Leaders in the Cloud:

Surviving in a Tough Economy:
Cloud Computing to the Rescue

Sand Hill
Group

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Introduction

With the continuing economic turmoil around the world, the downgrading of the U.S. credit rating for the first time in history, the EU facing similar challenges, and the specter of another recession looming on the horizon, many companies are focusing their attention on economic survival. Today's threefold mantra is cost reductions, tighter budgets, and maximizing cash flow. In particular, many Small and Medium Enterprises (SMEs) are struggling just to keep the lights on when there's not a lot of revenue growth.

There is good news. These companies can manage through the tough times by embracing technologies to not only survive but also to control costs and win increasingly intense competitive battles. While traditional, pre-Internet technologies were cumbersome, expensive, and complex, today's cloud computing technologies, cloud-based business applications, ubiquitous broadband access, and mobile technologies already are proving to be cost-effective, convenient, and powerful in this quest to survive and thrive.

Many emerging cloud-based business solutions provide features to SMEs that were previously only available to large enterprises, now at a fraction of the price. SME executives can tap into these applications to compete with the big companies, save costs, and improve effectiveness.

Smart companies need to invest strategically during an economic downturn to position themselves to compete and win when conditions improve. By leveraging cloud resources and business Software-as-Service (SaaS) solutions, they can make these investments with relatively lower capital outlay. Many of today's cloud business SaaS solutions provide features to SMEs that were previously only available to large enterprises, now at a fraction of the price. SME executives can tap into these applications to compete with the big companies and save costs.

This white paper identifies the top challenges companies face in rough economic conditions and illustrates how cloud computing can positively impact cost savings, asset utilization, process and supply chain efficiencies, and the ability to mine valuable insights from data.

Challenges of the New Economic Norm

In the aftermath of the economic crisis in 2008, developed economies around the world continued to struggle with high unemployment rates and low growth rates. Customer expectations changed dramatically and business focused their priorities on economic survival. Cost pressures brought many new challenges to businesses of all sizes and in all industries.

Some common challenges they still face today include the following:

- Dramatic budget cuts
- Underutilized assets
- Challenges of globalization, outsourcing, and virtual teams
- Inefficient processes and supply chains
- Lack of insight into improvement areas

Dramatic Budget Cuts

In an economic and competitive environment where companies must deliver more value with even fewer resources, double-digit annual budget cuts are the norm. Business and IT executives must revisit their planning strategies to reduce capital and operational expenses, cut back on development and support costs, and prune headcount.

Underutilized Assets

Faced with tight budget constraints, SMEs need to squeeze more value out of existing technology assets. However, in many companies, assets such as desktops, printers, servers, and networking equipment are used very inefficiently, with average utilization ranging between 10 - 20 percent.

An SME electronics engineering company we interviewed ended up with a glut of 13 e-mail servers as a result of rapid expansion around the world prior to the recession. Furthermore, the company had 55 physical servers worldwide in use by their HR, financial, and engineering teams.

> **"The economy is certainly pushing CIOs whose budgets are shrinking by the day, without any reduction in the amount of work they need to do."**
> — *CIO, SME manufacturing company*

Clearly, having more systems means higher resupply and spare parts requirements, which increase inventory costs and working capital, not to mention ongoing maintenance, patching, and support costs. The CIO of this company is now reducing this technology footprint. As we demonstrate later in this paper, cloud computing allows SMEs like this example to run their business without much investment in physical technology assets.

> **"We had 55 physical servers and we got them down in the 20s. I've got a road map to get that down to six servers. We had 13 email servers around the world. Now we're down to one."**
> — *CIO, electronics engineering company*

Challenges of Globalization, Outsourcing, and Virtual Teams

On the global economic front, emerging markets recovered faster and emerged stronger from recent economic woes and continue to drive new growth for established and new companies alike. As these markets mature, they bring more experienced and skilled people to the global workforce, leading to an increase in outsourcing.

Organizations not only outsource routine management and maintenance work but also increasingly outsource strategic R&D and other high-value projects that require highly skilled workers. Small and midsized companies are driving this trend as they propel the growth and recovery of the economy overall. This trend leads to an explosion of geographically distributed virtual teams as companies continue to seek new ways to reduce costs of facilities, travel, and other overhead.

