

Google Communications Intelligence Report 2009

Business in the cloud: 2009 outlook



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"Some of the on-premise solutions were very complicated and there was no way we wanted to – or could – manage them internally. When we looked at the cloud solution, which was hosted, easy to manage, and gave our users tremendous flexibility, we knew right away it was the right solution for us."

—Arell Chapman, Assistant VP of Network Administration United Bank & Trust

Executive summary

More and more businesses are finding enhanced productivity and IT efficiency when they move their applications “to the cloud” – the realm of hosted, browser-based information access and management that includes Google’s Postini Services, Google Apps, and other SaaS (Software-as-a-Service) solutions. In fact, Pew Research Center cites that 69% of Americans were already using cloud services such as Gmail in 2008. Gartner Research affirms that 89% of companies expect to expand or maintain their use of cloud computing between 2009 and 2011.

How are these companies using cloud computing? What types of organizations are moving to the cloud, and what value do they find there? What are the key drivers for and barriers to adoption, and what are perceptions regarding security and cost in the decision to move to the cloud?

To find out, Google recently sponsored a global, multi-industry study of 1,125 IT decision-makers to track perceptions about cloud computing and the key business drivers behind the growth in cloud-based solutions. We’re sharing our findings here. Highlights include:

- Email security, web security, and messaging are the cloud applications most widely adopted (ranking higher than CRM) ; organizations using these applications in the cloud report higher satisfaction than users of traditional platforms
- IT departments are evaluated based on network uptime, cost management, data security, and issue resolution – all of which are generally enhanced by cloud solutions
- Key benefits to using cloud apps include value, availability, convenience of not implementing on-premise, consistency across locations, better service, reliability, and ease of staying up-to-date
- Ease of use is cited as the key motivator for transitioning to cloud apps
- “Price” is mentioned as a key deterrent by respondents not currently using cloud-based apps; however, “value” is cited as a key benefit by respondents who currently used cloud solutions.
- A key deterrent for adoption of cloud apps is cited as resistance to change; questions about security factored as a secondary concern

Note that nearly 50% of the respondents who were “aware of but not currently using cloud-based apps” indicated that they are considering a full or partial cloud implementation in the next 12 months.

IT realities today

IT continues to be a key driver in producing operational efficiency, cost effectiveness, and competitive advantage for organizations of all sizes. IT personnel maintain a constant balancing act between the internal demands of the organization to support revenue generation (sales tools and support), budget management (operate efficiently, “do more with less”), and damage prevention (spam and virus control, legal compliance, data security).

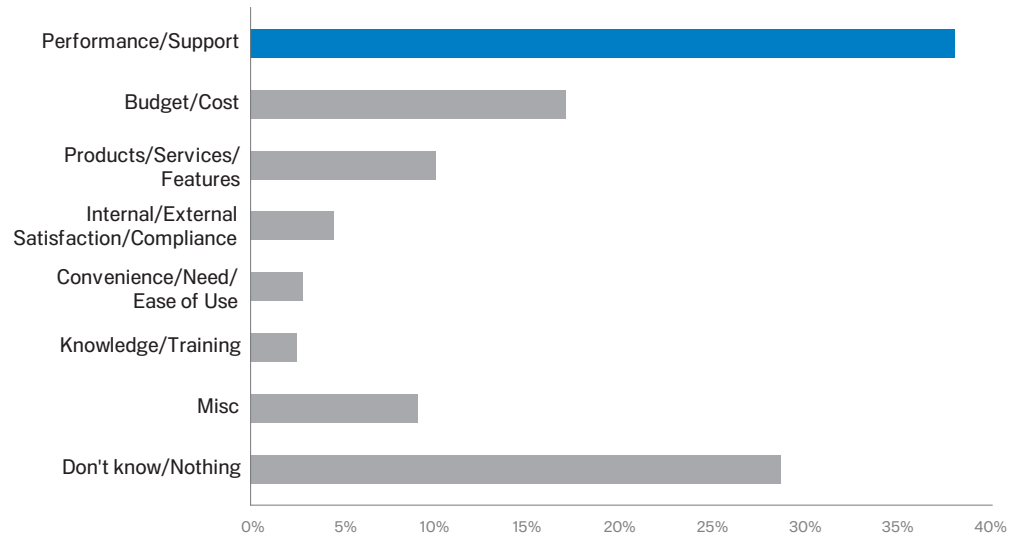
We asked respondents an open-ended question regarding factors by which the success of their IT teams were measured. Answers included:

