

After reviewing our 2017 revenue and profitability, and ascertaining the intersection of actual revenue and EBITDAO in the target matrix described above, the compensation committee determined a financial bonus factor

TABLE OF CONTENTS

of 93.1% for our corporate performance objectives, as reflected in the following table (showing target and actual revenue and EBITDAO reference points for the calculation, with intermediate points on the matrix interpolated). The compensation committee determined the financial bonus factor entirely through reference to the target matrix.

	Revenue (\$M)	EBITDAO (\$M)	Financial Bonus Factor
2017 Minimum Threshold	\$ 533.0	\$ 123.0	55%
2017 Target	\$ 550.0	\$ 135.0	100%
2017 Actual	\$ 545.5	\$ 131.8	93.1%

Reconciliation of Net Income to Non-GAAP EBITDAO

	Twelve Months Ended December 31,	
	2016	2017
	(in thousands)	
Net income	\$ 28,983	\$ 44,380
Add back:		
Interest and other expense, net	12,895	12,121
Provision for income taxes	8,331	7,847
Stock-based compensation	41,158	47,813
Depreciation and amortization	15,349	24,053
Wire transaction recovery ⁽¹⁾	—	(4,770)
Contingent consideration adjustment ⁽²⁾	—	319
EBITDAO	\$ 106,716	\$ 131,763

(1) Operating costs and expenses for the year ended December 31, 2017 include the probable insurance recovery of amounts associated with the previously recognized 2014 wire transaction loss.

(2) Amount represents the change in fair value of acquisition-related contingent consideration liabilities.

Individual Performance Objectives

For the individual performance component, payments are determined at the discretion of the compensation committee based on our CEO's subjective evaluation of each individual's performance (which involves both quantitative and qualitative considerations) and collaborative contribution to our overall success. For our CEO and President, individual performance was not a factor in determining their annual cash bonuses; their bonuses were based solely on our corporate performance.

At that time, the compensation committee also determined, based on its review of the recommendation of our CEO, that the individual performance objectives of each named executive officer had been attained at the following percentage levels.

Named Executive Officer ⁽¹⁾	Individual Performance Objectives Attainment Level
Tarek A. Sherif	N/A
Glen M. de Vries	N/A
Rouven Bergmann	150% ⁽²⁾
Michael Otner	200% ⁽²⁾
Michael Pray	100% ⁽²⁾

(1) Mr. Capone and Ms. Weger are not included in the above table. Their compensation (including bonus for 2017) was determined under the terms of their separation arrangements with the company.

(2) The individual performance component rewards each executive's functional contribution to the company's performance. For example, Mr. Bergmann exceeded his leadership and Finance organization objectives as our CFO and Mr. Otner exceeded his leadership and Legal organization objectives as our General Counsel. Mr. Pray received his full individual performance component in recognition of his leadership in enhancing the sales management team and the Company's strong 2017 bookings performance.

TABLE OF CONTENTS

Bonus Results

Based on its review of our overall corporate performance, and taking into account each named executive officer's attainment of his individual performance objectives for 2017, the compensation committee approved bonus payments as follows for our named executive officers. Because the annual cash bonuses for our CEO and President were based entirely on our corporate performance objectives, their actual annual cash bonus payments were 93.1% of their target annual cash bonus opportunities, in accordance with the 93.1% financial bonus factor described above.

Named Executive Officer⁽¹⁾	Target Annual Cash Bonus Opportunity	Amount Related to Company Performance Objectives	Amount Related to Individual Performance Objectives	Actual Annual Cash Bonus Payment	Percentage of Target Annual Cash Bonus Opportunity
Tarek A. Sherif	\$ 570,000	\$ 530,385	N/A	\$ 530,385	93.1%
Glen M. de Vries	\$ 570,000	\$ 530,385	N/A	\$ 530,385	93.1%
Rouven Bergmann	\$ 356,250	\$ 248,618	\$ 133,594	\$ 382,212	107%
Michael Otner	\$ 172,500	\$ 120,383	\$ 86,250	\$ 206,633	120%
Michael Pray	\$ 400,000	\$ 93,050	\$ 306,950	\$ 400,000	100%

(1) Mr. Capone and Ms. Weger are not included in the above table. Their compensation (including bonus for 2017) was determined under the terms of their separation arrangements with the company.

The annual cash bonuses paid to our named executive officers for 2017 are set forth in the "2017 Summary Compensation Table" below.

Long-Term Incentive Compensation

We believe that long-term performance is achieved through an ownership culture that aligns the long-term interests of our executives with those of our stockholders. Our incentive plans have been established and operated to achieve that objective. The compensation committee recognizes that while the annual cash bonus rewards management actions that impact short- and mid-term performance, the interests of our stockholders are also served by giving key employees the opportunity to participate in the long-term appreciation of our common stock through equity awards. In addition, equity awards are an effective tool for management retention because they are subject to vesting over an extended period of time and, in the case of stock options, provide for only a limited exercise period following termination of employment.

The annual equity awards granted to our executive officers are in the form of restricted stock awards and performance-based restricted stock units ("PBRUS") awards. Generally, stock options are granted to our executive officers only as part of new hire awards. The compensation committee believes that restricted stock and stock unit awards provide a stronger incentive to create and preserve long-term stockholder value. Restricted stock and stock unit awards promote employee retention and stock ownership and also help manage stockholder dilution by using fewer shares than would result from the exclusive or principal use of stock options.

For 2017, 50% of the value of the annual equity awards granted to our executive officers was in the form of shares of restricted stock subject to time-based vesting conditions (annually over four years), contingent on our achieving positive EBITDAO for 2017, and 50% of the value of such awards was in the form of PBRUSs, except for our CEO and President who received 40% of such awards in the form of shares of restricted stock subject to time-based vesting conditions (annually over four years) and 60% of such awards in the form of PBRUSs. The PBRUSs granted in 2017 ("2017 PBRUS Awards") are to be earned at the end of a three-year performance period, with one-half of the award vesting based on our achievement of performance goals based on the Company's GAAP Net Income Attainment subject to certain limited adjustments over a three-year performance period ending December 31, 2019 and one-half of the award vesting based on our relative three year TSR (December 31, 2016 – December 31, 2019) compared to the Russell 2000 Index. Each 2017 PBRUS Award represents a contingent right to receive 0% to 200% of the target number of shares of our common stock subject to the award.

To determine the size of each 2017 equity award, the compensation committee considered the recommendation of our CEO (except with respect to his own award and the award for our President), its assessment of each executive officer's past performance and expected future contributions, competitive market

TABLE OF CONTENTS

data about similar awards for their respective positions, and its assessment of the retention value of each executive officer's outstanding and unvested equity awards. The number of shares of restricted stock and PBRsUs awarded to our named executive officers was calculated based on the stock price value equal to the average closing NASDAQ market price for our common stock for the 30 trading days prior to the grant date, and, in the case of PBRsUs, reflects their value assuming performance at the target level.

The equity awards granted to our named executive officers in February 2017 were as follows:

Named Executive Officer	2017 Annual Time-Based Restricted Stock Award (Economic Value) ⁽¹⁾	2017 Annual Time-Based Restricted Stock Award (# of shares)	2017 Annual Performance-Based Restricted Stock Units Award (Economic Value) ⁽¹⁾	2017 Annual Performance-Based Restricted Stock Units Award at target (Total # of units that may be earned in 2020)
Tarek A. Sherif	\$ 2,600,000	49,904	\$ 3,900,000	74,856
Glen M. de Vries	\$ 2,600,000	49,904	\$ 3,900,000	74,856
Rouven Bergmann	\$ 1,375,000	26,392	\$ 1,375,000	26,392
Michael Otner	\$ 500,000	9,597	\$ 500,000	9,597
Michael Pray	\$ 500,000	9,597	\$ 500,000	9,597
Michael Capone	\$ 2,250,000	43,186	\$ 2,250,000	43,186

(1) Represents dollar amount (economic value) approved by our compensation committee for time-based restricted stock and PBRsU awards. The values given for the corresponding equity awards in the "2017 Summary Compensation Table" below were computed in accordance with Accounting Standards Codification subtopic 718 (ASC 718).

Earnings Determination for 2015 PBRsU Awards

For 2017, the number of shares of our common stock to be earned with respect to the third and final tranche of the 2015 PBRsU Awards was based on our TSR performance for the three-year period from January 1, 2015 through December 31, 2017 relative to the corresponding TSR of the Russell 2000 Index.

The following table indicates select reference points (representing 0%, 100% and 200% of target, with intermediate points interpolated) for the calculations leading to the 200% PBRsU earnings determination made by the compensation committee in February 2018. Pursuant to the 200% earnings determination, Messrs. Sherif, de Vries, Capone and Otner respectively earned 44,592, 44,592, 14,866 and 8,920 shares of our common stock, all of which were fully vested. (Messrs. Bergmann and Pray joined us after the 2015 Annual PBRsU Awards were made.)

Medidata TSR Relative to Russell 2000 TSR	Percentage of target achieved
75 th percentile or greater	200.0%
50 th percentile	100.0%
20 th percentile or less	0.0%
2015-2017 TSR CALCULATIONS FOR PBRsU EARNINGS DETERMINATION	
2015-2017 Medidata TSR	50.54%
2015-2017 Russell 2000 TSR	22.45%
Medidata TSR > RUSSELL 2000 TSR	28.09%

The equity awards granted to our named executive officers in 2017 are set forth in the "2017 Summary Compensation Table" and the "2017 Grants of Plan-Based Awards Table" below.

Employee Benefits and Perquisites

In 2017, our named executive officers, like our other employees, participated in various employee benefit plans, including medical and dental care plans, a qualified Section 401(k) retirement plan, our employee stock purchase plan, life, accidental death and dismemberment and disability insurance, paid time off and other benefits. In addition, some of our named executive officers (along with all other trip participants from the

TABLE OF CONTENTS

company) also received de minimis travel expenses for a company-sponsored trip for spouses or significant others who attend our President's Club sales incentive trips to accompany them, including a gross-up for income tax purposes for those travel expenses related to the President's Club.

For further information about the employee benefits and perquisites provided to our named executive officers in 2017, see the "2017 Summary Compensation Table" below.

We do not generally differentiate the benefits we offer our named executive officers from the benefits we offer our other employees. In 2017, we did not maintain any benefit programs exclusively for our executive officers, such as executive pension plans, deferred compensation plans, supplemental insurance or other executive retirement benefits.

Post-Employment Compensation

We have entered into change in control agreements with each of our executive officers, including each of our named executive officers. These agreements require us to provide certain payments and benefits upon a qualifying termination of employment, which includes a termination of employment without cause or where the executive officer resigns with good reason, during the severance protection period, which begins on the date a definitive transaction agreement is signed and ends two years after the date of a change in control. The receipt of these payments and benefits are contingent upon the named executive officer's execution, delivery, and non-revocation of a release and waiver of claims satisfactory to us following the termination of employment. In addition, for six months following termination of employment, and as a condition to the payments and benefits, the named executive officer must cooperate with any transition efforts that we request and must not disparage us, or our employees, executive officers, or members of our board of directors.

We believe that these agreements act as an incentive for our executive officers to remain employed and focused on their responsibilities during the threat or negotiation of a change-in-control transaction, which preserves our value and the potential benefit to be received by our stockholders in the transaction.

The agreements provide for payments and benefits which are payable only upon a "double trigger"; that is, only following a change in control of the company and a qualifying termination of employment, including a termination of employment without cause or a resignation for good reason.

For a summary of the material terms and conditions of the post-employment compensation arrangements with our named executive officers, see "Potential Payments upon Termination of Employment or a Change in Control" below.

In December 2017, we entered into a separation agreement with Mr. Capone relating to his separation from the company. Under the terms of the separation agreement, Mr. Capone resigned his officer position and his employment was terminated effective December 13, 2017. Under the separation agreement, Mr. Capone is receiving his existing base salary through June 30, 2018 and remained eligible to receive a portion of his annual cash bonus for 2017. Mr. Capone is eligible for continued vesting of previously awarded but unvested equity awards in accordance with the applicable plan documents through June 30, 2018.

In August 2017, we entered into a separation agreement with Ms. Weger relating to her separation from the company. Under the terms of the separation agreement, Ms. Weger's employment was terminated effective August 7, 2017. Under the separation agreement, Ms. Weger received a severance amount equal to 6 months' salary totaling \$175,000, payable over a 6-month period. We paid Ms. Weger's insurance premiums through August 31, 2017.

Other Compensation Policies

Executive Stock Ownership Guidelines

In February 2013, our board of directors adopted stock ownership guidelines for our executive officers to help ensure that we maintain close alignment between the interests of our executive officers and those of our stockholders. Under our executive stock ownership guidelines, our CEO and President are each expected to own shares of our common stock valued at five times his annual base salary, and each other executive officer is expected to own shares of our common stock valued at two times his or her annual base salary. Each executive officer must achieve his or her applicable ownership levels on or before the fifth anniversary of his or her becoming an executive officer. At the end of 2017, all of our named executive officers were in compliance with their respective ownership guidelines.

TABLE OF CONTENTS

These guidelines were amended in April 2017 to require that, if the individual's stock ownership requirement has not been met within the required period, the individual will be required to retain at least 50% of all net shares of the company (after settlement of taxes and transaction fees) acquired upon future vesting of equity awards, until his or her minimum stock ownership requirement is achieved.

Executive Incentive Compensation Recoupment Policy

In February 2015, our compensation committee adopted an Executive Incentive Compensation Recoupment Policy. Under this "clawback" policy, in the event that we are required to prepare an accounting restatement due to the misconduct of any covered executive officer (that is, our Section 16 reporting officers), we may seek to recover reimbursement of cash incentive compensation from each covered executive officer who, at any time after January 1, 2015 and during the three-year period preceding the date on which we are required to prepare the accounting restatement, received payment of such compensation based on the erroneous financial data. The amount of compensation to be recovered is the excess of the amount paid to the covered executive officer calculated by reference to the erroneous financial data, over the amount that would have been paid to the covered executive officer calculated by reference to the corrected financial data. In adopting this recoupment policy, our compensation committee elected not to include equity-based incentive compensation because of the complexity and absence of guidance as to how to calculate the recovery of equity incentives based on a relative TSR performance measure.

The compensation committee intends to amend this policy, as necessary and appropriate, to comply with the SEC's final rules regarding the recoupment policies of the Dodd-Frank Wall Street Reform and Consumer Protection Act once adopted.

Equity Award Grant Policy

Under our equity award grant policy, grants made in conjunction with the hiring of a new employee or the promotion of an existing employee will be made on the first trading day of the month following the hire date or the promotion date. Under certain limited circumstances, our board of directors or the compensation committee may approve equity awards that are exceptions to the policy. With respect to equity awards granted to existing employees other than in connection with a promotion, typically such awards are made on an annual basis. Our preference is for the annual equity award grants to be made in the first quarter of the calendar year to align the annual awards with the determination of the prior year's financial results and performance reviews. Options are granted with an exercise price equal to the fair market value of our common shares on the grant date.

Generally, our annual restricted stock and PBRUS awards are determined as dollar amounts and then converted into shares or units (respectively) based on a stock price value equal to the average closing price for our common stock for the 30 trading days prior to the grant date.

Hedging Prohibitions

Our employees (including our executive officers) and members of our board of directors are prohibited from engaging in hedging transactions in our equity securities.

Tax Considerations

Section 162(m) of the Code places an annual \$1 million limit on the amount we can deduct for compensation paid to any of our "covered employees" (which, for 2017, included our named executive officers other than our chief financial officer). For 2017, the \$1 million deduction limit did not apply to qualifying performance-based compensation.

Consistent with past practices, the compensation committee has sought to maximize the extent to which the 2017 executive incentive compensation awards made to our executives qualified for the performance-based compensation exemption from Section 162(m). Although no assurance can be given, we believe that compensation payable under the 2017 equity incentive compensation awards will constitute deductible performance-based compensation under Section 162(m).

The Tax Cuts and Jobs Act of 2017 (the "2017 Tax Act") amended Section 162(m) of the Code to eliminate the exemption for performance-based compensation and to expand the definition of "covered employee" to include a company's chief financial officer and certain individuals who were covered employees in years other

TABLE OF CONTENTS

than the then-current taxable year. These amendments are generally effective for taxable years beginning after December 31, 2017—in our case, for 2018 and subsequent years—subject to transition relief for compensation paid pursuant to certain contracts in effect on November 2, 2017. The transition rules contain uncertainties that prevent the compensation committee from definitively determining what future compensation (if any) will remain subject to the pre-2017 Tax Act provisions of Section 162(m), including the performance-based compensation exemption. Pending (or in the absence of) clarification of the transition rules, it is anticipated (although no assurance can be given) that the transition relief will apply to awards made under the 2017 LTIP on or before November 2, 2017. The compensation committee will review its outstanding awards and agreements to determine which, if any, may qualify for transition relief under the 2017 Act, taking into account any clarification of the transition rules which may be issued by the Treasury Department.

