We surveyed almost 1,800 IT pros to gauge their compensation, IT budgets, headcounts, organizational mood and tech priorities.
2015 IT salary survey highlights differences in pay by IT role

Our 2015 IT salaries survey reveals the average pay for IT pros in the U.S., broken down by role and region of the country, job aspirations, optimism levels, and key tech projects.

BY SUE TROY

SENIOR IT EXECUTIVES—CIOS, CTOs, executive vice presidents and directors of IT, MIS or IS—continued to top the IT professional salary charts in TechTarget’s 2015 Annual IT Salary and Careers Survey, pulling in almost twice as much on average as network managers and IT staff.

The average base salary for all U.S. respondents to the 2015 IT salary survey, no matter the role, was $100,333, and the average total compensation—base pay plus bonuses—was $110,724.

Senior IT execs made 41% and 50% more than those averages, respectively, pulling in $141,371 in base salary on average and $165,798 in total compensation. IT staff, meanwhile, made 25% less in base salary and 28% less in total compensation than the average survey
Those in the Midwest reported the lowest average salary ($93,421) and the lowest average total compensation ($102,515). Those in the Western region came in close behind the Northeast, with $104,428 in average base salary and $116,278 in average total compensation. Southern U.S. respondents reported an average of $99,460 in base salary and $109,656 in total compensation.

Survey respondents reported raises in line with 2014—5.3% of base salary in 2015 versus 5% in 2014—and 35% expect a bonus in 2016, compared with only 20% who said the same in 2014. As for respondents’ career ambitions, 41% reported that they most aspire to move up within their departments and/or companies over the next three to five years, while 14% want to move to a larger company and only 5% want to leave IT entirely—other response options were “stay in my current role,” “move to a smaller company,” and “none of the above.”

Regional differences were reflected in the survey’s results. Those in the Northeast region reported an average salary of $106,319 and an average total compensation of $117,130, while those in the Midwest reported the lowest average salary ($93,421) and the lowest average total compensation ($102,515). Those in the Western region came in close behind the Northeast, with $104,428 in average base salary and $116,278 in average total compensation. Southern U.S. respondents reported an average of $99,460 in base salary and $109,656 in total compensation.

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The mood among IT professionals appears to be more optimistic in 2015 than last. Thirty-eight percent describe their mood as optimistic,
while 39% chose “neither optimistic nor pessimistic.” In 2014’s survey, only 21% described their mood as optimistic, while 41% said they were neither optimistic nor pessimistic. And respondents see brighter days ahead: 41% said that the mood will be more optimistic in 2016 compared with 2015.

Among those who said they were pessimistic, almost half (48%) said that one of the top-two reasons was that management was ineffective, followed closely by limited career advancement (46%). Of much lesser concern to respondents were the economy—cited as a top-two concern by only 12% of respondents—and the lack of innovation opportunity (14%). In terms of measures of success, the most cited factors among respondents as a whole were “helping achieve a business goal or outcome,” cited by 52% of respondents as a top-three measure of success; “ensuring reliability of IT services,” cited by 50%; and “completing projects on time,” cited by 43%. Coming in under budget, achieving ROI on projects and purchases, and creating new...

### Salary and compensation by role

<table>
<thead>
<tr>
<th>Role</th>
<th>Average Base Salary ($)</th>
<th>Average Total Compensation ($)</th>
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</thead>
<tbody>
<tr>
<td>Senior IT executives</td>
<td>141,371</td>
<td>165,798</td>
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<td>Director of business applications</td>
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<td>Network manager or administrator</td>
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<td>79,913</td>
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<tr>
<td>IT staff</td>
<td>75,628</td>
<td>80,164</td>
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</tbody>
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SOURCE: TECHTARGET'S 2015 IT SALARY AND CAREERS SURVEY, RESPONDENT TOTAL: 1,548
business opportunities were at the bottom of the list of nine measures of success—cited as a top-three measure of success by 10%, 11% and 12% of respondents, respectively.

As you might expect, respondents’ projects of interest varied considerably by role, with senior IT execs being most concerned with IT management—50% chose this as one of the top-three areas that occupy most of their time—application development and design (24%), and security. This compares with project managers, for instance, who were more likely to be focused on business process management (31%), application development and design (29%), and IT management (28%).

Directors of business apps, meanwhile, were more likely to be focused on application management (46%), business process management (42%), and app development and design (33%).

Among the various roles held by respondents, compliance and privacy professionals were more likely to be concerned about the same technology areas as other compliance and privacy professionals: security, risk management and compliance, which were cited as top-three areas of concern by about 75% of those respondents. Technology consultants, meanwhile, were the least likely to be occupied by the same technology areas. Application development and design, business process management and security were cited as top-three concerns by only 22% of those respondents. Project managers also seem to have little in common with one another in terms of technology focus, with business process management, app development and design, and IT management cited as top-three areas of

In terms of measures of success, the most cited factors among respondents were ‘helping achieve a business goal or outcome,’ cited by 52% of respondents as a top-three measure of success.
concern by 29% of respondents. Senior IT execs, IT managers and IT staff also ranked low on the scale of technology areas held in common with their peers, while security professionals, database administrators and data analysts ranked relatively high.

ABOUT THE SURVEY
TechTarget’s 2015 IT Salary and Careers Survey was fielded from June to September and had 1,783 U.S. respondents. Sample sizes varied by question, depending on respondents’ answers to previous questions, or exclusion of errors or outlier data. The respondent mix by role was as follows: senior IT executives (14%), IT staff (14%), IT manager (13%), systems administrator (9%), programmer/developer (8%), technology consultant (8%), project manager (6%), network manager/administrator (6%), sales and marketing (4%), database administrator (4%), security manager (3%), data analyst (3%), non-IT corporate or business staff (2%), systems integrator (2%), director of business applications (1%), compliance/privacy officer (1%) and data center manager (1%).
Compensation for senior IT leaders—CIOs, CTOs, CISOs, executive vice presidents and directors of IT—was stable in 2015, showing little or no difference from executive pay trends in 2014. The median total compensation for this group was $153,420, a mere 2.3% change from the median $150,000 in total compensation reported in 2014. That’s according to TechTarget’s 2015 Annual IT Salary and Careers Survey of 248 senior IT executives in the United States.

The flat trend in IT executive pay, however, belies the tremendous changes associated with this executive-level group, as companies across industries adapt to a digitally enabled customer and employee base. The digital revolution has forced senior IT leaders to examine how their roles must also adapt. At least among the highest earners in this group—base salaries ranged...
from a low of $36,275 to a high of $600,000—the adaptation is well under way; their jobs have shifted from a primary focus on delivering reliable IT services to delivering business outcomes, the survey showed.

**EXECUTIVE PAY: BY THE NUMBERS**

As noted, most of the executive pay metrics for senior IT leaders aligned closely with 2014 numbers, despite a difference in survey respondent demographics between the two years. (Senior IT execs represented 14% of the total 1,783 IT professionals polled in 2015’s survey versus 28% in 2014.)

Total compensation (pay plus bonuses) rose for 61% of senior IT leaders in 2015 versus 64% in 2014; 32% reported no change in compensation in 2015, a hair up from the 29% whose compensation was flat in 2014; 7% made less money in 2015, the same as in 2014.

Geography mattered, as might be expected. Total compensation was greater in regions where the cost of living is relatively high. On average, senior IT leaders working in the West earned the most in total compensation ($165,000), followed by the Northeast ($156,500), the South ($153,420) and the Midwest ($125,000).

In terms of base salaries, senior execs earned a median of $138,000 in 2015, compared with $135,000 in 2014. In 2015, over half of respondents (53%) received raises and 49% got bonuses, very much in line with the 54% and 46% reporting raises and bonuses respectively in 2014.