- security, stability, and access
- cost, necessary software, business needs
- speed and perfection
- project completion on budget and on time
- the ability to maintain costs within budget and provide business with requested services

Measuring IT success

Nearly 40% of respondents from medium-sized to large companies indicated that their IT department is primarily measured by the performance and support of IT infrastructure (general uptime, availability, and stability of the network and other computing resources). Budget concerns ranked next in importance, with 17% of respondents reporting that their department is evaluated based on keeping costs under control and staying within budget.

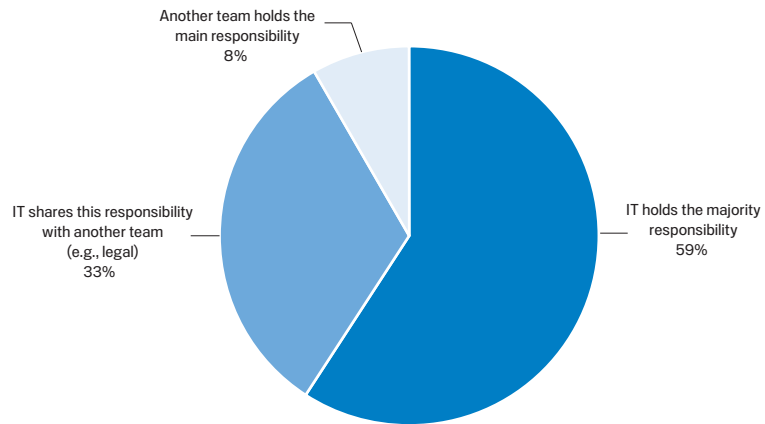
What are the primary metrics against which your IT department is measured?



IT's role in communications security and compliance

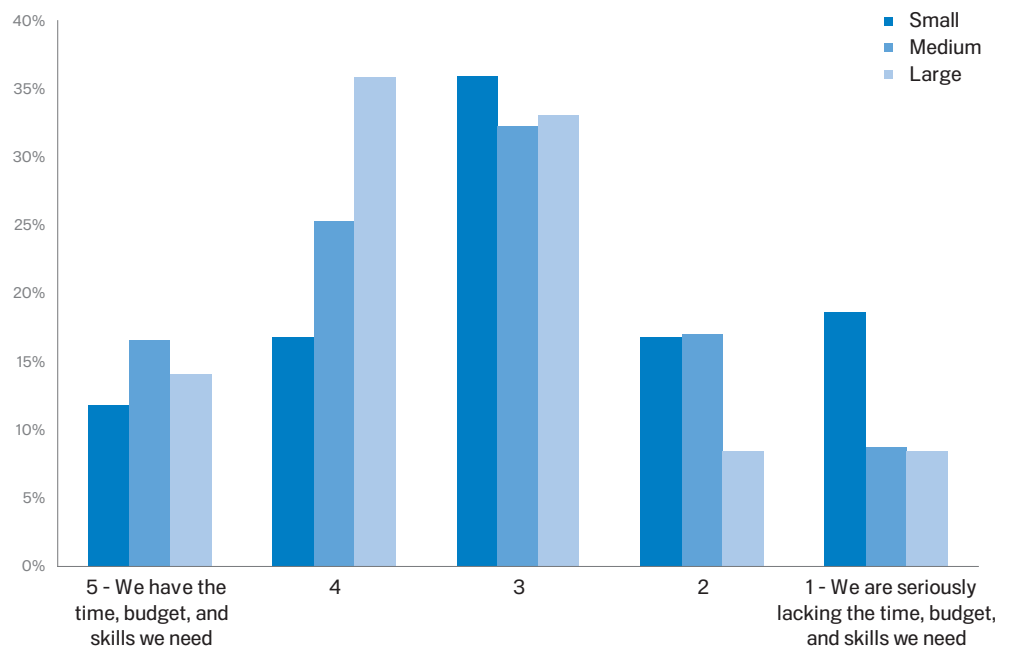
Our survey showed that IT decision makers are seen as responsible for communications (email) security and compliance, especially in medium and large organizations, which tend to have more specifically-identified resources for IT management. Nearly 60% of respondents indicated that their IT department holds the majority of the responsibility – up from 53% last year – and another 33% indicated that IT shares the responsibility for communications security and compliance with another team, most often the legal department.