The compensation committee believes that its primary responsibility is to provide a compensation program that attracts, retains and rewards the executive officers necessary for our success, as described above. The compensation committee may thus provide for the payment of compensation that is not fully deductible under Section 162(m) to ensure competitive levels of total compensation for our executive officers and to serve our and our stockholders' best interests when we otherwise view such compensation as consistent with our compensation policies. Although the Section 162(m) performance-based compensation exemption has been eliminated (subject to limited transition relief), the compensation committee believes that a strong link between pay and performance is critical to align executive and shareholder interests. It is thus anticipated that, going forward, the compensation committee will continue to ensure that a significant portion of pay for our executive officers is at risk and subject to the attainment of performance goals, notwithstanding the expanded deduction limitations of Section 162(m) as amended by the 2017 Tax Act.

Risks Presented by Compensation Programs

We have reviewed our compensation policies for all employees, including employees who are not executive officers, as they pertain to risk, including factors listed above under “What We Do” and “What We Do Not Do,” and we have determined that our compensation programs do not create or encourage the taking of risks that are reasonably likely to have a material adverse effect on our company. Several elements of the compensation program are designed to promote long-term stockholder value creation and incorporate components to mitigate risk, including a balanced mix of cash and equity compensation and annual and long-term incentives; multiple performance measures with payouts subject to the compensation committee's overall assessment of performance; and equity compensation having a multi-year vesting period and weighted more heavily towards restricted stock than stock options to provide greater incentive to create and preserve long-term stockholder value. Based on its evaluation, the compensation committee has determined, in its reasonable business judgment, that our compensation practices and policies for all employees do not encourage excessive risk and instead promote behaviors that support long-term sustainability and stockholder value creation.

Compensation Committee Report

The material in this report shall not be deemed to be (i) “soliciting material,” (ii) “filed” with the SEC, (iii) subject to Regulations 14A or 14C of the Exchange Act, or (iv) subject to the liabilities of Section 18 of the Exchange Act. This report shall not be deemed incorporated by reference into any of our other filings under the Exchange Act or the Securities Act, except to the extent the company specifically incorporates it by reference into such filing.

The compensation committee has reviewed and discussed the Compensation Discussion and Analysis with management. Based upon such review, the related discussions and such other matters deemed relevant and appropriate by the compensation committee, the compensation committee recommended to our board of directors that the Compensation Discussion and Analysis be included in this proxy statement.

THE COMPENSATION COMMITTEE

Neil Kurtz (Chairman)
Carlos Dominguez
George McCulloch

[TABLE OF CONTENTS](#)

2017 Summary Compensation Table

The following table provides required information regarding the compensation in the years ended December 31, 2017, 2016 and 2015 of (i) our chief executive officer, (ii) chief financial officer, (iii) each of the next three most highly compensated executive officers, and (iv) an additional two individuals who would have been among the group of persons described in the preceding clause (iii) except that these individuals were not serving as an executive officer at December 31, 2017. We refer to these officers as our named executive officers.

<u>Name and Principal Position</u>	<u>Year</u>	<u>Salary (\$)</u>	<u>Option Awards⁽¹⁾ (\$)</u>	<u>Stock Awards⁽¹⁾ (\$)</u>	<u>Non-Equity Incentive Plan Compensation⁽²⁾ (\$)</u>	<u>All Other Compensation⁽³⁾ (\$)</u>	<u>Total (\$)</u>
Tarek A. Sherif <i>Chairman and Chief Executive Officer</i>	2017	570,000	—	8,165,168	530,385	16,427	9,281,980
	2016	568,333	—	6,711,808	638,400	12,428	7,930,969
	2015	545,833	—	7,596,917	313,500	5,990	8,462,241
Glen M. de Vries <i>President</i>	2017	570,000	—	8,165,168	530,385	11,654	9,277,206
	2016	568,333	—	6,711,808	638,400	8,844	7,927,385
	2015	545,833	—	7,596,917	313,500	5,300	8,461,551
Rouven Bergmann ⁽⁴⁾ <i>Chief Financial Officer</i>	2017	472,621	—	3,374,613	382,212	16,701	4,246,146
	2016	450,000	—	2,455,273	300,713	13,488	3,219,474
	2015	262,500	1,349,999	1,749,990	145,777	304,675	3,812,941
Michael Otner <i>Executive Vice President & General Counsel</i>	2017	344,119	—	1,227,136	206,633	11,486	1,789,373
	2016	335,771	—	1,044,580	183,529	11,759	1,575,639
Michael Pray <i>Executive Vice President- General Manager of Global Sales</i>	2017	400,000	—	1,227,136	400,000	15,185	2,042,321
Michael Capone <i>Former Chief Operating Officer</i>	2017	496,056	—	5,521,978	348,938	14,450	6,381,421
	2016	472,917	—	3,865,930	558,625	11,771	4,909,243
	2015	450,000	—	2,532,348	292,163	9,112	3,283,623
Mary Weger ⁽⁵⁾ <i>Former Executive Vice President- Human Resources</i>	2017	297,051	700,008	1,049,987	—	160,100	2,207,145

(1) The dollar amounts reported for option awards, restricted stock awards and performance-based restricted stock unit awards (“PBRUs”) represent the aggregate grant date fair value computed in accordance with ASC 718. For information on the assumptions used to calculate the value of the awards, refer to Note 11 to consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2017, as filed with the Securities and Exchange Commission on February 28, 2018.

(2) Represents performance-based cash incentives.

(3) Includes (i) employer contributions to 401(k) plan of \$8,100 for each of Messrs. Sherif, de Vries, Bergmann, Otner and Capone, \$8,000 for Mr. Pray, and \$3,702 for Ms. Weger; (ii) imputed income on group-term life insurance premiums of \$2,838 paid for Mr. Sherif; \$990 for Messrs. Bergmann and Otner; \$1,518 for Messrs. Pray and Capone; and \$1,419 for Ms. Weger; (iii) executive supplemental long term disability insurance payments of \$5,239 for Mr. Sherif; \$3,554 for Messrs. de Vries and Bergmann; \$2,396 for Mr. Otner; \$1,992 for Mr. Pray; \$4,332 for Mr. Capone; and \$464 for Ms. Weger; and (iv) tax gross-up payments of \$3,842 for Mr. Bergmann; \$3,675 for Mr. Pray; and \$4,515 for Ms. Weger, relating to travel expenses for their spouses for our President’s Club sales awards meeting.

(4) Mr. Bergmann joined us effective May 13, 2015. The amounts reported for 2015 in the table above represent his 2015 base salary, performance-based cash incentive and life insurance premiums prorated for the period of May 13, 2015 to December 31, 2015. In addition, Mr. Bergmann received a sign-on bonus of \$300,000 and new hire equity awards consisting of an option to purchase 57,643 shares of our common stock and 32,839 shares of restricted stock in May 2015 outside of the annual grant process.

TABLE OF CONTENTS

(5) Ms. Weger joined us effective February 23, 2017 and her employment was terminated effective August 7, 2017. The amounts reported for 2017 in the table above represent her 2017 base salary, cash sign-on bonus, and her severance amounts and life insurance premiums prorated for the period of February 23, 2017 to December 31, 2017. In addition, Ms. Weger received new hire equity awards consisting of an option to purchase 27,911 shares of our common stock and 18,630 shares of restricted stock outside of the annual grant process, which were cancelled in connection with her termination pursuant to her separation agreement.

Note to the Summary Compensation Table: SEC rules require that the Summary Compensation Table include in each year the aggregate grant date fair value of all stock, option or other equity awards granted during that year, regardless of whether such awards were granted based upon the average closing price for the 30 trading days immediately preceding the grant or are subject to service- or performance-based vesting conditions. The value of the equity awards reported in the Summary Compensation Table is often very different from the actual realized and realizable/current values (if any amount is even earned) of such awards, and therefore the equity awards and total annual compensation data is not indicative of how the compensation committee views executive compensation for the corresponding year in its decision-making process. We encourage shareholders to review the “Compensation Discussion and Analysis” for a full discussion about our executive compensation decisions for 2017.

2017 Grants of Plan-Based Awards Table

The following table provides information regarding grants of plan-based awards to our named executive officers during the year ended December 31, 2017:

Name	Grant Date	Estimated Future Payouts Under Non-Equity Incentive Plan Awards			Estimated Future Payouts Under Equity Incentive Plan Awards ⁽¹⁾⁽²⁾			All Other Stock Awards: Number of Shares of Stock or Units ⁽¹⁾ (#)	All Other Option Awards: Number of Securities Underlying Options ⁽¹⁾ (#)	Exercise or Base Price of Option Awards (\$/Sh)	Grant Date Fair Value of Stock and Option Awards ⁽³⁾ (\$)
		Threshold (\$)	Target (\$)	Maximum (\$)	Threshold (#)	Target (#)	Maximum (#)				
Tarek A. Sherif	2/23/2017 ⁽⁴⁾	—	570,000	1,425,000	—	37,428	74,856	—	—	—	3,243,136
	2/23/2017 ⁽⁵⁾	—	—	—	—	37,428	74,856	—	—	—	2,109,442
	2/23/2017 ⁽⁶⁾	—	—	—	—	—	—	49,904	—	—	2,812,589
Glen M. de Vries	2/23/2017 ⁽⁴⁾	—	570,000	1,425,000	—	37,428	74,856	—	—	—	3,243,136
	2/23/2017 ⁽⁵⁾	—	—	—	—	37,428	74,856	—	—	—	2,109,442
	2/23/2017 ⁽⁶⁾	—	—	—	—	—	—	49,904	—	—	2,812,589
Rouven Bergmann	2/23/2017 ⁽⁴⁾	—	356,250	890,625	—	13,196	26,392	—	—	—	1,143,433
	2/23/2017 ⁽⁵⁾	—	—	—	—	13,196	26,392	—	—	—	743,727
	2/23/2017 ⁽⁶⁾	—	—	—	—	—	—	26,392	—	—	1,487,453
Michael O'neer	2/23/2017 ⁽⁴⁾	—	172,500	431,250	—	4,799	9,598	—	—	—	415,833
	2/23/2017 ⁽⁵⁾	—	—	—	—	4,798	9,596	—	—	—	270,415
	2/23/2017 ⁽⁶⁾	—	—	—	—	—	—	9,597	—	—	540,887
Michael Pray	2/23/2017 ⁽⁴⁾	—	400,000	1,000,000	—	4,799	9,598	—	—	—	415,833
	2/23/2017 ⁽⁵⁾	—	—	—	—	4,798	9,596	—	—	—	270,415
	2/23/2017 ⁽⁶⁾	—	—	—	—	—	—	9,597	—	—	540,887
Michael Capone	2/23/2017 ⁽⁴⁾	—	500,000	1,250,000	—	21,593	43,186	—	—	—	1,871,033
	2/23/2017 ⁽⁵⁾	—	—	—	—	21,593	43,186	—	—	—	1,216,981
	2/23/2017 ⁽⁶⁾	—	—	—	—	—	—	43,186	—	—	2,433,963
Mary Weger	2/23/2017 ⁽⁷⁾	—	149,589 ⁽⁸⁾	373,973	—	—	—	18,630	—	—	1,049,987
	2/23/2017 ⁽⁷⁾	—	—	—	—	—	—	—	27,911	56.36	700,008

- (1) Each restricted stock award and performance-based restricted stock unit award (“PBRSU”) was granted pursuant to our 2009 Long-Term Incentive Plan.
- (2) Represents the threshold, target and maximum number of shares of our common stock that may be earned under the PBRsUs granted to the named executive officers in 2017.
- (3) The amounts in this column represent the aggregate grant date fair value, computed in accordance with ASC 718, of each restricted stock award and PBRsU granted to the named executive officer in 2017.
- (4) These PBRsUs vest in full on the third anniversary of the grant date, subject to performance conditions. The performance period for these PBRsUs, which contain market conditions related to our 2017—2019 total shareholder return relative to that of the Russell 2000 Index, ends on December 31, 2019.

TABLE OF CONTENTS

- (5) These PBRsUs vest in full on the third anniversary of the grant date, subject to performance conditions. The performance period for these PBRsUs, which contain performance conditions related to our 2017–2019 net income growth, ends on December 31, 2019.
- (6) These restricted stock awards vest 25% on each anniversary of the grant date, subject to the recipient’s continued employment with the company.
- (7) These options were scheduled to vest 25% on the first anniversary of the grant date and 1/36 monthly thereafter, and the restricted stock awards were scheduled to 25% on each anniversary of the grant date, in each case subject to the recipient’s continued employment with the company. These awards were cancelled in connection with Ms. Weger’s termination pursuant to her separation agreement.
- (8) Ms. Weger’s annualized 2017 Non-Equity Incentive Target amount of \$175,000 was pro-rated based upon her 2017 hire date.

Outstanding Equity Awards at December 31, 2017 Table

The following table provides information regarding option awards granted to our named executive officers that were outstanding at December 31, 2017:

Name	Grant Date	Option Awards		Option Exercise Price (\$)	Option Expiration Date
		Number of Securities Underlying Unexercised Options Exercisable (#)	Number of Securities Underlying Unexercised Options Unexercisable (#)		
Tarek A. Sherif	8/13/2008	73,460	— ⁽¹⁾	9.88	8/13/2018
	6/24/2009	107,566	— ⁽²⁾	7.00	6/24/2019
	5/18/2010	75,058	— ⁽²⁾	7.68	5/18/2020
	5/31/2011	70,300	— ⁽²⁾	11.50	5/31/2021
	5/16/2012	72,174	— ⁽²⁾	13.99	5/16/2022
Glen M. de Vries	8/13/2008	26,836	— ⁽¹⁾	9.88	8/13/2018
	6/24/2009	107,566	— ⁽²⁾	7.00	6/24/2019
	5/18/2010	75,058	— ⁽²⁾	7.68	5/18/2020
	5/31/2011	70,300	— ⁽²⁾	11.50	5/31/2021
	5/16/2012	72,174	— ⁽²⁾	13.99	5/16/2022
Rouven Bergmann	5/13/2015	37,227	20,416 ⁽¹⁾	53.29	5/13/2025
Michael Otner	6/24/2009	2,158	— ⁽²⁾	7.00	6/24/2019
	5/18/2010	5,708	— ⁽²⁾	7.68	5/18/2020
	5/31/2011	6,152	— ⁽²⁾	11.50	5/31/2021
Michael Pray	10/14/2016	8,400	20,402 ⁽¹⁾	49.70	10/14/2026
Michael Capone	10/1/2014	30,309	7,976 ⁽¹⁾	44.01	10/1/2024

- (1) The shares underlying these option grants vested 25% on the first anniversary of the grant date, and then 1/36 of the remainder per month after that date until the option became fully vested on the fourth anniversary of the grant date.
- (2) The shares underlying these option grants vest in 48 equal monthly installments commencing one month after the grant date.

[TABLE OF CONTENTS](#)

The following table provides information regarding stock awards granted to our named executive officers that were outstanding at December 31, 2017:

Name	Grant Date	Stock Awards			
		Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested (\$)	Number of Unearned Shares, Units or Other Rights That Have Not Vested (#)	Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested (\$)
Tarek A. Sherif	2/10/2014	4,672 ⁽¹⁾	296,065	—	—
	2/13/2015	33,446 ⁽¹⁾	2,119,473	—	—
	2/13/2015	— ⁽²⁾	—	22,296	1,412,898
	2/26/2016	57,354 ⁽¹⁾	3,634,523	—	—
	2/26/2016	8,496 ⁽³⁾	538,392	—	—
	2/26/2016	— ⁽⁴⁾	—	76,472	4,846,031
	2/23/2017	49,904 ⁽¹⁾	3,162,416	—	—
	2/23/2017	— ⁽⁵⁾	—	37,428	2,371,812
	2/23/2017	— ⁽⁶⁾	—	37,428	2,371,812
Glen M. de Vries	2/10/2014	4,672 ⁽¹⁾	296,065	—	—
	2/13/2015	33,446 ⁽¹⁾	2,119,473	—	—
	2/13/2015	— ⁽²⁾	—	22,296	1,412,898
	2/26/2016	57,354 ⁽¹⁾	3,634,523	—	—
	2/26/2016	8,496 ⁽³⁾	538,392	—	—
	2/26/2016	— ⁽⁴⁾	—	76,472	4,846,031
	2/23/2017	49,904 ⁽¹⁾	3,162,416	—	—
	2/23/2017	— ⁽⁵⁾	—	37,428	2,371,812
	2/23/2017	— ⁽⁶⁾	—	37,428	2,371,812
Rouven Bergmann	5/13/2015	12,667 ⁽¹⁾	802,708	—	—
	2/26/2016	14,339 ⁽¹⁾	908,662	—	—
	2/26/2016	16,994 ⁽³⁾	1,076,910	—	—
	2/26/2016	— ⁽⁴⁾	—	19,118	1,211,508
	2/23/2017	26,392 ⁽¹⁾	1,672,461	—	—
	2/23/2017	— ⁽⁵⁾	—	13,196	836,231
	2/23/2017	— ⁽⁶⁾	—	13,196	836,231
Michael Otner	2/10/2014	935 ⁽¹⁾	59,251	—	—
	2/13/2015	6,690 ⁽¹⁾	423,945	—	—
	2/13/2015	— ⁽²⁾	—	4,460	282,630
	2/26/2016	9,559 ⁽¹⁾	605,754	—	—
	2/26/2016	— ⁽⁴⁾	—	12,745	807,651
	2/23/2017	9,597 ⁽¹⁾	608,162	—	—
	2/23/2017	— ⁽⁵⁾	—	4,799	304,113
Michael Pray	10/14/2016	28,295 ⁽¹⁾	1,793,054	—	—
	2/23/2017	9,597 ⁽¹⁾	608,162	—	—
	2/23/2017	— ⁽⁵⁾	—	4,799	304,113
	2/23/2017	— ⁽⁶⁾	—	4,798	304,049
Michael Capone ⁽⁷⁾	2/13/2015	5,574 ⁽¹⁾	353,224	—	—
	2/13/2015	— ⁽²⁾	—	7,433	471,029
	2/26/2016	6,373 ⁽¹⁾	403,857	—	—
	2/26/2016	16,994 ⁽⁴⁾	1,076,910	—	—
	2/23/2017	10,796 ⁽¹⁾	684,143	—	—

(1) The restricted stock awards vest 25% on each anniversary of the grant date, subject to the executive's continued employment.