For those who received raises, the median hike was 3.4% (average was 6.1%), virtually the same as the 3% median raise (average 5.8%) in 2014. Bonuses varied more from year to year: The 2015 median bonus was $20,000 (average $33,219) versus a median $25,000 (average $35,427) for bonus pay in 2014.

The outlook for IT executive pay in 2016 is cheery. Similar to 2014 and 2015, 60% of senior IT leaders expect to make more money in 2016,
according to the survey, but they are more bullish on the particulars: 56% expect a raise in 2016, up from 42% a year ago; 47% look forward to receiving a bonus versus only 27% in 2014.

**R-E-S-P-E-C-T**

The unchanging compensation metrics give little sense of the changes afoot in the jobs of senior IT leaders. Follow-up interviews with a few of the respondents reveal a strong desire to play a strategic role at their companies, rather than carry out orders from the business or, equally as bad, be viewed simply as a cost center.

And, indeed, many businesses appreciate the value their IT leaders offer, the survey showed. In answer to the question, “What are your top measures for success in your position?” “Helping achieve a business goal or outcome” was the top metric (55%) cited by respondents, just above “Ensuring reliability of IT services” (52%) and “Improving product or service delivery” (42%).

For some IT leaders, like the CIO who recently moved from one coastal financial services company to another and expected to make $250,000 in total compensation in 2015 it was the business’ unwillingness to treat him as a peer—not better pay—that motivated him to seek another job. He requested anonymity so he could speak candidly.

“I had been hired on as their CIO,” he said, speaking of his former company, “but I had been reduced to not much more than an order-taker. There was no strategic alignment. It was a total bait and switch.”

One of the aggravating factors for the CIO was the reporting structure. Although the CIO title conferred executive team status, he reported to the CEO. (In the 2015 survey, 29% of respondents said they report to the CEO, about the same as in prior years.)

“I learned very quickly that when you don’t...
Anthony Peters, director of information technology at Burr Pilger Mayer (BPM), a San Francisco accounting firm, got a raise and bonus in 2015, earning above the survey’s average $165,798 in total executive pay. Peters’ bonus is tied to performance.

“The IT strategy has to specifically align with the overall strategy of the business. The closer we impact that strategy, the more likely I am to get that bonus. In 2015, we did really well,” he said.

He calculates his team has completed 70% of the goals. “Some of them we were not able to meet because either the firm was not quite there or the technology did not quite enable us to do it,” he said.

His firm, which is growing again after some belt-tightening during the recession, aims to differentiate itself in the competitive Silicon Valley market by offering specialized accounting services, including IT, ERP and credit card audits. One of IT’s big pushes has been to improve

BONUS PAY, BUSINESS ALIGNMENT, CIO ROLE

report to the CEO, you’re left answering to business peers—who you’re trying to help—many of whom don’t understand the strategic possibilities of IT, or even how you can gain efficiencies and economies of scale,” he said.

His new job, which he started in June, came with “a slight bump in pay.” But the big difference between the two positions is his ability to act as a strategic partner to the business, first by improving IT service delivery and saving money by renegotiating IT contracts. “In the first three months on the job, I had already paid back my salary to the company,” he said. He has started to strategize how the company can use cutting-edge technology including the Internet of Things as a competitive differentiator. Two recent critical hires—a chief of information security and an assistant IT manager to oversee day-to-day IT operations—will help him focus on business technology strategy. It also doesn’t hurt that he now reports to the CEO, he added.
Burr Pilger Mayer’s customer-facing systems, enabling the firm’s experts and their clients to do business in real time on a secure, private platform that is connected to all the relevant back-end systems.

For one CIO who moved to a new job, it was the business’ unwillingness to treat him as a peer that motivated him to leave.

Silicon Valley customers expect their client firms to have the same sophisticated technology they use, Peters said. He has been deeply involved in meeting those high standards, but he wants to do more. With the company’s support, he is pursuing a second MBA in business analytics. His ambition is to have the same scope of responsibilities as that of a CIO at a large firm (and the title), an ambition he’s expressed to his CEO.

“I have the ear of my CEO, and I am able to get things done through him, but I think that for me to be effective, I need to be the one presenting at the table and not going through the CEO,” he said. IT needs to be at the table explaining why the firm needs a technology.

“That is not to say the CEO can’t do that, but that is not his job. His job is to run the firm. My job is to put the technology in place that enables us to run the firm and execute on the business strategy—and that includes addressing the board of directors, as well as the management team,” Peters said.
LIKE THE UPWARDLY mobile family in the 1970s sitcom The Jeffersons, senior IT leaders and their staffs felt they were movin’ on up—at least when it comes to job satisfaction. That’s according to TechTarget’s 2015 Annual IT Salary and Careers Survey of 248 senior IT leaders. The survey found that nearly half (48%) of senior IT leaders—CIOs, CTOs and IT directors—who responded to a question about optimism in the workplace said the mood in their IT organizations is positive, up from 37% in 2014. The other half isn’t all bad. About one fifth (22%) of respondents said the mood is pessimistic, and 29% said it’s neither.

Respondents pointed to three main factors behind the rise in optimism: an atmosphere that encourages innovation (54%), a strong management team (43%) and accelerating busi-
ness (30%). Budget cuts provided the most fuel for pessimism in IT (55%). Ineffective management was next (47%), followed by limited career advancement (33%).

But there was far more IT job satisfaction than dismay among senior IT leaders, with 67% either content with their jobs or open to new opportunities but not looking for...
work, a percentage point higher than in 2014’s survey.

**OPPORTUNITY MAKES THE WORLD GO ‘ROUND**

Count Robert Laszlo among the happy majority. The director of services at FFW, a global Web development business that builds websites for big corporations like NBC Sports and GE, said the company is growing, having doubled the number of employees in the two years he’s been there. “I absolutely have every reason to be optimistic,” he said.

One of those reasons is opportunity for advancement. Laszlo started as program manager, juggling a variety of web development projects at a time, before being promoted to his current position—overseeing and supporting multiple programs and teams. He hopes someday to reach the c-level. Other technology executives have like-minded aspirations. In the survey, 23% said they want to move up in their organizations, another 23% are content to stay put, 7% want to climb the ladder in IT, and 6% want to move into a business role.

The growing optimism among tech leaders and IT job satisfaction may reflect opinions on the U.S. economy as a whole, which have taken an upbeat turn. CFOs in a Bank of America Merrill Lynch survey recently gave the outlook for 2016 a score of 61 out of 100—with 0 the weakest and 100 extraordinarily strong—up from 59 for 2015 and the highest since the 2008 recession. The unemployment rate, too, is showing promise, hitting 5%, the lowest in seven and a half years.

Laszlo, whose salary is above the 2015 average for senior IT execs, said he’s paid well and grateful for it. He said his company is making money, so he—and everyone else there—should be as well. But money’s not everything.

“I think you reach a point where hopefully you’re not thinking about money every day. You’re not worried about it,” he said. “The prime motivator is feeling like you’re contributing, feeling like what you’re doing matters to somebody.”
JOB FULFILLMENT TIED TO TEAM SPIRIT

Money isn’t the prime motivator for the four-person IT team at Millar Inc., a Houston-based producer of cardiac and neurological catheters, said director of IT Todd Miller. The company is small, with 140 people in the U.S., U.K. and New Zealand, and pay there is at the lower end of the scale. But brisk business, an innovative atmosphere and a passion for helping others keep his team’s spirits climbing, he said.

Miller said he is proud of his tightknit, collaborative team. Though each member has a
particular expertise—whether it’s networking or virtualization or information security—each helps any of the others when needed, even if it’s something as basic as resetting a password. That’s worth a lot in a hot technology market like Houston, where many companies pay a premium for talent, Miller said.

