Unleash the Hidden Power of Your SMB

yankee group

by Steve Hilton | January 2008

The Bottom Line:	Consumer technology increases small business productivity 30% to 40% outside the office, especially for the least empowered employees.
Key Concepts:	Consumer applications, technology, business productivity, small businesses.
Who Should Read:	Applications vendors and service providers, VP of product marketing and R&D, CFO, CIO.

Executive Summary

Chatter abounds about the benefits of consumer technology in the business environment, but few have the insights into:

- Which consumer-technology solutions increase or decrease productivity and by how much?
- In which work-related venues (e.g., home, office, hotels, airports, coffee shops) do technology solutions impact employee productivity and connectivity?
- Which segments are ready targets for these productivity improvements from technology solutions?

This Yankee Group Report looks at the confluence of consumer technology and venues of usage and employee segment to identify those mobile professionals most suited to increase productivity. Mobile professionals—employees using a wireless-enabled laptop or having a mobile phone device that is used for business purposes at least 20% of the time—stand to increase productivity the most from adoption of these types of technology solutions. (See Exhibit1.)

To maximize employee productivity, SMBs must:.

- Buy technology solutions that drive productivity outside the office, not inside the office.
- Invest in blogs, wikis, smart phones, WWAD-enabled (EV-DO or HSDPA) laptops, instant messaging and online travel services for their mobile employees.
- Force IT staffs to support the just-making-its in their organizations as much as the movers-and-shakers and aspiring executives. (Want to l earn more about our SMB employee segments like the just-making-its? Read on.)

Exhibit 1. Productivity Tool Winners and Losers Inside and Outside the Office Environment
Source: Yankee Group Anywhere Enterprise—SMB: 2007 US Mobile Professional Blended Lifestyle Survey

	Inside	Outside
Consumer IM	↑	↑
Mobile SMS	↓	↑
802.11 Laptops		↓ ↑
EV-DO Laptops		↑
Smart Phones		↑
Voice-Only Cell Phones		↓
Wikis		↑
Blogs		↑
Second Life		↓
Online Travel Services		↑
Online Auction Sites		↑
Slingbox	↓	
YouTube		↓
MP3 Player		↑

I. Technology Openness at SMBs

Imagine a world where David Reynolds, the head of sales of a 100-person specialty plastics manufacturer, is awaiting his flight at the airport to visit a key medical services customer. To drown out all that airport turmoil, he's listening to some MP3s while wearing noise-canceling headphones connected to his laptop. His wireless wide-area broadband connectivity over EV-DO enables access to his company's internal blog discussing the needs of healthcare and medical services clients. While reading the blog, he's able to IM with his product marketing manager about his customer's product design concerns. He reviews his company's virtual manufacturing plant in Second Life, which depicts the supply-chain dependencies in creating specialty plastics products. He uses this virtual world to differentiate his customer conversations from his competition's. Imagine this type of connected, empowered world for SMBs.

As we learned in the July 2007 Yankee Group Report, *Zen and the Art of Rogue Employee Management*, employees seeking productivity increases and better ways to balance their home and work lives are introducing consumer-based technologies into the large enterprise. Monolithic IT departments—the modern-day equivalent of the medieval fortress garrison—must cede control and adopt a cooperative model to best support workers and grow the enterprise.

Those same types of consumer-based technologies are finding their way into small businesses as well. In fact, consumer-based technologies may find a more willing home with SMBs due to the structural differences between large and small businesses.

Let's modify our July 2007 Report's main assumptions for the SMB environment:

- Replace those roguish large business employees with frisky, overworked small business employees.
- Replace that 50- to 100-person IT department with two IT guys and one part-time college kid (who happens to be a good skateboarder and web designer).
- Replace the command-and-control mentality of the large enterprise IT group with IT generalists who do their best just keeping up with day-to-day desktop support and don't have time to worry about rogue employees.
- Replace the security-laden enterprise environment with little to no security beyond anti-malware suites.

Now we've entered the SMB realm: a place where consumer- and business-based technologies can flourish, increase productivity and improve employees' work/life balance. There are no IT warlords to prevent consumer IM applications on the desktop. There are no security applications to prevent YouTube from running. There are no corporate policies governing which smart phone employees can or cannot use. Breathe the rarefied air of SMB Camelot with 70 million firms worldwide.

This research refines our understanding of employee productivity and connectivity by quantifying the impact of technology by work-related venue and employee segment, without which the productivity discussion is rather theoretical.