TABLE OF CONTENTS

- (2) The performance period for these performance-based restricted stock units, which contain market conditions related to our 2015—2017 total shareholder return relative to that of the Russell 2000 Index, ended on December 31, 2017. In February 2018, the compensation committee determined that the named executive officers received 200% of their target amounts.
- (3) These restricted stock awards vest 1/3 on each anniversary of the grant date, subject to the executive’s continued employment.
- (4) The performance period for these performance-based restricted stock units, which contain market conditions related to our 2016—2018 total shareholder return relative to that of the Russell 2000 Index, will end on December 31, 2018.
- (5) The performance period for these performance-based restricted stock units, which contain market conditions related to our 2017—2019 total shareholder return relative to that of the Russell 2000 Index, will end on December 31, 2019.
- (6) The performance period for these performance-based restricted stock units, which contain performance conditions related to our 2017—2019 net income growth, will end on December 31, 2019.
- (7) Michael Capone was separated from the company effective December 13, 2017. These balances represent the shares that will still vest under his separation agreement.

2017 Option Exercises and Stock Vested Table

The following table sets forth information regarding options exercised by our named executive officers during 2017 and restricted stock awards that vested during 2017. The value realized for such options and restricted stock awards is also provided. For options, the value realized on exercise is equal to the difference between the market price of the underlying shares of common stock at exercise and the exercise price of the options. For restricted stock awards, the value realized on vesting is equal to the market price of the underlying shares of common stock at vesting.

Name	Option Awards		Stock Awards	
	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise (\$)	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting (\$)
Tarek A. Sherif	—	—	80,812	4,542,052
Glen M. de Vries	—	—	80,812	4,542,052
Rouven Bergmann	—	—	19,609	1,176,706
Michael Otner	2,255	161,728	15,319	862,569
Michael Pray	—	—	9,431	754,574
Michael Capone	—	—	51,160	3,139,249

Securities Authorized for Issuance under Equity Compensation Plans

The following table sets forth information regarding our equity compensation plans in effect as of December 31, 2017. Each of our equity compensation plans is an “employee benefit plan” as defined by Rule 405 of Regulation C of the Securities Act.

Plan Category	(a)	(b)	(c)
	Number of Securities to be Issued Upon Exercise of Outstanding Options	Weighted-Average Exercise Price of Outstanding Options	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column(a))
Equity compensation plans approved by security holders	1,511,225	\$ 22.72	1,404,338 ⁽¹⁾
Equity compensation plans not approved by security holders	—	—	—
Total	1,511,225	\$ 22.72	1,404,338 ⁽¹⁾

- (1) Includes 1,301,258 shares remaining for issuance pursuant to the 2017 Long-Term Incentive Plan and 103,080 shares remaining for issuance under the Second Amended and Restated 2014 Employee Stock Purchase Plan.

Potential Payments upon Termination of Employment or a Change of Control

Change in Control Scenarios

We have entered into change in control agreements with our chief executive officer and our other named executive officers. These agreements provide payments and benefits based on a “double trigger” arrangement and only arise if there is an involuntary termination of employment during the severance protection period, which

TABLE OF CONTENTS

begins on the date a definitive transaction agreement is signed and ends two years after the date of a change in control. Payments and benefits will be due in the event the named executive officer's employment is involuntarily terminated by us without "cause" during the severance protection period or by the executive for "good reason" during the post-change in control protection period. These agreements provide that, upon a qualifying termination event, a named executive officer will be entitled to:

- a pro rata payment of the annual incentive award he would have earned for the year of termination if his employment had continued through the end of the year, based on the portion of the year elapsed prior to the date of termination;
- a lump sum severance payment equal to the sum (for Messrs. Sherif and de Vries, 200% of the sum) of his base salary and target bonus (or prior year's bonus, if greater); and
- continuing group health and life insurance coverage for 12 months (for Messrs. Sherif and de Vries, 24 months).

The effect of a change in control on our equity-based awards will depend on whether the awards are subject to performance conditions or vest solely on the basis of continuing service. In general, if an equity-based award is subject only to a time-based vesting condition at the time of a change in control, the acquiring or surviving company may assume the award on an economically equivalent basis. The assumed award will be subject to substantially the same vesting and other terms and conditions as the original award, except that any previously unvested portion of the award will become fully vested if the acquiring or successor company terminates the named executive officer's employment without "cause" or he terminates his or her employment for "good reason" within 24 months after the change in control. If the award is not so assumed by the acquiring or successor company, then it will become fully vested in connection with the change in control transaction.

In the case of outstanding annual PBRsUs that have been earned and remain subject to time based vesting, the unvested portion of the award will be treated much like other awards that vest solely on the basis of continuing service (that is, the awards may be assumed subject to accelerated vesting upon involuntary termination of employment within 24 months after the change in control and, to the extent not assumed, will become fully vested as part of the change in control).

In the case of outstanding PBRsUs that have not yet been earned, if a change in control occurs during the performance period and the award is not assumed by the acquiring or successor company, some or all of the PBRsUs that otherwise could have been earned under the award will be deemed to have been earned and will be settled or paid out accordingly in connection with the change in control. The number of PBRsUs deemed to have been earned will be based in whole or in part upon actual performance for the portion of the applicable performance period ending prior to the change in control.

Each named executive officer would have been entitled to the following estimated payments and benefits if a "change in control" occurred on December 31, 2017, and his employment was then terminated by us without "cause":

<u>Executive</u>	<u>Cash⁽¹⁾</u> <u>(\$)</u>	<u>Welfare</u> <u>Benefits</u> <u>(\$)</u>	<u>Stock</u> <u>Options⁽²⁾</u> <u>(\$)</u>	<u>Restricted</u> <u>Stock⁽²⁾</u> <u>(\$)</u>	<u>Restricted</u> <u>Stock</u> <u>Units⁽²⁾</u> <u>(\$)</u>	<u>Total</u> <u>(\$)</u>
Tarek A. Sherif	2,416,800	41,674	—	12,576,664	14,367,577	29,402,715
Glen M. de Vries	2,416,800	13,544	—	12,576,664	14,367,577	29,374,585
Rouven Bergmann	831,250	19,540	1,293,762	4,460,741	4,252,392	10,857,685
Michael Otner	528,529	20,837	—	2,262,372	2,146,919	4,958,657
Michael Pray	800,000	19,540	1,292,875	2,401,216	825,602	5,339,233

(1) The amount does not reflect a pro-rata bonus for 2017. This is because we are required to assume an employment termination date of December 31, 2017. On this date, each named executive officer would have already earned a bonus for 2017 regardless of whether he terminated employment. Please refer to the "Non-Equity Incentive Plan Compensation" column of the Summary Compensation Table for the amount of the 2017 bonus paid to each executive.

(2) Equity values are based on the following assumptions: (i) a closing price of our common stock on December 31, 2017 of \$63.37 per share; and (ii) the awards are not assumed in the corporate transaction, vest immediately prior to the change in control in accordance with the applicable award agreements and are cashed out.

TABLE OF CONTENTS

Our named executive officers are not entitled to an excise tax gross-up with respect to their change-in-control payments and benefits. The payments and benefits will be reduced, however, to avoid the imposition of such excise tax if such reduction would enable the named executive officers to net more on an after-tax basis than they would in the absence of a reduction. In any event, the named executive officers would be personally responsible for the payment of any excise tax liability associated with any change in control payments and benefits.

Non-Change in Control Scenarios

In general, our executive officers are not entitled to severance payments or benefits upon termination of employment outside the context of a change in control (as discussed above). Certain equity awards do, however, provide special rules in the event of certain terminations of employment. These are summarized below. Except as noted below, all unvested equity awards will be forfeited by an executive officer upon termination of his employment.

Death or Disability

Our post-2012 restricted stock awards provide that the unvested shares of our common stock subject to the awards will become fully vested upon termination of a named executive officer's employment due to his death or disability. Our annual PBRSU awards provide that, if a named executive officer's employment is terminated due to death or disability during the applicable performance period, then he or she will be deemed to have earned a pro rata portion of the PBRsUs that would have been earned if his employment had not terminated (based upon the portion of the year elapsed at the time of the termination of employment), and all earned (or deemed earned) PBRsUs will become fully vested.

We would have provided each named executive officer or his beneficiary with the following estimated payments or benefits had he died or become disabled on December 31, 2017.

Executive	Life Insurance⁽¹⁾ (\$)	Disability Payments⁽²⁾ (\$)	Restricted Stock⁽³⁾ (\$)	Total (\$)
Tarek A. Sherif	600,000	397,500	12,576,664	13,574,164
Glen M. de Vries	50,000	397,500	12,576,664	13,024,164
Rouven Bergmann	600,000	354,750	4,460,741	5,415,491
Michael Otner	600,000	270,135	2,262,372	3,132,507
Michael Pray	600,000	313,200	2,401,216	3,314,416

- (1) Proceeds would be payable by a third-party insurer. Benefits provided upon death depend on the individual level of benefits chosen by the named executive officer during the annual benefits enrollment process. The named executive officers receive the same company-provided life insurance coverage as is generally offered to U.S.-based employees. The coverage is 200% of base salary for life insurance up to a maximum of \$600,000 unless a lower amount is elected. Each U.S.-based employee has the option of choosing a higher level of coverage at his or her own expense.
- (2) The named executive officers receive the same short-term and long-term disability coverage as is generally offered to U.S.-based employees. The coverage is (i) for short-term disability, 100%, 90%, 80% and 70% of base salary for months one through three, four, five and six, respectively, and (ii) for a subsequent period of long-term disability, 66.6% of base salary (up to a maximum monthly payment of \$23,250) for, generally, the duration of an employee's long-term disability. The payments above assume the annualized payout for the year immediately following disability and are funded through a combination of third party insurer benefits and salary continuation.
- (3) Equity values are based on a closing price of our common stock on December 31, 2017 of \$63.37 per share.

CEO Pay Ratio

We are providing the following information regarding the relationship of the annual total compensation of our CEO and that of our "median employee," as required by Section 953(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act, and Item 402(u) of Regulation S-K. The pay ratio information provided below is a reasonable estimate calculated in a manner consistent with these new pay ratio disclosure rules.

We determined the pay ratio by dividing the total 2017 compensation of the CEO as disclosed in the Summary Compensation Table by the total 2017 compensation of the median employee, using the same components of compensation as used in the Summary Compensation Table for the CEO.

TABLE OF CONTENTS

Our median employee for 2017 was determined using the compensation of employees (other than the CEO) who were actively employed on October 1, 2017, the measurement date. To determine the media employee, we ordered the employees by total compensation, which was computed as the sum of:

1. annualized base salary as of the measurement date;
2. target bonus as of the measurement date (annualized, in the case of permanent employees that were not employed throughout 2017); and
3. the full grant date fair value, computed in accordance with Accounting Standards Codification (ASC) 718, of equity awards granted to the employee during the 12 months prior to the measurement date.

The total compensation of our median employee, using the same methodology we use for the CEO's Summary Compensation Table compensation, was \$134,458. The total compensation of the CEO was \$9,281,980. The resulting ratio of our CEO's annual total compensation to the annual total compensation of our median employee was approximately 69:1.

The total compensation of the average employee, using the same methodology and measurement period as the above calculation, was \$186,108. Of the CEO's total compensation, \$5,882,963, or approximately 63%, is performance-based and therefore not guaranteed to be received. This component is largely comprised of performance-based restricted stock units with a grant-date fair value of \$5,352,578, which are tied to our net income growth and our total shareholder return relative to that of the Russell 2000 Index over the three-year period ending December 31, 2019.

It should be noted that the SEC's pay ratio disclosure rules provide reporting companies with a great deal of flexibility in determining the methodology used to identify the median employee and the pay ratio. As such, our methodology may differ materially from the methodology used by other companies to prepare their pay ratio disclosures, which may contribute to a lack of comparability between our pay ratio and the pay ratio reported by other companies, including those within our industry.

[TABLE OF CONTENTS](#)

SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Exchange Act requires our directors, executive officers and persons who own more than ten percent of a registered class of our equity securities (collectively, the “Reporting Persons”) to file reports of ownership and changes in ownership with the SEC. Such persons are required by SEC regulations to furnish us with copies of all such filings.

Based solely on our review of copies of such filings, or written representations from Reporting Persons that all reportable transactions were reported, we believe that during 2017, the Reporting Persons timely filed all reports they were required to file under Section 16(a).

[TABLE OF CONTENTS](#)

COMMON STOCK OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information regarding the beneficial ownership of our common stock as of April 2, 2018 by:

- each of our directors;
- each of our named executive officers;
- all our directors and executive officers as a group; and
- each person or entity who is known by us to beneficially own 5% or more of our outstanding common stock.

The amounts and percentages of common stock beneficially owned are reported on the basis of regulations of the SEC governing the determination of beneficial ownership of securities. Under the rules of the SEC, a person is deemed to be a “beneficial owner” of a security if that person has or shares “voting power,” which includes the power to vote or to direct the voting of such security, or “investment power,” which includes the power to dispose of or to direct the disposition of such security. A person is also deemed to be a beneficial owner of any securities of which that person has a right to acquire beneficial ownership within 60 days. Under these rules, more than one person may be deemed a beneficial owner of the same securities and a person may be deemed a beneficial owner of securities as to which he has no economic interest. The number of shares of common stock outstanding used in calculating the percentage for each listed person includes the shares of common stock underlying options held by such person that are, or within 60 days will become, exercisable, but excludes shares of common stock underlying options held by any other person.

Except as indicated by footnote, the persons named in the table have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them, subject to community property laws where applicable. Percentage of ownership is based on 59,198,095 shares of common stock outstanding on April 2, 2018.

Unless otherwise indicated below, each person or entity has an address in care of our principal executive offices at 350 Hudson Street, 9th Floor, New York, New York 10014.

Name and Address of Beneficial Owner ⁽¹⁾	Number of Shares Beneficially Owned ⁽²⁾	Percent
Named Executive Officers and Directors:		
Tarek A. Sherif ⁽³⁾	995,382	1.7%
Glen M. de Vries ⁽⁴⁾	1,053,408	1.8%
Rouven Bergmann ⁽⁵⁾	137,976	*
Michael Otner ⁽⁶⁾	98,578	*
Michael Pray ⁽⁷⁾	63,250	*
Carlos Dominguez ⁽⁸⁾	85,626	*
Neil M. Kurtz, M.D.	113,337	*
George W. McCulloch ⁽⁹⁾	86,116	*
Lee Shapiro ⁽¹⁰⁾	45,211	*
Robert Taylor	49,372	*
All Executive Officers and Directors as a group (11 persons)⁽¹¹⁾	2,796,551	4.7%
5% Stockholders:		
BlackRock, Inc. ⁽¹²⁾	6,634,957	11.2%
Brown Capital Management, LLC ⁽¹³⁾	5,339,762	9.0%
The Vanguard Group, Inc. ⁽¹⁴⁾	4,765,646	8.1%
Sands Capital Management, LLC ⁽¹⁵⁾	3,554,159	6.0%

* Represents beneficial ownership of less than one percent (1.0%) of the outstanding common stock.