> **"It is a jarring contrast—today's office is very likely to involve mobile technology in a car, or a VoIP call from a home office. With the continued popularity of Dilbert comics and the TV hit, "The Office," the old world of cubicles, monitors, fax machines, and water coolers seems to be frozen in time. "**
> *— Oliver Marks, Founding Partner, SovosGroup. com on Collaboration 2.0 blog*

Global teams face distinct obstacles to collaborating and working together productively. When employees on the same team are physically located in Palo Alto, Boston, London, Bangalore, and Shanghai, they can't simply walk down to the next meeting room to plan projects, discuss goals, or rapidly resolve a business or customer problem. Without critical communication skills and support tools, virtual teams like these will fail to collaborate effectively and end up classified as "low-performance" teams.

Inefficient Processes and Supply Chains

Many companies that attempt to provide a coherent customer experience fall short and stumble because they lack the efficient processes and cross-functional workflows to optimize service responsiveness and customer satisfaction. Additionally, internal processes—ranging from billing, cash flow, and accounts receivable cycle times to supply chain and inventory management—are often siloed and inefficient, leading to more overhead and a waste of resources.

Many companies are supply-chain blind because 80 percent of the data is outside their own ERP systems of record. Not surprisingly, therefore, variability is very common in many supply chains. While 95 percent of the orders get to their destinations more or less on time, the remaining uncertainty means companies must carry more inventory. Global companies have especially long lead times. In this digital, I-want-it-now age, companies that make their customers wait will lose them and lose out to the competition.

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Lack of Insight into Improvement Areas

Data explosion within the enterprise is a well-documented phenomenon. Unfortunately, more than 80 percent of this data remains hidden in siloed databases and operational systems. As a result, companies lack the visibility and insights to act on important information to effectively:

- Control costs

- Improve operational efficiency

- Reduce inventories

- Fix bottlenecks in the supply chain

- Seize revenue opportunities.

Cloud Computing to the Rescue

The following sections explore and explain how companies can deploy cloud computing to effectively address the above challenges.

Cost Advantages of the Cloud

Lower capital costs and flexible pricing models. When using cloud applications, companies don't need to make large capital investments on servers and storage, nor do they have to pay hefty up-front license fees and ongoing maintenance fees for the software. They typically pay for cloud applications on a per-user subscription basis. This means only paying for what they use and easily increasing or reducing their usage to rapidly respond to changing business needs. The pricing model also helps them manage costs during the trying economic conditions that force businesses of all sizes to cut back on unnecessary capital investments.

> **"The only way I could reduce my IT budget by over 50 percent was to tear down on-premise, dysfunctional business applications and replace them with something that worked and is priced by the user."**
> — *CIO, software vendor*

It is not surprising that 46 percent of executives surveyed in the 2011 Sand Hill Group study (see Appendices A & B) cited cost efficiency as the most important driver of embracing cloud computing for their companies.

The good news is that many respondents reported significant cost savings with cloud projects compared to their traditional alternatives. In fact, 91 percent reported cost savings overall, with 62 percent realizing savings greater than 10 percent.

Cloud Computing Improves Asset Utilization

Cloud technologies leverage automation, economies of scale, and resource sharing to achieve cost and agility benefits. For example, a key feature of cloud is multi-tenancy, an architectural approach where a single instance of cloud software runs on a server that services multiple client organizations or "tenants."

This architecture allows cloud hosting companies to maximize utilization of their IT resources—applications, operating systems, hardware, and storage—by sharing them securely among multiple users and customers. With this approach, server utilization that typically runs at 10 - 20 percent capacity can be increased to more than 80 percent. This is where cloud vendors benefit from cost savings, which they pass on to their customers.

Companies that buy technology services from external cloud vendors can lower both risk and costs while shifting Capital Expenses (CapEx) to Operational Expenses (OpEx).

Instead of buying excess capacity to anticipate peak demands, companies can buy more licenses as needed, taking advantage of the elastic nature of cloud resources.

This flexibility reduces up-front software and hardware costs and eliminates the need to hire specialized talent to manage these resources.

SME executives can take advantage of business cloud applications to run their business and at the same time reduce their internal IT footprint.

CASE STUDY: Manufacturing Company Achieves Significant Cost Savings by Moving to the Cloud

A manufacturing company was very frustrated with the cost, complexity, and poor usability of its traditional on-premise applications. The company evaluated several on-premise applications and corresponding cloud equivalents for its HR and CRM systems. The findings, which include the following factors, make a convincing argument for the multiple benefits of cloud applications:

- Cloud requires 25 percent lower investment than with traditional on-premise applications

- 70 percent fewer resources to administer/run the cloud application versus traditional applications

- 25 percent lower TCO (total cost of ownership) over a five- to seven-year time frame for cloud compared to the on-premise application

- 40 percent cost and time savings with a cloud pilot project.

