

Fall 2017

Who Runs Silicon Valley



NUTANIX
(NASDAQ: NTNX)
is the latest SV150 IPO
(September, 2016)

SV150 Trends to Watch



Continued double-digit losses in SV150 ranked companies due to acquisition (see page [5](#))

- Intense public company acquisition activity impacting all sectors
- Silicon Valley based IPO activity remains light in 2017
- Revenue cutoff for SV150 ranking has fallen by \$43 million, many newly added companies below the 2015 revenue threshold



Low CEO turnover in the SV150 (see pages [6-7](#))

- More CEOs "acquired out" than replaced in 2016-17
- 2016 CEO replacement rate of only 8.7% versus 12.6% in the S&P500
- New SV150 CEO appointments often paired with exiting CEO appointed as Chair



Declines in (the small base of) female CEOs (see pages [8](#) and [24-26](#))

- No new female SV150 CEOs in 2016-17
- Loss of several women SV150 CEOs due to acquisition
- Only one female Founder-CEO in the SV150



Short tenures/rapid turnover in functional leadership roles (see pages [10-20](#))

- One-third of functional heads new to their role since the start of 2016
- Median tenure for all functional roles in range of 2-3 years



High levels of executive voting power (see pages [22-23](#))

- Dual Class Stock Ownership companies provide opportunity for founders to retain high levels of control after the IPO
- SV150 voting power of management much higher than in the S&P100

Who Runs Silicon Valley

2017 C-Suite Edition

Mark Lonergan



Mark is the Founder and Managing Partner of Lonergan Partners, Silicon Valley's largest independent search firm. In this role, he has advised CEOs and boards of directors on leadership issues for over twenty-six years.



Mark is also Chairman of the Board of the Silicon Valley Directors' Exchange, a network of corporate directors whose mission is to promote the education of Silicon Valley boards of directors. SVDX programs are jointly sponsored with the Stanford Rock Center for Corporate Governance.



In our fourth annual review of leadership in the Silicon Valley, the fundamental shift in the landscape of the Silicon Valley 150 (SV150) is the rapid disappearance of many established public companies, with so few new Silicon Valley IPOs taking their place. Why have so many boards of directors and CEOs opted to sell in 2016-17? And what is happening to tech leadership in the face of all this M&A activity?

"Management is doing things right; leadership is doing the right things." Peter Drucker (1909-2005)

In this C-Suite edition of our annual SV150 report, we dip into the ranks of the senior functional executives running the top public technology companies in the Silicon Valley, to better understand the people in these important roles. One thing is clear: Chief Executive Officers have more direct reports than ever and SV150 functional specialists now outnumber the generalist heads of business units by more than 3 to 1.

We learned a lot about how the SV150 thinks about leadership from building the dataset for this report. From our research, we calculate there is an average of 11.5 leaders per SV150 company¹. While all companies had CEOs and CFOs in place, there was considerable variation in what other senior roles were designated. For example, we found Chief Operating Officers at only 34% of SV150 companies, and they were most likely to be found at the largest public companies (42% worked at a Top 50 ranked company). Likewise, General Managers/Presidents of business units were most likely to be found at Top 50 ranked companies (55% of them worked at a Top 50 ranked company).

Our research focuses on the functional managers in the leadership team. The average number of functional managers reporting directly to the CEO has more than doubled since the 1980s, and three-quarters of the increase has been attributed to functional managers². Our report profiles the functional managers of the SV150 running finance, engineering, sales, marketing and HR—all roles of increasing importance in the management team, and with ever-evolving responsibilities.



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The Silicon Valley 150



2017 Acquisitions Completed

Yahoo—SV#23
Brocade—SV#38 (est. by Nov 30)
Linear—SV#51
Solar City—SV#74
Intersil—SV#84
Rocket Fuel—SV#88
Nimble—SV#94
Zeltiq—SV#104
Shoretel—SV#105
Invensense—SV#113
Jive—SV#133
Ultratech—SV#136
AMCC—SV#144
SciClone—SV#148

Are we witnessing a public company extinction event?

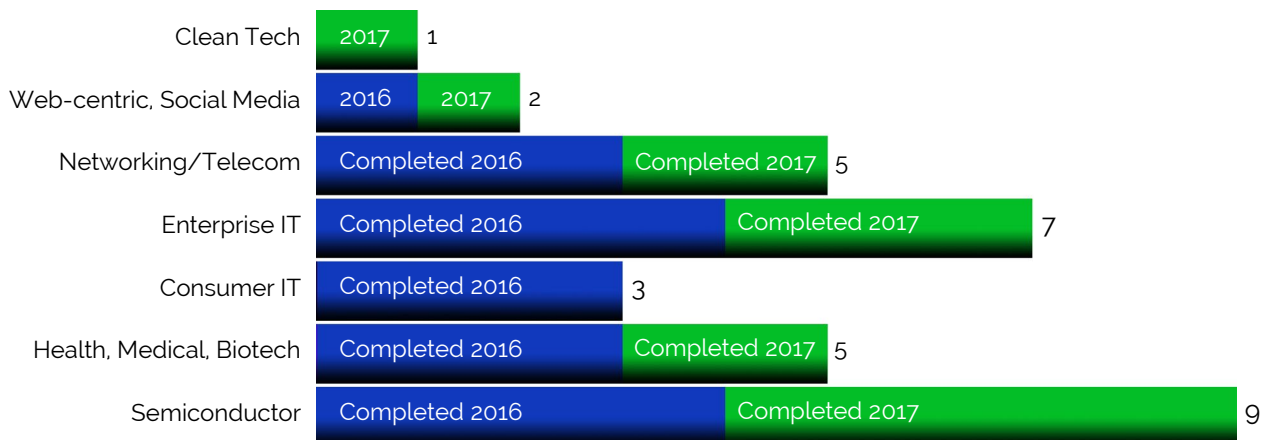
While SV150 acquisitions are a normal occurrence, 2016-2017 represents a spike in public company consolidation.

In 2016, eighteen public companies were acquired and removed from the roster of top Silicon Valley tech firms. As of the study date of this report, fourteen more companies on the SV150 list (compiled annually by the Mercury News) have been acquired. Combined, over 20% of the companies on the SV150 roster have been removed due to acquisition in the last two years. While acquisitions have been most frequent in the semiconductor sector, the graph below makes it clear this activity is impacting all industry sectors.

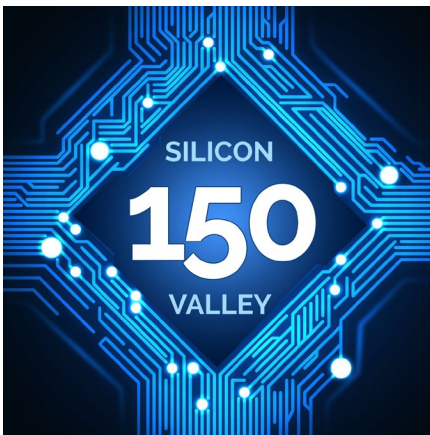
On the new public company generation side of the equation, 2016-2017 has been sluggish for Silicon Valley tech IPOs or public spin-offs. In 2016, only two IPOs were added to the SV150: Nutanix (SV#80) and Twilio (SV#116). The revenue of the bottom ranked company on the list declined from \$181 million in 2015 to \$138 million in 2016. Of the 19 companies newly added to the list in 2016, 10 would have been below the cutoff revenue in the prior year.

In 2017 the new tech IPO rate has picked up, but numerous high profile tech IPOs have been outside the Silicon Valley (for example Snap in LA and Blue Apron in NYC); and none of the most eagerly awaited Silicon Valley unicorns have gone public this year to date. Local IPOs that have launched that could make our SV150 roster next year are Mulesoft (NYSE: MULE), Cloudera (NYSE: CLDR), Okta (NASDAQ: OKTA) and Roku (NASDAQ: ROKU).

Acquisition Pipeline by Sector 2016-2017



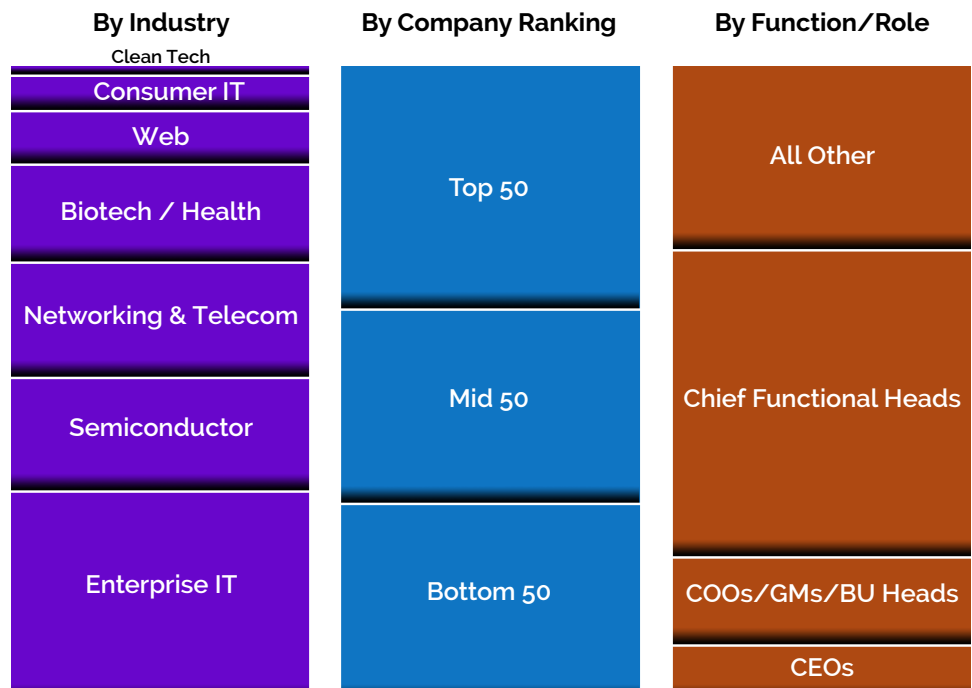
Silicon Valley Leadership Population



The 100% bars to the right provide a breakdown of the over 1600 website-designated leaders of SV150 companies (as classified and ranked by the San Jose Mercury News, based on 2016 revenues).

Who are the leaders of the SV150? In order to answer this question, we took as our population the 1,626 executives who were listed as leaders on the company websites and proxies of the top 150 largest publically traded companies headquartered in the Silicon Valley³.

Leaders of the Silicon Valley 150



Our profile focuses on the CEOs and functional heads of finance, sales, marketing, engineering, and human resources. We wanted to know who these leaders are—are they men or women, how old are they, where do they come from, and how were they educated? We also wanted to know how long they had served in their role, were they hired from the outside or promoted into the role, and how well were they compensated.