TABLE OF CONTENTS

- (1) Shares shown in the table above include shares held in the beneficial owner's name or jointly with others, or in the name of a bank, nominee or trustee for the beneficial owner's account.
- (2) For each of our executive officers and directors, the shares listed in this column include the following shares of restricted stock (which are subject to forfeiture and shall be automatically transferred back to the company upon termination or cessation of service if the vesting conditions have not been satisfied): 136,038 shares for each of Messrs. Sherif and de Vries; 60,367 shares for Mr. Bergmann; 28,174 shares for Mr. Otter; 58,009 shares for Mr. Pray; 3,334 shares for each of Messrs. Dominguez, Kurtz, McCulloch, and Shapiro; and 3,630 shares for Mr. Taylor.
- (3) Includes 325,098 shares of common stock that may be acquired upon exercise of stock options that are exercisable or will become exercisable within 60 days of April 2, 2018.
- (4) Includes 325,098 shares of common stock that may be acquired upon exercise of stock options that are exercisable or will become exercisable within 60 days of April 2, 2018.
- (5) Includes 43,232 shares of common stock that may be acquired upon exercise of stock options that are exercisable or will become exercisable within 60 days of April 2, 2018.
- (6) Includes 14,018 shares of common stock that may be acquired upon exercise of stock options that are exercisable or will become exercisable within 60 days of April 2, 2018.
- (7) Includes 11,400 shares of common stock that may be acquired upon exercise of stock options that are exercisable or will become exercisable within 60 days of April 2, 2018.
- (8) Includes 28,672 shares of common stock that may be acquired upon exercise of stock options that are exercisable or will become exercisable within 60 days of April 2, 2018.
- (9) Includes 28,672 shares of common stock that may be acquired upon exercise of stock options that are exercisable or will become exercisable within 60 days of April 2, 2018.
- (10) Includes 9,708 shares of common stock that may be acquired upon exercise of stock options that are exercisable or will become exercisable within 60 days of April 2, 2018.
- (11) Includes an aggregate of 786,107 shares of common stock that may be acquired upon exercise of stock options that are exercisable or will become exercisable within 60 days of April 2, 2018.
- (12) This information is based solely on a Schedule 13G/A filed with the SEC on January 19, 2018 by BlackRock, Inc., which reported sole voting power and sole dispositive power with respect to 6,506,687 and 6,634,957 shares of common stock, respectively. The address of the principal business office for the reporting person is 55 E. 52nd Street, New York, NY 10055.
- (13) This information is based solely on a Schedule 13G/A filed with the SEC on February 14, 2018 by Brown Capital Management, LLC. Brown Capital Management, LLC reported sole voting power and sole dispositive power with respect to 3,366,582 and 5,339,762 shares of common stock, respectively. The address of the principal business office for the reporting persons is 1201 N. Calvert Street, Baltimore, MD 21202.
- (14) This information is based solely on a Schedule 13G/A filed with the SEC on February 9, 2018 by The Vanguard Group, Inc., which reported sole voting power and sole dispositive power with respect to 110,220 and 4,653,288 shares of common stock, respectively, and shared voting power and shared dispositive power with respect to 6,693 and 112,358 shares of common stock, respectively. The address of the principal business office for the reporting person is 100 Vanguard Blvd., Malvern, PA 19355.
- (15) This information is based solely on a Schedule 13G/A filed with the SEC on February 14, 2018 by Sands Capital Management, LLC, which reported sole voting power and sole dispositive power with respect to 2,382,759 and 3,554,159 shares of common stock, respectively. The address of the principal business office for the reporting person is 1000 Wilson Blvd., Ste. 3000, Arlington, VA 22209.

RELATED PERSON TRANSACTIONS

Policy and Procedure for Approval of Related Person Transactions

We require that all related party transactions, which includes transactions with directors, officers and holders of five percent or more of our voting securities and any member of the immediate family of and any entity affiliated with any of the foregoing persons, to be approved by our audit committee or another independent body of our board of directors. In approving or rejecting any such proposal, our audit committee (or other independent committee) is to consider the relevant facts and circumstances available and deemed relevant to the committee, including, but not limited to, whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances and the extent of the related party's interest in the transaction.

Transactions with Related Persons

Based on a review of the transactions and arrangements between the company and any related person or related person affiliate, we did not engage in any other transactions or series of similar transactions in which the amount involved exceeded \$120,000 and in which any of our directors or executive officers, any holder of more than 5% of any class of our voting securities or any member of the immediate family of any of the foregoing persons had a direct or indirect material interest.

PROPOSAL 5**RATIFICATION OF APPOINTMENT OF
INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

Deloitte & Touche LLP served as our principal independent registered public accounting firm for the year ended December 31, 2017. Deloitte & Touche LLP has been appointed by the audit committee as the independent registered public accountant firm for us and our subsidiaries for the year ending December 31, 2018. This appointment is being presented to the stockholders for ratification. Representatives of Deloitte & Touche LLP are expected to be present at the Annual Meeting and will be provided an opportunity to make statements if they desire to do so and to respond to appropriate questions from stockholders.

Vote Required

If a quorum is present at the Annual Meeting, the ratification of the appointment of Deloitte & Touche LLP requires the affirmative vote of at least a majority of the votes cast on the matter.

Board Recommendation

Our board of directors recommends a vote FOR such ratification. If the stockholders fail to ratify the appointment of Deloitte & Touche LLP as our independent registered public accounting firm, it is not anticipated that Deloitte & Touche LLP will be replaced in 2018. Such lack of approval will, however, be considered by the audit committee in selecting our independent registered public accounting firm for 2019.

Fees Paid to Independent Registered Public Accounting Firm

The following table sets forth fees billed for professional audit services and other services rendered to the company by Deloitte & Touche LLP and its affiliates for the years ended December 31, 2017 and 2016.

	<u>2017</u>	<u>2016</u>
Audit Fees	\$ 2,073,494	\$ 1,536,033
Audit-Related Fees	—	—
Tax Fees	166,500	271,102
All Other Fees	—	—
Total	\$ 2,239,994	\$ 1,807,135

Audit Fees. Audit fees for both years consisted of aggregate fees billed for professional services rendered for the audit of our consolidated annual financial statements, review of interim consolidated financial statements, consultations on accounting matters directly related to the audit, or services that are normally provided by the independent registered public accounting firm in connection with statutory and regulatory filings or engagements.

Audit-Related Fees. Audit-related fees consists of aggregate fees billed for accounting consultations and other services that were reasonably related to the performance of audits or reviews of our financial statements and were not reported above under Audit Fees.

Tax Fees. Tax fees consisted principally of assistance with matters related to tax compliance and reporting.

All Other Fees. All other fees consists of aggregate fees billed for products and services provided by the independent registered public accounting firm other than those disclosed above.

Audit Committee Report

The material in this report shall not be deemed to be (i) "soliciting material," (ii) "filed" with the SEC, (iii) subject to Regulations 14A or 14C of the Exchange Act, or (iv) subject to the liabilities of Section 18 of the Exchange Act. This report shall not be deemed incorporated by reference into any of our other filings under the Exchange Act or the Securities Act, except to the extent the company specifically incorporates it by reference into such filing.

The audit committee operates under a written charter approved by the board of directors that provides that its responsibilities include the oversight of the quality of the company's financial reports and other financial information and its compliance with legal and regulatory requirements; the appointment, compensation, and

TABLE OF CONTENTS

oversight of the company's independent registered public accounting firm, Deloitte & Touche LLP, including reviewing its independence; reviewing and approving the planned scope of the company's annual audit; reviewing and pre-approving any non-audit services that may be performed by Deloitte & Touche LLP; the oversight of the company's internal audit function; reviewing with management and the company's independent registered public accounting firm the adequacy of internal financial controls; and reviewing the company's critical accounting policies and estimates and the application of accounting principles generally accepted in the United States.

The audit committee oversees the company's financial reporting process on behalf of the board of directors. Management is responsible for the company's internal controls, financial reporting process, and compliance with laws and regulations and ethical business standards. Deloitte & Touche LLP is responsible for performing an independent audit of the company's consolidated financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). The audit committee's main responsibility is to monitor and oversee this process.

The audit committee reviewed and discussed our audited financial statements for the year ended December 31, 2017, with management. The audit committee discussed with Deloitte & Touche LLP the matters required to be discussed by Statement on Auditing Standards No. 61, as amended (Communication with Audit Committees). The audit committee has received the written disclosures and the letter from the independent accountant required by applicable requirements of the Public Company Accounting Oversight Board regarding the independent accountant's communications with the audit committee concerning independence, and has discussed with the independent accountant the independent accountant's independence.

The audit committee considered any fees paid to Deloitte & Touche LLP for the provision of non-audit-related services and does not believe that these fees compromise Deloitte & Touche LLP's independence in performing the audit.

Based on the review and discussions referred to above, the audit committee recommended to the board of directors that such audited financial statements be included in the company's Annual Report on Form 10-K for the year ended December 31, 2017, for filing with the SEC.

THE AUDIT COMMITTEE

Robert B. Taylor (Chairman)
Neil M. Kurtz, M.D.
George McCulloch
Lee Shapiro

Policy on Audit Committee Pre-Approval of Audit and Permissible Non-Audit Services of Independent Auditors

The audit committee pre-approves all audit and non-audit services provided by our independent registered public accounting firm prior to the engagement of the independent registered public accounting firm with respect to such services. The audit committee shall pre-approve any additional audit services and permissible non-audit services.

ADDITIONAL INFORMATION

Stockholder Proposals and Nominations

In order for a stockholder proposal to be considered for inclusion in the proxy statement for the 2019 annual meeting of stockholders, the written proposal must be received by the Corporate Secretary at the address below. The Corporate Secretary must receive the proposal no later than December 20, 2018. The proposal will also need to comply with the SEC's regulations under Rule 14a-8 regarding the inclusion of stockholder proposals in company sponsored proxy materials. Proposals should be addressed to:

Corporate Secretary
Medidata Solutions, Inc.
350 Hudson Street, 9th Floor
New York, New York 10014.

For a stockholder proposal that is not intended to be included in the proxy statement for the 2019 annual meeting of stockholders, or if you want to nominate a person for election as a director, you must provide written notice to the Corporate Secretary at the address above. The Secretary must receive this notice not earlier than January 30, 2019 and not later than March 1, 2019. However, if our 2019 annual meeting of stockholders is held more than 30 days before or more than 60 days after May 30, 2019, then the Secretary must receive this notice not earlier than the close of business on the 120th day prior to such annual meeting and not later than the close of business on the later of the 90th day prior to such annual meeting or the 10th day following the day on which we make a public announcement of the date of the meeting. The notice of a proposed item of business must provide information as required in our bylaws which, in general, require that the notice include for each matter a brief description of the matter to be brought before the meeting; the reason for bringing the matter before the meeting; the text of the proposal or matter; your name, address, and number of shares you own beneficially or of record; and any material interest you have in the proposal.

The notice of a proposed director nomination must provide information and documentation as required in our bylaws which, in general, require that the notice of a director nomination include the information about the nominee that would be required to be disclosed in the solicitation of proxies for the election of a director under federal securities laws; the nominee's written consent to be named in the proxy statement as a nominee and to serve as a director if elected; a description of any transaction or arrangement during the last three years between the stockholder making the nomination and the nominee in which the nominee had a direct or indirect material interest; and a completed and signed questionnaire, representation and agreement. A copy of the bylaw requirements will be provided upon request to the Corporate Secretary at the address above.

Transaction of Other Business

Management does not intend to bring before the annual meeting any matters other than those disclosed in the notice of annual meeting of stockholders attached to this proxy statement, and it does not know of any business that persons other than management intend to present at the meeting. If any other matters are properly presented at the Annual Meeting for action, the persons named in the form of proxy and acting thereunder generally will have discretion to vote on those matters in accordance with their best judgment.

Annual Report on Form 10-K

Copies of our annual report on Form 10-K for the year ended December 31, 2017, as filed with the SEC, are available without charge to stockholders upon request to Investor Relations, at the principal executive offices of Medidata Solutions, Inc., 350 Hudson Street, 9th Floor, New York, New York 10014.

Incorporation by Reference

To the extent that this proxy statement is incorporated by reference into any other filing under the Securities Act or the Exchange Act, the sections of this proxy statement entitled "Compensation Committee Report" and "Audit Committee Report" (to the extent permitted by the rules of the SEC) will not be deemed incorporated unless specifically provided otherwise in such filing. Information contained on or connected to our website is not incorporated by reference into this proxy statement and should not be considered part of this proxy statement or any other filing that we make with the SEC.

[TABLE OF CONTENTS](#)

Householding

The SEC's proxy rules permit companies and intermediaries, such as brokers and banks, to satisfy proxy delivery requirements with respect to two or more stockholders sharing the same address by delivering a single proxy mailing to those stockholders. This method of delivery, often referred to as householding, should reduce the amount of duplicate information that stockholders receive and lower printing and mailing costs for companies. Medidata and certain intermediaries are householding proxy materials for stockholders of record in connection with the Annual Meeting. This means that:

- Only one proxy mailing will be delivered to multiple stockholders sharing an address unless you notify your broker or bank to the contrary;
- You can contact Medidata by calling 212-918-1800 or by writing to Investor Relations, Medidata Solutions, Inc., 350 Hudson Street, 9th Floor, New York, New York 10014 to request a separate set of the proxy materials and for future meetings or, if you are currently receiving multiple copies, to receive only a single copy in the future or you can contact your bank or broker to make a similar request; and
- You can request delivery of a single set of the proxy materials from your bank or broker if you share the same address as another Medidata stockholder and your bank or broker has determined to household proxy materials.

MEDIDATA SOLUTIONS, INC.
AMENDED AND RESTATED
2017 LONG-TERM INCENTIVE PLAN

ARTICLE 1
GENERAL

1.1 Purpose. The purpose of the Plan is to establish a vehicle through which the Company can provide equity-based and other incentive compensation opportunities in order to facilitate its ability to recruit, motivate, reward and retain talented individuals who contribute or are expected to contribute to the success and growth of the Company.

1.2 Eligibility. Awards may be granted under the Plan to any employee or non-employee director of, and any consultant, independent contractor or other person who provides personal services to, the Company or any of its Subsidiaries, provided that Incentive Stock Options may be granted only to employees.

1.3 Types of Awards. Awards under the Plan may include, without limitation, Options, Stock Appreciation Rights, shares of Restricted Stock, Restricted Stock Units, other Share-based Awards and performance-based Cash Incentive Awards, all as described in Articles 5 through 7 hereof.

ARTICLE 2
DEFINITIONS

2.1 “Award” means an award made to an eligible person under the Plan.

2.2 “Award Agreement” means an agreement, in written or electronic form, between the Company and a Participant setting forth the terms and conditions of an Award.

2.3 “Board” means the Board of Directors of the Company.

2.4 “Cause” has the meaning set forth in Section 9.3(a).

2.5 “Change in Control” has the meaning set forth in Section 9.3(b).

2.6 “Code” means the Internal Revenue Code of 1986, as amended.

2.7 “Committee” means the Compensation Committee of the Board.

2.8 “Company” means Medidata Solutions, Inc., a Delaware corporation, and any successor thereto.

2.9 “Exchange Act” means the Securities Exchange Act of 1934, as amended.

2.10 “Exercise Price” means, with respect to an Option, the purchase price per Share covered by the Option and, with respect to an SAR, the baseline price per Share covered by the SAR.

2.11 “Fair Market Value” means, as of any relevant date, the closing price per Share on such date on the principal securities exchange on which Shares are traded or, if no Shares are traded on that date, the closing price per Share on the next preceding date on which Shares are traded, or (2) the value determined under such other method or convention as the Board or the Committee, acting in a consistent manner in accordance with the Plan and applicable tax law, may prescribe.

2.12 “Incentive Cash Award” means a performance-based cash Award described in Section 7.2.

2.13 “Incentive Stock Option” or “ISO” means an Option that qualifies as an “incentive stock option” within the meaning of Section 422 of the Code.

2.14 “Option” means an option to purchase Shares granted pursuant to Section 5.1.

2.15 “Participant” means any person who has been selected to receive an Award under the Plan or who holds an outstanding Award under the Plan.

2.16 “Performance-Based Exemption” means the performance-based compensation exemption from the compensation deduction limitations imposed by Section 162(m) of the Code, as set forth in Section 162(m)(4)(c) of the Code.

TABLE OF CONTENTS

2.17 “Performance Factors” means any of the factors listed in Section 7.3(b) that may be used for Awards intended to qualify for the Performance-Based Exemption.

2.18 “Plan” means the incentive compensation plan set forth herein, as it now exists or is hereafter amended.

2.19 “Restricted Stock” means stock issued in the name of a Participant pursuant to Section 6.1, subject to applicable transfer restrictions and vesting and other conditions.

2.20 “Restricted Stock Unit” or “RSU” means a contingent right to receive Shares in the future that is granted pursuant to Section 6.1.

2.21 “Section 409A” means Section 409A of the Code.

2.22 “Shares” means shares of the Company’s common stock.

2.23 “SAR” or “Stock Appreciation Right” means a right to receive appreciation in the value of Shares that is granted pursuant to Section 5.2.

2.24 “Subsidiary” means (a) a corporation or other entity in an unbroken chain of corporations or other entities at least 50% of the total value or voting power of the equity securities of which is owned by the Company or by any other corporation or other entity in the chain, and (b) any other corporation or entity in which the Company has a 20% controlling interest, directly or indirectly, as may be designated by the Committee pursuant to the criteria set forth in Section 1.409A-1(b)(5)(iii)(E) of the Treasury regulations.

2.25 “Ten Percent Stockholder” means a person who owns or is deemed to own (under Section 424(d) of the Code) more than ten percent of the total combined voting power of all classes of stock of the Company or any Subsidiary.

ARTICLE 3 ADMINISTRATION

3.1 General. Except as specified herein or as otherwise determined by the Board, the Plan shall be administered by the Committee, the composition of which is governed by the Committee’s charter.

3.2 Authority of the Committee. Subject to the provisions of the Plan, the Committee, acting in its discretion, shall have the power and authority to select the persons to whom Awards will be made, prescribe the terms and conditions of each Award and make amendments thereto, construe, interpret and apply the provisions of the Plan and of any Award Agreement, and make any and all determinations and take any and all other actions as it deems necessary or desirable in order to carry out the terms of the Plan or of any Award. Each Award granted under the Plan shall have a vesting period of at least one year from the date the Award is granted, provided that the Committee may prescribe a shorter vesting period with respect to Awards covering up to 5% of the Shares issuable under the Plan.