“You might get more money in a different situation, but at the end of the day you have better job satisfaction getting along with the people you work with,” he said.

Optimism runs high there also because IT is well regarded at the company and given a lot of room to “do some cool things.” One innovation hatched by Miller’s network security manager is using big data platforms Splunk and Varonis and Windows PowerShell task automation software to create a “self-healing” network that can instantaneously take action if anything out of the ordinary occurs.

For instance, if Splunk and Varonis detect any malicious activity on a user account, the PowerShell scripts will automatically disable the account and reset TCP/IP traffic. That isolates the computer from the network without having to physically pull the cable from the PC.

The team’s ability to build and deploy cutting edge technology is “kind of neat” for a company Millar’s size, Miller said.

**TIME TO MOVE ON**

But optimism and IT job satisfaction haven’t touched every organization. For the director of information systems in a midsize Wisconsin city, things can’t get much worse. He has requested anonymity because he’s looking for another job.

In the city government, he said, “There isn’t an emphasis on technology, so it’s getting harder for me to stay current and stay relevant in my field.”

What he’d like to see are more real-time dashboard technologies that would help business units make better decisions. Instead, the city, like others in Wisconsin and elsewhere,
has focused on protective services like the police and fire departments—while forcing IT to cut its budget by 7%. The irony is, the director said, technology is needed for a lot of the projects the city wants to pursue, like body cameras on police officers in the field, which towns and cities across the U.S. are looking into or implementing following the 2014 police shooting of unarmed teenager Michael Brown in Ferguson, Mo.

The director said he’s seeking either an IT director or CIO role at an organization that sees IT as an asset, not a cost center. Others in his department are looking, too, and he knows it. To help keep morale healthy, he even helps them look so that they don’t have to hide anything—and so they make good career choices.

“If they do leave, what I’ve gotten out of it is not a dissatisfied employee but a more productive employee as they’re looking,” he said. “I handle it a little bit differently than most.”

Farther west, Ron Van Zanten did find another job. He moved from vice president of business intelligence at Great Western Bank, based in Sioux Falls, S.D., to senior VP of data management and BI at Meta Payment Systems, the electronic payments arm of MetaBank, also headquartered in Sioux Falls. Great Western didn’t have the data needs of Meta, as it’s called, which owns several hundred thousand “white label” automated teller machines in gas stations and convenience stores across the country. Meta also issues gift cards and other reloadable cards.

It was the challenge of managing and standardizing the data from dozens of card processors and partners that enticed Van Zanten. The small bump in his above-average pay was secondary.

“Here, because they’re always looking for different channels, different products to offer, there’s always going to be something new to consider,” he said. “There’s just more aggressiveness in trying to expand the company. And that’s where my data systems can provide value.” □
2015 salary survey: IT budgets rise for two-fifths of senior IT leaders

According to TechTarget’s 2015 IT salary survey, a majority of senior IT executives said their IT budget and headcount either grew or remained stable in 2015.

BY FRANCESCA SALES

PHIL STASKO IS among a select group of senior IT leaders who saw both their headcounts and IT budgets rise sharply in 2015. Stasko, director of IS at environmental consultancy Apex Co. LLC, not only saw his IT budget increase by an impressive 20% in 2015 over 2014, but he also boosted his IT staff by 30%.

Stasko’s experience, however—a healthy budget increase combined with robust hiring in 2015—was not the case for many IT leaders, according to TechTarget’s 2015 Annual IT Salary and Careers Survey.

Specifically, the 2015 salary survey reported that 39% of IT budgets increased in 2015; 35% of budgets were flat. The results are similar to those in 2014 and 2013, when the majority of IT organizations either saw budgets go up (42% and 40%, respectively) or stay the same (39%
and 36%, respectively). In addition, the average budget increase in 2015 was also the same as in 2014—14%.

In what may prove to be a worrisome sign, 21% of IT leaders saw budgets decrease in 2015, up from 15% in 2014, and the average decrease was larger: 13% in 2015 versus 9.9% in 2014.

**2015 SALARY SURVEY SAYS IT HEADCOUNTS FLAT**
The numbers on IT staffing also showed few signs of change, according to the 2015 salary survey, which polled 248 senior IT executives, identified as CIOs, CTOs, executive vice presidents, and directors of IT and information security. Nearly half (44%) of all senior leaders described headcount as flat or lower (19%) in 2015, virtually the same as in 2014 (44% flat and 21% lower); 33% said they added staff in 2015, the same percentage as in 2014. In 2015, 19% of IT organizations saw headcount go down, about the same as in 2014 (21%).

Moreover, the outlook for staffing does not look especially bright. Only 31% of those surveyed said they were looking to hire in 2016, slightly less than the 36% in 2014. Plus, close
About the value of IT by top management.

A couple of years ago, his IT organization was focused primarily on cost-cutting. Getting approval for hardware and software purchases, even modest ones, typically hinged on finding the least expensive option, Stasko said.

That changed with the arrival of a new CEO two years ago. “He immediately said, ‘We’ve got to improve everything; we’ve got to get up to speed,’” he said.

Getting up to speed included a major upgrade to the company’s network system, replacing old switches with gigabit, high-end wireless access points and implementing a new accounting system.

The latter project, which began in June 2014 and continued through April, accounted for much of the budget and hiring increases in 2015, Stasko said, requiring not only a large team of internal staff, but also six consultants.

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**ACQUISITIONS, CHANGE IN LEADERSHIP SPUR BUDGET INCREASE**

Apex’s Stasko said the 20% boost in his IT budget went mainly to deferred maintenance and was due largely to a change in attitude about the value of IT by top management.

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Many of the new hires are developers tasked with building out user-friendly, Web-based applications for the accounting system, with the
aim of improving how people do their jobs.

“Instead of [employees] having to go learn the accounting system ... we’re serving it up via the cloud, with minimal training; it’s more intuitive,” he said, adding that the IT organization is now seen as a value-add, rather than just a cost center.

Not surprisingly, Stasko was among the 65% of respondents who said the mood at their organizations was optimistic in the 2015 salary survey. “You do all the stuff, you feel like you’re pounding your head against the wall, you don’t think it’s doing anything—then you hear people actually say that this went well.”

The major upgrades are happening as Apex is growing dramatically through acquisitions. The company added three or four companies in 2014, and is planning to buy up to six more companies in 2016.

Indeed, Stasko predicts that his will budget go up another 10% in 2017 to help integrate the new companies, beef up his application development group and add business intelligence expertise.

T-SHAPED EMPLOYEES MAKE UP FOR BUDGET CUTS
Unlike Stasko, Rick Fortney, CIO of Laramie County in Wyoming, saw his $1.8 million IT budget shrink by 1.5% in 2015, and he expects more cuts to come in 2016, as his staff wraps up major IT projects involving migrating legacy systems. The work includes the conversion of the county’s legacy mainframe system to a Windows-based system, which Fortney said will better meet the needs of the county’s many agencies, including the 911 center, the sheriff’s office and the Cheyenne police department.

IT consolidation is a high priority for Fortney, who has served as Laramie County IT director since 1993. Consolidation offers economies of scale his department couldn’t leverage when each agency used its own systems.

“You couldn’t necessarily afford the security and the high availability that we build into our environment if we were supporting the county treasurer’s office only, because on one hand, it would be hard to justify that high level of secu-
rity and high availability,” he said. “Consolidating everything—everybody gets the benefit of what we’re doing.”

That said, finding the right IT people to do the work is one of his perennial challenges, added Fortney, who currently has a staff of 15. He felt fortunate to add a staff member in 2015 who not only knew systems and services, but could also work as backup support to the one employee running telecommunications and electronic security.

“The workload is getting too much, plus too critical to just have one person who’s knowledgeable on it,” Fortney said.

