



**Ipsos Reid**

*Research Study*

**Analyzing the Return On Investment of a  
BlackBerry Deployment, 2007  
Small to Medium Business**

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# Ipsos Reid BlackBerry ROI Study, 2007

## About the Original Study

- The original study was undertaken to reflect the growing international popularity of BlackBerry® handhelds.
- The original study reported findings from 1,335 BlackBerry End Users and 1,387 IT Managers responsible for administering 1 to 500 BlackBerry handhelds in their organizations.
- A ROI analysis was provided for organizations deploying 500 or less BlackBerry handhelds.

## About the Report

- This report focuses solely on the Small to Medium Business (SMB) sub-sample which is defined as companies with 10 to 999 employees.
- This report is based on 532 SMB BlackBerry End Users and 705 IT Managers responsible for administering 1 to 500 BlackBerry handhelds in their organizations. The median number of BlackBerry smartphones deployed in this sample is 25.

## Summary of Results (SMB Sub-Sample)

- **Personal Productivity:** The typical (median) SMB End User converts 60 minutes of downtime into productive time per day. The average (mean) for this data point was 73 minutes. The median is used in the report because it is a more conservative estimate and is less susceptible to outlier effects than the mean value.
  - This equates to 250 hours per user per year in recovered downtime. For a BlackBerry smartphone user earning \$75,000 per year, this equates to a value of \$9,375.
  - The personal productivity results are very consistent with the results for the market as a whole since SMB users receive equivalent benefit from the same wireless access to email, calendar and PIM applications.
- **Workflow:** In addition to their own personal productivity, BlackBerry also allows mobile staff to keep work moving for others while they are out of the office. The average SMB BlackBerry user reports that BlackBerry increases the efficiency of the teams that they work with by 39%.
  - This equates to over US\$34,515 per SMB BlackBerry User per year based on international productivity per employee data.
  - The increase in efficiency is slightly higher for the SMB market than for the market as a whole.
- **Immediacy:** The average SMB BlackBerry User processes 2,500 time sensitive emails per year while mobile and over 1,990 phone calls per year.
- **BlackBerry Net TCO** per SMB User totals US\$1,084.
- **BlackBerry ROI** varies by individual and is conservatively calculated at a minimum of 256%. This equates to a payback period of 142 days, or approximately 5 months.

## Introduction

### About This Report

The purpose of this report is to determine a typical SMB company's return on investing in BlackBerry. This report is based on the data of the BlackBerry ROI study conducted by Ipsos Reid and Research In Motion Limited (RIM) in 2007: the SMB data subset was used, no re-field was conducted.

#### NOTES:

1. *This study looks exclusively at the ROI from BlackBerry email, organizer and voice.*
2. *For some parts of the report data from RIM internal panel survey was used. It is worth to mention that the number of active panelists has changed since then; the most recent results are presented in the report.*

### Study Methodology

Subscribers to RIM's BlackBerry Connection® newsletter were sent an email invitation to complete an online study in November 2007. The email invitation included a link to the online questionnaire, which was housed on Ipsos Reid's website.

Respondents who indicated that they are responsible for the management, administration or support of BlackBerry within their organization were linked to an Information Technology Administrator questionnaire (these respondents will be labeled as "IT Administrators" for the purposes of this report). BlackBerry users who indicated that they are not responsible for the management, administration or support of BlackBerry within their organization were linked to the BlackBerry End User questionnaire (these respondents will be labeled as "End Users").

Respondents were screened to ensure that their organization uses BlackBerry Enterprise Server, and in the case of End Users, that their BlackBerry handheld is connected to BlackBerry Enterprise Server.

A total of 705 SMB IT Administrators and 532 SMB End Users completed the questionnaire by November 30<sup>th</sup>, 2007. A sample size of 705 provides a margin of error of  $\pm 3.7\%$ , 19 times out of 20, while a sample size of 532 provides a margin of error of  $\pm 4.3\%$ , 19 times out of 20. The margin of error will be larger for sub segments of the sample.

The study was conducted with BlackBerry Users and IT Managers in North America, Europe, Asia Pacific and Latin America. Six percent of SMB End User responses and 11% of SMB IT Administrator responses were received from outside North America.

All monetary figures in this report are presented in US dollars.