II. Methodology

The survey data used in this Report is from the Yankee Group *Anywhere Enterprise— SMB: 2007 US Mobile Professional Blended Lifestyle Survey*. This online survey of 504 SMB employees focuses on the business- and consumer-centric tools that employees use in various working venues. The survey also gauges employees' levels of technology empowerment and self-actualization to help understand how employees interact with applications and IT infrastructure in the work environment. The survey respondents are not technologists. Only 13% of the respondents are IT personnel; the remainder are not. All respondents are full-time employees with positions ranging from staff roles to CEOs and founders, ages 21 to 71. All respondents are relatively mobile and connected—mobile professionals by Yankee Group definition—either using a wireless-enabled laptop or having a mobile phone device that is used for business purposes at least 20% of the time. As such, the respondents do not reflect the SMB employee population at large, but rather a mobile-oriented professional subsegment of the population.

We use cluster analysis to help identify good employee target segments for consumer technology in the work environment. For purposes of our analysis, we assume a maximum of four SMB employee clusters based on a combination of variables including travel patterns, hours spent working per week in various venues, laptop ownership, age, educational attainment and personal income. We believe the most highly mobile and connected employees rely more often on particular types of technology to increase their productivity. In addition, these consumer-technology solutions would help Anywhere employees better balance their work and home commitments, adding a level of sanity to their already hectic lives.

Following our cluster analysis, we use regression analysis to isolate particular technology solutions that have a positive (or negative) impact on employee productivity by workplace environment. Using a standard linear multiple regression model, we predict

levels of employee productivity in various work-related venues based on use of consumer- and business-technology solutions. Our work-related venues include the office, home office, hotel, customers' offices, airports, commuting to work, coffee shops and restaurants, and airplanes. Our consumer- and business-technology solutions include various collaboration, social networking, entertainment, messaging, communications and commercial transaction solutions.

We obtain measures of productivity from our survey by asking SMB employees to score their productivity on a scale of 1 to 100. We define productivity as the level of valuable, business-related output an employee creates.

III. SMB Target Segments

The professional workplace is filled with company leaders, aspiring executives, comfortable completers and those just making ends meet. Each character has a role to play and each role can variously benefit from technology in work-related venues.

But before we get ahead of ourselves, let's review the *dramatis personae* in this story:

- **Movers-and-shakers**: Fifteen percent of the SMB mobile professional workforce is composed of powerful executive types. Employees in this segment spend 50% of their 57-hour workweek in their primary office space, and 50% working elsewhere. Movers-and-shakers spend a lot of time traveling. In fact, 12% of this segment's total travel time is international travel—something unique to this segment—and another 30% of their total travel time is domestic. This heavy travel schedule forces movers-and-shakers to spend more time working in airplanes, airports, hotels, customers' offices, restaurants and coffee shops than other employee segments. This is the most

educated segment, having 4-year college degrees plus an average of another three-quarters of a year of education. Employees in this segment have average individual income levels in excess of US $187,000.

- **Aspiring executives**: Twenty-two percent of the SMB mobile professional workforce is composed of this aspiring leader type. Employees in this segment work 55 hours per week—only 48% of it in their primary office location. Aspiring executives spend 26% (14.3 hours) of their working week working at home, the highest at-home working hours of our four segments. Employees in this segment are approximately the same age as movers-and-shakers (44 to 45 years old), have the equivalent of a 4-year college degree on average, but earn US $125,000 per year in individual income—one-third less than the movers-and-shakers.

- **Common folk**: Forty-four percent of the SMB mobile professional workforce is composed of comfortable, satisfied, SMB employees who get by fairly well. Common folk employees work a 50- to 51-hour work week, 62% of which is spent in their primary office. They generally keep their work and home lives separate, as their incidence of home-office work is lowest of the segments at 7 to 8 hours per week. When common folk head to the office, they spend 1 hour and 20 minutes commuting each day—the most for any segment in our study. Educationally, common folk have between a 2-year and 4-year college degree, are approximately 40 to 41 years old and earn US $76,000 in individual income per year.

- **Just-making-its**: Twenty-one percent of the SMB mobile professional workforce is composed of employees just making ends meet. Earning US $35,000 on average per year and having the

equivalent of slightly more than a 2-year college degree or trade or vocational degree, these (on average) 38-year-olds are fighting to keep up. They work 51 hours per week, slightly more than the common folk, of which 60% is spent in their primary office locations and 20% in their home offices. Almost all of their business-related travel is local, rather than domestic or international. Compared to our three other employee segments, just-making-its spend the fewest hours working in hotels, airports, airplanes and coffee shops.