How much is IT at your company held responsible for ensuring systems and processes are secure and compliant?



Further data from the survey revealed that about 18% of medium businesses felt equipped to handle security and compliance needs; large businesses reported slightly lower preparedness and small businesses dropped to 12%. Across all business sizes, most IT personnel reported being “somewhat equipped” to handle these concerns. Respondents from small-sized organizations seemed to face the largest challenge: 36% of respondents reported “seriously lacking” the resources empowered handle security and compliance challenges. Judging from this data, a significant number of organizations see opportunities to improve their security and compliance preparedness – a number that will likely increase as legislative changes, including increased privacy protection requirements, and e-discovery challenges also rise.

How well equipped is IT to handle security and compliance?



We asked companies to define the factors that motivated them to start using cloud computing applications. Some responses included:

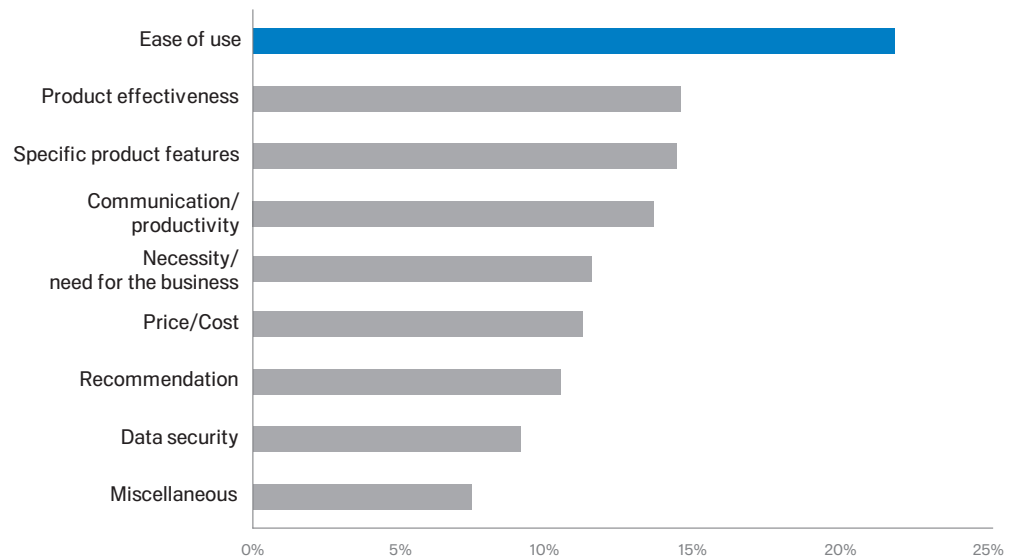
- improved security
- need access to information stored in the head office, plus cheaper and easier communication between offices. Plus, we need to be able to input data from the branches
- easy to use and no need to re-implement locally
- better quality of service for the applications to ensure data integrity and reduce errors
- need to secure and control the amount of junk coming through

Cloud computing: helping IT enhance results

1. Motivation

Across industries, some 22% of respondents who were “aware of and currently using cloud computing” had moved to cloud computing because of ease of use and convenience; 14% made the switch seeking product-effectiveness traits such as service quality, availability, and reliability. “Cost,” interestingly, factored lower here; since cloud solutions tend to have a markedly lower TCO (Total Cost of Ownership) than on-premise solutions, this might suggest that the results delivered in cloud applications outweigh even the bottom-line benefits of lower cost.