### About Ipsos Reid

Ipsos Reid is a member of the Ipsos Group. Ipsos is a leading global survey-based market research group, with revenues of 718 million euros in 2005. It offers a full suite of research services, guided by industry experts and bolstered by advanced analytics and methodologies in advertising, marketing, public opinion and customer loyalty research, as well as forecasting and modeling. Member companies also offer a full line of custom, syndicated, omnibus, panel, and online research products and services.

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## Organization of This Report

### 1) **Core BlackBerry Benefits**

- BlackBerry Productivity Benefits
- Blackberry Workflow Efficiency Benefits
- BlackBerry Immediacy Benefits

### 2) **BlackBerry Cost Savings**

### 3) **BlackBerry Total Cost of Ownership (TCO)**

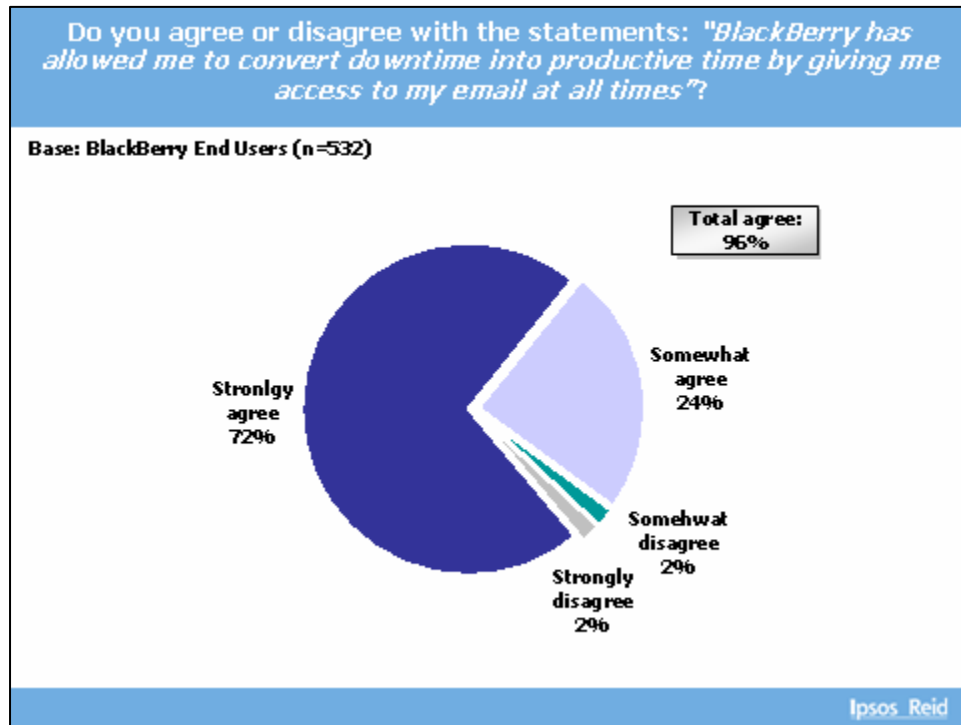
### 4) **BlackBerry ROI and Pay-Back Period Calculations**

### 5) **Conclusion**

## BlackBerry Productivity Benefits

BlackBerry End User respondents to the 2007 BlackBerry ROI study were asked if they agreed with the statement: "BlackBerry has allowed me to convert downtime into productive time by giving me access to my email at all times." Virtually all SMB respondents agreed with the statement (96%), with 72% of those who strongly agreed.