Fortney’s approach to hiring someone with broad technology expertise—sometimes referred to a T-shaped person—is consistent with the hiring practices by Laramie County, where employees are highly valued and layoffs are rare, he said.
Security is the common theme in 2016 top IT projects

*TechTarget’s 2015 Annual IT Salary and Careers Survey results reveal how CIOs and senior IT leaders are coming to terms with shadow IT.*

BY NICOLE LASKOWSKI

**Security will be** the top IT project for CIOs and senior IT leaders in 2016, according to TechTarget’s 2015 Annual IT Salary and Careers Survey of 248 senior IT leaders (CIOs, CTOs, CISOs, executive vice presidents and directors of IT). When asked to choose their three top IT projects for 2016 out of a list of 30, 27% of respondents selected security, followed by application development (24%), cloud computing (19%), and business intelligence/big data (18%).

The survey results show how priorities continue to evolve for IT departments, and, based on interviews with survey respondents conducted for this article, reflect how the IT security conversation continues to mature. Rather than viewed by IT leaders as a stand-alone project, security is becoming integral to just about everything IT does. Dennis Vlasich,
CIO for the City of Fontana, Calif., for example, can’t talk about cloud computing without talking about security.

“The real issue of cloud computing is procedural and legal more than it is technical. We’re finding that the [software as a service] vendors are going to departments and enticing them to sign up for services without [consulting] IT,” Vlasich said. “That’s causing more silos, for one thing. But it also creates a lot of problems because [city employees] don’t consider some of the security and connectivity issues associated with cloud computing.”

The emphasis on security is also true for Gregory Turner, COO and head of IT at the health care non-profit organization Millenium Collaborative Care. For Turner, application development and design, which was relatively low on the totem pole of top IT projects for CIOs and senior IT leaders in the 2014 survey, will be a top project 2016. But when discussing app dev plans for 2016, he highlighted security as a priority.

**EVERGREEN PROJECTS**

Selected by survey respondents as the top project for a third year in a row, security is expected to become an even bigger part of the IT project portfolio. According to 2013 and 2014 Tech-Target survey results, 21% of senior IT leaders selected security as a top project. In 2015, the percentage was closer to one-third of those surveyed.

The heightened interest doesn’t come as a surprise to experts. “Everyone’s concerned with security issues due to the nature of what’s been happening recently,” said Turner, who works for a non-profit organization in western New York that’s striving to better connect Medicaid patients with health care providers. After another turbulent year of high-profile breaches, including Ashley Madison, CVS and the Office of Personnel Management, security threats are top-of-mind for board members and CEOs, alike, putting a spotlight on CIOs and senior IT leaders.

For Vlasich, security and cloud computing,
which ranked as a top IT project for the second year in a row, are intertwined thanks, in part, to rogue IT. SaaS-based solutions make it easy to sign up for services, but city employees don’t always think about nuances like “open APIs, federated identity management, and things like an exit strategy, who owns the data when the contract’s over,” he said.

Vlasich, who plans to retire in 2016, doesn’t want IT to be a hurdle for departments looking for new functionality; instead, he wants IT to ensure any services the city invests in make sense to the organization as a whole. When his HR department was searching for an online applicant tracking system, Vlasich assigned an analyst to do research and find a solution that

### Highest-ranking project areas for 2016

- **Security**: 27%
- **App dev/design**: 24%
- **Cloud Computing**: 19%
- **Business intelligence/big data**: 18%
- **Business process management**: 16%

Source: TechTarget’s 2015 IT Salary and Careers Survey
worked for HR and met the city’s regulatory standards. “Now, it’s supported by IT as if it was a premise system,” he said. “We’re not providing the server, but we’re providing the support, training and technical back-end stuff.”

THE RISE OF APP DEV
Cloud computing isn’t the only area where security figures large in the conversation between business and IT. For Turner, a top project in 2016 will be application development, which saw a meteoric rise in in 2015’s survey results. In 2014, app dev ranked seventh, with 14% of respondents reporting it as one of their top IT projects for 2015. In the 2015 survey, 24% of respondents indicated it would be a top project in 2016, ranking it second only to security.

When discussing app dev, Turner said that strong, seamless security ranks high on his list of priorities. Millennium Collaborative Care will operate as a liaison between Medicaid patients in western New York and health care providers to help improve the quality of care. In 2016, the non-profit organization plans to roll out a version of its integrated delivery solution, which will be a “combination of healthcare-related technology to ultimately provide the right care from the right provider at the right time,” Turner said.

Part of the organization’s objective is to ensure the type of care providers give patients is performance- and not volume-based, which hinges on data and analytics. Applications, in other words, are vital data pipelines for the organization. “When we’re working with a workforce that isn’t our employees, we have to be cognizant of the fact that we don’t have the same sphere of influence over [them],” he said.

APP DEV AND ROGUE IT
Turner’s biggest security concern isn’t that someone will hack into the system; instead, he worries about theft or misplacement of a mobile device or a thumb drive that contains sensi-
Application development’s rise in popularity—and the security risks a self-service app environment poses—could suggest a cloud backlash is in the offing and spur a quest for standardization, said Jill Dyche, vice president of best practices at SAS Institute Inc., where she works closely with CIOs and senior IT leaders.

“Five to seven years ago, the business was like, ‘We’ll do this ourselves, IT,’ ” Dyche said. “The [business] still wants to own the application, but they don’t want to own the relation-

<table>
<thead>
<tr>
<th>Lowest-ranking project areas for 2016</th>
<th>Web services</th>
<th>Internet of Things</th>
<th>Help desk</th>
<th>Social media</th>
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**SOURCE:** TECHTARGET’S 2015 IT SALARY AND CAREERS SURVEY
ship with the cloud vendor or procurement or renewal.”

In the City of Fontana, Vlasich set up an active federation service and asks that SaaS vendors be compliant in Security Assertion Markup Language (SAML), a standard protocol for federated identity management. When employees are terminated, they’re removed from the directory, effectively cutting off any access they had to SaaS-based services.

But there’s still work to do. When the City of Fontana’s purchasing department struck a deal with Bank of America for a new purchasing card (PCard) system, it didn’t consult IT. “They didn’t even think it was something IT could or should be involved in until we brought up the fact that this was going to be a problem with identity management,” Vlasich said.

He asked the purchasing department to put him in touch with Bank of America so he could ensure the financial institution was compliant with SAML. Turned out, it wasn’t. “The good news is, they are planning to be SAML compliant in 2016,” he said.

To ensure better visibility into SaaS investments, Vlasich plans to work with the purchasing department, which monitors all purchases, including those made with credit cards. “They can flag the purchase, take a look and ask, ‘Is this ascribing to some sort of service,’ and then route it to IT so we can intervene,” he said. “That’s something we are going to put in place because of the way SaaS solutions are being marketed.”
A 2015 TECHTARGET survey found that while cybersecurity managers in enterprises have many responsibilities, IT risk management and regulatory compliance take up the most work time.

The TechTarget 2015 Annual IT Salary and Careers Survey polled 1,783 IT professionals in North America between June and September of 2015. Among those who said that security was one of their top three concerns (354 respondents), IT risk management and regulatory compliance were also cited as top concerns by, respectively, 34% and 25% of those respondents.

Among senior IT executives with a security focus who were planning for 2016, however, the order of importance shifted: 23% cited compliance as a top three concern, while 18% cited risk management.
More than anything else security-focused respondents are aiming to improve operational efficiencies in 2016, but experts said it may be difficult to improve efficiency when it comes to IT risk management and regulatory compliance.

**RISK MANAGEMENT TIME DRAIN**

Ryan Barrett, vice president of security and privacy at Intermedia, said risk management can feel time-consuming because the process can be very long and results may not appear for months or years.