Our information is all based on publically available data, primarily from the company website, press releases, and proxy filings. We supplemented this information when necessary with business bios from Reuters and Bloomberg and biographical information posted publically by the executives themselves. We did not run any 'background checks' on these executives, so we only know what has been provided to the public. The dataset we created is also a snapshot in time, with our population being executives listed on their websites as of August 1, 2017. Changes since that date are not reflected in our data.

SV150 CEO Changes



Kevin Mandia

CEO, FireEye—SV#76
Appointed 2016

Kevin Mandia, age 46, grew up in Rochester, New York, and attended Lafayette College on an Air Force ROTC scholarship. After graduation he became an intelligence officer for the Pentagon with a focus on cybersecurity.

Kevin's security focus led him to found his own company, Mandiant, where he would eventually be named one of America's top private cybersleuths by Fortune magazine after he revealed the role of a secret Chinese military unit in hacking US companies.

Mandiant was purchased by FireEye in December, 2013, for over \$1 billion. Kevin served as Chief Operating Officer at FireEye before being appointed its new CEO in June, 2016.

At the end of 2016, SV150 CEOs managed \$849 billion in revenues, \$3.5 trillion in market capitalization, and more than one million employees. They also averaged \$6.7 million in 2016 compensation, according to their latest proxy filings.

Over the past four years we have profiled the CEOs of the SV150 on several occasions. In this edition, we examine new CEO trends and compare CEOs to their functional heads (for a complete rundown of CEO demographics and role statistics, see the table on [page 20](#).)

New CEO Leaders

In 2016, a total of 13 new SV150 CEOs were appointed, for an overall replacement rate of 8.7%. This is much lower than the same year comparable S&P500 replacement rate of 12.6%⁴. The following profile focuses on these 13 SV150 CEO succession events.

Incoming 2016 SV150 CEOs:

Replaced experienced CEOs with significant concentration of power

The replaced CEOs averaged 9 years in position; 46% were also Chairmen of the Board, 38% were considered founders, and 62% had reported voting power of over 1% (those with reported voting power averaged 6.8%).

Were somewhat younger than the CEOs they replaced

The average age of incoming CEOs was 49 versus 53 for those they replaced.

Were all male CEOs, replacing all male CEOs

There were no women among the new 2016 CEOs, and with the departure of several women CEOs due to acquisition, the total number of women SV150 CEOs has fallen. See the section on Women Leaders in the SV150 ([page 24](#)) for a roster of remaining women CEOs.

Were more likely to have been promoted internally than to have been hired/acquired in

54% were promoted versus 31% hired in and 15% acquired in.

Were not usually experienced public company CEOs

23% of the new CEOs had prior experience with running public companies—this includes two CEOs who were running public companies that were acquired, prior to transitioning into the CEO role of the new parent company; this also includes one hired in CEO with prior public company CEO experience.

SV150 CEO Changes continued...



Shaw Hong

CEO, OmniVision—formerly SV#58

Shaw Hong was founder, CEO & Chairman of OmniVision, an image sensor developer founded in 1990 with over \$1 billion in revenue prior to its 2016 acquisition. Among the 18 CEOs exiting the SV150 roster in 2016 due to an acquisition, he was the longest serving (with over 20 years as CEO since he was appointed in 1995), as well as being the oldest (at age 78) at the time of the acquisition.

Shaw holds a BS degree in Electrical Engineering from Jiao Tong University in China and an MS degree in Electrical Engineering from Oregon State University.

Were highly likely to serve with the outgoing CEO as their Chairman of the Board

While none of the 2016 appointees were made Chairman of the Board upon appointment, almost one-third (31%) had the outgoing CEO serving as their Chairman of the Board, and one was appointed to serve alongside a co-CEO who is also Chairman. In the SV150, 20% of companies have the last CEO replaced serving as the current Chairman. This differs dramatically from the S&P500 where only 6% of companies have the former CEO as Chairman of the Board⁵.

Outgoing CEOs of Acquired Companies

In addition to the 13 CEOs who were replaced in 2016 profiled in the analysis above, 18 CEOs were 'acquired out' of their jobs in 2016, for a total 20.7% disappearance rate for SV150 CEOs.

'Acquired Out' CEOs in 2016:

Were experienced CEOs with significant concentration of power

The outgoing CEOs averaged 9 years in position; 22% were also Chairmen of the Board, 28% were considered founders, and 56% had reported voting power of over 1% (those with reported voting power averaged 3%).

Were among the oldest CEOs

The average age of outgoing CEOs was 56, with 82% Baby Boomers born before 1965.

Were mostly men

There was only one woman CEO in this group, Selino Lo of Ruckus Wireless. In 2017, two more women SV150 CEOs have been acquired out: Marissa Meyer of Yahoo (SV#23) and Elisa Steele of Jive Networks (SV#133).

A note on 2017 CEO changes to-date. Through the end of September, a total of only 7 new SV150 CEOs have been appointed, and 13 more CEOs have been fully 'acquired out' of their roles. More than half the newly appointed 2017 CEOs will serve with the outgoing CEO as their Chairman of the Board, continuing that trend.

CEO Demographic Profile



Jeff Lawson

CEO, Twilio—SV#116 (IPO 2016)

Jeff Lawson, age 39, is Founder, CEO & Chairman of Twilio, one of the newest IPOs on the SV150 roster. Jeff is a serial entrepreneur who has been starting companies since he was in middle school.

Jeff grew up outside Detroit and went to the University of Michigan where he earned his BS in Computer Science & Film/Video. Prior to co-founding Twilio, Jeff was involved in the founding of Nine Star, Stubhub.com, and Versity. He was also one of the original product managers for Amazon Web Services.

Jeff exemplifies a new breed of Founder-CEOs who, with the benefit of dual class stock ownership structures, retain significant voting power even after the IPO. As of the April, 2017 Twilio proxy, Jeff retained 20.3% voting power.

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Compared to the functional heads on their teams, the typical SV150 CEO:

Is more likely to be a man

Only 4% of SV150 CEOs are women, with only one qualifying as that rarest of unicorns, the woman Founder-CEO: Lynn Jurich of Sunrun (SV#90). Only Heads of Engineering were as unlikely to be a woman.

Is more likely to be a Baby Boomer

The average age of CEOs is 53, which was higher than the average of any of the functional heads profiled. In fact, more than half (54%) of the ranks of SV150 CEOs qualify as Baby Boomers (born before 1965).

Currently the youngest CEOs in the SV150 are: Aaron Levie of Box (SV#95) born in 1985; Mark Zuckerberg of Facebook (SV#9) born in 1984; and Has-sane El-Khoury of Cypress Semiconductor (SV#45) born in 1980.

Two currently-serving CEOs share the spot as being oldest: Jerry Rawls of Finisar (SV#52) and Philippe Courtot of Qualys (SV#135), who were both 72 as of the filing of their 2017 proxy.

Is more likely to be from outside the US in origin

30% of CEOs are from outside the US. Only the Heads of Engineering have a higher rate of foreign origin, at 39%.

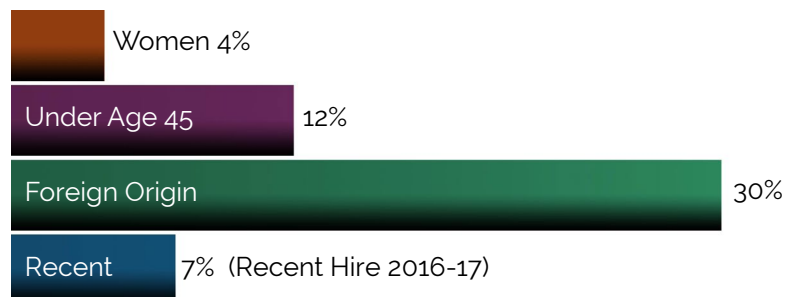
Among the 44 CEOs whose foreign origin could be confirmed, there was a two-way tie for top country of origin: India and Taiwan.

Is more likely to have a STEM degree

57% of known CEO undergraduate majors were STEM, and 57% of known graduate degrees were STEM. The most popular undergraduate major for CEOs was Electrical Engineering, with 31 of 101 known undergraduate majors in this field.

Only Heads of Engineering, were more likely to have a STEM degree. The functional head with the next highest rate of STEM education was Marketing, with 40% of known degrees in a STEM field.

CEOs—Diversity Stats



CEO Demographic Profile continued...



Percent of MBAs Awarded by Stanford or Harvard

CEOs—39%

Marketing—29%

Sales—21%

CFOs—13%

Engineering—13%

HR—6%

Is more likely to have an MBA

Only CFOs were more likely to have an MBA, with 48% of CFOs having an MBA versus 23% of CEOs. CEOs who had MBAs, however, were more likely to have earned an elite MBA from either the Stanford Graduate School of Business (7 CEOs) or the Harvard Business School (6 CEOs), than any of the other functional heads profiled.

The MBA is least popular with CEOs who are also founders, (9% of founder-CEOs had earned an MBA).

The low representation of MBAs in the SV150 is markedly different from the Fortune 100, where according to U.S. News & World Report, the top graduate degree is the MBA, with 39% of CEOs having earned one⁶.

Has the longest tenure by far, especially if a founder

SV150 CEOs have an average tenure that is multiples that of their functional heads. Founder-CEOs have an average tenure of 14 years, while non-founders have an average tenure of six years.

Were the least likely SV150 leader to be new to his or her role in 2016-17

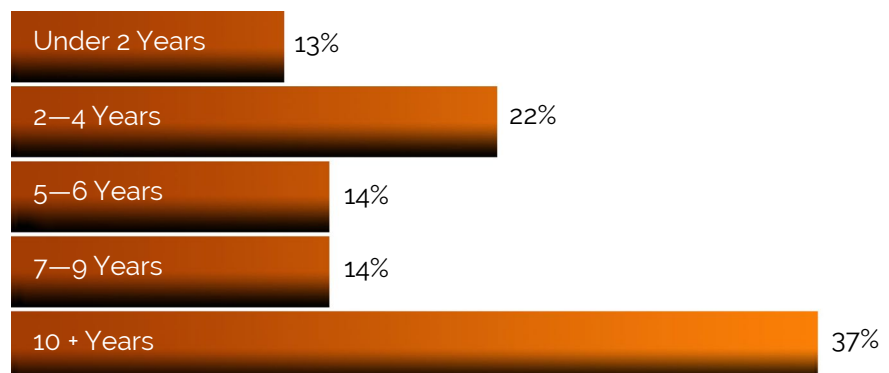
Only 20 SV150 CEOs have been appointed in 2016-17 to-date. This is far lower than the ratios for any of their functional heads.