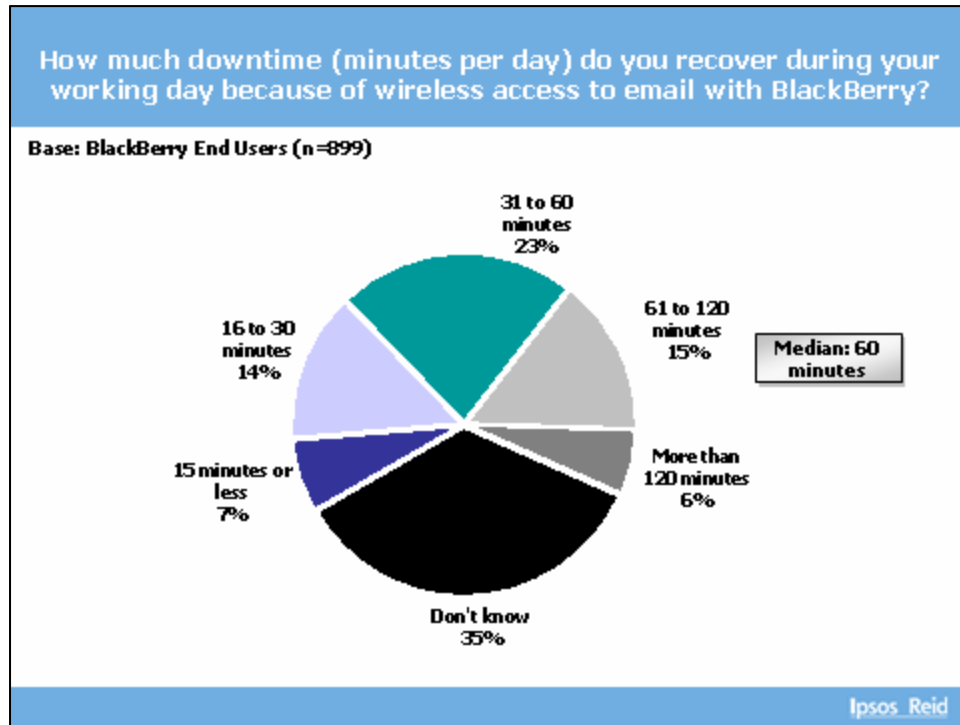
FIGURE 1



On average, SMB End Users indicate that they recover one hour per workday because of BlackBerry. The median<sup>1</sup> value of 60 minutes per day [figure 2] is lower than the mean value of 73 minutes per day reported in this study. The median value will be used for the ROI calculations because it is a more conservative estimate and is less susceptible to outlier effects than the mean value.

<sup>1</sup> A median value is the middle value of all responses. Half of responses are below the median value and the other half are above the median value. Using the median value is sometimes more conservative than using a mean or average value as an average value can be skewed by a small number of respondents giving large values.

FIGURE 2<sup>2</sup>



Assuming a five-day workweek and 50 working weeks per year, this translates to the recovery of approximately 250 hours per year.

The 2004 ROI study put forth that the impact of this recovered time is most appropriately measured in direct relation to the End User's salary, assuming that the value of their daily productivity is assumed to be accurately reflected in their salary level. Accordingly, the table below lists annual recovered productivity as a proportion of an SMB BlackBerry user's annual salary [figure 3].

FIGURE 3

Salary of BlackBerry User	Value of Annual Recovered Downtime <sup>3</sup>
\$40,000	\$5,000
\$50,000	\$6,250
\$60,000	\$7,500
\$75,000	\$9,375
\$100,000	\$12,500
\$125,000	\$15,625
\$150,000	\$18,750

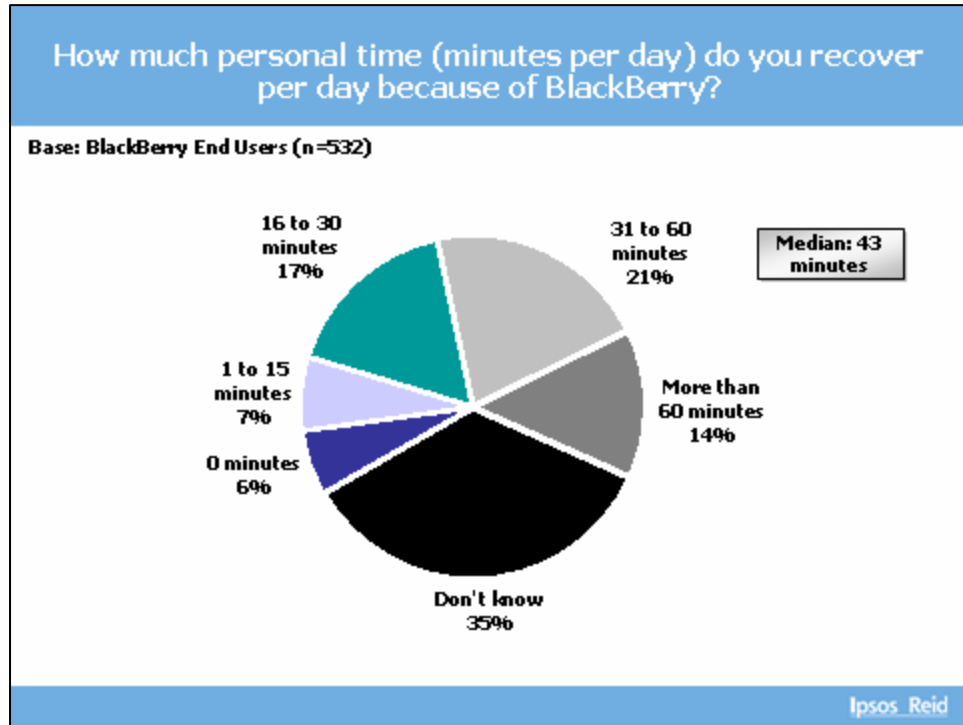
<sup>2</sup> Data from the RIM Panel Study was used.