3.3 Delegation of Authority. To the fullest extent authorized or permitted by applicable law, including, without limitation, Section 157(c) of the Delaware General Corporation Law, the Committee may (i) delegate to officers of the Company or any affiliate, or committees thereof, the authority, subject to such terms as the Committee shall determine, to perform such functions, including the authority to grant Awards, as the Committee may determine, and (ii) delegate to any person or subcommittee (who may, but need not be members of the Committee) such Plan-related administrative authority and responsibilities as it deems appropriate. The Committee may not delegate its authority with respect to non-ministerial actions relating to individuals who are subject to the reporting requirements of Section 16(a) of the Exchange Act or Awards that are intended to qualify for the Performance-Based Exemption.

3.4 Indemnification. The Company shall indemnify and hold harmless each member of the Committee and the Board and any employee or director of the Company or any Subsidiary to whom any duty or power relating to the administration of the Plan or any Award is delegated from and against any loss, cost, liability (including any sum paid in settlement of a claim with the approval of the Board), damage and expense (including reasonable legal and other expenses incident thereto) arising out of or incurred in connection with the Plan, unless and except to the extent attributable to such person’s fraud or willful misconduct.

ARTICLE 4
SHARES SUBJECT TO THE PLAN; INDIVIDUAL AWARD LIMITS

4.1 Shares Issuable under the Plan. Subject to Section 4.3, the number of Shares available for grant and issuance pursuant to Awards made under the Plan shall be equal to 2,500,000 plus the number of Shares subject to outstanding awards under the Company's 2009 Plan Long-Term Incentive Plan that, on or after the effective date of this Plan, are forfeited, settled in cash or otherwise terminated without such Shares being issued. The number of Shares that may be issued pursuant to ISOs shall not exceed 1,000,000. For purposes of these limitations, (a) the total number of Shares covered by stock-settled SARs (and not just the number of Shares issued in settlement of such SARs) shall be deemed to have been issued under the Plan (and will not be returned to the Plan's share reserve), and (b) Shares covered and/or issued pursuant to an Award will again be available for grant and issuance pursuant to subsequent Awards to the extent such Shares are covered by or relate to (1) the unexercised portion of an Option or SAR that is forfeited or otherwise terminated or canceled for any reason other than exercise, (2) Restricted Stock Awards, RSU Awards or any other forms of Award that are forfeited, (3) subject to an Award that is settled in cash or that otherwise terminates without such Shares being issued, or (4) Shares issued pursuant to awards that are assumed, converted or substituted as a result of the acquisition of another company by the Company or a combination of the Company with another Company. Shares that are used or withheld to pay the exercise price of an Option or SAR or to satisfy the tax withholding obligations associated with the vesting or settlement of an Option or SAR will not be available for future grant and issuance under the Plan. Shares that are used or withheld to satisfy tax withholding obligations of Awards other than Options and SARs will be added back to the Share reserve and will be available for future Awards under the Plan. Shares issued under the Plan may be either authorized and unissued Shares, or authorized and issued Shares held in the Company's treasury, or any combination of the foregoing. For the avoidance of doubt, Shares purchased by the Company in the open market with proceeds from a cash exercise of an Option may not be added to the pool of Shares otherwise available under the Plan.

4.2 Individual Award Limitations. No more than 300,000 Shares may be issued pursuant to Awards granted to any Participant in any calendar year of the Company. No more than \$4,000,000 may be earned by any Participant for any calendar year pursuant to Cash Incentive Awards made under Section 7.2. If the performance period for a Cash Incentive Award covers more than one calendar year, then, for the purpose of applying the annual limit under the preceding sentence, the amount that may be earned by the Participant for each calendar year covered by the performance period will be deemed to be equal to the quotient of (a) the maximum amount that may be earned pursuant to the Award, divided by (b) the number of such calendar years.

4.3 Adjustments for Capital Changes. In the event of a split-up, spin-off, stock dividend, extraordinary cash dividend, recapitalization, consolidation of Shares, reverse stock split or other similar capital change, the number and class of Shares that may be issued under the Plan pursuant to Section 4.1, the number of Shares that be covered by ISOs pursuant to Section 4.1, the number and class of Shares that may be issued pursuant to annual Awards granted to any Participant pursuant to Section 4.2, the number, class and/or Exercise Price (if any) of Shares subject to outstanding Awards and performance goals expressed in or with respect to Shares shall be equitably adjusted by and at the discretion of the Board or the Committee in order to prevent undue dilution or enlargement of the benefits available under the Plan or an outstanding Award, as the case may be, provided that the number of Shares subject to any outstanding Award shall always be a whole number.

4.4 No Dividend Payments on Unvested Shares. Notwithstanding anything to the contrary contained herein, no Participant shall be paid dividends with respect to unvested Shares covered by an Award (including, without limitation, Options and SARs), provided that the Committee may award dividend equivalents (on Awards other than Options and SARs) for future settlement if, as and when the corresponding unvested Shares become vested and non-forfeitable.

ARTICLE 5
STOCK OPTIONS; STOCK APPRECIATION RIGHTS

5.1 Grant of Company Stock Options. Except as otherwise specified herein (including in Section 3.2), the Committee may grant Options to Participants upon such vesting, forfeiture and other terms and conditions as the Committee, acting in its discretion in accordance with the Plan, may determine, either at the time an Option is granted or, if the holder's rights are not adversely affected, at any subsequent time. Each Option will be deemed not to be an ISO (a non-ISO) unless, at the time the Option is granted, the Committee specifically designates such Option as an ISO. If an Option is designated as an ISO and if part or all of the Option does not qualify as

TABLE OF CONTENTS

an ISO for any reason, then the Option or the portion of the Option that does not so qualify will nevertheless remain outstanding and will be characterized as a non-ISO.

5.2 Grant of Stock Appreciation Rights. Except as otherwise specified herein (including in Section 3.2), the Committee may grant Stock Appreciation Rights, or SARs, to Participants, either alone or in connection with the grant of an Option, upon such vesting, forfeiture and other terms and conditions as the Committee, acting in its discretion in accordance with the Plan, may determine, either at the time the SARs are granted or, if the holder's rights are not adversely affected, at any subsequent time. Upon exercise, the holder of an SAR shall be entitled to receive cash and/or a number of whole Shares (as determined by the Committee) having a value equal to the product of X and Y, where—

X = the number of whole Shares as to which the SAR is being exercised, and

Y = the excess of (i) the Fair Market Value per Share on the date of exercise over (ii) the Exercise Price per Share covered by the SAR.

5.3 Exercise Price. The Committee shall determine the Exercise Price per Share under each Option and each SAR, provided that (a) the Exercise Price per Share shall be at least equal to the Fair Market Value per Share on the date the Option or SAR is granted; and (b) in the case of an ISO granted to a Ten Percent Stockholder, the Exercise Price per Share shall be at least equal to 110% of the Fair Market Value per Share on the date the ISO is granted.

5.4 Repricing and Reloading Prohibited. Except in connection with a corporate transaction involving the Company (including, without limitation, any stock dividend, distribution (whether in the form of cash, Shares, other securities or other property), stock split, extraordinary cash dividend, recapitalization, change in control, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase or exchange of Common Shares or other securities, or similar transaction(s)), the Company may not, without obtaining stockholder approval: (a) reduce the Exercise Price under outstanding Options or SARs; (b) cancel outstanding Options or SARs in exchange for Options or SARs with a lower Exercise Price; or (c) cancel outstanding Options or SARs in exchange for cash or other securities at a time when the per Share Exercise Price under such Options or SARs is higher than the Fair Market Value. The Committee may not grant an Option that includes a “reload” feature or make any other Plan Awards that have the effect of providing a “reload” feature with respect to Shares used to satisfy the Option exercise price or applicable withholding tax.

5.5 Exercise Period of Options and SARs. The Committee may establish such vesting, forfeiture, expiration and other conditions as it deems appropriate (on a grant-by-grant basis) with respect to the exercisability of an Option or SAR; provided, however, that, unless sooner terminated in accordance with its terms, each Option and each SAR shall automatically expire on the tenth anniversary of the date the Option or SAR is granted (or, in the case of an ISO granted to a Ten Percent Stockholder, on the fifth anniversary of the date the ISO is granted).

5.6 Exercise of Options. A Participant may exercise an outstanding Option that is vested and exercisable by transmitting to the Secretary of the Company (or another person designated by the Company for this purpose) a written notice identifying the Option that is being exercised and specifying the number of whole Shares to be purchased pursuant to such exercise, together with payment in full of the aggregate Exercise Price payable for such Shares and any applicable withholding taxes. The Exercise Price shall be payable in cash or by check or by any other means that the Committee may expressly permit, including, without limitation, (a) the Participant's surrender of previously-owned Shares, (b) the Company's withholding Shares that would otherwise be issued if the Exercise Price had been paid in cash, (c) payment pursuant to a broker-assisted cashless exercise program established and made available in accordance with applicable law, (d) any other method of payment that is permitted by applicable law, or (e) any combination of the foregoing. Applicable withholding taxes shall be payable in cash or by any other method that may be permitted or required by the Committee in accordance with Section 11.1. Shares tendered or withheld for the payment of the exercise price of an Option will be credited on the basis of the Fair Market Value of such Shares on the date they are tendered or withheld pursuant to such exercise.

5.7 Exercise of SARs. A Participant may exercise an outstanding SAR that is vested and exercisable by transmitting to the Secretary of the Company (or another person designated by the Company for this purpose) a written notice identifying the SAR that is being exercised and specifying the number of whole Shares for which

TABLE OF CONTENTS

the SAR is being exercised, together with payment in full of any applicable withholding taxes attributable to such exercise. Applicable withholding taxes shall be payable in cash or by any other method that may be permitted or required by the Committee in accordance with Section 11.1.

5.8 Termination of Employment or Service. Unless the Committee determines otherwise at the time of grant, or thereafter if no rights of a Participant are thereby reduced, in the event of the termination of a Participant's employment or service with the Company and its Subsidiaries, (a) the Participant will forfeit any then outstanding unvested Options or SARs, and (b) any then outstanding vested Option or SAR will remain outstanding for a period of at least 90 days (one year if such termination is due to the Participant's death) following the date of such termination (but in no event longer than the expiration of its stated term.) Notwithstanding the foregoing, if a Participant's employment or other service is terminated by the Company or a Subsidiary for Cause (as such term is defined in Section 9.3(a) below) or at a time when grounds for such a termination exist, the Participant's then outstanding Options and/or SARs (whether or not previously vested) shall immediately terminate and shall have no further force or effect.

5.9 Rights as a Stockholder. A Participant shall have no rights to vote or receive dividends or any other rights of a stockholder with respect to any Shares covered by an Option or SAR unless and until such Option or SAR is validly exercised and any such Shares are issued to the Participant (subject to Section 4.3).

ARTICLE 6 RESTRICTED STOCK AND RESTRICTED STOCK UNIT AWARDS

6.1 Grant of Restricted Stock and RSU Awards. The Committee may grant Restricted Stock Awards and/or Restricted Stock Unit Awards (RSUs) to any Participant. Under a Restricted Stock Award, the Company issues Shares to the Participant when the Award is made subject to specified conditions and restrictions; and under an RSU Award, the Participant receives the right to receive Shares in the future upon satisfaction of specified terms and conditions. Except as otherwise specified herein (including in Section 3.2), the vesting, forfeiture and other terms and conditions applicable to the Shares covered by a Restricted Stock Award or the RSUs and Shares covered by a Restricted Stock Unit Award (including, but not limited to, conditions and restrictions tied to the achievement of specified performance objectives and/or the completion of one or more specified periods of future service) will be determined by the Committee and will be set forth in the applicable Award Agreement.

6.2 Restricted Shares. Shares issued pursuant to a Restricted Stock Award may be evidenced by book entries on the Company's stock transfer records pending satisfaction of the applicable vesting conditions. If a stock certificate for restricted Shares is issued, the certificate will bear an appropriate legend to reflect the nature of the conditions and restrictions applicable to the Shares. The Company may retain physical possession of any such stock certificate and may require a Participant to deliver a stock power to the Company, endorsed in blank, in order to facilitate the transfer back to the Company of restricted Shares that are forfeited. Notwithstanding the foregoing, if a Participant forfeits Shares covered by a Restricted Stock Award, the Shares that are forfeited shall automatically be cancelled on the books and records of the Company whether or not the Participant returns a certificate for such Shares or otherwise fails or refuses to execute documents or take other action requested by the Company in connection with the cancellation of the forfeited Shares. Except as otherwise provided in the Award Agreement, a Participant who holds unvested Shares pursuant to an outstanding Restricted Stock Award shall have the right to vote the unvested Shares. Subject to Section 4.4, no dividends will be paid with respect to unvested Shares covered by a Restricted Stock Award.

6.3 Shares Covered by RSU Awards. No Shares will be issued pursuant to an RSU Award unless and until the applicable vesting and other conditions have been satisfied. The holder of an RSU Award shall have no rights as a stockholder with respect to Shares covered by the RSUs unless and until the RSUs becomes vested and the Shares covered by the vested RSUs are issued to the Participant.

6.4 Non-Transferability. No Restricted Stock Award, no RSUs and no Shares covered by a Restricted Stock or RSU Award may be sold, assigned, transferred, disposed of, pledged or otherwise hypothecated other than to the Company or its designee in accordance with the terms of the Award or the Plan, and any attempt to do so shall be null and void.

6.5 Termination of Service Before Vesting; Forfeiture. Unless otherwise specified in the Award Agreement or otherwise subsequently determined by the Committee, unvested Shares held pursuant to a Restricted Stock Award and unvested RSUs held under an RSU Award shall be forfeited and canceled upon the termination of a Participant's employment or other service with the Company and its Subsidiaries.

TABLE OF CONTENTS

6.6 Timing Requirement for Settlement of RSUs. Unless otherwise specified in the applicable Award Agreement, RSUs shall be settled in the form of Shares or cash (as determined by the Committee) as soon as practicable after the RSUs become vested but in no event later than the 15th day of the third month following the calendar year in which the vesting of such RSUs occurs. Notwithstanding the foregoing, the terms of an RSU Award may expressly provide that settlement of vested RSUs covered by the Award will be deferred until a later date or the occurrence of a subsequent event, provided that any such deferral provision complies with the election, distribution timing and other requirements of Section 409A.

6.7 Receipt of Shares. A Participant who holds Shares that become vested under a Restricted Stock Award or who holds RSUs that become vested (to the extent the vested RSUs are settled in Shares) will be entitled to receive such Shares, subject to the payment or satisfaction of applicable withholding taxes. Applicable withholding taxes shall be payable in cash or by any other method that may be permitted or required by the Committee in accordance with Section 11.1.

ARTICLE 7 OTHER FORMS OF AWARD

7.1 Other Share-Based Awards. Subject to applicable law, the Committee, acting in its discretion, may grant such other forms of Award denominated or payable in, valued in whole or in part by reference to, or otherwise based upon or related to, Shares, including, without limitation, performance share awards, performance unit awards, stock bonus Awards, dividend equivalent Awards (either alone or in conjunction with other Awards), purchase rights for Shares, and Share-based Awards designed to comply with or take advantage of applicable laws outside of the United States. Except as otherwise specified herein (including in Section 3.2), each such Share-based Award will be made upon such vesting, forfeiture, performance and other terms and conditions as the Committee, acting in its discretion, may determine; provided that dividend equivalent awards made in conjunction with other Share-based Awards shall be subject to the same vesting and forfeiture conditions and the same payment terms applicable to the corresponding Share-based Awards and/or, if applicable, such different payment terms and conditions that may be required in order to comply with Section 409A. If and when a Share-based Award granted under this Section becomes payable, payment may be made in the form of cash, whole Shares or a combination of cash and whole Shares (as determined by the Committee), with a payment in Shares being based upon their Fair Market Value on the applicable vesting or payment date(s). The settlement of any such Award shall be subject to the payment or satisfaction of applicable withholding taxes. Applicable withholding taxes shall be payable in cash or by any other method that may be permitted or required by the Committee in accordance with Section 11.1.

7.2 Cash Incentive Awards. The Committee may make annual and/or long-term Cash Incentive Awards pursuant to which a Participant may earn the right to receive a cash payment that is conditioned upon the achievement of a specified performance goal or goals established by the Committee and communicated to the Participant as soon as practicable after the beginning of the applicable performance period and the satisfaction of such other terms and conditions as the Committee may prescribe. A Cash Incentive Award will be payable in the form of a single sum cash payment on or as soon as practicable after the date the Award becomes earned and vested, but in no event later than the 15th day of the third month of the following calendar year. Notwithstanding the foregoing, the Committee may require or permit the deferred payment and/or installment payout of all or part of any such Cash Incentive Award if (and only if) the Award is exempt from Section 409A or, if not so exempt, the deferred payout complies with the applicable terms and conditions of Section 409A. The payment of Cash Incentive Awards will be subject to applicable tax withholding requirements.

7.3 Termination of Service Before Vesting; Forfeiture. Unless otherwise specified in the Award Agreement or otherwise subsequently determined by the Committee, unearned and/or unvested Share-based Awards and Cash Incentive Awards outstanding upon the termination of a Participant's employment or other service with the Company and its Subsidiaries shall be forfeited and canceled.