“It involves constantly **measuring risk** (which is subjective), guessing at the likelihood (also subjective) and coming up with a plan to **mitigate the risk**. Following that risk from the beginning (identification) to the end (mitigation) can be long and boring,” Barrett said. “It’s not the sexiest part of Information Security, but it truly can yield some tangible results in keeping the business safe. The road may be long, but it’s worth traveling.”

Jeff Schilling, CSO for Armor Defense Inc., said that understanding time and resource limitations is often the key to risk management.

“First, set up three risk categories (high, medium and low). Next, build your IT architecture to allow you to have the best visibility and detection capabilities across your high-risk category workloads and focus your patching, protection and detection operations on the highest-risk workloads,” Schilling said. ”You may make the assessment that your organic security may not have the tools or experience to protect your highest-classification data. At that point, you should consider outsourcing to a secure hosting environment that does have the needed tools and skilled security team. The other thing I would recommend is assume your user environment is compromised. Build your access management systems with **two-factor authentication** and **role-based access control** to narrow the risk.”

Paul Nicholson, director of product marketing at A10 Networks, said the act of prioritizing
risk can be time-consuming because of where sensitive data is located, and the emerging risks faced can be unique to each company.

“Risk management is so time-consuming because organizations must understand where sensitive data is in their organization by discovering and classifying that data and then continually assess[ing] and [prioritizing] their risks based on this information,” Nicholson said. “IT teams must look at emerging risks that are unique to their organization or their industry and look at general security risks—such as a critical application vulnerability—to effectively manage risks.”

A vice president of IT Security and Compliance at a small business who responded to the survey, but wished to remain anonymous, said risk management was time-consuming because of limited resources.

“In the ideal world, I’d have an unlimited budget, and a business model that is inherently safe,” the respondent said. “However, in the absence of those two items: I’m striving to more completely engage the c-staff and board of directors to build an agreed-upon risk appetite, from which I can then apply technical controls to support. The real challenge right now is that I’m largely operating in a vacuum. Assuming I can gain traction with the c-staff, I’ll gain a reasonable budget, and from that, I will definitely be automating as much as possible.”

**COMPLIANCE CHALLENGES**

In terms of compliance, Barrett said that every industry offers unique regulatory challenges and many industries are required by legislation to comply with long-term data management regulations.

“Compliance is often determined on three factors,” Barrett said, “security: data must be safeguarded against all threats to its integrity; permanence: data must be retained in its original state without being altered; and auditability: data must be accessible in a timely manner when required.”
Schilling said a problem with regulations is that many are based on a potentially outmoded network-centric approach to security, and he suggests a data-centric approach would be better.

“You should focus your biggest efforts on protecting your data centers where your applications and databases live. After all, that is what the threat actors are after,” Schilling said. “Start security from the inside out. Protect the database with application-level encryption that keeps only those with access to the keys from ever getting access to unencrypted data; put anomaly monitoring between the database and the application; and put strong authentication (multi-factor) between the application and the user and only allow the user to view and/or interact with the data, not download it.”

Nicholson said regulatory compliance is time-consuming because organizations often need to comply with multiple regulations with different objectives and requirements.

“Not only do they need to implement appropriate security, privacy and change management controls, but they need to document these controls to auditors and regulators,” Nicholson said. “Automation tools and technologies can help organizations accelerate compliance processes. Dedicated products, such as Web application firewalls and network firewalls and DDoS mitigation tools, can help organizations address compliance requirements, like PCI DSS requirement 6.6, the Health Insurance Portability and Accountability Act (HIPAA), and regional financial regulations, by protecting credit card data, personally identifiable information and financial records from compromise. Many security tools can also produce reports and logs then can
The unnamed survey respondent said dealing with multiple regulation standards was painful. “Maintaining compliance would be easier if I had a single-source location where the various regulations that apply to our company could be lined up, and all the common facets, as well as the uncommon facets of the regulations, would be called out so that compliance efforts could be weighted for maximum effect across multiple regulations.”

Despite the time-consuming chore of maintaining regulatory compliance, the respondent said it did improve security but that may not always be the case. “At this stage, compliance is actually helping me call out security issues that expose the company to regulatory compliance issues,” the respondent said. “However, I can see a point in the future, where certain compliance issues will no longer be directly related to security issues, and that divergence will be where I start to have a negative correlation between security and compliance.”
DATA HAS BECOME a huge asset for businesses in the digital age, making regulatory compliance a competitive differentiator for many modern companies. And as both regulations and data threats have become increasingly complex, GRC professionals’ skill sets have become a prized commodity.

Compensation for these professionals seems to be keeping up with the trend, according to TechTarget’s 2015 Annual IT Salary and Careers Survey. From a sample size of 176 respondents who selected “Compliance” when asked to select the top three technology areas that occupy the most of their time, the average salary reported was $107,888. Fifty percent received a raise in 2015, and 54% anticipate a raise in 2016.

The lucky IT compliance management professionals are getting more resources, too, with
33% saying IT budgets increased in 2015, and 38% reporting additional staffing in their departments. These employees have taken on much more responsibility in recent years: In addition to risk management, GRC professionals are often responsible for the administration and development of the company’s technology platform and associated IT processes, said Marci McCarthy, CEO and Chairman of ISE Talent and CEO and president of T.E.N.

“Additionally, they’re responsible for configuring, maintaining and reporting on the technology platform and its subsequent data,” McCarthy said. “Other duties may include liaising with various business groups for the identification, remediation and tracking of organizational risks and vulnerabilities.”

**IT COMPLIANCE PROS ‘SATISFIED’**
The heightened profile and additional responsibilities have not had a negative impact on satisfaction, however: 68% reported they were “satisfied” with their current position. In the next three to five years, 41% said they want to move up within their current company or department, and only 14% are seeking employment with a larger company.

**Corporate risk specialists and IT professionals are increasingly tapped to fill GRC responsibilities and help maintain regulatory compliance.**

Professionals’ IT compliance management experience has become invaluable to companies as regulatory compliance rules have spread across industries, said Geoff Harris, CEO of Alderbridge and International board director of the Information Systems Security Association.

“Organizations are having to demonstrate to regulators and regulatory bodies that they are compliant, and they need people to do that,” Harris said.
To fill the gap, companies have turned to a wide range of departments and potential skill sets, Harris said. Corporate risk specialists and IT professionals, for example, are increasingly tapped to fill GRC responsibilities and help maintain regulatory compliance.

“I think there is quite a good flow of candidates, generally, and from across professions that move into this area,” Harris said. “I see people moving across from all sorts of areas, from within cybersecurity but also other areas—moving across to take on those roles.”

GRC REMAINS A TOP CONCERN

Not surprisingly, the respondents that specialize in regulatory compliance reported that their top “areas of greatest concern” in 2015 were compliance, security and risk management. These issues aren’t going away, either: In 2016, many predict that their work projects will focus on compliance (67%) and security (44%).

Companies have sometimes struggled to keep processes up to speed as large data volumes have caused big GRC complications. The combination of increased data threats; well-publicized breaches and new regulations have forced companies to develop detailed security programs on the fly—and the staff to go with it, McCarthy added.

“As a result, most face a steep learning curve regarding hiring best practices, understanding qualifications and offering competitive compensation packages,” McCarthy said.

In the face of these increased responsibilities, the moods at survey respondents’ IT departments seem divided between optimistic and neutral: 36% described the mood as “optimistic,” but 38% report being “neither optimistic...
nor pessimistic.” The 2016 outlook seems a bit
more positive, with 38% predicting the mood
will be more optimistic in 2016, while 31% said
it would be “neither optimistic nor pessimistic.”

As for the regulatory compliance professionals who were more pessimistic about their IT
department’s mood, ineffective management
(68%) and limited career advancement (53%) were cited as the biggest reasons for the in-
creased feelings of pessimism.