<sup>3</sup> Assumes 2,000 hours worked in a given year (40 hours per week x 50 working weeks).

BlackBerry End Users were also asked how much personal time they recovered per day because of BlackBerry. Sixty five percent of SMB End Users were able to estimate their daily personal time savings due to BlackBerry with the median estimate being 43 minutes [figure 4].

While it is difficult to put a dollar value on recovered personal time, it is fair to assume that recovered personal time likely leads to a feeling of an improved quality of life which could result in lower absenteeism and greater loyalty to the firm.

**FIGURE 4**



## BlackBerry Workflow Benefits

In this report, productivity measures the BlackBerry benefits attained by end users in terms of their own conversion of downtime into productive time. Workflow measures the benefits to others delivered by BlackBerry users who are able to remain fully functional members of their teams while they are mobile. For example, not being able to respond to requests to sign-off on project terms or costs can result in mobile managers or staff slowing down tasks and project completions for many others.

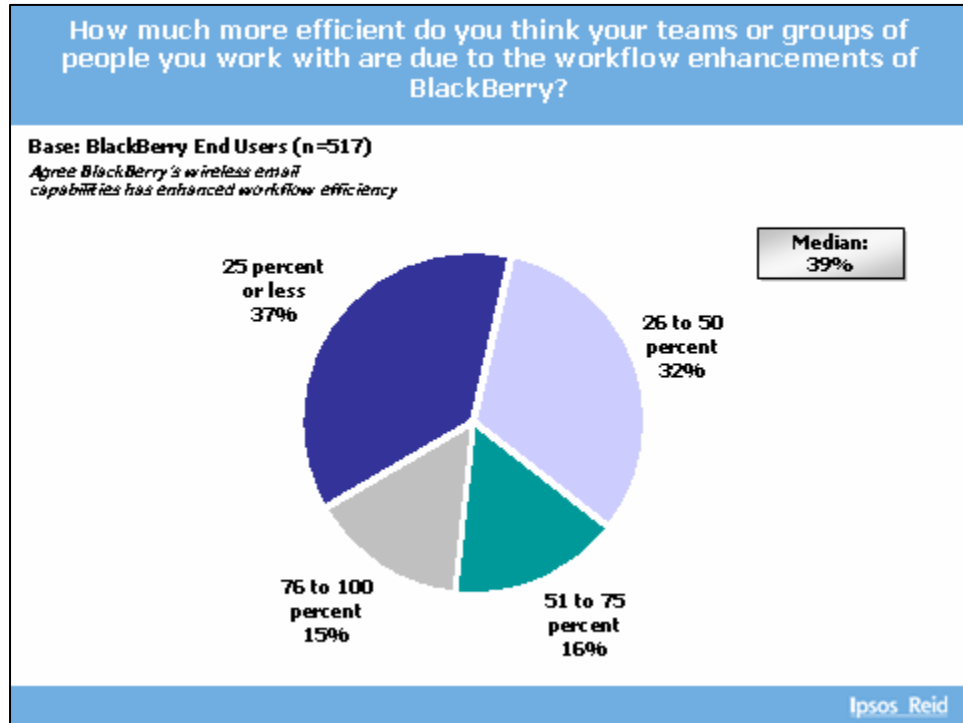
End User respondents were given the following definition of workflow:

*Workflow refers to the processes followed by employees to complete tasks and projects in regards to how they interact with colleagues and business systems. Workflow also refers to the assessment of the efficiency that employees achieve in completing tasks and projects and measures how effective employees are in having the information they need to get things done.*

After having read the definition, survey respondents were then asked if they agreed or disagreed with the following statement: *“BlackBerry’s wireless email capabilities have enhanced my workflow efficiency.”* Agreement with this statement is near universal among SMB respondents as 74% strongly agree and 23% somewhat agree.