ARTICLE 8
PERFORMANCE-BASED EXEMPTION AWARDS

8.1 Performance-Based Exemption—General. If the Committee intends that an Award should qualify for the Performance-Based Exemption (other than Options and SARs which otherwise qualify as “performance-based compensation” for purposes of Section 162(m) of the Code), then, except as otherwise permitted by Section 162(m) of the Code, the grant, exercise, vesting, amount and/or settlement of such Award shall be contingent upon achievement of one or more pre-established, objective performance goals, which shall be prescribed in writing by the Committee not later than 90 days after the commencement of the applicable performance period and in any event before completion of 25% of such performance period in accordance with the requirements of Section 162(m). Such performance goals shall be based on any one or more of the Performance Factors listed in Section 8.2 and may be expressed in absolute terms, relative to performance in prior periods and/or relative to performance of other companies or an index of other companies or on such other basis as the Committee, acting in a manner consistent with Section 162(m) of the Code, may determine. All determinations as to the establishment of performance goals, the amount of cash and/or the number of Shares that may be earned, the target level (and, if applicable, minimum and maximum levels) of actual achievement required as a condition of earning the Award, and the earned value of any Award intended to qualify for the Performance-Based Exemption shall be made by the Committee and shall be recorded in writing.

8.2 Performance Factors. Any one or more of the following Performance Factors may be used by the Committee in establishing performance goals for Awards intended to qualify for the Performance-Based Exemption, in each case taking into account such adjustments and other objective factors as the Committee may specify at the time the goal is established: Any one or more of the following Performance Factors may be used by the Committee in establishing performance goals for Awards intended to qualify for the Performance-Based Exemption, in each case taking into account such adjustments and other objective factors as the Committee may specify at the time the goal is established: (a) income measures (including, but not limited to, gross profit, operating income, earnings before or after taxes and/or other adjustments, or earnings per share); (b) return measures (including, but not limited to, return on assets, investment, equity, or sales); (c) cash flow return on investments, which equals net cash flows divided by owners’ equity; (d) gross revenues; (e) debt measures (including, without limitation, debt multiples); (f) marked value added; (g) economic value added; and (h) sales and growth metrics (including, but not limited to, iACV, subscription growth, bookings or backlog); and/or (i) Share price (including, but not limited to, growth measures and total shareholder return).

8.3 Performance Goals. In establishing performance goals with respect to an Award intended to qualify for the Performance Exemption, the applicable Performance Factors may be determined by reference to the Company’s performance and/or the performance of any one or more Subsidiaries, divisions, business segments or business units of the Company and its Subsidiaries, and may be based upon comparisons of any of the indicators of performance relative to other companies (or subsidiaries, divisions, business segments or business units of other companies) or relevant indices. Subject to compliance with the Treasury regulations under Section 162(m) of the Code, the Committee may prescribe that performance goals under any such Award will be adjusted as necessary or appropriate in order to account for changes in law or accounting rules, principles or standards or to reflect the impact of extraordinary or unusual items, events or circumstances which, if not taken into account, would result in windfalls or hardships that are not consistent with the intent and purposes of the Award, including without limitation (a) restructurings, discontinued operations, extraordinary items, and other unusual or non-recurring charges, (b) an event either not directly related to the operations of the Company or not within the reasonable control of the Company’s management, (c) acquisitions and divestitures, or (d) changes in generally accepted accounting principles.

8.4 Discretion. The Committee shall have the authority, in its discretion, to reduce the formula amount or number of Shares otherwise payable pursuant to an Award that is intended to qualify for the Performance-Based Exemption, but may not increase the amount or number of Shares that would otherwise be payable under any such Award; provided that, in the case of an Award intended to constitute a “share-based payment arrangement” under FASB ASC Topic 718, the Committee may exercise its discretion under this Section only if such discretion is expressly reserved as part of the original terms of the Award.

TABLE OF CONTENTS

8.5 Certification. No amount shall be paid and no Shares shall be distributed or released pursuant to an Award intended to qualify for the Performance-Based Exemption unless and until the Committee certifies in writing the extent of achievement of the applicable performance goal(s) and the corresponding amount that is earned by the Participant under such Award.

ARTICLE 9 CHANGE IN CONTROL

9.1 Assumption or Substitution of Outstanding Awards. If a “Change in Control” (as defined below) occurs, the parties to the Change in Control may agree that outstanding Awards shall be assumed by, or converted into a substitute award for or with respect to shares of common stock of, the successor or acquiring company (or a parent company thereof) on an economically equivalent basis. If the Change in Control does not involve an agreement with a third party, and if the Shares covered by an outstanding Award are still traded on a national securities exchange, then the Committee may unilaterally require that the Award be continued, assumed, converted or substituted in accordance with this Section. The vesting and other terms of any such assumed or substitute award shall be substantially the same as the vesting and other terms and conditions of the original Award, provided that (a) if the assumed or substituted Award is an Option or SAR, the number of shares and Exercise Price shall be adjusted in accordance with the principles set forth in Sections 1.424-1(a)(5) and 1.409A-1(b)(5)(v)(D) of the Treasury regulations, and (b) if the assumed or substituted Award is not an Option or SAR, the number of shares covered by the assumed or substitute Award will be based upon the Change in Control transaction value of the Company’s outstanding Shares. If the original Award is subject to the satisfaction of performance conditions, such performance conditions shall be deemed to have been satisfied immediately prior to the Change in Control at the greater of (x) the target performance level(s), or, if calculable, (y) the actual performance level(s) during the portion of the performance period ending immediately prior to the Change in Control. If, within two years following a Change in Control, a Participant’s employment or other service terminates due to the Participant’s death or is terminated by the Company or a successor or acquiring company (or any of its or their affiliates) without “Cause” (as such terms are defined below), any then outstanding assumed or substitute Awards held by such terminated Participant shall immediately be fully vested, and any outstanding assumed or substitute Options and SARs will remain outstanding for 180 days after such termination of employment (or, if earlier, until the expiration of their original stated terms).

9.2 Awards Not Assumed or Substituted. If a Change in Control occurs and an outstanding Award is not assumed, converted, substituted or continued pursuant to Section 9.1, then such Award will be deemed fully vested; provided, however, that, if the Award is subject to the satisfaction of performance conditions, such performance conditions shall be deemed to have been satisfied immediately prior to the Change in Control at the greater of (x) the target performance level(s), or, if calculable, (y) the actual performance level(s) during the portion of the performance period ending immediately prior to the Change in Control. Each such outstanding Award shall be cancelled immediately prior to the effective time of the Change in Control in exchange for an amount equal to the per Share consideration received by the holders of outstanding Shares in the Change in Control transaction, reduced in the case of an Option or SAR by the Exercise Price for such Shares. No consideration will be payable in respect of the cancellation of an Option or SAR with an Exercise Price per Share that is equal to or greater than the value of the Change in Control transaction consideration per Share. The amount payable with respect to the cancellation of an outstanding Award pursuant to this section will be paid in cash, unless the parties to the Change in Control agree that some or all of such amount will be payable in the form of freely tradable shares of common stock of the successor or acquiring company (or a parent company thereof). Subject to Section 11.2, the payments contemplated by this Section 9.2 shall be made upon at or as soon as practicable following the effective time of the Change in Control.

9.3 Certain Defined Terms.

(a) “Cause” means, with respect to any Participant and unless otherwise specified in the Participant’s Award Agreement, (i) if there is an employment, change in control or other services-related agreement in effect between the Participant and the Company or a Subsidiary that defines the term “cause” (or a term of like import), the Participant’s engaging in conduct that constitutes “cause” (or a term of like import) within the meaning of that agreement, or (ii) if there is no such employment or other agreement in effect, “Cause” shall mean (1) willful failure (except where due to physical or mental incapacity) or refusal to perform in any material respect the duties and responsibilities of the Participant’s employment which is not corrected within ten days following of written notice of such conduct by the Company; (2) misappropriation by Participant of the assets or

TABLE OF CONTENTS

business opportunities of the Company or its subsidiaries; (3) embezzlement or fraud committed by the Participant, at Participant's direction, or with Participant's prior personal knowledge; (4) the Participant's conviction of, or plea of guilty or nolo contendere to, the commission of a felony; or (5) the Participant's willful actions or failures to act which have or would be reasonably likely to have a material adverse effect on the property, business or reputation of the Company or on the ability of the Participant to perform the material duties of his or her employment.

(b) A "Change in Control" shall be deemed to have occurred upon the happening of any of the following events:

(i) any "person" as such term is used in Sections 13(d) and 14(d) of the Exchange Act (other than the Company, a subsidiary of the Company, any trustee or other fiduciary holding securities under any employee benefit plan of the Company or any corporation owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their ownership of stock of the Company), is or becomes, including pursuant to a tender or exchange offer for shares of Common Stock pursuant to which purchases are made, the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities, provided, however, that the provisions of this paragraph (a) shall not be applicable to any acquisition directly from the Company; or

(ii) individuals who, as of the date hereof, constitute the Board (the "Incumbent Board"), shall cease for any reason to constitute at least a majority thereof; provided, however, that any individual becoming a director subsequent to the date hereof whose appointment or election by the Board or nomination for election by the Company's stockholders was approved or recommended by a vote of at least two-thirds (2/3) of the directors then still in office who were either directors on the date hereof, or whose appointment, election or nomination for election was previously so approved or recommended, shall be considered a member of the Incumbent Board, but excluding for this purpose any new director whose initial assumption of office is in connection with an actual or threatened election contest relating to the election of directors of the Company or

(iii) there is consummated a merger or consolidation of the Company or any direct or indirect subsidiary of the Company with any other corporation, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior to such merger or consolidation continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or any parent thereof) more than 50% of the combined voting power of the securities of the Company or such surviving entity or any parent thereof outstanding immediately after such merger or consolidation; or

(iv) there is consummated a plan of complete liquidation or dissolution of the Company or there is consummated the sale or disposition by the Company of all or substantially all of the Company's assets, in one transaction or a series of related transactions, other than a sale or disposition by the Company of all or substantially all of the Company's assets to an entity, more than 50% of the combined voting power of the voting securities of which is owned by stockholders of the Company in substantially the same proportion as their ownership of the Company immediately prior to such sale.

9.4 No Fractional Shares. In the event of an adjustment in the number of shares covered by any Award pursuant to the provisions hereof, any fractional shares resulting from such adjustment shall be disregarded, and each converted Award shall cover only the number of full shares resulting from the adjustment.

ARTICLE 10 AMENDMENT AND TERMINATION

10.1 Amendment and Termination of the Plan. The Board, acting in its sole discretion, may amend the Plan at any time and from time to time and may terminate the Plan at any time. Plan amendments will be subject to approval by the Company's stockholders if and to the extent such approval is required in order to satisfy applicable law and/or stock exchange listing rules. Unless sooner terminated, the Plan will terminate on May 30, 2027 (the tenth anniversary of the date it was approved by the Company's stockholders).

TABLE OF CONTENTS

10.2 Outstanding Awards. Except as specifically required or permitted by the Plan or an Award Agreement, no amendment of an Award Agreement, and no termination, amendment or modification of the Plan shall cause any then outstanding Award to be forfeited or altered in a way that adversely affects a Participant's rights, unless the Participant consents thereto. The rights of any person with respect to an Award that is outstanding at the time of the termination of the Plan shall not be affected solely by reason of such termination and shall continue in accordance with the terms of the Award and of the Plan, as each is then in effect or is thereafter amended.

ARTICLE 11 TAX WITHHOLDING; SECTION 409A

11.1 Tax Withholding. Each Award and the exercise, vesting and settlement of each Award shall be subject to a Participant's payment or other satisfaction of any applicable withholding taxes. The Committee, in its sole discretion and pursuant to applicable law and such procedures as it may specify from time to time, may require or permit the Participant to satisfy the tax withholding obligation(s) relating to an Award (in whole or in part) by or through (a) the payment of cash by the Participant, (b) the Company's withholding cash or Shares that would otherwise be paid, issued or released pursuant to the Award, (c) the transfer to the Company of other Shares owned by the Participant, (d) a broker-assisted cashless exercise arrangement that complies with applicable law, and/or (e) by such other means as the Committee may determine, including, without limitation, withholding from regular and/or incentive cash compensation that may otherwise be or become payable to the Participant. The amount of a Participant's withholding tax obligation that is satisfied in Shares (whether previously-owned or withheld from the Shares that would otherwise be issued or released) shall be based upon the Fair Market Value of the Shares on the date such Shares are delivered or withheld. In no event may Shares be used to satisfy more than the minimum amount of a Participant's tax withholding obligation.

11.2 Section 409A Compliance. It is intended that Awards made under the Plan, including any deferred payment or settlement terms and conditions, shall be exempt from or comply with Section 409A. Without limiting the generality of the preceding sentence and notwithstanding anything to the contrary contained herein, the following provisions shall apply with respect to an Award if and to the extent that such Award provides for the payment of "nonqualified deferred compensation" (within the meaning of Section 409A).

(a) If a Participant becomes entitled to payments (cash or Shares) under the Award on account of the "termination of the Participant's employment or other service" or words of like import, then such termination of employment or service will not be deemed to have occurred unless and until the Participant incurs a "separation from service" within the meaning of Section 409A.

(b) If the Participant is a "specified employee" within the meaning of Section 409A at the time of his or her separation from service, then any such payment covered by Section 409A shall be delayed until the first business day following the earlier of (i) the date which is six months after the date of such separation from service, or (ii) the date of the Participant's death, if and to the extent such delay is required by Section 409A. On the delayed payment date, the Participant (or the Participant's beneficiary) will be entitled to receive a lump sum payment or distribution of the payments that otherwise would have been made during the period that such payments are delayed.

(c) If a payment covered by Section 409A would be accelerated on account of the occurrence of a "Change in Control," then such payment shall not be made unless such Change in Control also constitutes a "change in ownership," "change in effective control" or "change in ownership of a substantial portion of the Company's assets" within the meaning of Section 409A. Any payment that would have been made except for the application of the preceding sentence shall be made in accordance with the payment or settlement schedule that would have applied under the Award in the absence of a Change in Control or, if earlier, on the date of the termination of the Participant's employment or service (without regard to any further service or performance conditions that otherwise would have applied).

(d) Notwithstanding the foregoing, each Participant shall be solely responsible, and the Company shall have no liability to the Participant or otherwise, for or with respect to any taxes, acceleration of taxes, interest or penalties arising under Section 409A.

**ARTICLE 12
MISCELLANEOUS**

12.1 Non-Transferability. Except as otherwise specifically permitted by the Plan or the applicable Award Agreement, no Award shall be assignable or transferable except upon the Participant's death to his or her "beneficiary" (as defined below), and, during a Participant's lifetime, an Option or SAR may be exercised only by the Participant or the Participant's guardian or legal representative. Notwithstanding the foregoing, subject to the consent of the Committee (which it may grant, condition or deny in its sole discretion for any or no reason), a Participant may make an inter vivos transfer of an Option (other than an ISO), SAR or RSU to any "family member" (within the meaning of Item A(1)(a)(5) of the General Instructions to SEC Form S-8 or a successor), including, without limitation, to one or more trusts, partnerships, limited liability companies and other entities which qualify as family members, provided that such transfer is not a transfer for value or is a transfer for value that the Committee determines is for estate planning purposes, and provided further that such transfer is permitted by applicable law and does not give rise to tax under Section 409A. For the purposes hereof, a Participant's "beneficiary" is any person or entity (including, without limitation, a trust or estate) designated in writing by a Participant to succeed to the Participant's Award(s) upon the Participant's death, subject to the provisions hereof and of the applicable Award Agreement(s). A Participant may designate a beneficiary by delivering a written beneficiary designation to the Committee (or its designee) in such form and in such manner as the Committee (or its designee) may prescribe. Each beneficiary designation duly filed with the Committee (or its designee) will have the effect of superseding and revoking any prior beneficiary designation. If a Participant does not designate a beneficiary, or if no designated beneficiary survives the Participant, then the Participant's estate will be deemed to be his or her beneficiary. The term "Participant," as used herein, shall be deemed to include the Participant's beneficiary if and to the extent the context requires.

12.2 Successors. All obligations of the Company with respect to Awards granted under the Plan shall be binding on any successor to the Company of all or substantially all of the business and/or assets of the Company, whether the existence of such successor is the result of a direct or indirect purchase, merger, consolidation or otherwise, and the term "Company" as used herein shall be construed accordingly.

12.3 Legal Construction. If any provision of the Plan shall be held illegal or invalid for any reason, such illegality or invalidity shall not affect the remaining parts of the Plan, and the Plan shall be construed and enforced as if the illegal or invalid provision had not been included.

12.4 Compliance with Law. The granting of Awards and the issuance of Shares under the Plan shall be subject to all applicable laws, rules, and regulations, and to such approvals by any governmental agencies or national securities exchanges as may be required.

12.5 Transfer Orders; Placement of Legends. All certificates for shares of Common Stock delivered under the Plan shall be subject to such stock-transfer orders and other restrictions as the Company may deem advisable under the rules, regulations, and other requirements of the Securities and Exchange Commission, any stock exchange or market upon which the Common Stock may then be listed, and any applicable federal or state securities law. The Company may cause a legend or legends to be placed on any such certificates to make appropriate reference to such restrictions.

12.6 Nonexclusivity of the Plan. No provision of the Plan, and neither its adoption by the Board or submission to the stockholders for approval, shall be construed as creating any limitations on the power of the Board or a committee thereof to adopt such other incentive arrangements, apart from the Plan, as it may deem desirable.