Imagine a day in the life of an SMB with all four types of employees. It's 9 a.m. at Trans Moldings, our specialty plastics manufacturer in Oklahoma City, Okla. But for owner Thomas Baker—a mover-and-shaker—it's 4 p.m. as he's visiting potential partners and prospects in Dusseldorf, Germany. Thomas is traveling with David Reynolds, the aspiring executive whom we met earlier. He is finishing up a grueling day of meetings and is checking BlackBerry-based e-mail in a coffee shop. Booting up his laptop and Skype and donning a headset, Thomas calls his controller Mary Fitzsimmons, a common folk back in Oklahoma City, to ask her about some non-paying accounts and whether her father-in-law is feeling well after his surgery. At the end of the call he asks Mary to IM Bruce Bowen, a junior salesperson, about the non-paying account. Bruce, a just-making-it, has been working the account but hasn't fixed all the problems yet. Bruce has just arrived at his next customer visit in the suburbs of Oklahoma City and is powering up his WWAD-enabled laptop to make a presentation. Before the presentation, he IMs Mary to tell her to check his latest entry in their NetSuite web-based CRM application and get back to Thomas. And so the day goes.

Exhibit 2 shows our SMB employee clusters along two dimensions:

- Socioeconomic attainment corresponding to levels of education, income and age
- Out-of-office work patterns corresponding to levels of non-primary-office-based work, and incidence of international and domestic travel (non-local travel).

Movers-and-shakers and aspiring executives have high levels of out-of-office work and socioeconomic attainment. These top-of-the-ladder employees see the value of consumer- and business-based technology tools. Common folk are a comfortable lot. They are slow to adopt technology and slow to make major changes to their work-related environments. They prefer to keep work confined to the office, where they already have self-perceived high levels of productivity. The common folk don't believe new technology will increase their at-office productivity. And there's little reason to increase out-of-office work-related productivity for common folk because they generally don't work outside their primary office environments. Very few technology add-ons tend to enhance employee productivity in the office

environment, as we'll discover very soon. Just-making-its are an interesting lot as they work normal hours, are a bit younger, but have a tough time keeping up economically. Would consumer- and business-based technologies help this type? We believe they would, but common folk often aren't given the chance to feel the empowerment from these technologies.

You would be forgiven for asking why, in a report that is ostensibly about the mobile internet, we have dedicated a whole section to socioeconomics. We've done it because achieving Scenario X will only make a real difference if the nature of the change it produces is both social and economic. As Exhibit 1 illustrates, the relationship between the introduction of mobile internet services and socioeconomic conditions is complicated. There is at least one virtuous cycle involved: As mobile internet adoption and usage grows, it will produce certain changes in society and the economy. These changes in turn stimulate faster adoption and more use of the service. At the same time, it is the socioeconomic status of a country that will determine how great the impact will be. Let's take an example.

IV. Picking the Right Instrument of Battle

Employees feel productive in the office environment, but productivity lags as soon as they step outside the workplace door. The Yankee Group *Anywhere Enterprise— SMB: 2007 US Mobile Professional Blended Lifestyle Survey* sheds light on the productivity increases and decreases from SMB employees using technology in various work-related venues.

Exhibit 3 shows the types of technology and work venues we study in our survey.