Respondents were then asked to indicate how much more efficient their teams or groups of people that they work with are due to the workflow enhancements of BlackBerry (the 3% of SMB respondents who do not agree that BlackBerry has improved their workflow efficiency were not asked this question). About one third of SMB respondents (31%) think their teams’ efficiency has increased by greater than 50%, while the median response provided is that their teams are now 39% more efficient due to the workflow enhancements of BlackBerry [figure 5].

**FIGURE 5**



According to the *IMD World Competitiveness Yearbook 2004*, the typical Output per American Employee per Annum is approximately \$88,500. If we were to conservatively estimate that one BlackBerry handheld enabled employee is responsible (as a manager or team leader) for one non-BlackBerry handheld enabled employee, it follows that the employee's efficiency has improved by \$34,515<sup>4</sup> due to BlackBerry. If a manager was responsible for five employees in his or her group, BlackBerry would be responsible for \$172,575 in increased productivity.

<sup>4</sup> \$88,500 USD x a 39% increase in efficiency

## BlackBerry Immediacy Benefits

Immediacy refers to the unique, often one-off gains that can be achieved because of the speed of BlackBerry voice and data awareness. BlackBerry immediacy benefits include client acquisition and retention through improved responsiveness and transaction gains.

Because voice and data frequency rates vary, we will break these out individually.

### BlackBerry Email and Organizer Immediacy Benefits

Email is used as the key driver of BlackBerry immediacy but quick access to a user's calendar, contacts or other organizer data is often vital to achieve an immediacy benefit.

To quantify the immediacy benefits provided by BlackBerry wireless email and the organizer, an arbitrary dollar value is placed on each time-sensitive communication that End Users are able to address due to BlackBerry while mobile. Although the derived number is completely arbitrary, this is the only way to calculate an average immediacy benefit per user. The reality is that many of the time sensitive email discussed here will have no material immediacy benefit. However, numerous respondents to the BlackBerry ROI studies have discussed single multi-million dollar immediate emails that were attributed to gaining or retaining major clients or allowing end users to take advantage of short-term information for direct financial gain.

To determine the number of time-sensitive emails addressed by BlackBerry, End Users were asked how many emails they send from their BlackBerry handheld in a given day, how many emails they receive, what percentage of their email is time sensitive, and how much time they spend away from the office.

The median number of business emails received per day by SMB respondents is 38, and the median percentage of time spent away from the office by SMB End Users is 37%. Note, this number is a bit misleading as it includes both mobile and non-mobile days and periods. Additionally, the median value for the percentage of email that is received that can be classified as time sensitive is 44%. As such, the median number of time-sensitive emails received by SMB BlackBerry End Users while they are away from the office is five per day, or 31<sup>5</sup> per week.

The median number of business emails sent by SMB BlackBerry End Users per day from their BlackBerry handheld is 8. Note this number also includes both mobile and non-mobile days and periods. The median percentage of time-sensitive emails sent by SMB BlackBerry End Users is 48%. This is equivalent to five time-sensitive emails being sent per day by the median SMB BlackBerry user, or 19<sup>6</sup> per week.

Including both sent and received email, the typical SMB BlackBerry End User is addressing 50 time sensitive emails per week, or 2,500 time-sensitive emails per year.

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<sup>5</sup> 38 emails received x 44% time sensitive x 37% of time spent away from the office x 5 days a week = 31 time sensitive emails per week received while away from the office

<sup>6</sup> 8 emails sent from BlackBerry handheld x 48% time sensitive x 5 days per week = 19 time sensitive emails sent from BlackBerry handheld per week

## BlackBerry Voice Immediacy Benefits

The same system of assigning arbitrary values to each phone call will be used to calculate an indicator for BlackBerry voice immediacy. The median SMB BlackBerry user with voice activated on their BlackBerry handheld conducts 500 minutes<sup>7</sup> of voice calls per month. According to the most current general market data from the CTIA (1H2004), the average duration of local calls was 2.94 minutes while the average duration of roaming calls was 3.4 minutes for all mobile phone users. To calculate the average duration of all calls, the degree of mobility of BlackBerry users has to be accounted for to estimate the split between local and roaming calls. When this data is applied on a weighted average basis the average duration of all BlackBerry voice calls is approximated at 3.01 minutes. As such, each SMB BlackBerry user with voice activated on their BlackBerry handhelds places or receives approximately 166 phone calls per month, or 1,992 phone calls per year.