What motivated your organization to start using SaaS?



The motivation for switching to the cloud varied by industry. “Ease of use” and “product effectiveness” were cited by healthcare and communications respondents as primary reasons; both also listed “data security.” Banking stated “business necessity” as a top reason. “Price/cost” was not the top priority in any industry; only technology respondents listed it as a key factor.

Top 2 motivations to start using SaaS by industry

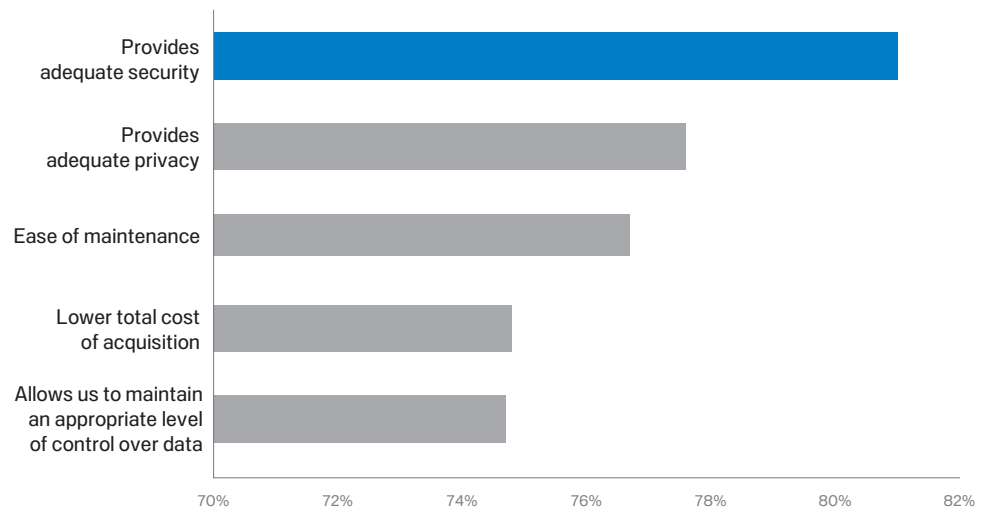
| | Retail | Professional Services | Manufacturing | Public Sector | Technology | Healthcare | Communications/Media | Education | Banking |
|---------------------------------|--------|-----------------------|---------------|---------------|------------|------------|----------------------|-----------|---------|
| Ease of use | 1 | 1 | 1 | 1 | | 1 | | 2 | |
| Product effectiveness | | | 2 | | | | 1 | 1 | 2 |
| Specific product features | | | | 2 | | | | | |
| Communication/productivity | | | | | 1 | | | | |
| Necessity/need for the business | | 2 | | | | | | | 1 |
| Price/cost | | | | | 2 | | | | |
| Recommendation | 2 | | | | | | | | |
| Data security | | | | | | 2 | 2 | | |

Boise State University will save \$90,000 annually in ongoing email system costs by moving communications to the cloud with Google Apps. The school also notes markedly reduced call volume at help desks. The migration also enabled BSU to begin consolidating their server operating system platforms. Previously, eight engineers worked to support services implemented across four separate operating systems, but since switching to Google Apps, they've removed 11 servers and have allocated just 1/10th of one full-time employee to system support. According to the school's IT lead, engineering resources that were previously allocated to their legacy system could be reassigned to build the framework for a new identity management system, and further resource productivity benefits also becoming possible.

2. Usage

Of all survey respondents, 45% use cloud solutions for email security, 40% for messaging (email, IM, calendar), and 38% for web security. Overall, organizations that use cloud solutions had three top criteria affecting the choice to implement additional cloud applications: security, privacy, and ease of maintenance. Although “lower cost of acquisition,” or purchase/deployment costs, did not rank in the top three across all respondents, it received higher ranking in manufacturing, professional services, and the public sector industries.

What features are most important in your decision to use more SaaS?