12.7 Sub-Plans. The Committee may from time to time establish sub-plans under the Plan for purposes of satisfying securities, tax or other laws of any foreign jurisdictions that may apply to Participants who receive Awards. Any such sub-plan shall contain such limitations and other terms and conditions as the Committee determines are necessary or desirable for such purposes and shall be in such form (including, without limitation, as an appendix to the Plan) as the Committee deems appropriate. Each sub-plan shall be deemed a part of the Plan, but shall apply only to the Participants who are subject to the laws of the jurisdiction to which the sub-plan relates.

12.8 Uniformity Not Required. The provisions of the Award Agreements need not be uniform among all Awards, among all Awards of the same type, among all Awards granted to the same Participant, or among all Awards granted at the same time.

TABLE OF CONTENTS

12.9 Claw Back Conditions. Notwithstanding anything to the contrary contained herein or in an Award Agreement, Awards and benefits otherwise provided by Awards made under the Plan shall be subject to the Company's incentive compensation claw back policies as in effect from time to time, and, as applicable, the claw back requirements of the Dodd-Frank Act Section 954.

12.10 Limitation of Rights. The Plan shall not interfere with or limit in any way the right of the Company or of any Subsidiary to terminate any person's employment or other service at any time, and the Plan shall not confer upon any person the right to continue in the employ or other service of the Company or any Subsidiary. No employee, director or other person shall have any right to be selected to receive an Award or, having been so selected, to be selected to receive a future Award.

12.11 Decisions and Determinations Final. All decisions and determinations made by the Board pursuant to the provisions hereof and, except to the extent rights or powers under the Plan are reserved specifically to the discretion of the Board, all decisions and determinations made by the Committee in connection with the exercise of its authority and responsibilities under the Plan (including, without limitation, decisions and determinations relating to the construction, interpretation and administration of the Plan or any Award), shall be final, binding and conclusive on all persons.

12.12 Governing Law. The Plan and all Award Agreements shall be construed in accordance with and governed by the laws of the State of Delaware (without regard to the legislative or judicial conflict of laws rules of any state).

MEDIDATA SOLUTIONS, INC.

**THIRD AMENDED AND RESTATED
2014 EMPLOYEE STOCK PURCHASE PLAN**

1. **Purpose.** The purpose of the Medidata Solutions, Inc. Third Amended and Restated 2014 Employee Stock Purchase Plan (the “Plan”) is to provide eligible employees of Medidata Solutions, Inc. (the “Company”) and its Subsidiaries with a convenient way to purchase shares of the Company’s common stock (the “Common Stock”). It is believed that participation in the Plan will incentivize employees to exert maximum efforts for the success of the Company and, in turn, enhance stockholder value. The Plan is intended to satisfy the requirements of Section 423 of the Internal Revenue Code of 1986 (the “Code”).

2. **Definitions.** Capitalized terms that are not otherwise defined in this document shall have the meanings ascribed to them below.

(a) “Account” means the bookkeeping account established in the name of a Participant to reflect the payroll deductions made and accumulated on his or her behalf for the purchase of Common Stock under the Plan.

(b) “Board” means the Board of Directors of the Company.

(c) “Committee” means the Compensation Committee of the Board or such other persons (including the Board) who may be appointed to administer the Plan pursuant to Section 3.

(d) “Common Stock” means the common stock of the Company, \$.01 par value per share.

(e) “Eligible Employee” means an Employee whose customary employment is more than twenty (20) hours per week. The Committee may establish additional or different eligibility conditions hereunder and/or under one or more sub-plans covering Employees who are subject to the laws of a foreign jurisdiction, provided that such conditions do not affect the qualified status of the Plan under Section 423 of the Code.

(f) “Employee” means an individual who performs services for a Participating Company in an employer-employee relationship. An individual who is a non-employee director or who is classified in the Participating Company’s records as an independent contractor or “leased employee” shall not be an Employee for purposes of the Plan.

(g) “Fair Market Value” means, on any date, the closing price per share of the Company’s Common Stock on the principal securities exchange on which such shares are traded or, if no shares are traded on that date, the closing price per share on the last preceding date on which such shares are traded.

(h) “Offer Date” means the date on which an Offering is made, which shall occur only on the first day of the Offering Period for such Offering.

(i) “Offering” means the grant of Purchase Rights under the Plan, which shall occur on the first day of each Offering Period.

(j) “Offering Period” means each period of time during which Purchase Rights granted pursuant to an Offering may be exercised, as described in Section 7.1 of the Plan.

(k) “Participant” means an Eligible Employee who participates in an Offering under the Plan and for whom a payroll deduction Account is maintained.

(l) “Participating Company” means the Company and any Subsidiary of the Company that is designated as a participating employer by the Committee.

(m) “Purchase Date” means, with respect to an Offering, each date during the Offering Period on which shares of Common Stock may be purchased pursuant to the exercise of a Purchase Right.

(n) “Purchase Period” means, with respect to an Offering, the period of time from one Purchase Date to the next Purchase Date.

(o) “Purchase Right” means the right to purchase shares of Common Stock granted to a Participant pursuant to an Offering.

TABLE OF CONTENTS

(p) “Sale Event” means the occurrence of any of the following: (i) any person (within the meaning of Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934, as amended (“Exchange Act”)), other than the Company, any employee benefit plan of the Company, any entity owned directly or indirectly by the shareholders of the Company in substantially the same proportion as their ownership of stock of the Company or any person who becomes a beneficial owner directly or indirectly of securities of the Company pursuant to a transaction described in (ii) below, becomes the beneficial owner (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of securities of the Company (not including in the securities beneficially owned by such person any securities acquired directly from the Company or its affiliates) representing 50% or more of the combined voting power of the Company’s then outstanding voting securities; or (ii) there shall have been consummated a consolidation, merger or reorganization of the Company, unless (1) the stockholders of the Company immediately before such consolidation, merger or reorganization own, directly or indirectly, at least a majority of the combined voting power of the outstanding voting securities of the corporation or other entity resulting from such consolidation, merger or reorganization, (2) individuals who were members of the Board immediately prior to the execution of the agreement providing for such consolidation, merger or reorganization constitute a majority of the board of directors of the surviving corporation or of a corporation directly or indirectly beneficially owning a majority of the voting securities of the surviving corporation, and (3) no person beneficially owns more than 50% of the combined voting power of the then outstanding voting securities of the surviving corporation (other than a person who is (A) the Company or a subsidiary of the Company, (B) an employee benefit plan maintained by the Company, the surviving corporation or any subsidiary, or (C) the beneficial owner of 50% or more of the combined voting power of the outstanding voting securities of the Company immediately prior to such consolidation, merger or reorganization); or (c) the stockholders of the Company approve the complete liquidation or dissolution of the Company, or a sale or other disposition of all or substantially all of the assets of the Company (other than to an entity described in (ii) above).

(q) “Subsidiary” means a corporation 50% or more of the total combined voting power of which is owned directly or indirectly by the Company, as described in Section 424(f) of the Code.

3. Administration. The Plan shall be administered by the Committee. Subject to the provisions of the Plan, the Committee, acting in its sole and absolute discretion, will have full power and authority to interpret the provisions of the Plan, to establish the start dates and durations of future Offering Periods and the Purchase Date(s) within such Offering Periods, to determine which Subsidiaries will be designated as Participating Companies, to establish one or more sub-plans (including, without limitation, sub-plans intended to achieve certain tax or other objectives in locations outside the United States or to comply with local laws applicable to offerings in such foreign jurisdictions), to supervise the administration of the Plan, and to take such other action as it deems necessary or desirable in order to carry out the provisions of the Plan. All determinations and decisions made by the Committee in administering the Plan shall be final, conclusive, and binding on all persons. Subject to the requirements of applicable law, the Committee may delegate to any person or group or subcommittee of persons (who may, but need not be members of the Committee) such Plan-related functions within the scope of its responsibility, power and authority as it deems appropriate. The Company shall indemnify and hold harmless each member of the Committee and any employee or director of the Company or any Subsidiary to whom any duty or power relating to the administration or interpretation of the Plan is delegated from and against any loss, cost, liability (including any sum paid in settlement of a claim with the approval of the Board), damage and expense (including reasonable legal and other expenses incident thereto) arising out of or incurred in connection with the Plan, unless and except to the extent attributable to such person’s fraud or willful misconduct.

4. Enrollment and Participation.

4.1 General. Any Eligible Employee may enroll in the Plan and participate in an Offering, provided that he or she is an Eligible Employee on the Offer Date and has been an Eligible Employee for at least ten days before such Offer Date (or for such other period of time, not to exceed two years, as the Committee may prescribe). No individual may become a Participant in an Offering on a date other than the first day of the Offering Period.

4.2 Enrollment. An Eligible Employee who desires to become a Participant may do so by enrolling in the Plan before the first day of an Offering Period in such manner (including by electronic signature) and in accordance with such procedures as the Committee may prescribe for this purpose.

TABLE OF CONTENTS

4.3 Participation. A Participant may be enrolled for only one Offering at a time and may not participate in multiple Offerings at the same time within overlapping Offering Periods. If an Eligible Employee participates in an Offering and continues to be an Eligible Employee through the end of the Offering Period, then he or she will automatically participate in the next succeeding Offering without having to re-enroll. If a Participant receives a Purchase Right pursuant to one Offering and if, before the end of the Offering Period, he or she ceases to be a Participant (by reason of the Participant's withdrawal, termination of employment or otherwise), then he or she may not resume participation in that Offering. Such former Participant may, however, participate in a subsequent Offering, provided that he or she satisfies the applicable eligibility and enrollment requirements of the Plan before the Offer Date of such subsequent Offering.

4.4 Five Percent Shareholders. No Employee may be granted a Purchase Right under the Plan if, immediately after the grant of such Purchase Right, the Employee would own stock possessing 5 percent or more of the total combined voting power or value of all classes of stock of the Company or any Subsidiary. For this purpose, the rules of Section 424(d) of the Code will apply in determining an Employee's stock ownership, and stock which the Employee may purchase under any outstanding options (including outstanding Purchase Rights) will be treated as stock owned by the Employee.

4.5 Transfer to Related Corporation. In the event that an Employee leaves the employ of one Participating Company to become an Employee of another Participating Company, such Employee shall be deemed to continue as an Employee for all purposes of the Plan.

5. Common Stock Subject to Plan: Structure of the Plan.

5.1 Shares Reserved for Issue. Subject to Section 12, the Company may issue a total of 1,800,000 shares of Common Stock under the Plan (including any sub-plan established as part of the Plan). If the total number of shares for which Purchase Rights to be granted on any Offer Date exceeds the number of shares then available for issuance under the Plan or a given sub-plan (after deduction of all shares for which Purchase Rights have been exercised under the Plan or are then outstanding), the Company shall make a pro rata allocation of the shares remaining available in as nearly a uniform manner as is practicable and equitable. In such event, the payroll deductions to be made pursuant to the authorizations for the applicable Offering Period may be reduced accordingly and the Company shall give written notice of any such reduction to each affected Participant. Shares issued under this Plan may consist, in whole or in part, of authorized and unissued shares or treasury shares reacquired in private transactions or open market purchases. If any Purchase Rights granted under this Plan shall expire or terminate for any reason without having been exercised in full, the un-purchased shares subject thereto shall again be available for issuance under the Plan.

5.2 Plan Structure.

(a) This Plan document is an omnibus document which includes the primary Plan (the "Statutory Plan") designed to permit offerings of grants to employees of Participating Companies where such offerings are intended to satisfy the requirements of Section 423 of the Code (although the Company makes no undertaking nor representation to obtain or maintain qualification under Section 423 for any Subsidiary, individual, offering or grant) and also separate sub-plans (each a "Non-Statutory Plan") which permit offerings of grants to employees of Participating Companies (including certain Non-U.S. Subsidiaries) that are not intended to satisfy the requirements of Section 423 of the Code.

(b) The Statutory Plan shall be a separate and independent plan from the Non-Statutory Plan, provided, however, that the total number of shares authorized to be issued under the Plan applies in the aggregate to both the Statutory Plan and the Non-Statutory Plan. Offerings under the Non-Statutory Plan may be made to achieve desired tax or other objectives in particular locations outside the United States or to comply with local laws applicable to offerings in such foreign jurisdictions. Without limiting the generality of the foregoing, the Board and the Committee are specifically authorized to include in any Non-Statutory Plan such different terms and conditions as it deems appropriate under applicable local law requirements, including, without limitation, terms and conditions regarding eligibility to participate, the definition of compensation, the handling of payroll deductions, the establishment of bank or trust accounts or other funding vehicles to hold payroll deductions, the payment of interest, the conversion of local currency, and the determination or designation of beneficiaries of deceased Participants.

TABLE OF CONTENTS

(c) The terms of the Statutory Plan shall be those set forth in this Plan document to the extent such terms are consistent with the requirements for qualification under Section 423 of the Code. The Committee may establish Non-Statutory Plans applicable to particular Participating Companies or locations that are not participating in the Statutory Plan. The terms of a Non-Statutory Plan may take precedence over other provisions in this document, with the exception of Section 5.1 of the Plan (relating to the total number of shares of Common Stock that may be issued under the Plan). Unless otherwise superseded by the terms of such Non-Statutory Plan, the provisions of this Plan document shall govern the operation of such Non-Statutory Plan. Except to the extent expressly set forth herein or where the context suggests otherwise, any reference herein to “Plan” shall be construed to include a reference to the Statutory Plan and the Non-Statutory Plan(s).

6. Payroll Deduction Elections. The purchase price of shares of Common Stock acquired by a Participant under the Plan will be paid with amounts withheld from the Participant’s pay pursuant to the Participant’s payroll deduction election(s) made in accordance with this Section.

6.1 General. As part of the enrollment process, an Eligible Employee must make a payroll deduction election, authorizing the Company to deduct a certain amount from each regular paycheck for the purchase of Common Stock under the Plan. Unless the Committee determines otherwise, the amount to be deducted from each regular paycheck pursuant to an Employee’s payroll deduction election will be determined under the formula: $(A \times B) \div C$, where—

A = the Employee’s annual rate of base salary in effect at the time of the payroll deduction election,

B = the deduction percentage (not to exceed 50%) specified by the Employee, and

C = the number of regular pay periods in a year.

Once established, an Employee’s per-pay-period payroll deduction election will remain in effect (subject to limitations under the Plan) unless and until the Employee changes his or her election or ceases to be a participant in Plan, as provided herein. The Committee may modify the rules and procedures applicable to payroll deduction elections at such time(s) and in such manner as it deems necessary or appropriate for the orderly administration of the Plan; provided, however, that no such action may be taken if it would cause the Plan to be in violation of Section 423(b)(5) of the Code (which provides that all Employees participating in the Plan must have equal rights and privileges). Notwithstanding the foregoing, (a) the total amount deducted from a Participant’s compensation under the Plan shall not exceed \$21,250 in any calendar year, and (b) the amount that may be deducted from a Participant’s compensation on any payroll date may not exceed the net amount of cash compensation otherwise payable to the Participant on such date, after taxes and other authorized payroll deductions. If a Participant has an unused Account balance immediately following the last Purchase Date of an Offering Period, such balance will be refunded to the Participant.

6.2 Effect of Election; New Elections. Once a payroll deduction election is in effect, it shall remain in effect unless and until it is revoked or modified. A payroll deduction election may be modified by the filing of a new payroll deduction election in the manner described in Section 6.1. A new payroll deduction election will become effective as soon as practicable after its receipt by the Company and will supersede all prior payroll deduction elections. Unless the Committee determines otherwise, only one rate reduction and one rate increase may be made by any Participant during any Purchase Period. A Participant may increase or decrease the rate of his or her payroll deductions for a subsequent Offering Period by filing a new payroll deduction election before the first day of such subsequent Offering Period, and any such new election will not be taken into account in determining the number of changes the Participant may make during any Purchase Period.

6.3 Participants’ Accounts. The Committee will establish a bookkeeping Account or cause a bookkeeping Account to be established and maintained in the name of each Participant in order to reflect the amount of the Participant’s payroll deductions made and accumulated under the Plan. Each Participant’s Account will be credited with the amounts deducted from the Participant’s compensation under the Plan and, on each Purchase Date, will be reduced by the purchase price paid for any shares of Common Stock acquired by the Participant on such date pursuant to the exercise of the Participant’s Purchase Right. No interest or other earnings will be credited to the Participants’ Accounts. The cash retained by the Company pursuant to a Participant’s payroll deduction election(s) will be considered to be general assets of the Company and may be held or used by

TABLE OF CONTENTS

the Company as it deems appropriate. As and when a Participant's Account is charged for the purchase price of shares of Common Stock acquired upon the exercise of the Participant's Purchase Right(s), a like amount of the Participant's payroll deductions will be deemed to have been paid to the Company in exchange for such shares.

7. Terms and Conditions of Each Offering. Each Offering under the Plan will be made on the first day of an Offering Period and each purchase of shares of Common Stock pursuant to the exercise of a Purchase Right will be made on a Purchase Date, as described below.

7.1 Offering Periods and Purchase Dates. The first Offering Period under the Plan shall be the 24-month period beginning on January 1, 2014 and, unless the Committee determines otherwise, a new 24-month Offering Period will begin on each subsequent July 1 (starting July 1, 2014) and January 1. Each 24-month Offering Period will have four Purchase Dates, on June 30 and December 31 of each year during the Offering Period (e.g., June 30, 2014, December 31, 2014, June 30, 2015 and December 31, 2015 in the case of the first Offering Period under the Plan). The Committee may prescribe a different start date and/or duration for any future Offering Period, provided that no Offering Period shall have a duration of more than 27 months. The Committee may also establish different Purchase Dates within any future Offering Period, provided that each Offering Period must have at least one Purchase Date and the last day of each Offering Period must be a Purchase Date. The Committee will notify Eligible Employees of any change in future Offering Periods and Purchase Dates as soon as reasonably practicable prior to the scheduled beginning of the first Offering Period to be affected by such change.