Those with a more pessimistic view should
take solace that their career opportunities will
likely continue to expand in the near future: Demand for GRC professionals will only in-
crease, McCarthy said, especially at larger orga-
nizations. But when it comes to GRC staffing,
human resource and talent management organi-
zations are at a crossroads, she added.

“They have a task and a mission to fill these
positions,” McCarthy said. “However, these jobs
are not very easy ones to fill. They’re not like
general IT jobs, and many of them are very spe-
cialized and require specific kinds of industry
backgrounds.”
These days, Dennis Dushek is feeling satisfied with his job. The business systems analyst at linen and uniform rental company Bay Towel in Green Bay, Wis., said management takes his recommendations seriously, and workers in sales, accounting and other departments value the reports he creates for them. “There’s a lot of looking for optimistic projects and results,” Dushek said. “We’re not just fighting fires. We’re able to plan for the future.”

Dushek isn’t alone in his optimism. According to TechTarget’s 2015 Annual IT Salary and Careers Survey, business intelligence and big data professionals are relatively upbeat about both their current jobs and their prospects for the future—and there are plenty of reasons why.

Results show that the average base salary for the 114 survey respondents who said they pri...
But the positive feelings aren’t just about personal compensation. In the survey, 68% of the responding BI and big data professionals said they don’t have career changes in mind; of that group, 22% plan to stay in their current positions for the foreseeable future, while 46% said they’re open to new opportunities, but aren’t actively seeking a different job.

Separately, 39% said the mood in their IT department is optimistic, compared to just 19% who said it’s pessimistic. In addition, 41% of respondents said the head count in their department is larger than it was in 2014, compared to 20% who said their department’s workforce shrank in 2015.

When bonuses are factored in, average total compensation for BI and big data respondents rose to $136,282—25% more than the overall figure of $110,724.

Fifty-three percent of the respondents in the BI and big data category said they received a raise in 2015, and 45% got a bonus. Looking ahead, 55% expect a raise in 2016 and 47% expect a bonus. Each of those figures is higher than the corresponding ones for all respondents to the survey, which was conducted online from June to September.

Good Time to Be in BI, Big Data Jobs

“Satisfaction is trending up, because people are thinking about keeping their workers happy,” said Matt Mueller, president of CBIG Consulting’s Recruiting & Staffing, a Rosemont, Ill., company that helps place BI and big data workers in jobs.
“I think IT is becoming more and more specialized, so for the folks who have the right skill set and right background, it is a good time.”

For example, Mueller said the percentage of BI and big data survey respondents who received bonuses in 2015 is higher than he personally has seen in previous years—though the 45% figure is unchanged from the 2014 TechTarget salary survey. In the years following the recession that ran from late 2007 into 2009, bonuses were the first thing to go, as businesses tightened their belts, he noted. But the fact that so many respondents are now receiving bonuses signals to Mueller that organizations are investing more in executives and other workers involved in BI and big data programs.

Bay Towel’s Dushek said he thinks the company has made efforts to keep him and his IT co-workers happy. In a smaller company, such as Bay Towel, it’s often harder to retool with new employees if someone leaves than it is in larger organizations, particularly for a role like Dushek’s: He’s the only one in the department who does reporting for the various business units. As a result, he said he’s pretty confident that Bay Towel is unlikely to pull back from its investment in him and his position.

The other thing that’s keeping many BI and big data professionals satisfied is that their work is increasingly valued by corporate management, Mueller said. He added that more and more companies are basing their entire business strategy around data and analytics, so workers in the BI and data management fields are enjoying relatively high esteem within their organizations.

GOING SEPARATE WAYS ON ANALYTICS TASKS
In some cases, the specialization of roles within IT is also helping BI and big data professionals spend more time on tasks they enjoy. That has been an important factor in keeping data scientists at the Yellow Pages telephone-listings operations in Canada happy with their work, according to Richard Langlois, director of big data
and analytics at Montreal-based Yellow Pages Ltd.

Langlois said his team primarily works to set up data pipelines, and ensures that the information in them is clean and ready to use. More technically oriented data engineers handle the process of building data architectures, enabling the data science team to spend virtually all its time on actual analytics applications. The separation of duties allows the data scientists “to focus on analysis activities as opposed to hunting and gathering of the actual data,” he said.

Mueller said he’s seeing heavy demand for data developers and architects right now, as well as workers with specialized big data skills involving technologies such as Hadoop and NoSQL databases.

Ultimately, he believes compensation will play an important role in companies’ ability to retain top BI and big data talent going forward. There’s a lot of buzz about how data scientists and other analytics professionals are motivated by interesting challenges and engaging work environments, and that may be true to an extent. But most skilled IT and analytics workers are still going to go to the companies that offer them the best compensation packages, Mueller said.

Given that reality, he would have expected a greater percentage of the BI and big data survey respondents to have reported receiving a raise in 2015, but he thinks higher numbers will come as the business importance of BI, analytics and big data continues to grow. “Compensation is going to be key to retention,” Mueller said. “Challenging work is important, but there are lots of open jobs right now, so you really have to pay people.” ■
APPARENTLY, IT’S STILL a great time to be a software developer.

According to TechTarget’s Annual IT Salary and Careers Survey, software developers in 2015 were largely happy with their jobs, optimistic about the future and still relatively well-paid. And with a worldwide shortage of software developers not likely to end soon, the future continues to look bright for the profession.

Between June and September of 2015, TechTarget conducted an online survey of 1,783 IT professionals, of which 392 described themselves as working in application development and design.

In 2015, software developer pay averaged $108,738, down slightly from 2014’s $110,340, and reported a total average compensation package worth $119,783. The reason for the slight
DEVELOPERS

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decrease in salary: The 2014 survey included almost double the number of IT executives than those who responded in 2015. Overall, 60% said their total compensation improved in 2015 over 2014. In that time, 48% got raises—with an average salary bump of 5.6%—while 43% received bonuses, which averaged $14,614.

Why’d they get those raises and bonuses? For 58%, it was successfully helping achieve a business goal or outcome. Other measures of success included on-time completion of projects (54%), improved product or service delivery (42%), ensuring reliability of IT services (33%) and meeting productivity goals (30%).

But, clearly, not everyone who took the survey is happy with software developer pay these days. The problem, said survey respondent and developer Shayne Gray, is that nontechnical companies really don’t know how to treat—or pay—developers. “It is my belief that a lot of developers feel underpaid,” Gray said “For instance, at one point, I applied for a position for a developer job at a company that makes garage doors.”

The problem is that some of these companies that are more conservative do not understand developers. “At this previously mentioned garage door company, I was told during the interview that it took management a long time to realize that if a developer was not typing on his keyboard, he was still working, because a lot of the job is mental and thinking. Needless to say, I didn’t pursue that opportunity, as I know it would lead to a lot of frustrations with management.”

THE FUTURE OF SOFTWARE DEVELOPER PAY

Frustrations aside, survey participants predicted application management, big data and business process management will be the largest areas of focus for 2016. But cloud, security and mobile were also mentioned as priorities. As COO of healthcare provider system Millennium Collaborative Care in Buffalo, N.Y., administrative director Greg Turner, who was a survey respon-
dent, is experiencing interest in those areas firsthand.

“With telemedicine, we’re looking at being able to capture vital stats from smartphones about patients and get real-time measures, so we can continually get a real-time view of our population and a 360 [degree] view of the individual,” he said. “The data scientist analytics role is going to be a huge, critical success factor for us.”

Those areas are mission-critical for Turner’s company, but what are the reasons other companies are focusing on those specific technologies? New customer acquisition was the most important, with 46% citing it. Other reasons included operational efficiencies (34%), better customer service (30%), new product or service delivery models (30%) and simplified business processes (29%). Just 2% of respondents said it was too early to know for certain.