Mapping cloud computing to IT performance metrics

1. Ensuring the performance of the IT infrastructure

Because updates and enhancements to cloud applications are hosted “in the cloud” and not in on-premise servers, organizations can make use of upgrades without having to patch servers or install new software. What’s more, cloud solutions generally provide a net higher level of uptime, since systems don’t have to be “taken down” for upgrades and maintenance. They also greatly enhance preparedness and scaling – the ability to ensure that companies have sufficient capacity to handle usage growth – relative to on-premise solutions. With cloud-based solutions, coverage is always there, without additional infrastructure investment.

2. Maintaining costs and budget

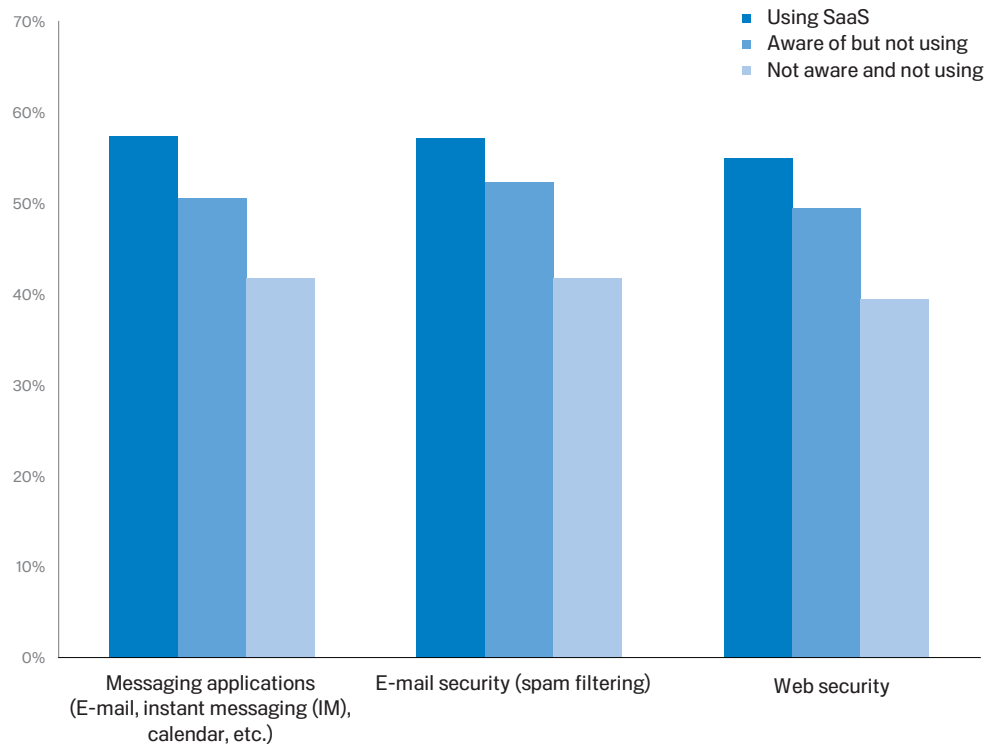
Cloud solutions can help organizations plan budgets and reduce spending because they minimize the need for software licenses and on-premise hardware. Because less hardware and fewer upgrades translate to reductions in IT “maintenance” time, organizations who use cloud solutions can also reduce costs associated with hardware and software maintenance, and can free IT resources to focus on activities more aligned with strategic objectives.

Delivering full-featured products and services

With cloud solutions, updates can be automatic or administrator-controlled, letting organizations manage how their users make use of new features and capabilities. In addition, cloud solutions often roll out improvements to the service at a higher frequency so that organizations don't have to wait for an annual release cycle. In the case of email security, cloud solutions can detect and stop threats with greater speed, accuracy, and protection than on-premise solutions.

Real benefits of cloud computing become evident when we compare the overall level of satisfaction with the “big three” application areas – email security, messaging, and web security – between organizations using cloud solutions and those using on-premise or other legacy solutions. Across the board, users of cloud applications report measurably higher satisfaction than users of traditional solutions for all three application areas mentioned above.