For the purpose of this calculation, it is assumed that all phone calls are placed from BlackBerry handhelds while the user is mobile and that all voice calls have an element of time sensitivity to them [Figure 6].

**FIGURE 6**

Dollar value of Immediacy	Annual BlackBerry Return (dollar value x 2,500 time sensitive emails per year)	Annual BlackBerry Return (dollar value x 1,200 voice calls per year)	Total Annual BlackBerry Return (email and voice)
\$1	\$2,500	\$1,992	\$4,492
\$2	\$5,000	\$3,984	\$8,984
\$5	\$12,500	\$9,960	\$22,460
\$10	\$25,000	\$19,920	\$44,920
\$15	\$37,500	\$29,880	\$67,380
\$20	\$50,000	\$39,840	\$89,840

<sup>7</sup> Data from the RIM Panel Study was used.

## Cost Savings

The median SMB BlackBerry End User who dialed into the corporate network prior to using BlackBerry indicates that in a given month, they would spend 186 minutes (or 3.1 hours) dialed into the corporate network. Since becoming a BlackBerry user the median SMB End User is dialed into the corporate network for 32 minutes per month (or 0.5 hours). This is a drop of 83%.

As such, a typical SMB End User who uses a laptop and dials into the corporate network can expect to save \$185<sup>8</sup> per year once they start using BlackBerry. Given that 82% of SMB BlackBerry users use a laptop and 89% of those users dial into the corporate network at least once a month, this is equivalent to a savings of US\$135 for an average SMB BlackBerry user (i.e. the average across all users once adjusted for those who do not have laptops and those who have a laptop but do not use it to dial into the corporate network.)

The average price to carriers of BlackBerry handhelds is approximately US\$366. We have assumed that the price to clients would not exceed this due to subsidization by carriers. Using a service life of 2 years (US\$183 per year), RAS savings can be looked at as a fringe benefit that equates to free handheld hardware plus a couple of months of free airtime, depending on carrier package and pricing.

## BlackBerry Total Cost of Ownership (TCO)

The following table details the investment required by an SMB firm looking to deploy BlackBerry handhelds to its users. Given that voice activated BlackBerry handhelds are near universal in 2007 (99% among SMB End User respondents), the results assume every new user has voice activated on their BlackBerry handheld.

**FIGURE 7**

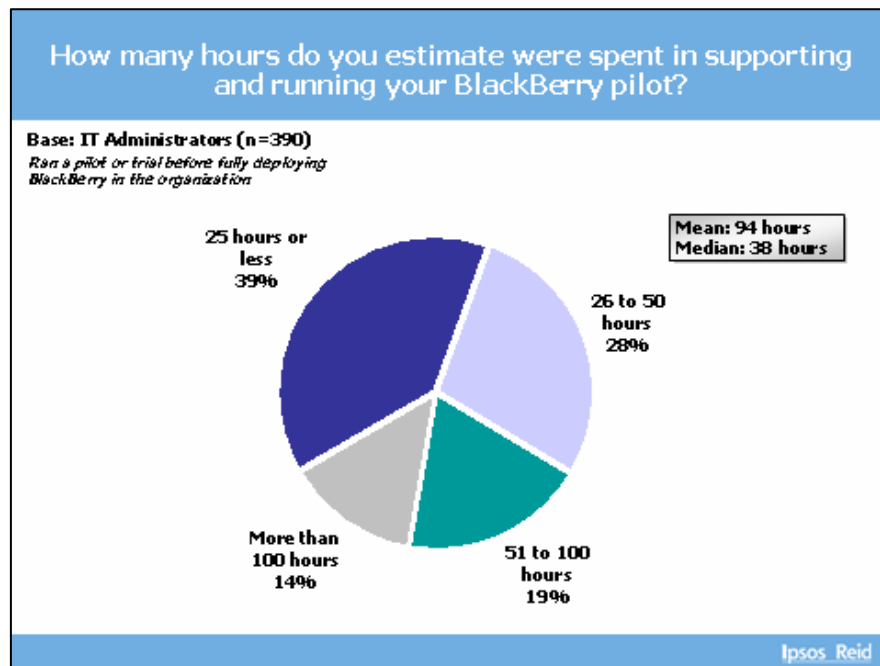
Component	Annual Cost Per User
BlackBerry Handheld	\$183
BlackBerry Software	\$10
Server hardware	\$0
Airtime – Data (\$40 per month)	\$480
Airtime – Voice	\$288
BlackBerry Pilot Costs	\$25
Internal Support Costs	\$233
<b>TCO</b>	<b>\$1,219</b>
<b>Cost Savings (RAS)</b>	<b>\$135</b>
<b>Net TCO – (subtract savings)</b>	<b>\$1,084</b>
<b>Incremental TCO – (subtract voice cost for users that already had mobile phones: \$288)</b>	<b>\$796</b>