We measure productivity on a scale of 1 to 100, with 100 being the highest level of productivity as self-reported by an SMB employee survey respondent. The base level of productivity is the level of productivity exhibited by an SMB employee who does
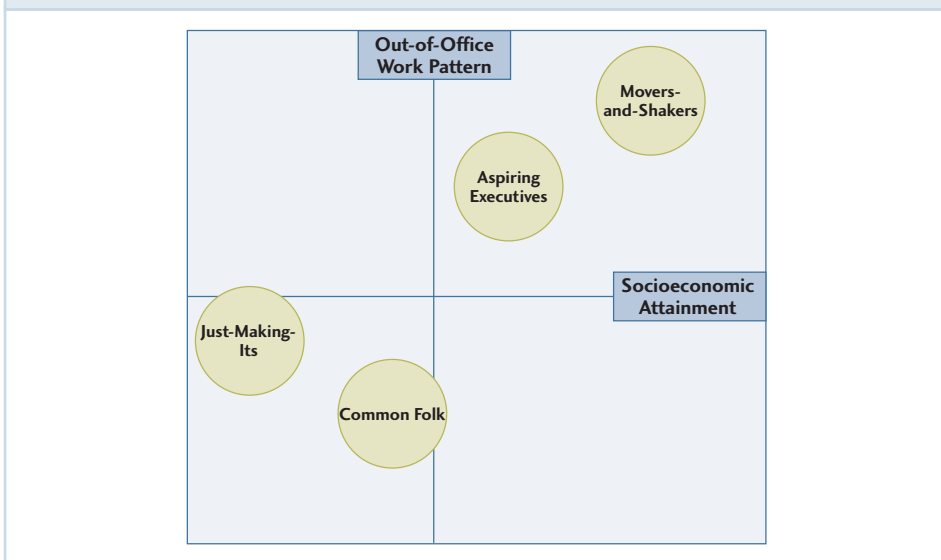
Exhibit 3. **Technologies and Work-Related Venues of Technology Use for SMB Employees**

Source: Yankee Group Anywhere Enterprise—SMB: 2007 US Mobile Professional Blended Lifestyle Survey

Technology	Work-Related Venues
YouTube	Office
Second Life	Home Office
Auction Sites	Hotels
MP3 Players	Customers' Offices
Slingbox	Airports
Wikis	Commuting to Work
Blogs	Coffee Shops/ Restaurants
Online Travel Services	Airplanes
Mobile Text Messaging	
Consumer IM	
Smart Phones	
Voice-Only Cell Phones	
EV-DO-Enabled Laptops	
802.11-Enabled Laptops	

Exhibit 2. **SMB Employee Clusters**
Source: Yankee Group Anywhere Enterprise—SMB: 2007 US Mobile Professional Blended Lifestyle Survey

not use any of the technology solutions shown in Exhibit 3. A technology solution can positively or negatively impact an SMB employee's productivity for a given work-related venue, or a technology solution can have no statistically significant impact on productivity. We use a 95% level of statistical inference in our analysis.

We also measure employees' desired level of productivity by work-related venue. However, asking SMB employees directly about their desired level of productivity produces spurious data. Respondents have a hard time describing their desired level of productivity in non-traditional work venues. For example, how productive does an employee wish to be at home or in an airplane? Those questions yield poor responses. Instead of asking directly for employees' desired level of productivity, we ask about their desired level of connectivity by work-related venue. We take this desired level of connectivity as a proxy for their desired level of productivity, assuming that employees who demand greater interactions at a work-related venue are seeking to increase productivity or their success rate with a given work-related task.

Using productivity, technology solution and venue data, we ran a series of multiple regressions of the following specification. Each venue-specific regression equation tells us the base level of productivity for an average SMB employee, the marginal productivity impact of each piece of consumer- or business-related technology and whether working more or fewer hours per week has any impact on how productive an employee feels (see Exhibit 4).

Let's take an example from our analysis. In airports, an environment filled with stresses, noise and organized mayhem, SMB employees' desired productivity score of 55 out of a possible 100 productivity points indicates they want to be moderately

productive. Although SMB employees want moderate productivity at the airport, on average they feel extremely unproductive, as shown by their base-level productivity score of 8. However, employees who use EV-DO-enabled laptops, smart phones, online travel services and wikis add 5, 4, 6 and 7 productivity points, respectively, to their base-level score. So, an SMB employee who uses all four of those technology tools in airports feels relatively productive with a productivity score (modified by technology usage) of 30. Employees realize that technology alone can't alleviate the non-

productive time at the airport spent waiting in lines, checking in, running for food or drink, getting through security and just plain relaxing before your flight. However, technology tools can turn wasted time (from a work-related perspective) into a relatively productive and connected experience.