In some cases, they also can eliminate physical servers altogether, as illustrated in the the example of the IT services company that leveraged SaaS applications to launch its business.

The Cloud Facilitates Collaboration

Several cloud solutions overcome the productivity and continuity challenges of running a business with distributed workforces. In particular, the virtual workplace and improved collaboration has already become a reality with SaaS applications hosted by the vendor and provided as a service to the end user.

The most popular of these applications enable the following valuable functions:

- Virtual team members can conduct real-time, face-to-face meetings (often with video), collaborate on projects, and share, discuss, and edit project documents, project plans, presentations, and more.

- Team members can collaborate virtually to achieve a specific set of objectives such as delivering a software project, hiring a new employee, or closing a sale. In fact, some of the greatest success stories of the cloud come from groups and communities working together in ways that were not previously possible before the cloud. The explosion of social tools like Facebook, Twitter, and LinkedIn has been spectacular; these technologies are now moving to the enterprise with solutions such as Jive, Yammer, Salesforce Chatter, and SAP StreamWork.

- Users can gain access to their PCs, Macs, documents, presentations, and spreadsheets remotely from any location.

IT Services Company Leverages SaaS to Launch Business

A new IT services company launched its business without buying any servers and without hiring any IT resources to run its business. The company switched to using the following applications in the cloud:

- Email
- Collaboration
- Conferencing
- Telephone system
- Sales force automation
- Website
- Human resource management
- Marketing automation

The benefits to the company of going to the cloud were immediate:

- Fulfilled all the basic requirements to launch the business without heavy capital investments

- Began operations in just days and weeks, instead of months or quarters

- Paid only for services actually consumed

- Was not locked into long-term contracts, reducing risk in case the venture fails and/or the business opportunity changes, leaving the company with no lingering debt.

> **"The challenge was making sure our distributed workforce was able to work effectively and productively with each other. We needed to find technology solutions that allow employees to work with others across the organization just as if they were there in person."**
> — *Director of Global ITS Services, networking company*

Cloud-Based Supply Chain Solutions Improve Performance Dramatically

A cloud-based supply-chain platform can solve many of the challenges of dealing with multiple partners globally, including:

- Automating supply-chain processes such as order fulfillment, purchase to pay, and inventory tracking so they span the entire value chain of partners. This in turn reduces:

    - Inventory carrying costs

    - Operational expenses

    - Transportation expenses and overhead

- A supplier that joins the community can easily work with multiple retailers. The work and contribution of any single partner or a logistics service provider—such as repair or improvement of the data connection for just one customer on the network— can be applied to benefit every other member of the community.

- The cloud platform becomes a virtual supply chain platform. Customers can plug and play with partners virtually without any rewiring of the nervous systems of these processes.

- The physical flow of shipments, orders, inventory, packing lists, commercial invoices, etc., can be represented in the cloud system centrally just once. Entire communities gain access to this central repository of information—a single version of the supply chain truth. Hence, they can collaborate and make decisions that improve operational efficiency, reduce waste, and improve cycle times.

- The cloud becomes a system of record for transactional processes around an order during its execution. It can provide details of the order status as it executes to the merchants, inventory planners, and procurement staff.

The Cloud Makes it Easy to Mine Insights from Data

Analytics is the area of greatest activity in the cloud. Cloud-based systems shine when it comes to accessing, processing, and managing large volumes of data.

Specifically, companies can apply cloud-based analytics to three areas:

- Predict customer demand

- Improve operational processes

- Optimize the supply chain

> **"Using an analytics tool to analyze suspicious employee theft activity by site and by employee, one casual dining restaurant saw a profit increase of $20,000 - $40,000 a year."**
> — *"What Every CEO Needs to Know About The Cloud," Harvard Business Review, November 2011*

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Predict Customer Demand

Most of the activity to date in analytics has been around understanding, predicting, and influencing customer behavior, both online and offline. There is a lot of excitement around collecting consumer data at the point of sale, marrying that with profile information, and predicting demand more accurately.

Improve Operational Processes

Companies can also improve their operational processes by identifying unprofitable customers and cost chokepoints. This is accomplished by analyzing current and historical data from general ledgers and combining it with production or customer data.