Percentage of respondents very satisfied with their current solution



Based on this input, respondents state that cloud computing best fulfills its promises of easy maintenance, low cost of ownership and acquisition, security and privacy, and ensuring that the latest version of the application is being used.

Drilling down into the responses, the specific order of attributes that comprise the respondents' satisfaction slightly varies by company size. No matter what the size, ease of maintenance ranked highest. Large organizations next look to ease of scalability, which is consistent with the sheer number and geographic dispersion of employees in organizations of this size.

About the 2009 Cloud Computing survey

In February 2009, Google sponsored an online survey of 1,125 IT decision makers, conducted by TNS Market Research, an independent third-party research firm, on their opinions of SaaS and its impact on their jobs and companies. The largest group of respondents was in the wholesale and retail industry, with professional services close behind. Other industries strongly represented in the survey were manufacturing, healthcare, communications and other IT, education, banking/insurance, and transportation.

A total of 660 respondents (59 percent) work at small companies with fewer than 99 employees and 465 respondents (41 percent) are employed by medium or large enterprises with 100 or more employees. CIOs or other C-level executives comprised 21% of respondents. Another 31% were IT VPs, directors, or managers or hold another IT-related position within the company. A total of 28% of the responding firms were located in the United States, 17% in Australia, 15% in the United Kingdom, 14% in Germany, 13% in France, and 13% in Japan.

Google regularly conducts research tracking current challenges and perceptions facing IT decision makers, and shares findings from this research in reports such as this.

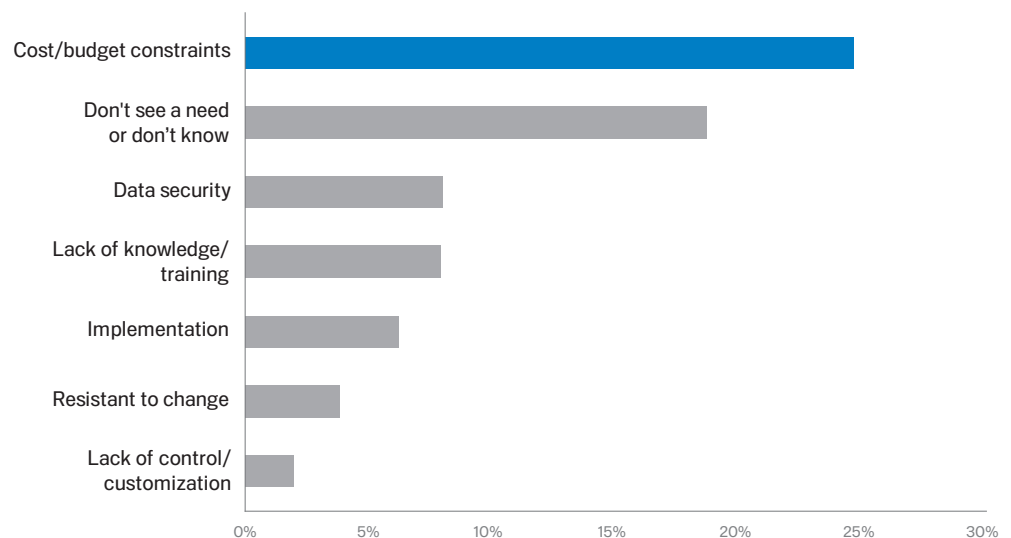
For medium-sized companies, ensuring the most recent version of the software is available, control over data, and ease of scalability all tied for second place in factors that comprise respondents' satisfaction.

Finally, in companies with fewer than 99 employees, the ability of the solution to deliver the latest version of the software and to provide adequate security ranked second and third.

Barriers to cloud computing adoption

Although companies that currently use cloud applications and services report lowered Total Cost of Ownership (TCO) relative to on-premise solutions, non-users continue to perceive higher costs associated with switching to the cloud. Cost or budget issues were the primary factor reported as a barrier to adoption; it is likely that for some of these respondents the fixed costs already invested in existing hardware, software, and systems were seen as a deterrent to adopting a new solution.

What are barriers to adopting (more) SaaS at your organization?