Receives more than 2X the median compensation reported for the most highly-paid functional heads (those whose compensation is listed in the proxies)

CEOs enjoyed a median 2016 compensation of \$5.1 million, or more than double that of the function with the second highest median 2016 compensation, which was CFOs with \$2.1 million.



CEOs by Years of Tenure



CFO Demographic Profile



Ruth Porat

CFO, Alphabet/Google—SV#2

Ruth Porat, the CFO of Google and its parent company Alphabet, is widely credited with bringing financial discipline to Alphabet. When Ruth was told her nickname at Google is 'Ruth Vader'—thanks to her relentless focus on the bottom line—her response was, "That's fantastic!"

Prior to joining Alphabet in 2015, Ruth spent 28 years at Morgan Stanley. As CFO, she helped guide the company through the 2008 financial crisis.

Ruth received an MBA from the Wharton School, an MSc from the London School of Economics, and a BA from Stanford University. She is ranked #10 on Fortune's 2017 list of most powerful women.

CFOs of the SV150 occupy an increasingly critical role in the C-Suite. No longer the 'bean counters' of earlier generations, today's CFOs work closely with both the CEO and the Board of Directors in building the business. With expertise in M&A, strategy development, and risk management, an effective CFO makes a big difference to the success of the company and in winning the confidence of investors.

The Typical SV150 CFO:

Is a man

87% of CFOs in the SV150 were men. However, in the Top 50 companies of the SV150, 20% were women, reflecting a greater likelihood of finding a female CFO at a larger company.

Is age 52, on average

The ranks of SV150 CFOs are filled with Baby Boomers, with 42% born before 1965.

The youngest is Dylan Smith, age 31, CFO and Co-Founder at Box.

Is the functional head most likely to be US in origin

18% of CFOs were from outside the US, which is the lowest percentage in our five functions, and equal to the ratios for HR and Sales. The top foreign country of origin for SV150 CFOs is India, with six CFOs.

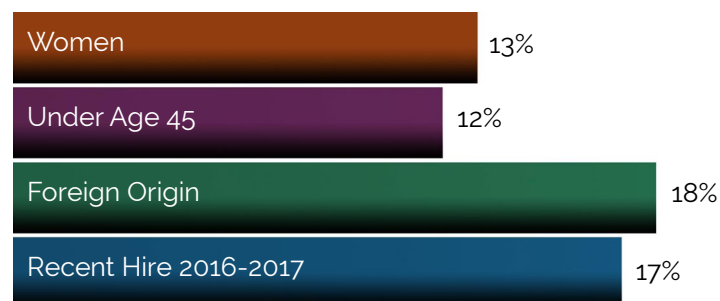
Is not likely to have a STEM degree

Only 17% of CFOs had a degree in a STEM field. More commonly their degrees are in business and finance.

Is highly likely to have an MBA

48% of CFOs have an MBA, which was the highest of the five functions, reflecting the alignment of finance management with general management skills.

CFOs—Diversity Stats



CFO Demographic Profile continued...

Average CFO Tenure

Semiconductor—5.2 years

Health, Medical, Biotech—4.4 years

Enterprise IT—4.3 years

Networking & Telecom—3.3 years

Clean Tech—3.2 years

Consumer IT—3.0 years

Web-centric/Social Media—2.5 yrs

Has been in position an average of 4.0 Years

The tenure of CFOs in their current role is fairly low at an average of four years, with a median of three years. 10% of CFOs have been in their role 10 or more years, with the semiconductor sector having the highest average CFO tenure. SV150 companies have been on a CFO hiring spree of late, with 27% of CFOs newly appointed to their role in 2016-2017.

Is more often hired into their current role from outside their current company than promoted

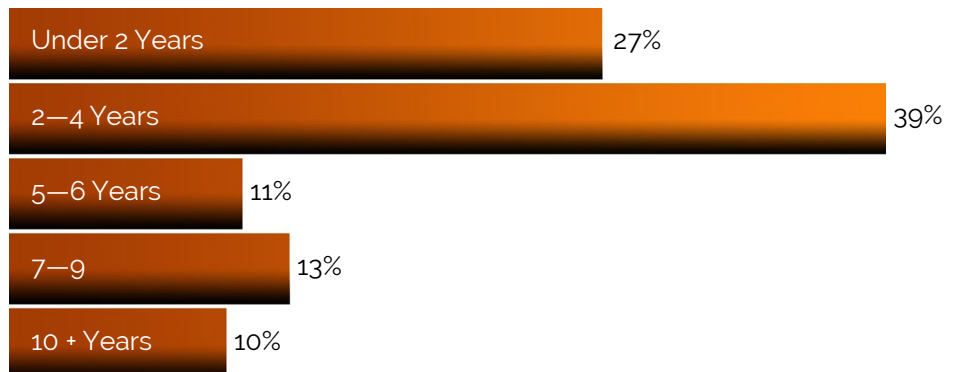
Only 40% were promoted versus being hired in from the outside.

Has high compensation but low voting power

CFOs enjoyed a median 2016 compensation of \$2.1 million, and an average compensation of \$3.9 million, the third-highest average after CEOs and Heads of Engineering. Their voting power was negligible, however, with only 10 having any listed voting power (must be listed above 1%).



CFOs by Years of Tenure



Heads of Engineering Profile



Rajiv Mirani

SVP Engineering, Nutanix—SV#80

Rajiv Mirani, age 47, is SVP Engineering at Nutanix, a cloud computing software company—one of only two 2016 IPOs which made it onto the SV150 roster.

Rajiv joined Nutanix in 2013, after an eight-year career at Citrix in Engineering. Prior to Citrix, Rajiv was a Co-Founder and Vice President of Engineering at Teros, which was acquired by Citrix in 2005.

Rajiv holds a PhD from Yale University and a BTech from the Indian Institute of Technology, Delhi.

Heads of Engineering in the SV150 work closest to the heart of the business—in the technical core of the C-Suite. Very often you will find a founder in this role, and in younger organizations the CEO may have occupied this position at some point in the recent past.

The Typical Head of Engineering:

Is a man

Only 4% of heads of engineering in the SV150 were women, making this one of the most difficult leadership roles for women to achieve (currently no less difficult than becoming CEO).

Is age 52, on average⁷

The ranks of the Heads of Engineering are filled with Baby Boomers, with 41% born before 1965.

Among the youngest is Eric Friedman, age 39, Chief Technology Officer and Co-Founder at Fitbit.

Is least likely to be US in origin

39% of Heads of Engineering were from outside the US, which is the highest percentage in the five functions. The top foreign countries of origin for Heads of Engineering are: India, the UK, Israel, and China, making this the most diverse of the five business functions along the dimension of national origin.

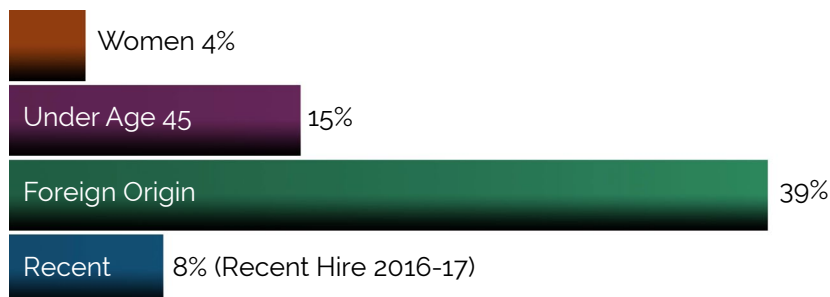
Has a degree in EE or Computer Science

50% of heads of engineering had a degree in at least one of these fields.

Is almost as likely to earn an MBA as a PhD

Not surprisingly, 17% have earned a PhD. What may be a surprise is 13% have an MBA, indicating the ability to manage engineering as a business function is also a prized skill.

Heads of Engineering—Diversity Stats



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Heads of Engineering Profile continued...



Most Commonly Attended Undergraduate Institutions

Stanford—7 degrees

UC Berkeley—6 degrees

MIT—3 degrees

University of Illinois at Urbana-Champaign—3 degrees

Indian Institute of Technology Bombay—3 degrees

Is the functional head most likely to also be a company founder

8% of the Heads of Engineering were also named a company founder in their bio.

Has been in their position an average of 5 years

The Heads of Engineering had relatively high longevity in their current role, with an average tenure of 4.9 years, and median tenure of 3 years. This role has the lowest recent turnover rate of the five functions, with 26% new to their role in 2016-2017.

Was promoted into their current role from within their current company

66% of non-founder Heads of Engineering were promoted versus being hired in from the outside. Their median tenure at their SV150 company was eight years. Not surprisingly, only 8% were newly hired to their company in 2016-2017.

Is somewhat likely to be a Named Executive Officer

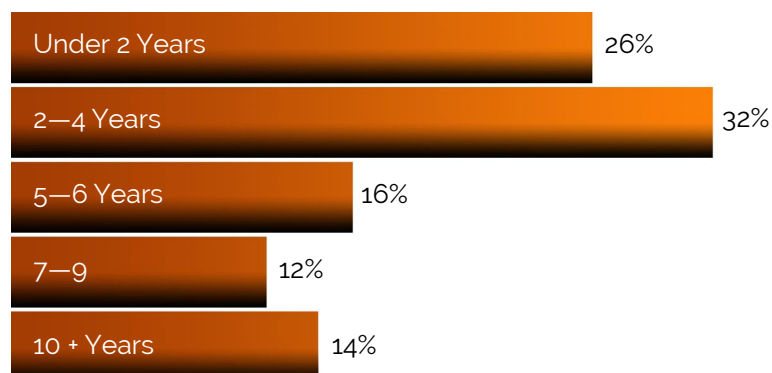
29% were listed in the last proxy as a Named Executive Officer (NEO).

Has high compensation but low voting power

NEO Heads of Engineering enjoyed a median 2016 compensation of \$2.0 million, and an average compensation of \$4.1 million, the second highest average after CEOs. Their voting power was negligible, however, with only nine have any listed voting power (must be listed above 1%).



Heads of Engineering by Years of Tenure



Heads of Sales Profile



Chano Fernandez

**EVP Global Field Operations,
Workday**—SV#49

Chano Fernandez was educated in Spain, where he earned a Bachelors in Physics from the University of Salamanca, and his MBA from the Instituto de Empresa in Madrid.

He is currently Workday's EVP of Global Field Operations, responsible for all sales, pre-sales, and sales operations across the globe. Previously, Chano was President of EMEA and APJ at Workday.

Heads of Sales in the SV150 are in the most 'measurable' of C-Suite roles. When effective, they deliver the growth needed for company success, and they do not last long in their role without business results. The best Heads of Sales combine dedication to short-term results with consistent long-term building of critical relationships inside and outside the organization.