<sup>8</sup> 186 minutes per month pre-BlackBerry – 32 minutes per month post-BlackBerry x 12 months = 1,848 RAS minutes saved per year. It is assumed one minute of RAS cost is approximately 10 cents.

### Assumptions for the preceding table:

- The average sales price to carriers of BlackBerry handhelds is approximately US\$366. We have taken a conservative approach by keeping the price to enterprise clients at this same value. Carriers are likely to discount the handheld hardware cost with enterprise contracts;
- The server software cost is \$499 which covers up to 30 users. Considering that the median number of handhelds deployed (25), the annual cost per user is \$10 (2 year amortization).
- Since BlackBerry Professional Software for SMB is usually installed on the same box as the mail server, the server hardware cost is \$0.
- For the BlackBerry Pilot Costs and the Internal Support Costs we used the overall market numbers.
- Incremental TCO is an interesting measure of actual BlackBerry TCO because the vast majority of mobile users (91% from previous study) were already incurring monthly voice costs. As such, voice costs cancel out when the voice service is moved over to a BlackBerry handheld. However, this treats voice expenses as a sunk cost. These numbers will not be used in the ROI calculations.

**FIGURE 8**



**FIGURE 9**

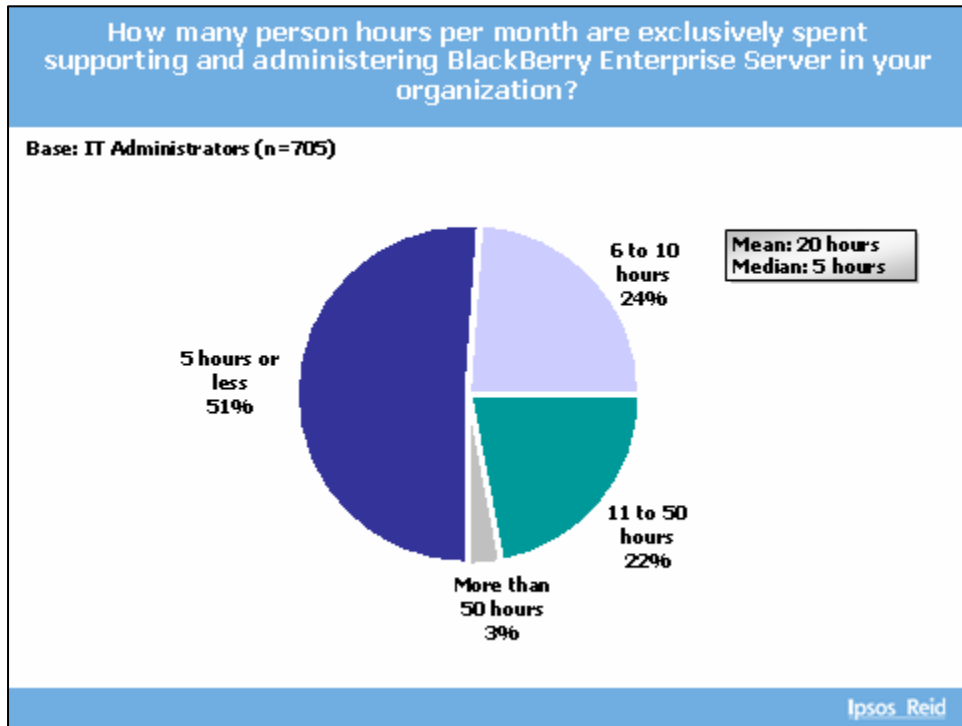
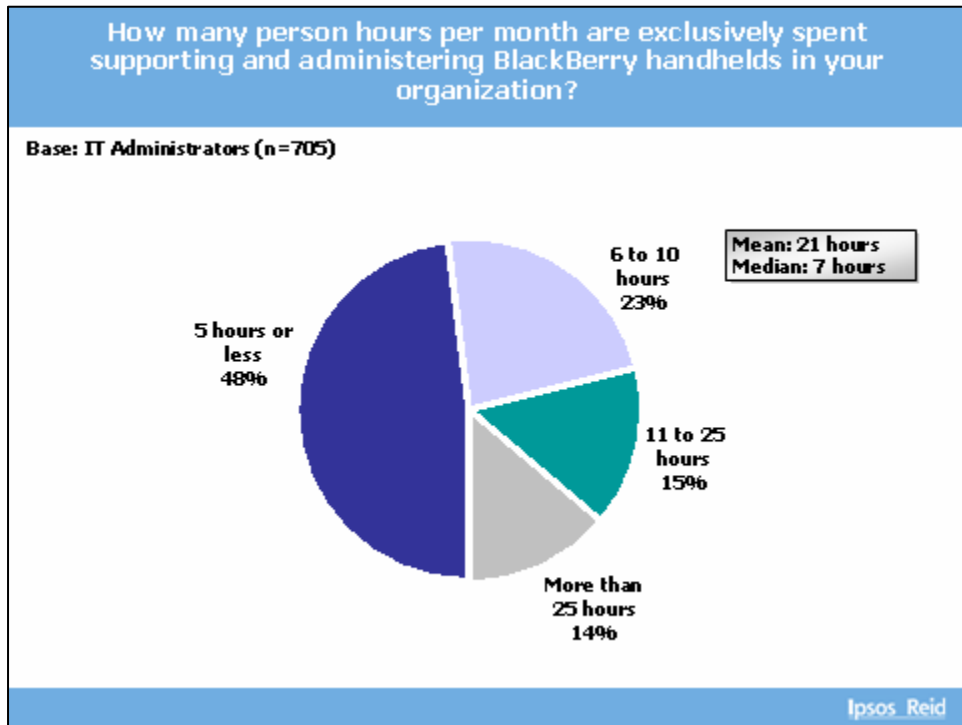