Software developers mostly like where they are, but are also likely to at least listen to a job offer. A full 24% are completely satisfied with their current role, while 43% aren’t looking for another job, but would be open to a new opportunity. Only 14% are actively looking for a new job.

They won’t have to look too hard. Over the past year, 57% of developers received at least five qualified job offers from recruiters, according to The Harvey Nash Technology Survey 2015. Harvey Nash, which is an international recruitment firm based in London, also found that Web developers, software engineers and software developers were the least likely people to actively look for and apply for jobs, said associate director Bhavin Joshi.

Joshi suggested that means developers—in demand around the world thanks to the shortage—don’t actually have to go out and look for work. Rather, the jobs will come to them, he said. That’s apparently even more true in the U.S.: Joshi’s survey showed only 16% of U.S.-based developers were actively job seeking, versus 22% in the U.K., which means American developers are more likely to wait for the phone to ring.
Developer Richard Bober, who was a survey participant, said he’s gotten 20 unsolicited offers from headhunters over the last two years. None were sufficiently attractive to tempt him to leave his current position.

“Changing employers is something of an ordeal,” he said. “There is a comfort zone that develops with your co-workers and the projects you’re assigned to. If you like your co-workers and you like the work, unless there is a big jump in salary offered, the new job isn’t as appealing. However, if you don’t like the direction of your IT department, or you don’t like your manager or co-workers, and you don’t feel appreciated, then it doesn’t take much to convince someone to make a move.”

**INNOVATION LEADS TO BETTER MORALE**

With so many developers not actively looking for work, it might be tempting to think the overall IT mood is optimistic, but the reality might be best described as neutral. For example, 41% of developers surveyed said the mood in their IT department was “neither optimistic nor pessimistic,” while 38% said it was optimistic. Why are the optimists happy? The No. 1 reason was because innovation is encouraged (55%), followed by improving business conditions (42%) and strong management (41%).

However, the naysayers agreed with Bober’s analysis: 56% blamed ineffective management. But that wasn’t all: 36% pointed to continuing IT budget cuts, 35% said career advancement was limited and 25% put the blame on job outsourcing.

More than one-third of respondents said their budgets and their head counts were larger in 2015 than 2014—33% in both cases—and 37% said their departments are fully staffed.
IT management tasks took less of systems administrators’ time in 2015 as they turned their attention to other areas of the data center. Networking, virtualization, IT management, and storage and backup ranked as the top four most time-consuming technology areas in TechTarget’s 2015 survey, followed by security.

Among IT pros who cited server management as one of their top three areas of concern (265 respondents), virtualization held strong at 25% from 2014 to 2015, as it continues to ensure flexible, cost-effective infrastructure and easy deployment of applications and servers.

“We have a couple of physical servers left for legacy applications,” said Ross Eberle, a technical support supervisor for the Rockford School District in Illinois.

The rest of their servers, 95%, are virtualized.
The survey results coincide with the growing need for IT teams to have broader skills. To be successful, employees must switch between several different roles in a given day.

You would think, then, that backups would take up more time. However, the TechTarget survey showed that storage and backup takes up less time than it used to, dropping from the third biggest time consumer in 2014 to the fourth in 2015. Eberle credits new, more capable software that eases backup management.

“When the storage increased, the backup time increased as well because there is more data, so we have to do more with it,” Eberle said. “Although, in the in 2014 or so, backup has taken less of our time because we migrated to a [newer] product.”

The survey results coincide with the growing need for IT teams to have broader skills. IT has become integral to the business with a smaller budget. To be successful, employees must switch between several different roles in a given day.

Businesses look for versatile people who are “techno-functional,” said Daniel Lozovsky, a senior business IT manager and technical architect for AT&T Mobility based in Seattle.

“[IT] roles are being redefined and they are fluid,” Lozovsky said. “It requires masters of a very strong technical kind of skill to operate in infrastructure or development.”

IT management dropped 8% from 2014 to 2015, bringing it from first to third on the respondent’s list of tasks that occupy their time. However, this decrease actually equalizes it with networking, virtualization, and storage and backup. In fact, Lozovsky claimed IT manage-
## Top time-consuming areas for data center pros

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<th>Area</th>
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*Source: TechTarget’s 2015 IT Salary and Careers Survey*
ment will continue to be integral as more IT jobs are outsourced.

“We spend less time hiring employees and more time dealing with outsourcing companies ... whether it’s India or somewhere in Eastern Europe,” Lozovsky said.

“There will be more emphasis on leadership ... and strategic planning and thinking,” he added.

While he doesn’t manage remote IT teams like Lozovsky, Eberle agreed that coaching IT teams and designing workflows for new initiatives consumes the majority of his day.

The newest entrant into the top five in 2015 is security, up from eighth place in 2014. ■
Data centers seek creative skills to drive innovation in IT

Now more than ever, data centers need creative employees to adapt and outwit problems for a more efficient, reliable IT infrastructure.

BY MEREDITH COURTEMANCHE

DATA CENTER TEAMS placed increased importance on creativity and innovation in 2015 in search of new ways to achieve traditional goals.

As expected, reliability of IT services, on-time project completion, achieving a business goal, improving service delivery and meeting productivity goals topped a list of measures for success in TechTarget’s 2015 survey of systems administrators, IT managers and executives, and those who work with the data center.

LESS FOCUS ON THE BUDGET

Those IT pros who cited server management as one of their top three areas of concern (265 respondents) put a higher premium on creativity and innovation in IT in 2015 than in 2014, ahead of achieving returns on investments and coming
Creativity and innovation have more to do with the hierarchical, logical IT world than people may think, said James Stanger, senior director of products for CompTIA Inc., a nonprofit IT industry association involved in training and certifications.

FINDING SOLUTIONS TO PROBLEMS
Innovation and creativity enhances an IT pro’s ability to troubleshoot, design architectures and optimize performance to meet traditionally important metrics, such as **reliability, stability and efficiency of IT operations**. Stanger calls it the ability to make an informed choice.

With more **dynamic data centers** meeting IT demands, deep technical expertise is still valuable, but so is the ability to adapt to a new approach and work with different groups of people.

“You need to think about your job,” Rabenstein said. “You can’t do more with less unless you have creativity and innovation. And we’re in the do-more-with-less phase in data center technology.”

Creativity and innovation were defined as important measures of success by 18% of respondents, up three percentage points from 2014. Coming in under budget fell in importance by six percentage points from 2014 to 2015, landing in the single digits.

“I think [creativity is] critically important—I wouldn’t hire someone if I didn’t think they had it,” said Jamie Rabenstein, information technology manager at Victor Community Support Services (VCSS), an agency that delivers mental health and family support services, based in Chico, Calif.

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are] going to overlook something,” Rabenstein said. “They could have increased server performance, bettered [service level agreements], prevented downtime. You can’t do that if you just follow.”

Rabenstein experienced this over the past year, as VCSS replaced Dell servers with Cisco Unified Computing System blades, and added Nimble hybrid solid-state drive and hard disk drive storage with Condusiv Technologies’ V-locity I/O reduction software. It requires a different approach than the old way of doing things, but he sees performance and space utilization payoffs—especially as VCSS moves about 1,000 end users onto virtual desktops.

Creativity saves companies money, Stanger said, which is why CIOs and directors should seek it out. **Small and medium-sized businesses** especially look for creative IT people to solve problems within the available budget, he said.

“Especially in the education field, a lot of creativity and innovation is required, due to resource constraints,” said Ross Eberle, technical support supervisor at the Rockford School District in Illinois. There is no budget available for turnkey new products to meet a requirement as IT demands change, he added, but end users must be supported nonetheless.