The Typical SV150 Head of Sales:

Is a man

90% of Heads of Sales in the SV150 were men.

Is age 51, on average⁷

The ranks of the Heads of Sales is still filled with Baby Boomers, with 39% born before 1965.

Among the youngest are Chris Akhavan, Chief Revenue Officer at Glu Mobile (SV#134), age 34; and Puneet Arora, SVP of Global Sales at 8x8 (SV#124), age 42.

Is the functional head most likely to be US in origin

18% of Heads of Sales were from outside the US, which along with CFOs is the lowest percentage in the five functions. The top foreign country of origin for Heads of Sales is the United Kingdom, with four Heads of Sales hailing from there.

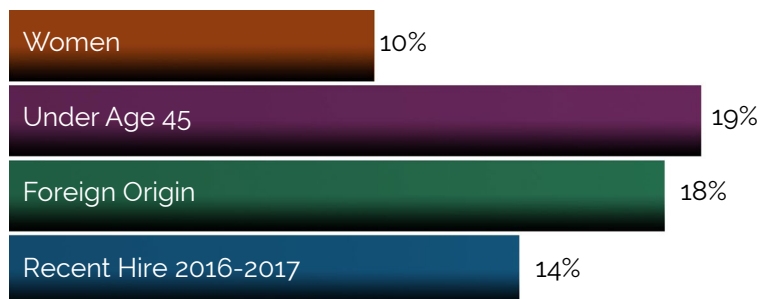
Often has a STEM degree

An impressive 32% have a STEM degree, often in electrical engineering.

Often has an MBA

22% of the heads of sales have an MBA, which was among the highest rates of the five functions, indicating the alignment of sales management with general management skills.

Heads of Sales—Diversity Stats



Heads of Sales Profile continued...

Frequency of Combined Sales & Marketing Leadership by Sector

Health, Medical, Biotech—46%

Semiconductor—17%

Enterprise IT—13%

Consumer IT—13%

Web-centric/Social Media—11%

Networking & Telcom—8%

Clean Tech—0%

Is sometimes also the Head of Marketing

Many Sales leaders incorporate some or all aspects of marketing into their role.

We determined 16% of top sales leaders were also the most senior executive in charge of marketing. Most of these executives have incorporated the word marketing in their title, typically (but not always) in the form 'EVP Sales & Marketing.' This was most likely to happen among companies ranked 51-100 (21% of these companies combined these roles). See the sidebar for the frequency of combined sales & marketing leadership by sector.

Has been in position an average of 3.2 Years

The tenure of the Head of Sales averaged 3.2 years, with a median tenure of only 2 years. This role has experienced more recent turnover than any other of the five functions, with 38% new to their role in 2016-2017.

Is often promoted into their current role from within their current company

Over half (56%) were promoted versus being hired in from the outside.

14% were new to their company in 2016/2017.

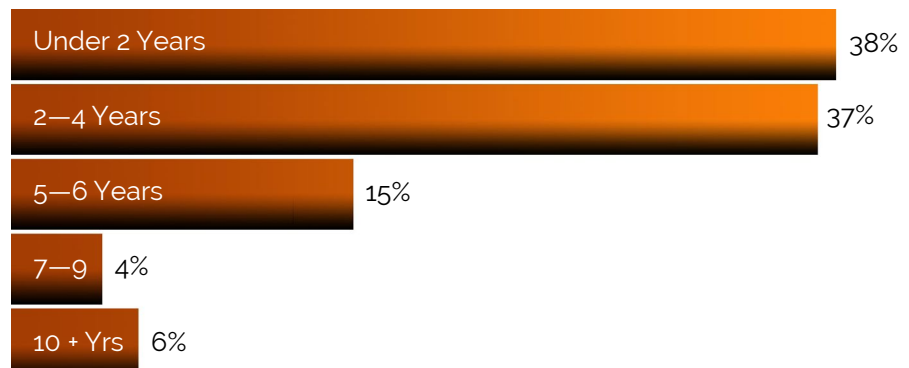
Is one of the most likely functional heads to be listed in the proxy as Named Executive Officer

Frequently listed as an NEO (34%).

Has high compensation but low voting power

Heads of Sales enjoyed a median 2016 compensation of \$1.6 million, and an average compensation of \$3.7 million, the fourth-highest average after CEOs, Heads of Engineering, and CFOs. Their voting power was negligible, however, with none having any listed voting power (must be listed above 1%).

Heads of Sales by Years of Tenure



Heads of Marketing Profile



Robin Matlock

Chief Marketing Officer, VMware
SV#16

Robin's scope of responsibility as CMO of VMware includes corporate marketing, partner, segment and field marketing. She joined VMware in 2009 from a marketing and business development role at Imperva (SV#118), and prior roles at McAfee, Entercept, and Symantec (SV#29) in business development and product management.

Robin learned at an early age that success depends on differentiation. She won a seat on the student council even though she was new to her school, because she performed a skit to stand out from the crowd. Her lesson learned: be courageous and do things differently.

Robin earned a BA in Economics and Music at Rice University.

Heads of Marketing in the SV150 contend with one of the most rapidly evolving roles in the C-Suite. No longer focused on 'only' advertising and promotion, today's tech marketer possesses skills in e-commerce, channel management, and data analytics. These leaders must have great business expertise and the ability to learn quickly.

The Typical Head of Marketing:

Is a man

80% of Heads of Marketing in the SV150 were men. Among the three functional leadership roles with a primary orientation towards products (engineering, sales and marketing), marketing was the most likely to be headed up by a woman.

Is age 49, on average⁷

Only a quarter of Heads of Marketing are Baby Boomers, with 25% born before 1965.

Among the youngest are Christine Cefalo, Chief Marketing Officer at Workday (SV#49), age 39; and Leslie Berland, Chief Marketing Officer at Twitter (SV#35), also age 39. Leslie has also assumed responsibility for Twitter's HR since August 2017.

Is the functional head most likely to be US in origin

28% of Heads of Marketing were from outside the US, which is the second-highest rate of the five functions after Engineering. The top foreign countries of origin for Heads of Marketing are the United Kingdom and Canada.

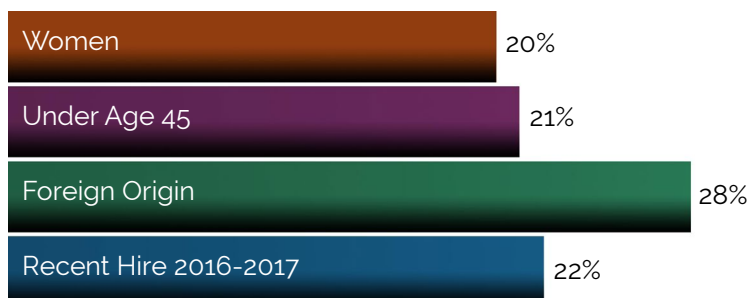
Is among the most likely leaders to have a STEM degree

An impressive 40% have a STEM degree, often in electrical engineering.

Often has an MBA

23% of the Heads of Marketing have an MBA, which was among the highest rates of the five functions, indicating the alignment of marketing management with general management skills.

Heads of Marketing—Diversity Stats



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Heads of Marketing Profile continued...

Heads of Marketing Average Tenure by Sector

Semiconductor—5.2 years

Networking & Telcom—3.8 years

Enterprise IT—3.3 years

Web-centric/Social Media—3.2 yrs

Consumer IT—2.5 years

Health, Medical, Biotech—2.4 years

Clean Tech—2.0 years

Has been in their position an average of 3.5 Years

The tenure of the Heads of Marketing averaged 3.5 years, with a median tenure of 2.5 years. This role has experienced high recent turnover, with 33% new to their role in 2016-2017.

Is usually hired into their current role from outside their current company

Well over half (63%) were hired in from the outside; 22% were new to their company in 2016-2017.

Is most likely to hold the title of Chief Marketing Officer

The most frequently used title in the SV150 was Chief Marketing Officer (CMO), with 47% of top marketers using this title. Popular in all industry sectors, the CMO title was most frequently used among Enterprise IT and Networking/Telecom companies, with 54% of top marketers using the title in these sectors.

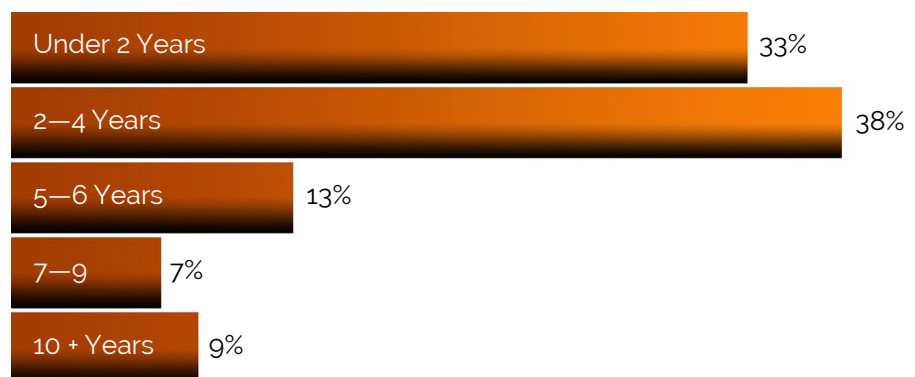
Is among the least likely functional heads to be listed in the proxy as a Named Executive Officer

Only 13% were listed as a Named Executive Officer (NEO).

Has high compensation but low voting power

NEO Heads of Marketing enjoyed a median 2016 compensation of \$1.8 million, and an average compensation of \$2.5 million. Their voting power was negligible, however, with none having any listed voting power (must be listed above 1%).

Heads of Marketing by Years of Tenure



Heads of HR Profile



Cindy Robbins

President & Chief People Officer, Salesforce.com—SV#15

Cindy Robbins, age 44, has helped lead Salesforce.com to its ranking as #8 on the Fortune listing of 100 Best Companies to Work For 2017. As her former title suggests, she has been charged with fostering 'employee success' for a workforce of over 24,000 employees (she was titled EVP of Global Employee Success until August 16, 2017).

As head of Human Resources, Cindy has spearheaded a ground-breaking gender-pay initiative which resulted in 6% of Salesforce.com's employees (both men and women) getting raises. In concert with CEO Marc Benioff, Cindy has helped differentiate Salesforce.com among the SV150 as a company committed to workforce diversity and equality.

Heads of HR in the SV150 have increasing importance in the C-Suite. Once engaged in a largely administrative role, today's HR exec is a strategic advisor to the CEO on all talent issues. Challenges around executive compensation, acquisition integration, conflict management and team building, all land on the desk of the Head of HR. Perhaps no other position in the C-Suite is changing as rapidly in response to the upside potential of this role.