7.2 Early Termination of Offering Periods. Unless the Committee determines otherwise, if the Fair Market Value per share of Common Stock on the first day of a new Offering Period is less than the Fair Market Value per share on the first day of an outstanding Offering Period, then (a) the earlier Offering Period shall be deemed to have terminated on the date immediately preceding the first day of such subsequent Offering Period, (b) the deemed termination date of the outstanding Offering Period will also be deemed to be a Purchase Date, (c) the Purchase Right held by each Participant will be exercised on such deemed Purchase Date in accordance with its terms and the terms of the Plan for the exercise of a Purchase Right generally, and (d) the Participant will be automatically enrolled in the new Offering on the first day of such new Offering Period.

7.3 Purchase Rights. An Eligible Employee who participates in an Offering will receive a Purchase Right on the first day of the Offering Period. Each Purchase Right will permit the Employee/Participant to purchase shares of Common Stock on each Purchase Date within the Offering Period for a purchase price per share equal to the lesser of 85% of the Fair Market Value per share of Common Stock on the first day of the Offering Period, or 85% of the Fair Market Value per share on the Purchase Date. Except as otherwise provided herein, the number of shares of Common Stock that may be purchased by a Participant on any Purchase Date pursuant to the exercise of a Purchase Right will be equal to the amount accumulated in the Participant's payroll deduction Account on such Purchase Date divided by the purchase price per share determined in accordance with the above formula, rounded down to the nearest whole number. Notwithstanding the foregoing, (a) unless the Committee prescribes a different maximum number with respect to an Offering, no more than 2,500 shares of Common Stock may be covered by a Purchase Right granted to any Participant pursuant to such Offering, and (b) no Participant may be permitted to purchase shares of stock under all qualified employee stock purchase plans of the Company and its Subsidiaries (including the Plan) at a rate that exceeds \$25,000 in fair market value of the stock (determined at the time the purchase rights are granted) for any calendar year in which any such purchase right granted to the Participant is outstanding at any time, determined in accordance with Section 423(b)(8) of the Code and the regulations issued thereunder.

7.4 Purchase of Shares. Except as otherwise provided and subject to the limitations contained herein, a Participant's Purchase Right will be exercised on each Purchase Date within an Offering Period for the number of whole shares determined by dividing the amount then credited to the Participant's Account by the applicable purchase price per share determined under Section 7.3 above. An amount equal to the aggregate purchase price of the shares being acquired will then be charged against the Participant's Account, and a corresponding amount of the Participant's payroll deductions will be deemed to have been paid to the Company in full payment of such purchase price. The Company shall issue the purchased shares to the Participant (in certificated or book entry form) as soon as practicable after the Purchase Date. The Committee may permit or require that the purchased shares be deposited for the Participant's account with a broker or agent designated by the Committee. The

TABLE OF CONTENTS

Committee may require that some or all of such shares be retained by such broker or agent for a designated period of time and/or may establish other procedures as it deems appropriate in connection with the administration of the Plan. The shares acquired pursuant to the exercise of a Purchase Right will be fully paid and non-assessable.

7.5 Withdrawal. Each Participant may withdraw from the Plan during an Offering Period by providing written notice to the Committee (at such time and in such form and manner as the Committee may prescribe) of his or her election to withdraw. A Participant's withdrawal will become effective as soon as practicable following receipt of such withdrawal notice by the Company, at which time the Participant's payroll deduction election will be canceled and the balance credited to the Participant's Account (to the extent not previously applied to the purchase of Common Stock, and, if the withdrawal is effective on or within ten days before a Purchase Date, to the extent not applied to the purchase of Common Stock on such Purchase Date) will be refunded to the Participant, without interest, in full and final satisfaction of the Participant's interest in the Plan. A Participant who withdraws from the Plan during one Offering Period may not resume his or her participation within the same Offering Period, but he or she may re-enroll in the Plan for a new Offering beginning on the first day of any subsequent Offering Period, subject to the same eligibility and other conditions and the same enrollment procedures as are applicable to any other person who desires to enroll in the Plan.

7.6 Termination of Employment. An individual's participation in the Plan will automatically terminate and any outstanding Purchase Right held by such individual will be automatically cancelled if he or she ceases to be employed by a Participating Company (regardless of the reason therefor). Upon or as soon as practical after such termination, the balance credited to the Participant's Account (to the extent not previously applied to the purchase of Common Stock, and, if the termination is effective on or within ten days prior to a Purchase Date, to the extent not applied to the purchase of Common Stock on such Purchase Date) will be distributed, without interest, to the Participant (or, if applicable, the Participant's beneficiary) in full and final satisfaction of the Participant's (or beneficiary's) interest in the Plan.

7.7 Nontransferable Rights. All Purchase Rights acquired pursuant to the Plan shall be nontransferable, except by will or the laws of descent and distribution, and shall be exercisable during the lifetime of a Participant only by the Participant.

7.8 Other Terms and Conditions. Purchase Rights granted under the Plan shall be subject to the terms and conditions set forth herein, and to such other terms and conditions not inconsistent herewith as the Committee may deem appropriate, provided that, except as otherwise permitted or required by applicable law, such terms and conditions shall be identical for each Participant granted Purchase Rights pursuant to any particular Offering under the Statutory Plan or any Non-Statutory Plan, as the case may be.

7.9 Registration of Shares. Notwithstanding anything to the contrary contained herein, no Purchase Rights granted under the Plan may be exercised to any extent unless the shares of Common Stock to be issued upon such exercise are covered by an effective registration statement pursuant to the Securities Act of 1933, as amended (the "Securities Act") and the Plan is in material compliance with all applicable laws. If on any Purchase Date, the shares of Common Stock are not so registered or the Plan is not in such compliance, no Purchase Rights granted under the Plan shall be exercised on such Purchase Date, and the Purchase Date shall be delayed until the shares of Common Stock are subject to such an effective registration statement and the Plan is in material compliance, except that the Purchase Date shall in no event be more than twenty-seven (27) months from the commencement of the Offering Date. If on the Purchase Date, as delayed to the maximum extent permissible, the shares of Common Stock are not registered and the Plan is not in material compliance with all applicable laws, no Purchase Rights shall be exercised and all accumulated but unused payroll deductions shall be refunded to the Participants, without interest.

8. Tax Withholding. To the extent any (i) grant of a Purchase Right, (ii) purchase of shares, or (iii) disposition of shares purchased under the Plan gives rise to any tax withholding obligation (including, without limitation, income and payroll withholding taxes imposed by any jurisdiction) the Committee may implement appropriate procedures to ensure that such tax withholding obligations are met. Those procedures may include, without limitation, withholding amounts credited to a Participant's Account, increased withholding from an employee's current compensation, cash payments to the Company or another Participating Company by the Participant, or a sale of a portion of the stock purchased under the Plan, which sale may be required and initiated by the Company.

TABLE OF CONTENTS

9. Equal Rights and Privileges. Notwithstanding anything to the contrary contained herein, all Participants granted Purchase Rights under any Offering shall have the same rights and privileges, except (a) the amount of Common Stock which may be purchased by any Participant pursuant to such Purchase Rights may bear a uniform relationship to the Participant's total compensation, or his or her basic or regular rate of compensation, and (b) no Participant may purchase more than the maximum amount of Common Stock permitted by the Plan or applicable law. The provisions of this Section are intended to reflect the requirements of Section 423(b)(5) of the Code, and such provisions will be interpreted, construed and administered accordingly.

10. Stock Issuance and Rights as Stockholder. Notwithstanding any other provisions of the Plan, no Participant shall have any rights of a stockholder (including the right to vote and receive dividends) with respect to shares of Common Stock covered by Purchase Rights granted under the Plan unless and until such shares have been purchased and delivered to him or her in accordance with the provisions hereof.

11. Beneficiary Designation. A Participant may designate a beneficiary who will receive any shares of Common Stock and/or unused cash credited to the Participant's Account in the event of such Participant's death subsequent to the end of a Purchase Period but prior to delivery of such shares and/or cash to the Participant. Such designation may be made by delivering a written beneficiary designation to the Committee (or its designee) in such form and in such manner as the Committee (or its designee) may prescribe for this purpose. Each beneficiary designation duly filed with the Committee (or its designee) will have the effect of superseding and revoking any prior beneficiary designation. If a Participant does not designate a beneficiary or if no designated beneficiary survives the Participant, then the Participant's beneficiary will be deemed to be his or her surviving spouse, if any, or, if there is no such surviving spouse, the Participant's estate.

12. Adjustments Upon Changes in Capitalization or Sale Event.

12.1 Capital Changes. In the event of reorganization, recapitalization, stock split, stock dividend, combination of shares, merger, consolidation, offering of rights, or any other change in the structure of the Company's Common Stock, the Committee may make such adjustment, if any, as it may deem appropriate in the number and class of shares that may be issued under the Plan, the maximum number of shares that may be purchased during any Offering Period or calendar year, and the number and class of shares and the purchase price per share covered by Purchase Rights that are then outstanding under the Plan. Such adjustments may include, without limitation, closing an Offering Period or Purchase Period early and permitting purchase on the last business day of the shortened Offering Period or Purchase Period, or terminating an offering and refunding Participants' Account balances.

12.2 Sale Event. If a Sale Event occurs, the Board or Committee may permit the surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company) to assume and continue outstanding Purchase Rights or to substitute similar rights (including a right to acquire the same consideration paid to the stockholders in the Sale Event) for outstanding Purchase Rights, in either case on an economically equivalent basis. If outstanding Purchase Rights are not so assumed, continued or substituted, then, unless the Committee or the Board determines otherwise, the balance of each Participant's Account will be applied to purchase shares of Common Stock within ten business days prior to the date of the Sale Event pursuant to automatic exercise of such Participant's outstanding Purchase Rights in full and final satisfaction of such Participant's interest in the Plan, and the shares so acquired will be entitled to participate in the Sale Transaction on the same basis as other holders of the Company's Common Stock, provided that any such automatic exercise of Purchase Rights will be subject to the applicable limitations and provisions that would otherwise be applicable and provided further that any amounts remaining in the Participant's Account after such automatic exercise of the Participant's Purchase Rights shall be distributed to the Participant in cash on or as soon as practicable (but not more than five business days) after the consummation of such Sale Event.

12.3 Committee or Board Determination Conclusive. All adjustments under this Section 12 shall be made by the Committee or the Board as constituted immediately prior to the capital change or Sale Event, as the case may be, and the Committee's or Board's determination as to what adjustments shall be made, and the extent thereof, shall be binding and conclusive.

12.4 Reservation of Rights. The grant of a Purchase Right pursuant to this Plan shall not affect in any way the right or power of the Company to make adjustments, reclassifications, reorganizations or changes of its capital or business structure or to merge or consolidate or to dissolve, liquidate, sell or transfer all or any part of its business or assets.

TABLE OF CONTENTS

13. Securities Law Requirements.

13.1 Investment Representations. The Company may require a Participant as a condition of the grant and/or exercise of a Purchase Right, to represent and establish to the satisfaction of the Company that all shares of Common Stock to be acquired pursuant to such grant and exercise will be acquired for investment and not for resale. The Company may cause such legends to be placed on certificates evidencing any such shares as, in the opinion of the Company's counsel, may be required by federal and applicable state securities laws.

13.2 Compliance with Applicable Securities Laws. No shares of Common Stock shall be issued to a Participant under the Plan unless and until counsel for the Company determines that: (i) the Company and the Participant have satisfied all applicable requirements under the Securities Act of 1933, as amended, and the Exchange Act; (ii) any applicable requirement of any stock exchange or quotation system on which the Company's Common Stock is listed or quoted has been satisfied; and (iii) all other applicable provisions of state and federal law have been satisfied.

14. Amendment. The Committee and the Board shall have the right at any time and without notice to amend, modify, suspend or terminate the Plan, provided that no Participant's existing rights under any outstanding Offering made under the Plan may be adversely affected thereby; and provided further that, except as permitted by Section 12 (relating to adjustments for capital changes and Sale Events), stockholder approval shall be required for any amendment if and to the extent such approval is required by Section 423 of the Code or other applicable law or listing requirements (including, as applicable, any amendment that would (i) increase the number of shares of Common Stock issuable under the Plan, or (ii) change the class of persons eligible to participate in the Plan).

15. Termination. Unless sooner terminated by the Board or the Committee, the Plan will automatically terminate on the earlier of the issuance of all the shares of Common Stock that may be issued under the Plan, or the date which is ten years from the date the Plan was adopted by the Board.

16. Reservation of Shares. The Company will at all times during the term of this Plan reserve and keep available such number of shares of its Common Stock as shall be sufficient to satisfy the requirements of the Plan.

17. No Rights Conferred. Neither the Plan nor an individual's participation in the Plan shall interfere with or limit in any way the right of a Participating Company to terminate or modify the terms and conditions of such individual's employment at any time or otherwise confer upon such individual a right to continue in the employ of such Participating Company.

18. Use of Funds. All payroll deductions received or held by the Company under the Plan may be used by the Company for any corporate purpose, and the Company shall not be obligated to segregate such payroll deductions.

19. Governing Law. The Plan shall be governed by the laws of the State of Delaware without regard to its conflicts of law provisions.

20. Effective Date. This Plan was adopted by the Board of Directors of the Company on April 16th, 2018. The Plan will be effective upon approval by the Company's stockholders at the 2018 Annual Stockholders' Meeting, provided, however, that no shares of Common Stock may be issued under the Plan unless the Plan is approved by the Company's stockholders at the 2018 Annual Stockholders' Meeting, and provided further that the Plan will automatically terminate and be of no force or effect on the date of such Annual Meeting if the Plan is not so approved.



MEDIDATA SOLUTIONS, INC.
350 HUDSON STREET, 9TH FLOOR
NEW YORK, NY 10014

VOTE BY INTERNET

Before The Meeting - Go to www.proxyvote.com

Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 P.M. Eastern Time the day before the meeting date. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

During The Meeting -

Go to www.virtualshareholdermeeting.com/medidata2018

You may attend the Meeting on May 30, 2018 at 10:00 A.M. EDT via the Internet and vote during the Meeting. Have the information that is printed in the box marked by the arrow available and follow the instructions.

VOTE BY PHONE - 1-800-690-6903

Use any touch-tone telephone to transmit your voting instructions up until 11:59 P.M. Eastern Time the day before the meeting date. Have your proxy card in hand when you call and then follow the instructions.

VOTE BY MAIL

Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:

E28046-P91717

KEEP THIS PORTION FOR YOUR RECORDS

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

DETACH AND RETURN THIS PORTION ONLY

MEDIDATA SOLUTIONS, INC.

The Board of Directors recommends you vote FOR the following:

1. Election of Directors

Nominees:

	For	Against	Abstain
1a. Tarek A. Sherif	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1b. Glen M. de Vries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1c. Carlos Dominguez	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1d. Neil M. Kurtz	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1e. George W. McCulloch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1f. Lee A. Shapiro	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1g. Robert B. Taylor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For Against Abstain

3. To approve an amendment to our 2017 Long-Term Incentive Plan ("LTIP") to increase by 1,300,000 the number of shares of common stock authorized for issuance under the LTIP.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. To approve an amendment to our Second Amended and Restated 2014 Employee Stock Purchase Plan ("ESPP") to increase by 1,000,000 the number of shares of common stock authorized for issuance under the ESPP.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. To ratify the appointment of Deloitte & Touche LLP as the company's independent registered public accounting firm for the year ending December 31, 2018.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Board of Directors recommends you vote FOR proposals 2, 3 and 4:

	For	Against	Abstain
2. To approve, on an advisory basis, named executive officer compensation (the "say on pay vote").	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NOTE: In the discretion, proxies are authorized to transact such other business as may properly come before the meeting or any adjournment or postponement thereof.

Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name by authorized officer.

--	--

Signature [PLEASE SIGN WITHIN BOX] Date

--	--

Signature (Joint Owners) Date

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting:
The Notice and Proxy Statement and Annual Report are available at www.proxyvote.com.

E28047-P91717

**MEDIDATA SOLUTIONS, INC.
Annual Meeting of Stockholders
MAY 30, 2018 10:00 A.M. EDT
This proxy is solicited by the Board of Directors**

The stockholder(s) hereby appoint(s) Tarek Sherif and Rouven Bergmann, or either of them, as proxies, each with the power to appoint his substitute, and hereby authorize(s) them to represent and to vote, as designated on the reverse side of this ballot, all of the shares of common stock of Medidata Solutions, Inc. that the stockholder(s) is/are entitled to vote at the Annual Meeting of Stockholders of Medidata Solutions, Inc. to be held via live webcast at www.virtualshareholdermeeting.com/medidata2018 on May 30, 2018 at 10:00 A.M. EDT and any adjournment or postponement thereof.

This proxy, when properly executed, will be voted in the manner directed herein. If no such direction is made, this proxy will be voted in accordance with the Board of Directors' recommendations.

Continued and to be signed on reverse side