For another example, SMB employees can greatly benefit from technology solutions in the home office environment, as 802.11-enabled laptops, online travel services, blogs and wikis increase productivity a total of 50 points. SMB employees' base-level productivity

Exhibit 4. **Impacts of Technology and Work Hours on SMB Employee Productivity by Work-Related Venue**
Source: Yankee Group Anywhere Enterprise—SMB: 2007 US Mobile Professional Blended Lifestyle Survey
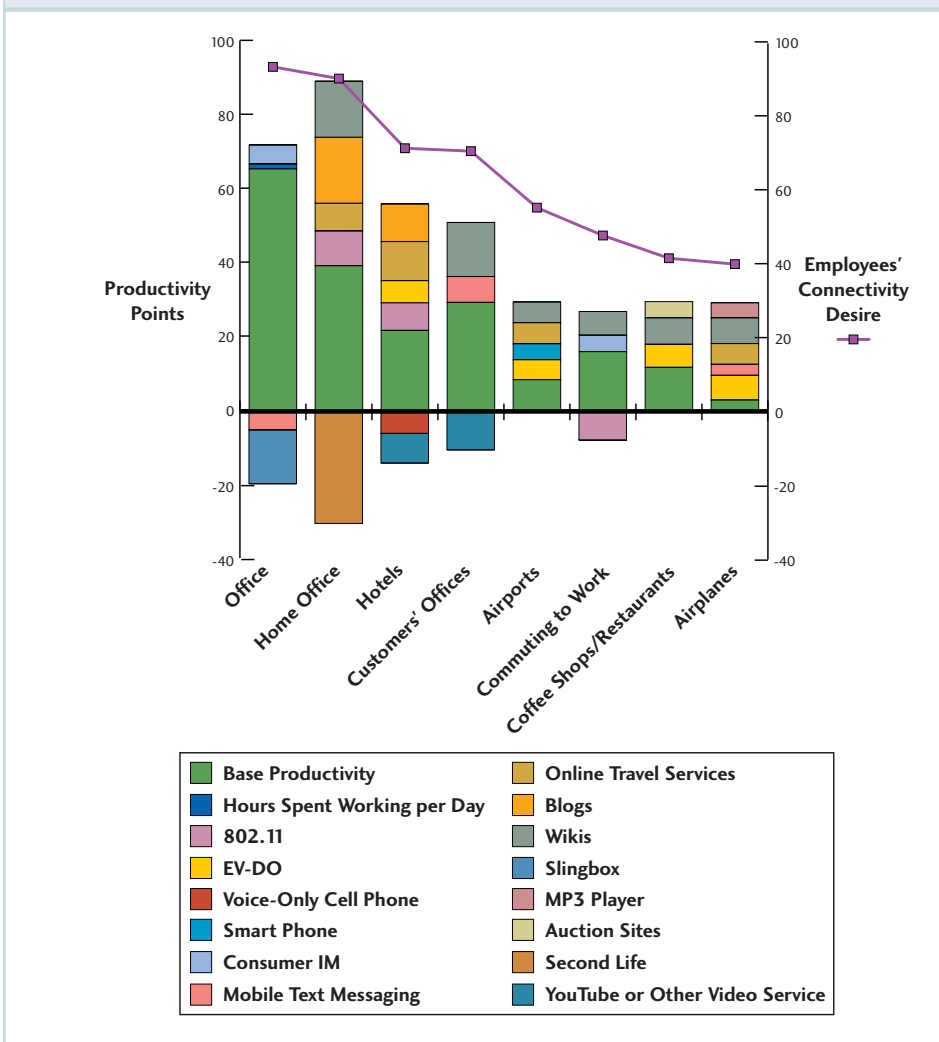
in the home office environment is moderate at 39, but they desire extremely high productivity of 90. Driving productivity higher in the home office environment requires heightened levels of communications with colleagues, customers and supply-chain partners. The use of all these technology-related solutions brings base-level productivity almost even with their desired levels of productivity—an amazing feat given the often present distractions associated with home-based working.

SMB employees can feel more productive in all of our out-of-office work-related venues with the use of consumer- and business-related technology solutions. However, in the office, it's very difficult to increase an employee's self-perceived levels of productivity with additional technology solutions. Most SMB employees feel stretched for time in the office: responsibilities require them to wear multiple hats and juggle tasks. According to our analysis of the office environment:

- Base-level productivity is moderately high at 65.
- Desired-level productivity is extremely high at 93.
- Consumer-grade IM (Yahoo! or AOL IM) is the only technology that increases productivity (5 points).
- Mobile text messaging and Slingbox actually decrease levels of perceived in-office productivity.

Of most interest in the office environment, SMB employees believe each additional hour spent working per day increases productivity scores by 1.3 points. In essence, by spending more hours in the office, an employee feels more productive. Over the course of a week, if an employee increases his or her number of hours worked by 10 (25% over a standard 40-hour workweek), that employee's productivity score increases by 13 points. We cannot say the same thing in out-of-office work environments. Working

an additional hour per day does not have a statistically significant impact on productivity in the home office, airport, airplane, coffee shops or restaurant environment. The use of consumer- and business-related technologies in those out-of-office environments statistically impacts productivity, not the raw number of hours worked.