The Typical Head of Human Resources:

Is a woman

73% of the Heads of Human Resources in the SV150 were women, making this the only leadership role where the majority of executives were female. Human Resource leaders accounted for more than half the female functional leaders we identified in our study of the SV150.

Is age 50, on average⁷

Only a quarter of Heads of Human Resources are Baby Boomers, with 25% born before 1965.

Among the youngest are Kris Graves, CHRO at Xperi (SV#120), age 41; and Tamesa Rogers, SVP of Human Resources at Netgear (SV#55), age 43.

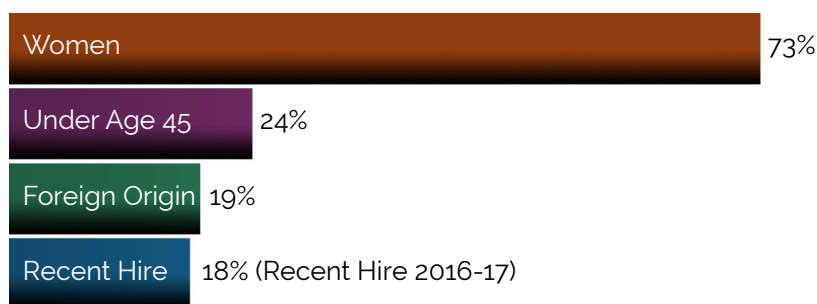
Is among the most likely to be US in origin

19% of Heads of Human Resources were from outside the US, which is the third-lowest percentage in the five functions after marketing and finance. The top foreign countries of origin for Heads of Human Resources are the United Kingdom and Canada.

Is not likely to have a STEM degree

Only 4% of Heads of Human Resources had a degree in a STEM field.

Heads of HR—Diversity Stats



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Heads of HR Profile continued...

Frequency of Titles Used by SV150 Heads of HR

SVP/EVP HR—28%
CHRO—15%
VP HR—18%
Chief People Officer—12%
HR Title Below VP—9%
HR/General Counsel Title—4%
HR/Admin Title—4%
All Other—10%

Is likely to have an MBA

23% of the Heads of Human Resources have an MBA, reflecting the alignment of human resources management with general management skills.

Is typically holding a VP title or above

Only 9% of Heads of Human Resources had a title below VP level. The use of the titles 'Chief Human Resources Officer' and 'Chief People Officer' have gained in popularity, but the traditional SVP/EVP/VP HR designations are still the primary titles found in the SV150.

Has been in position an average of 3.5 Years

The Heads of Human Resources had among the lowest average tenure in their current role at 3.5 years, with a median tenure of only 2 years. This role has experienced high recent turnover, with 35% new to their role in 2016-2017.

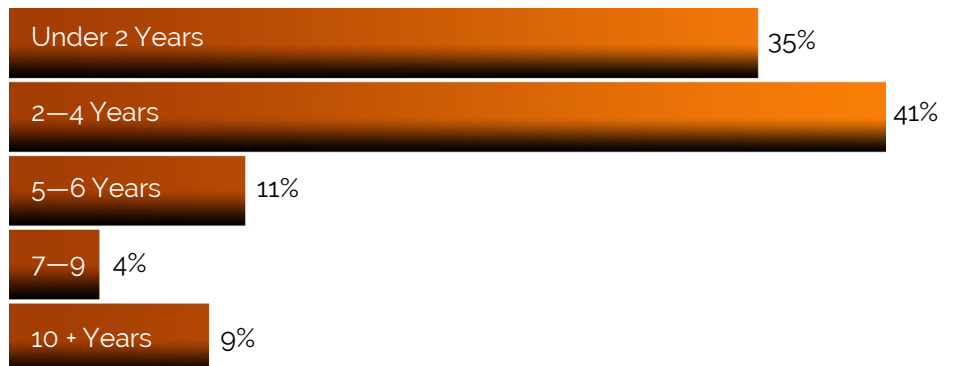
Are often hired into their current role from outside their current company

Only 45% were promoted versus being hired in from the outside.

Is the least likely functional head to be a Named Executive Officer

Only three were listed in the last proxy as a Named Executive Officer (NEO) who were not also the Chief Legal Officer of the company. The lack of compensation data for HR leaders who were not General Counsels means we are not reporting compensation statistics for leaders of this function.

Heads of HR by Years of Tenure



Summary Demographic Profile

	CFOs	Heads of Engineering	Heads of Sales	Heads of Marketing	Heads of HR	CEO-Founders	CEO Non-Founders	All CEOs
Average Age	52	52	51	49	50	51	55	53
% Baby Boomers (born before 1965)	42%	41%	39%	25%	25%	47%	58%	54%
% Under Age 45	12%	15%	19%	21%	24%	33%	4%	12%
% Women	13%	4%	10%	20%	73%	2%	5%	4%
% Foreign Origin	18%	39%	18%	28%	19%	35%	29%	30%
% STEM Educated	17%	100%	32%	40%	4%	61%	57%	59%
% with MBA	48%	13%	22%	23%	23%	9%	27%	23%
% Founders	1%	8%	0%	0%	0%	100%	0%	30%
% listed NEOs (last proxy)	88%	29%	34%	13%	5%	100%	92%	94%
% Outside Hires	57%	32%	44%	63%	55%	0%	47%	34%
% New to Role in 2016-2017	27%	26%	38%	34%	35%	0%	18%	13%
% New to Company in 2016-2017	17%	8%	14%	22%	18%	0%	10%	7%
Average Years of Tenure in Role	4.0	4.9	3.2	3.5	3.5	14.0	6.0	8.3
Median Years of Tenure in Role	3.0	3.0	2.0	2.5	2.0	13.0	5.0	7.0
Number with >1% Voting Power	11	9	none	none	none	39	39	78
Avg. 2016 NEO Compensation \$M	3.9	4.1	3.7	2.5	NA	3.8	8.1	6.7
Median 2016 NEO Compensation \$M	2.1	2.0	1.6	1.8	NA	2.2	6.0	5.1

Please see footnote 8 for a discussion of the methodology used in the table above.

Compensation & Voting Power



Highest Paid NEO

Sundar Pichai

CEO, Google—(part of Alphabet SV#2)

\$199.7 M in 2016, \$100.6 M in 2015

What is a NEO?

A Named Executive Officer (NEO) is one of three to five top executives of a public company identified in the annual proxy statement, for whom the last three year's of compensation data is broken out in detail.

The CEO and CFO are always considered NEOs. Additional NEOs are chosen from the functional and business unit heads with both the highest compensation and the most significant 'policy-making' responsibility. 46% of the top execs profiled demographically in this report were also NEOs. The NEO overlap of each functional group studied is provided in the table on page [20](#).

How much are SV150 leaders paid? Not surprisingly, the answer varies depending on the company, the role, and the timing.

In order to evaluate leadership compensation, we created a dataset of all the highest-paid leaders (called Named Executive Officers, or NEOs) currently employed at SV150 companies included in the latest proxy filings. Using the published proxy tables on executive compensation at these companies, we then calculated the median and average compensation values for these executives.

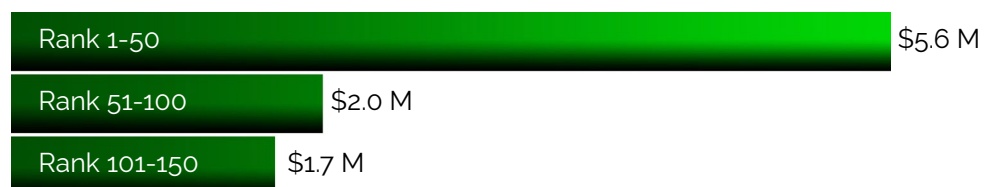
The SV150 NEO:

Earns a high annual income

In the SV150, the average 2016 NEO compensation was \$5 million and the median was \$2.5 million. This is inclusive of cash salary and non-equity incentive plan compensation (proxy term for a performance bonus), as well as stock and options. The value of stock and options is not necessarily the realized cash value to the individual, but is a single point-in-time valuation⁹.

Earns higher compensation at larger companies than at smaller companies

The compensation multiple, however, is significantly less than the revenue multiples involved. The graph below shows 2016 median NEO compensation by company revenue ranking.



Experienced 11% growth in median compensation value over 2014-2016

For the NEOs in the 2017 proxies who were still actively employed, who received compensation for all three years, compensation value grew from a median of \$2.29 million in 2014 to \$2.54 million in 2016.

Earns the greatest nominal compensation value from stock

Of the \$2.9 billion in NEO compensation reported for active employees on the latest proxies for 2016, 64% was in stock awards.

Earns a fraction of what SV150 CEOs earn

The median CEO 2016 earnings of \$5.1 million is 2.3X the median earnings of all other NEOs excluding CEOs, which was \$2.2 million.

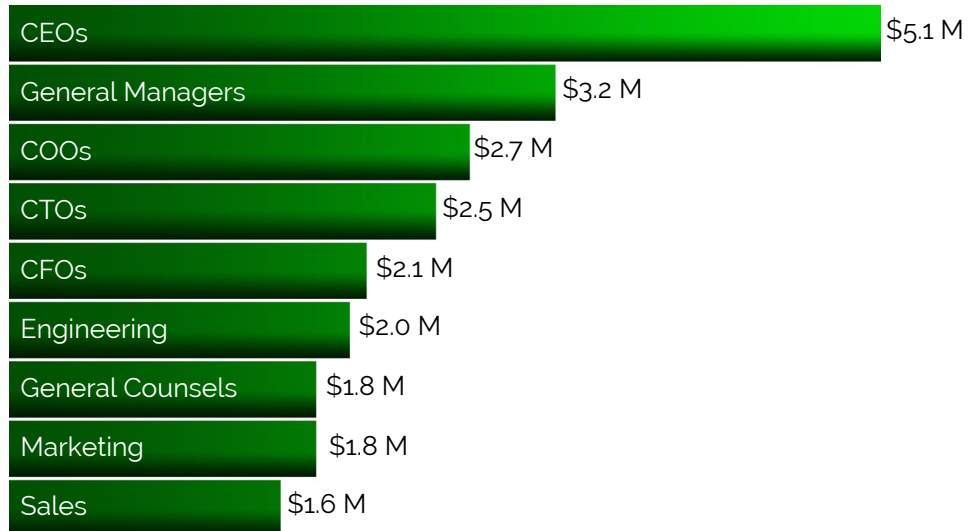
Compensation & Voting Power continued...