“A new relationship is also forming between IT and the business. The IT services sector hiring is strong, with a concentration on IT-business hybrids, such as software engineers, analysts, architects, and program and project managers over traditional tech infrastructure jobs, according to research from Foote Partners LLC in Vero Beach, Fla.

“You need an entrepreneurial spirit in the
back end,” said Jeff Einhorn, group manager of rAPIdd Infrastructure Services at Target.

Service managers should be empowered to make changes, with stability and efficiency in mind. Otherwise, business units might seek the autonomy and short-term payoff of shadow IT on public cloud services, Einhorn said.

Innovative and creative traits also increase satisfaction with the job. Innovative thinking was the second most cited reason for upbeat data center leaders. A total of 33% of data center respondents said the mood in their organization is optimistic. Of those, 45% claimed innovation is encouraged in their organization.

**HOW TO INJECT INNOVATION INTO IT**

IT organizations can increase the creative energy and interest in innovation around the data center through rewards, selective hiring and **strong leadership**.

“You can’t turn people into something they’re not. People who need to write databases can’t

whiteboard in front of CEOs,” VCSS’s Rabenstein said. But you can seek out the “sales personality” in engineering types during the interview process, using Myers-Briggs or other personality tests. Then, place those people in positions where they can step up with ideas.

“If you leave them alone for a few hours, maybe they’ll design something you’ve never seen before,” Rabenstein said.

**Target uses short-term challenges and hack-a-thons to encourage employees to work with ‘strangers’ in the IT organization.**

Target uses short-term challenges, hack-a-thons and other activities to encourage employees to work with “strangers” in the IT organization, according to Einhorn.

Time for “structured play” in a pilot lab will pay off, Stanger said, whether it’s simply evalu-
Eberle looks for technical skills, as well as a desire to learn and take on new tasks, when bringing an employee along on his team.

“In the IT industry, everyone’s got to learn on a constant basis,” he said. As a manager, Eberle’s role is to keep these creative people engaged and supply the information they need to make decisions.

“They’re part of the solution,” Eberle said. “A lot of times, we overlook that. We expect technicians to go out and get it done.”

In addition to encouraging free time, reward IT workers with conference attendance and trainings where they can cultivate ideas alongside peers at other companies. It may be easier to give a cash bonus, Stanger said, but the best companies foster curiosity through “education vacations.”

“They come back and their creativity goes off the charts.”

EDITOR’S NOTE: This report was based on response from survey takers who selected data center and server management as one of the top-three areas that occupy their time. They were allowed to choose multiple options in response to what they considered measures of success.
IT channel partner survey reveals cautious optimism

Value-added resellers and managed service providers expressed cautious optimism regarding their prospects in 2016, sentiments that reflect an uptick in business.

By John Moore

IT Channel Partner professionals appear cautiously optimistic on the industry’s prospects for 2016, with the mood buoyed by a combination of general economic trends and job satisfaction.

That observation is among the findings stemming from TechTarget’s 2015 Annual IT Salary and Careers Survey, which polled 341 people who either work directly for, or are self-employed and work for, a value-added reseller (VAR), systems integrator or managed service provider. A bit more than half of the survey respondents (53%) said they believed the mood will be more optimistic in 2016, while just under a third (31%) were neutral, anticipating the mood to be neither optimistic nor pessimistic. Pessimists were in the minority at 16% of the respondents.
Those results are somewhat more positive than the survey participants’ current sentiments: 46% of the IT channel partner staffers said the IT mood was optimistic, 37% were neither optimistic nor pessimistic and 17% expressed pessimism.

Optimists cited a number of reasons for their feelings, with increasing business, a strong management team and an innovative work environment ranking as the top three factors. Overall, most channel professionals—62%—expressed satisfaction with their jobs.

**TRACKING WITH OTHER RESULTS**

TechTarget’s findings are generally on track with other IT survey results. CompTIA’s IT Career Insights survey of nearly 2,000 IT professionals—roughly split between U.S. and international respondents—found that 73% of U.S. participants said they were either satisfied or very satisfied with their jobs, noted Tim Herbert, senior vice president, Research & Market Intelligence at CompTIA.

In addition, CompTIA’s IT Industry Business Confidence Index reversed a downward pattern. The fourth-quarter index saw an increase of 2.2 percentage points, “reversing two consecutive quarters of decline,” CompTIA noted. The index is based on an opinion survey of IT executives, polling them on their views of the U.S. economy, the IT industry and their own companies. CompTIA said all three index components posted gains in Q4, with the rating of the overall economy seeing the largest increase.

“For the most part there is pretty strong optimism among channel partners and channel companies right now,” Herbert said.

John Reed, senior executive director at Robert Half Technology, an IT staffing firm, said he thinks the optimism is due to the more strategic application of technology within organizations.

“As technology continues to impact most departments within organizations, the need for professionals to implement and maintain these technologies will continue to be important to
overall success and increased efficiency and productivity,” he said. “IT is becoming much more involved in strategic discussions for progressive organizations, which is providing a renewed sense of confidence and optimism for technology workers as they are seeing their roles expand.”

Reed added that his company is seeing tech leaders adding to their teams or implementing new technology initiatives such as digital or cloud projects.

SOME UNEASE AMONG IT CHANNEL PARTNER STAFF
There are some currents of unease, however, among the respondents to the TechTarget survey. Less than half of the respondents expect to receive a raise in 2016 and 31% said they believe no salary increase is in the offing.

One survey respondent, a software developer at a consulting firm, said she believes her compensation will stay the same in 2016 if she remains in her current job.

“The company has a new CEO, and they’re looking to cut costs all over,” said the developer, who requested anonymity. “They already said we wouldn’t get [a raise] in 2014. ... I think it’s probably going to be the same in 2016.”

There are some currents of unease among channel respondents to the TechTarget survey. Less than half of the respondents expect to receive a raise in 2016.

Tony Adams, owner of betaTech LLC, an MSP in Omaha, Neb., also finds himself at a career crossroad. Adams formed betaTech two years ago “more or less to make money to get through [graduate school].” His graduate studies focus on software development.
With the master’s degree almost in hand, Adams is now weighing his options about what his next step will be. The options include focusing exclusively on growing his managed services business or taking a full-time software development job, running his business on the side to grow it out later. The decision is hard because he loves being a business owner. He said it would take a while to get to the point where he could find and take on new clients to make the business more sustainable to support his family.

“Where I’m going I don’t know yet. ... I want to make the right decision. I don’t want to take on a job and then close down the business and then figure out that that’s not what I want to do,” he said.

This ambiguity spills over into compensation. While many IT channel partner professionals don’t expect any salary increase in 2016, those who do expect a raise, on average, anticipate a sizeable 6.4% boost.

Reed said Robert Half’s 2016 Salary Guide indicates an overall average starting salary that’s 5.3% higher in 2016 compared with 2015 salary levels. He said salary increases for employees already in a role may or may not prove as significant. He added, “It is important for employed professionals to stay up to date with salaries in their role and region if they plan on having discussions around raises with their managers.”

The differing employee fates with respect to wage hikes may have something to do with where they stand on the salary scale. Herbert, while warning against over-generalizing, said he discovered a possible correlation between salary level and size of salary increase when comparing the Department of Labor’s Occupational Employment Statistics for IT occupations in 2013...
and 2014. He found that workers in the 25th wage percentile received an average increase of 1.5%, while those in the 90th percentile received a 3% increase.

Herbert said that finding could show that certain technology niches experiencing high employer demand and scarce employee supply are pushing up some salaries but not others. Employees working in those niches are likely to be paid more and companies will try harder to retain them. But if employees at the top of the organization get the biggest raises, organizations with fixed workforce budgets will look to make offsets elsewhere. The result, Herbert added, is “fewer dollars for increases and bonuses in other parts of the organization.”