Optimize Supply Chain

Companies also have a strategic opportunity to optimize their supply chains using cloud-based analytics applications. If they have a quality data set that covers the transactional details of order fulfillment or the purchase-to-pay process, they can begin to glean actionable insights. These might include how their supply chain is operating and how to change it, whether they are sourcing in the right areas and working with the right providers, and more. Predictive analytics can help forecast demand more accurately so companies can balance their inventory with demand and still reduce the risk of stock-outs.

Analytics can also detect costs that exceed pre-determined limits and help companies control their operations more tightly. Best of all, to acquire these analytical capabilities from the cloud, companies don't need to buy or install any hardware and software, hire technical specialists, or expand IT staff.

Conclusion

The cloud today enables companies to respond to the challenging economy. It is especially attractive to small and midsized companies whose capital and resource constraints are a hindrance to achieving business transformation and competitive leadership in their market.

Because of the speed to market, cost savings, and business agility it enables, cloud computing is the most powerful technology wave to hit the business landscape in many decades. Companies that ignore it, do so at their own peril. Those businesses that take the steps today to become more efficient now will be rewarded even more handsomely when the economy turns around. Those that don't will fall behind the times and lose their competitive edge.

APPENDIX A

Overview of Sand Hill 2011 Cloud Survey

During January-February 2011, Sand Hill Group conducted a research study to gauge software vendors' cloud outlook for the coming year and beyond. The study utilized an online survey supplemented with in-depth follow-up interviews of 10 percent of the participants to gather executives' impressions on the direction of the cloud market, their cloud strategies, and customer readiness for adoption.

A total of 100 software CEOs and senior executives responded to the 24-question survey and provided insight about their cloud revenues today and next year, customer attitudes and readiness, and which products and services are gaining traction. Thirty-two percent of the respondents identified themselves with titles of CEO/presidents, and another 32 percent identified as vice presidents of sales/marketing/services.

The study also identified the long-term trends including which layers of the cloud stack will take hold in the next three to five years. In addition, researchers conducted in-depth telephone interviews with 10 percent of the surveyed executives to gain more insight. Participants in the initial survey as well as the follow-up interviews were guaranteed that their identities would remain confidential in order to protect the strategic nature of the corporate information provided.

A broad cross-section of software companies participated in the survey. Nearly three-quarters of the respondents were from product companies.

The executives represented primarily midsize and small companies. Thirty-seven percent were from companies with less than $10 million in revenues, and 28 percent have revenue of at least $10 million but less than $250 million. About 18 percent of the respondents were companies with greater than $1 billion in revenues.

The findings of this study are intended to give software companies directional insight as they make business decisions. Although efforts were taken to survey a wide variety of software companies, the study is not necessarily a representative sample of U.S. software companies.

APPENDIX B

Overview of Sand Hill 2010 Cloud Research Study

In 2010, Sand Hill Group released a landmark research study identifying the business value realized by companies deploying cloud-computing initiatives today. A two-phase study design uncovered both the in-depth insight of specific customer and vendor experiences, and a quantitative market survey provided a snapshot of cloud initiatives and priorities at a variety of companies. The interviews and survey questioned respondents about their current cloud initiatives, current and planned use of specific cloud models, business benefits, organizational and technical challenges, and details of specific use cases.

In-depth Interviews

In order to gain an understanding of the cloud experience at a variety of types of companies, Sand Hill conducted a total of 40 one-hour in-depth interviews. Twenty-two interviews involved CIOs, VPs of IT, systems architects, and technology directors at small, midsize, and large companies. This group of executives represented a variety of industries, including insurance and finance, energy, telecom, manufacturing, health care, media, and technology.

To gain insight from leading software vendors, Sand Hill conducted eight interviews with executive-level individuals who were responsible for cloud strategy and products within their organizations. Again, a mixture of representatives from large and small software companies was included.

Quantitative Survey

As part of the study, the Sand Hill Group conducted two Web-based quantitative surveys in collaboration with McKinsey & Co. and Tech-Web. These surveys received a total of 511 qualified responses. Most respondents were CEOs, CIOs, or other senior IT executives at their companies, which ranged in size from small businesses to global corporations.

The combination of qualitative interviews and quantitative surveys present first-hand accounts on the current state of cloud computing initiatives from an impressive cross-section of enterprises. However, the results may not be reliably projectable across the universe of American businesses. Therefore, the findings and implications in this report are intended to provide directional guidance during product development.