Top 10 NEO Earners In 2016

- 1 Sundar Pichai—\$199.7 million**
CEO, Google (sub of Alphabet)
SV#2
- 2 Larry Ellison—\$41.5 million**
CTO & Chairman of the Board
Oracle—SV#7
- 3 Mark Hurd—\$41.1 million**
Co-CEO, Oracle—SV#7
- 4 Safra Catz—\$40.9 million**
Co-CEO, Oracle—SV#7
- 5 Ruth Porat—\$39.1 million**
CFO, Alphabet—SV#2
- 6 Mark Anderson—\$38.0 million**
President, Palo Alto Networks
SV#50
- 7 Thomas Kurian—\$35.7 million**
President, Product Development,
Oracle—SV#7
- 8 Nir Zuk—\$32.2 million**
CTO & Founder, Palo Alto Networks
SV#50
- 9 Dion Weisler—\$28.7 million**
CEO, HP—SV#5
- 10 Sheryl Sandberg—\$24.5 million**
COO, Facebook—SV#9

Source: 2017 proxy compensation tables.

Median NEO Compensation by Role



Ownership and Voting Power

The adjunct to compensation is ownership and voting power. As you can see in the graph below, the management teams of the SV150 enjoy considerably more voting power than their S&P100 counterparts¹⁰. Voting power differs from ownership when an individual controls the voting rights of shares not owned outright, usually in the case of trusts, non-management family members, and cooperative voting agreements with other executives. Voting power will also differ from ownership in companies utilizing a dual class stock ownership structure (DCSO).

In the SV150, just over half of CEOs have enough voting power (over 1%) to be reported in the proxy. The average voting power of all SV150 CEOs (assuming zero voting power for the CEOs whose voting power is under the reporting threshold) is 6%. The average of all those CEOs with a reported voting power is 11%.

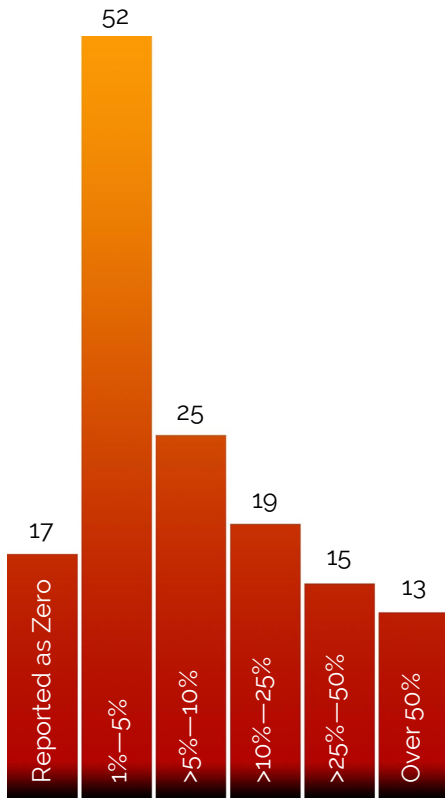
Reported voting power is rarely found among non-CEO executives. Only 23 NEOs who were not CEOs had reported voting power, and those were mostly CTOs and CFOs. The highest voting power among the non-CEO executive leaders was reported for Eric Friedman, CTO of Fitbit with 30.2%; and Sergey Brin, Co-Founder at Alphabet, with 25.9%.

Average Voting Power of All Executives & Directors as a Group



Compensation & Voting Power continued...

SV150 Companies by Voting Power of the Executive Officers & Directors



Source: DEF 14A Tables for 141 SV150 companies (independent at the time of the proxy filing).

2017 Silicon Valley IPOs with Dual Class Stock Structure

Okta—NASDAQ OKTA
Mulesoft—NYSE MULE
Roku—NASDAQ ROKU

One factor favoring greater ownership and voting power in the management of the SV150 is the relative youth of many of the companies involved, with founders still actively involved in many management teams. Another factor contributing to higher management voting power is the use of 'dual class stock ownership' structures (DCSO). New tech IPOs frequently utilize the DCSO structure, although the number of DCSO companies in the SV150 was flat 2015-2016 due to acquisitions.

The table below lists the current companies in the SV150 utilizing a dual class stock structure, along with the combined voting power of the executive officers and directors as a group as reported in their latest proxy.

Voting Power of All Executive Officers & Directors as a Group at SV150 DCSO Companies

Companies by SV150 Rank	Voting Power
Alphabet—SV#2	58.2%
Facebook—SV#9	60.4%
Fitbit—SV#42	75.7%
Bio-Rad Laboratories—SV#43	94.4%
Square—SV#47	67.27%
Workday—SV#49	86.0%
GoPro—SV#58	78.43%
Dolby Laboratories—SV#62	84.5%
Zynga—SV#73	70.9%
Pure Storage—SV#75	66.5%
Yelp—SV#77	10.1%
Nutanix—SV#80—from 2016 prospectus	39.2%
Veeva Systems—SV#83	52.8%
Box—SV#95	38.2%
RingCentral—SV#100	43.6%
Twilio—SV#138	24.6%

Women Leaders In the SV150

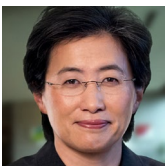
Six Women CEOs in the SV150



Meg Whitman
HPE—SV#4



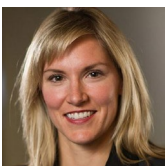
Safra Catz
Oracle—SV#7



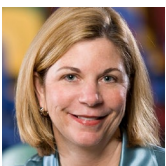
Lisa Su
AMD—SV#27



Jayshree Ullal
Arista—SV#60

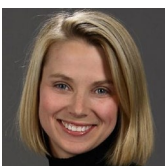


Lynn Jurich
Sunrun—SV#90

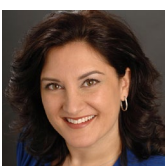


Kimberly Popovits
Genomic Health—
SV#108

"Acquired Out" Women CEOs



Marissa Meyer
Yahoo—SV#23



Elisa Steele
Jive—SV#133

2017 has seen unprecedented focus on the subject of women working in technology. In our previous SV150 reports, we noted the relatively low levels of women on SV150 Boards (12% in 2015), and the small number of women CEOs. This year we extend our focus to women at the top levels of leadership and compensation in SV150 companies.

Women leaders of the SV150:

Make up less than 1 in 5 executives

Women made up 17% of executives shown on SV150 websites and listed among the Named Executive Officers in the proxies. Of 142 independent companies as of our study date, 17 had no women executives on their website or among their Named Executive Officers. When we removed female HR heads and Chief Legal Officers (two roles with significant female representation), the number of companies with no women executives rose to 61, meaning 42% of the SV150 had no female running a business unit or heading up a business function outside HR/legal.

Are more likely to be found at Top 50 Companies

Not surprisingly, the companies where women leaders are most likely to be found are the Top 50: their leadership teams are on average larger, and 19% of those leaders are women, as compared to smaller companies where 16% of leaders are women.

Are most likely to be a Head of HR or a General Counsel

The two functions where women are most likely to fill the role are Head of HR and General Counsel/head of legal. The functions where women are least likely to be found are CEO and Head of Engineering.

Are not generally founders

There were only 2 founders named among the women leaders versus 81 male founders. The two women founders were: Lynn Jurich, CEO of Sunrun (SV#90); and Sara Liang of Super Micro Computer (SV#40), SVP of Operations, Treasurer, and Director.

Are not generally Named Executive Officers (NEOs)

Only 10% of the leaders listed in the proxies as NEOs were women. The most likely role filled by women NEOs was that of General Counsel; in fact, 25% of female NEOs were listed as General Counsels/heads of legal.

The majority (64%) of SV150 companies had no women NEOs. One-third had only one woman NEO. Only five companies had multiple women listed as NEOs: HP (SV#5), with three women NEOs; and NVidia (SV#18), Square (SV#47), Arista (SV#60), and Accrux (SV#102) all with two women NEOs.

Women Leaders In the SV150 continued...



Angela Ahrendts

SVP Retail, Apple—SV#1

Angela Ahrendts, age 57, is the 4th most highly compensated woman in the ranks of SV150 Named Executive Officers (see the table on this page).

She oversees the retail and online sales of Apple products, estimated to be \$50 billion in revenue, and is ranked # 13 on Fortune's 2017 list of most powerful women.

Born and raised in Indiana, Angela earned a degree in Merchandising and Marketing from Ball State, and began her career in fashion, eventually becoming the CEO of Burberry from 2006-2014. She joined Apple in the Spring of 2014 and is responsible for strategy, real estate & development, and operations of Apple's physical and online stores.

Had slightly higher average 2016 compensation than men

While the median 2016 compensation was the same for both women and men NEOs (\$2.5 million), average compensation was much higher for women NEOs. The women NEOs in our set had average 2016 compensation of \$5.7M versus \$4.9M for men. This was heavily skewed by five highly-compensated women listed in the below:

Top Women Ranked by 2016 NEO Compensation

Name	Company	Title	2016 Comp	Overall Comp Rank Including Men
1 Safra Catz	Oracle—SV#7	Co--CEO	\$40.9 M	4
2 Ruth Porat	Alphabet—SV#2	CFO	\$39.1 M	5
3 Sheryl Sandberg	Facebook—SV#9	COO	\$24.5 M	10
4 Angela Ahrendts	Apple—SV#1	SVP Retail	\$23 M	15
5 Meg Whitman	HPE—SV#4	CEO	\$17 M	27

Are not likely to have reportable voting power

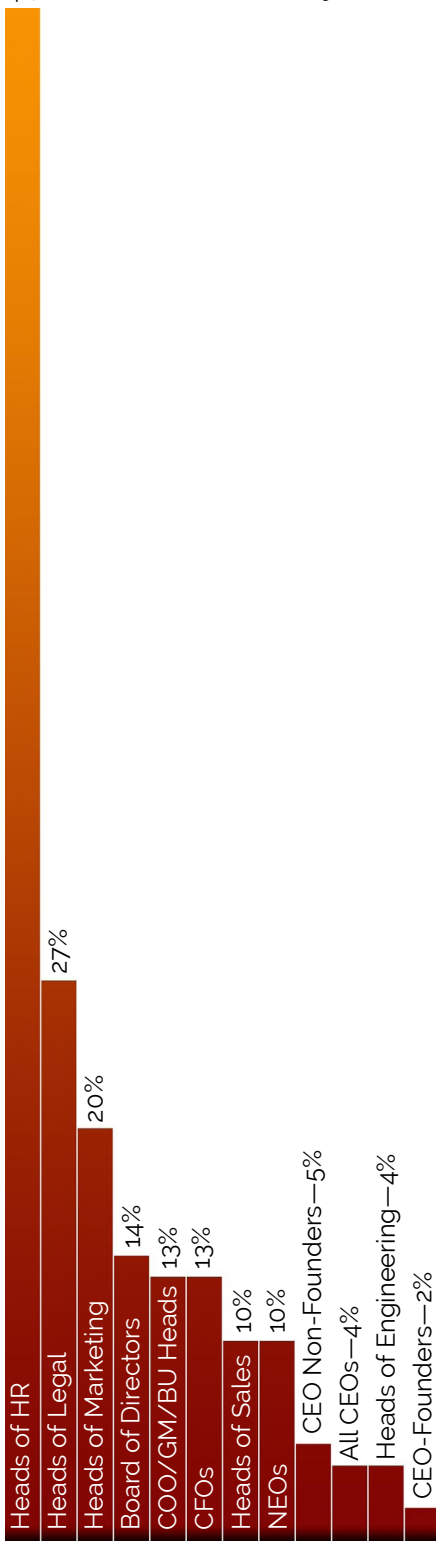
Only seven women management team executives (2% of all women) had reportable voting power of over 1% in the 2017 proxies. These women are:

- **Sara Liang**—**17.9%** voting power
SVP of Operations, Treasurer, Director, and Co-Founder at Super Micro Computer—SV#40
- **Jayshree Ullal**—**7.08%** voting power
CEO at Arista—SV#60
- **Lynn Jurich**—**3.46%** voting power
CEO and Co-Founder at Sunrun—SV#90
- **Sara Friar**—**2.26%** voting power
CFO at Square—SV#47
- **Kira Makagon**—**2.2%** voting power
EVP of Innovation at RingCentral—SV#100
- **Kimberly Popovits**—**2.4%** voting power
CEO at Genomic Health—SV#108
- **Alyssa Henry**—**1.19%** voting power
Seller Lead at Square—SV#47

By contrast, 118 male management team executives (9% of all men) had reportable voting power of over 1%.

SV150 Leadership Diversity

Percent Women by Role



A lot is being written about diversity in the tech community these days, and not surprisingly, tech has plenty of critics who point out low numbers of women in tech, and low numbers of non-Asian ethnic minorities. The data collected for this report confirms those perceptions are true.

The business case for leadership diversity rests in part on the belief that teams with diverse inputs make better decisions, and groups without tolerance for dissent fail at problem solving more often than groups where diverse points of view are fully aired and tested.

The Silicon Valley itself is the product of outsiders smashing existing business paradigms with new technologies and solutions. Every great SV150 company, from Apple to Intel to Facebook, started out with the vision of outsiders who solved problems in new ways.



While these successes have no formula, we can loosely link successful paradigm shifts to demographics such as youth and being an industry outsider. In the future, being female or being a member of an ethnic minority may be the basis in diverse life experience for developing the next great Silicon Valley paradigm shifts.

In the meantime, SV150 companies operate within a diverse society committed to equal opportunity. Supporting the success of women and ethnic minorities has significant value to society. Nevertheless, a commitment to leadership diversity is a huge multi-generational challenge, since the pool of leadership choices today does not reflect the demographics of society at large.

The demographic snapshot on this page and the next shows us where measurable features of diverse life experience exist in the SV150 today. We used the following simple measures to approximate this hard to assess quality: gender, age under 45, non-US origin, and recent hires from outside the company.

Gender

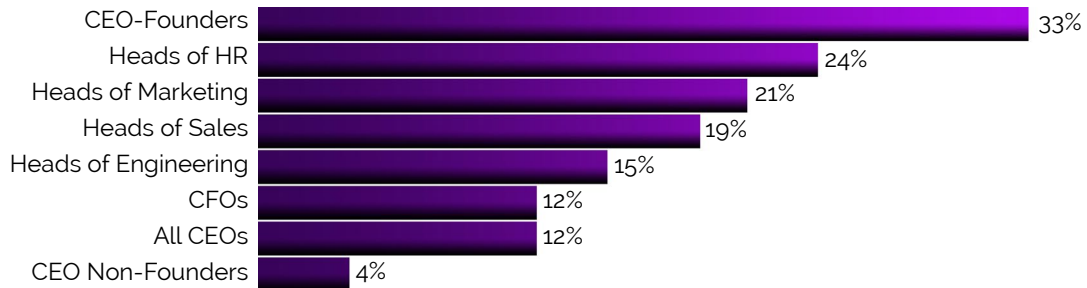
As you can see from the graph on the left, all the leadership roles profiled are highly skewed along gender lines. The closer to the CEO's office, the lower the ratio, until the most concerning stat of all—in all SV150 companies there is only ONE female founder-CEO (2% of total founder-CEOs).

SV150 Leadership Diversity continued...

Age Under 45

In technology, disruptive insight and energy is often found paired with youth. Is it any surprise, therefore, that the leading role for finding a high ratio of execs aged under 45 is Founder-CEOs. The locally high concentration of Founder-CEOs is possibly the most distinctive feature of the Silicon Valley.

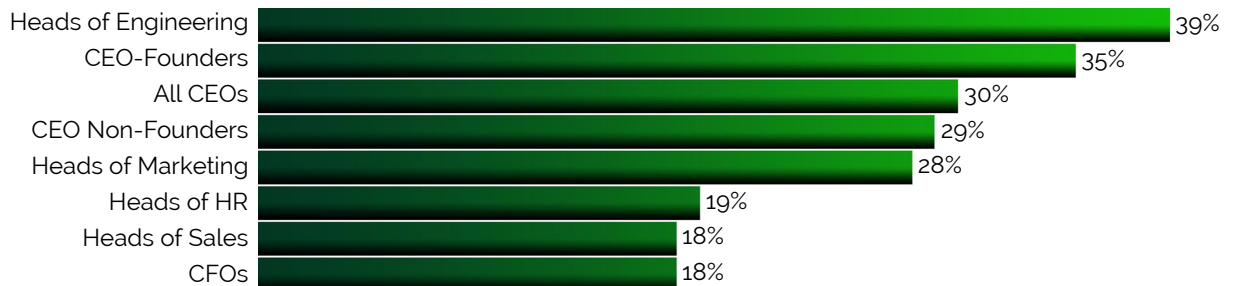
Percent of Leaders Under Age 45 by Role



Non-US Origin

Another model for technological innovation has been the foreign-born innovator, bringing their technical genius to the US for access to capital and talent. Not surprisingly, the leading roles for finding execs from outside the USA is in Engineering and among Founder-CEOs.

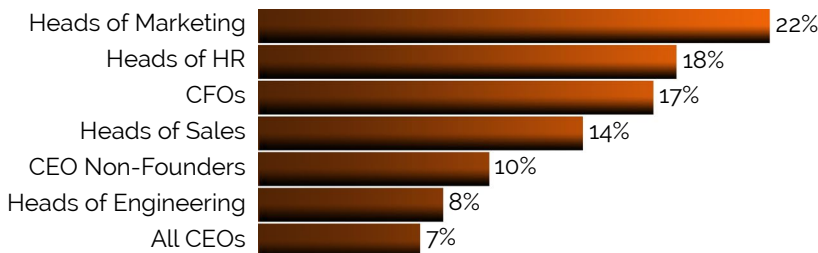
Percent of Leaders from Outside US by Role



Recent Hires from Outside the Company

'Fresh perspectives' from leaders brought in from outside the company can inject energy and creativity to decision making. The graph below shows where the SV150 is looking for those fresh perspectives: in marketing first and foremost, but also in HR, finance, and sales. Functions where recent hiring from outside is least in vogue include Engineering and the CEO's office.

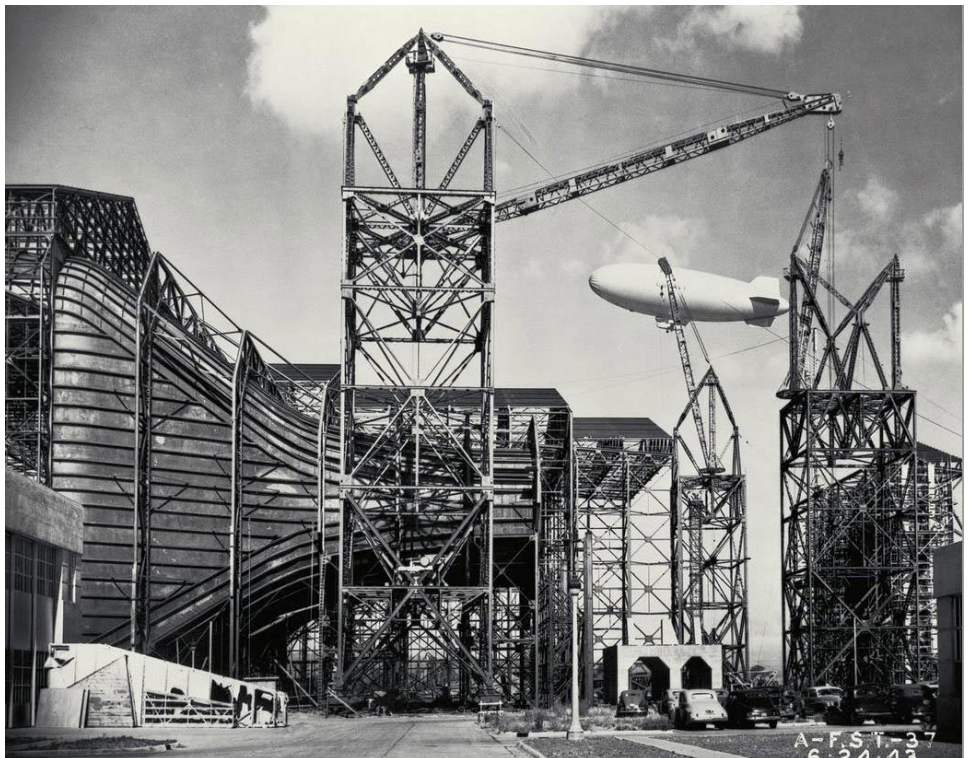
Percent of Leaders Hired Into Company 2016-2017



Concluding Thoughts

The Silicon Valley is a unique place on Earth. From its early importance in defense sector research (the image of Ames on this page is part of this history) to later innovations in semiconductor technology, the products and the people have combined to create an almost magical culture, ideal for risk taking and growth.

Like Florence under the Medici, the Silicon Valley is in a golden age, bringing together both capital and world-class talent, creating opportunities for even more innovation and growth. Around the world, this is the place where tech talent wants to be.