V. Who Benefits Most from These Technology Tools?

Consumer and business technology tools can increase employee productivity, but only for those who avail themselves of the tools or have enough support inside their organizations to get the help they need:

- **Movers-and-shakers and aspiring executives** generally have the stature within their firms to demand support from limited IT resources. Empowering these employees with consumer- and business-oriented technology tools yields strong productivity gains in out-of-office environments and drives these employees toward a ubiquitously connected world. Upward of 50% of these employees believe their IT organizations increase their productivity. More than 60% of them want a single mobile device to eliminate the need to carry multiple devices. Their heavy travel schedules make them key users of consumer- and business-based technology tools. Eighty-five percent of movers-and-shakers and 50% of knights of the round table are at the VP level or above. Get them access to blogs, wikis and some form of wireless laptop connectivity. Tiring though it may seem, online travel services are a must for this group. Calling toll-free numbers to contact airlines or travel agents must end now.

- **Common folk** should not heavily adopt consumer- and business-oriented technology solutions in out-of-office environments. Their lack of business-related travel and general satisfaction with the status quo make them late adopters for these work-related solutions. Once consumer- and business-oriented technology solutions become more commonplace in SMBs, we anticipate solutions appropriate for this common folk segment will become available.

- **Just-making-its** should be empowered with consumer- and business-oriented technology solutions, but this segment is generally the least supported by IT organizations. Typical do-it-yourselfers, this segment is composed of more than 50% managers and staff-level workers. Less than 30% of them believe their IT organizations make them more productive. Younger, eager to learn and generally dissatisfied with the status quo, this group if given limited resources can strongly benefit from technology tools in out-of-office work environments. Get them access to blogs, wikis and wireless laptop connectivity. Although fun to use and certainly entertaining, Second Life and YouTube don't pack the productivity boost as one might expect. Either corporate policy or word of mouth limiting use of these virtual-world and personal networking sites is a good idea, especially if they become a problem.

VI. Conclusions and Recommendations

Enhancing employee productivity is one of the key benefits of a ubiquitously connected ecosystem. Labor must remain competitive by increasing its effectiveness, creativity, speed and reliability by using connectivity-increasing technology tools. Competitive market dynamics in a globally connected world have increased the stakes in the game of business, as disparities in labor and capital rates around the world have caused massive shifts in the production of goods and services. Technology provides a solution to differentiate one worker from another, giving a leg up to one firm over another.

Although the vision of ubiquitous connectivity is becoming a reality and employees maintain a relatively high degree of personal productivity inside the four walls of their organization, the collaborative culture of organizations is suffering because organizations don't use tools to boost out-of-office connectivity and productivity. In work-related venues outside the office such as hotels or coffee shops, productivity tools such as blogs, wikis, smart phones and consumer-based IM have significant impact on productivity. These productivity increases catapult employees toward the ubiquitously connected world—if only those employees have the opportunity to use these technologies.

Technology tools aid out-of-office productivity for mobile professionals, especially those employees with higher levels of local, domestic and international travel. Technology tools also support productivity increases for employees at the high and low end of the spectrum, but less so in the middle.

Technology tools such as blogs, wikis, smart phones and EV-DO-enabled laptops can increase self-identified productivity up to 30% to 40% outside the office environment. Other tools such as YouTube, Second Life and traditional voice-only cellular phones can actually decrease out-of-office productivity. In the office, solutions such as mobile text messaging and Slingbox decrease productivity.

Recommendations for SMBs

- **Stop buying fixed-office-based technology and buy technology solutions that drive productivity outside the office.** Enhancing productivity in the office is difficult. However, consumer-based technology solutions can increase productivity outside the office.
- **Invest in blogs, wikis, smart phones, EV-DO-enabled laptops, instant messaging and online travel services for your mobile employees.** The best of these technology tools increases productivity 30% to 40% outside the office without becoming a drag on productivity inside the office.
- **Restructure IT staff to support the just-making-its in the organization as much as the movers-and-shakers and aspiring executives.** The most important, highest paid employees are almost always supported by IT. Those least empowered in the organization are often forgotten. However, those least empowered can have a large positive impact on a small business if given the technology tools to succeed.

VII. Further Reading

Zen and the Art of Rogue Employee Maintenance, Report, July 2007.

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