Conclusion

The information gathered in this survey seems to reflect a turning point for IT leaders and their consideration of cloud-based applications, and a need for clearer understanding around the advantages of cloud computing relative to traditional platforms. It seems clear that cloud solutions are moving from the early adopter phase and into more mainstream consideration, and – at this transition – questions about the benefits, especially about advantages and price differences relative to legacy systems, need to be addressed.

Many companies that have adopted cloud applications report that doing so enabled their IT department to better meet internal expectations and benchmarks of success. The success of these early adopters is leading the way for others to reap the benefits of cloud computing: according to our survey, more than 50% of companies that were “aware of, but not currently using” cloud applications indicated that they would

About Google Apps

Google Apps is an enterprise-ready suite of applications that includes Gmail, Google Calendar (shared calendaring), Google Docs and Spreadsheets (online document hosting and collaboration), Google Sites (team site creation and publishing), and Google Video (easy, secure sharing of video content).

For more information visit:
www.google.com/a

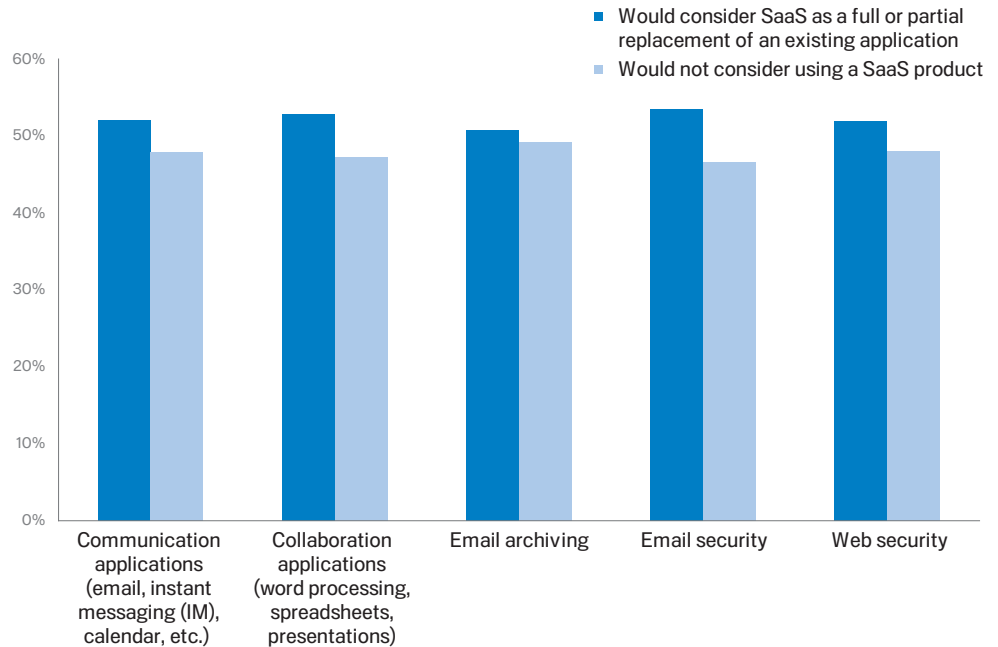
About Google Security and Archiving, powered by Postini

Google security and archiving products, powered by Postini, make email systems more secure, compliant and productive by blocking spam and other intrusions before they reach your network, and by providing encryption and archiving to help you meet compliance requirements. Google's hosted model leverages the "network effect" created by billions of daily email connections to detect and block threats in real time, without requiring on-site updates. Economies of scale in storage, along with simple deployment and maintenance-free service, drive a low total cost of ownership.

For more information visit:
www.google.com/postini

be considering a full or partial cloud implementation in the next 12 months. Of those organizations, the majority will evaluate one of the top three cloud computing applications – email security, messaging, and web security – as well as collaboration, file sharing, and videoconferencing applications – in the coming year.

Would your organization consider using SaaS in the next 12 months?



For information about Google's cloud-based productivity solutions, visit:

Google Apps: www.google.com/a

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