This June 2, 1943, photograph shows the construction of the Ames full-scale 40- by 80-foot wind tunnel, with a side view of the entrance cone and a blimp in the background. NASA Ames in Mountain View, California, is a landmark of today's Silicon Valley. Image Credit: NASA

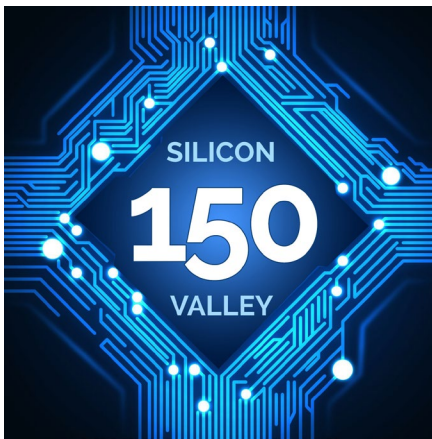
"It is not the strongest or the most intelligent who will survive, but those who can best manage change"

— Charles Darwin

The people we have profiled who lead the Silicon Valley today have come to the Silicon Valley for opportunity: for an education, a rewarding job, or access to capital and talent not available anywhere else. What they find here is compelling, but as with any golden age, there are no guarantees for the future. This report highlights just some of the trends impacting the SV150—semiconductor companies fading in importance, young companies led by founders with unprecedented levels of influence, and a continued wariness around tech IPOs even as the NASDAQ celebrates a new all-time high in October 2017. The environment for publically traded tech companies looks nothing like it did five years ago, and will no doubt continue to evolve.

Along with these trends, the leadership skills required to thrive in the Silicon Valley are changing rapidly in every functional area. New roles are created, achieve results, and then are replaced. Only those who adapt and constantly learn new skills will survive.

Appendix



Top 50

13.2 leaders per company on website

Middle 50

10.5 leaders per company on website

Bottom 50

10.6 leaders per company on website

SV150 Company Leadership Profile

We learned a lot about how the SV150 thinks about leadership from building this dataset. From our research, we calculated there is an average of 11.5 'website designated' leaders per company, taken from the versions of SV150 company websites viewed during the month of August, 2017, (not all 150 were independent as of the study period, and could not be included due to acquisition). Not surprisingly, when we grouped companies by revenue bands, the average size of the leadership team at the Top 50 ranked companies was greater than that of the smaller companies.

Using titles and bios, we grouped leaders by function and role. Our breakdown of the 'website designated' leadership population showed that functional leaders outnumbered the business unit leaders and COOs by more than 3 to 1.

For purposes of simplicity, we focused our demographic and biographic research on CEOs and the most senior functional leaders of finance, engineering, sales, marketing, and human resources only. We included just over 50% of the 'website designated' leaders in this data.

Among the leaders not profiled in this report:

Chief Operating Officers were designated at 34% of companies, and were most likely to be found at the larger companies (42% worked at a Top 50 ranked company). Likewise, General Managers/Presidents of business units were most likely to be found designated at Top 50 ranked companies (55% of them worked at a Top 50 ranked company).

Top legal executives were found across the rankings; we identified a top executive in charge of legal affairs at 112 companies, usually designated as General Counsel or Chief Legal Officer.

Footnotes

1

SV150 company leadership was defined as all executives who appeared on the company's website during research conducted in July-August, 2017, under the header for 'management' or 'leadership,' not including individuals whose sole role was to serve on the board of directors. A few websites offered a way to view execs reporting to a particular top executive in a 'drill-down' option; these leaders were not included. In the case of Alphabet, which does not list any executives on its website alphabet.com, we chose to use a listing of leadership from Bloomberg. All other SV150 companies that were independent as of the study period provided a listing of top executives on their website.

We supplemented the roster of 'website designated' leaders with all the currently employed Named Executive Officers found in the latest company proxy who were not also on the website (a small number).

If the website did not designate a leader for the functions of engineering, sales, marketing, and human resources, we used research to supplement the roster. See Footnote 3 below for further discussion of the methodology used to identify functional heads.

2

"Who Lives in the C-Suite? Organizational Structure and the Division of Labor in Top Management" Maria Guadalupe, Hongyi Li, Julie Wulf. Harvard Business Review. June 18, 2013.

3

The Silicon Valley 150 is an annual ranking done by The Mercury News of public companies in technology ranked by 2016 revenues. The geographic area included is five Bay Area counties: Alameda, Contra Costa, San Francisco, San Mateo, and Santa Clara.

Every effort was made to find a functional head in each of five functional areas for all SV150 companies. However, exceptions had to be made when 1) the company was fully acquired by our study date (8 companies); 2) the role was recently vacated and no new person in the role could be determined; and 3) the company went without anyone in that role (most frequently encountered in the health, medical & biotech sector in which the role of Engineering was sometimes not relevant). In some functional areas, when the company was organized along major business units, we ended up choosing an executive who led the function for the most significant of the business units.

The incumbent in the CEO and CFO role was always included. In rare cases, where there were two CEOs, and no CFO named, we found that one of the Co-CEOs was the former CFO and this person was included in both the CEO and CFO roster.

Sometimes a functional head chosen was someone recently promoted to a broader role, but no one was hired to fill the vacated functional role behind them (for example, a former head of sales promoted to Chief Operating Officer with no one new hired to fill the head of sales role). Depending on our reading of the situation, including how recently they were promoted, we included them in our analysis of the functional heads.

When a Chief Operating Officer was chosen as a head of one of the functions, their compensation was excluded from the computation of the average/median comp for that function, with the assumption they were being compensated for other aspects of their role besides the function in question.

All other heads were determined using research and judgment, with the following caveats in each area:

Human Resources

It was usually a simple process to identify the most senior HR executive. However, in companies where we could not find a 'VP or above' level executive in the role, we included the most senior person with an HR title we could find, even if they were at the Senior Director level. If no HR executive at any level could be identified (the function might be folded into an administrative, legal or finance area executive's responsibilities), we did not include anyone from that company in the roster of HR execs.



Footnotes continued...

Sales/Marketing

In cases where the business was organized along major business units or geographic boundaries, we tried to limit our selections to one person who it could be argued was in charge of the sales and/or marketing for the business or geography we identified as most significant, using proxy info and news articles as sources for this determination.

In some cases, the same person is in charge of both sales and marketing simultaneously. That person is included in the profiles of both functions, but in the overall analysis of people only once (for example, counts only once in looking at SV150 gender mix, average age etc.).

Engineering

We selected the executive whose role was to oversee the work of the company's engineering staff. This was not always easy to identify from titles. People overseeing engineering sometimes held the title of CTO/Head of R&D. In some cases, we included a head of technology whose role included a lot of innovating and tinkering, but who we felt had the responsibility for engineering as well.

In numerous founder-led companies, we ended up concluding that the Founder-CEO was truly the head of the function of engineering. If they had no senior executives reporting to them with a title indicating their role was engineering, we ended up not including anyone from that company in our profile of Heads of Engineering.

In the health, medical, biotech sector, if there was a Chief Scientist or Head of R&D, we included them in our analysis.

4

The Conference Board (2017). CEO Succession Practices. 2017 Edition.

5

The S&P500 rate of former CEOs acting as current Chairmen of the Board is taken from 2016 proxy filings as summarized in recruitment industry reports.

6

"Where Fortune 100 CEOs Earned MBAs" Ilana Kowarski. US New & World report. March 21, 2017

7

Ages were taken directly from the company website/proxy when available. If no age was available from these sources, Reuters and Bloomberg were consulted. As a result of these steps, 100% of CEOs and CFOs had a reported age. However, for the other four functions profiled, only 30-50% of the ages were available.

We supplemented the age data for these functions with imputed ages, using the year of graduation from a bachelor's degree program as taken from the executive's LinkedIn profile or other reported CV to impute a rough average age. The year of graduation was available for the majority of executives with missing reported ages. The average age shown in our profile includes all reported ages and imputed results for those missing a reported age. In all four functions, the average age with and without the imputed missing data were within two years of each other, and the average using imputed data was the lower of the two values.

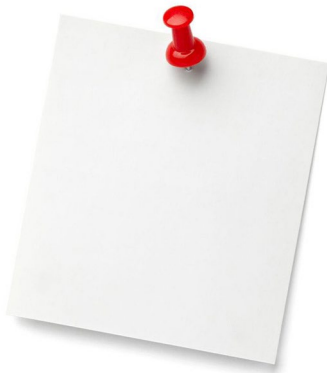
8

Every effort was made to obtain complete demographic information on each leader. However, full information was not available for all of the over 800 people included in this analysis. The following proxies were used to impute missing data. After testing the imputing methodologies in this and prior studies, the author believes the resulting averages are directionally accurate.

Average age (see footnote 7 above).

NEO Status: CEOs and CFOs are always reported as NEOs unless not in seat at the time of the last proxy publication.

STEM and MBA percentages are reported for leaders with known educations; if no educational info was reported, the leader is not included in either the numerator or the denominator of the percentage.



Footnotes continued...



Country of Origin: In our study, country of origin was considered country of birth; when country of birth could not be biographically determined, origin defaulted to country of undergraduate education, a default methodology used throughout the *Who Runs Silicon Valley* series. When actual origin data is cross-checked with this back-up methodology, it is found to be highly accurate. This methodology can skew the origin data towards countries with undergraduate offerings with international popularity, such as the United States and the United Kingdom. Since the period of undergraduate education can be assumed to be a significant milestone in one's professional development, labeling the country where the education was received as one's place of 'origin' is not entirely unwarranted where other information is not available.

9

Company proxies are required to report the cost of NEO compensation in a standardized table, making it straightforward to collect and compare these figures. The standard table dictates that compensation be shown in four main categories: Salary, Non-Equity Incentive Plan Compensation, Stock Awards, and Option Awards, although not all companies offer NEOs all components. For proxy purposes, stock and options awards are required to be valued at the grant date fair market value using FASB Accounting Standards Codification Topic 718, and depending on firm stock performance and eventual timing of monetization, would most likely have a different actual realized value to the NEO.

10

David A. Bell, *Corporate Governance Practices and Trends: 2016 Proxy Season*, Fenwick & West LLP (2016), pages 6-7.

About Mark Lonergan



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Mark is the Founder and Managing Partner of Lonergan Partners. Over his twenty-six year career in executive search, Mark has conducted over 500 senior executive assignments, working with technology clients in and out of the Silicon Valley such as: Gigamon, Brocade, ShoreTel, Xilinx, Infoblox, Inphi, Infinera, Marketo, Fortinet, Teradata, and many others.

Mark is currently Chairman of the Silicon Valley Directors Exchange, working with the Stanford Rock Center for Corporate Governance to educate corporate boards in the Silicon Valley.

Prior to founding Lonergan Partners, Mark was the Managing Partner for the Silicon Valley offices of Heidrick & Struggles. Prior to his career in executive search, Mark was VP Sales & Marketing at ADC Telecommunications, a \$2 billion public telecom equipment supplier, now part of Tyco International.

Background and Education

Mark has an MBA from the Kellogg Graduate School of Management at Northwestern University. He is also a graduate of Vanderbilt University with a degree in History.

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