FIGURE 10



## BlackBerry Return on Investment

The return on investment experienced by SMB BlackBerry users varies in relation to the employee's role within their organization and the degree of impact that their activities have on the firm's profitability. Several BlackBerry ROI scenarios for different occupation classes are presented below. The ROI and Payback periods are presented in escalating order to allow readers to quickly personalize where they would peg the numbers based on their individual interpretation of the contents of this report.

In the interest of being conservative the following calculation rules have been applied for all scenarios:

- TCO and Net TCO are calculated for each scenario to allow readers to decide whether they want to include the RAS savings that are typical of the average BlackBerry deployment.
- Personal productivity returns have been halved. This is to accommodate the argument that suggests that mobile workers will not necessarily do more work with every extra minute that is converted from downtime into potentially productive time.
- Workflow efficiencies have been halved. Similar to the reason with personal productivity, if there is merit to the argument that mobile professionals may take some slack time out of their increased productive time, their team-mates may also not take full advantage of the workflow benefits received from their mobile counterpart.
- Based on a two year amortization.
- 100 BlackBerry handhelds and one BlackBerry Enterprise Server.

### SCENARIO ONE

- Salary of \$50,000
- One-to-one ratio of mobile employee to other employee
- Value of time sensitive email or voice call is \$2 each

Source of Value	Dollar Amount	Cumulative Returns	BlackBerry TCO	BlackBerry ROI <sup>9</sup>	Payback Period <sup>10</sup>
Productivity	\$3,125	\$3,125	\$1,219	256%	142 days
Workflow	\$17,258	\$20,383	\$1,219	1672%	22 days
Immediacy	\$8,984	\$29,367	\$1,219	2409%	15 days

Source of Value	Dollar Amount	Cumulative Returns	BlackBerry Net TCO	BlackBerry ROI <sup>11</sup>	Payback Period <sup>12</sup>
Productivity	\$3,125	\$3,125	\$1,084	288%	127 days
Workflow	\$17,258	\$20,383	\$1,084	1880%	19 days
Immediacy	\$8,984	\$29,367	\$1,084	2709%	13 days

<sup>9</sup> BlackBerry ROI = Cumulative Returns / BlackBerry TCO

<sup>10</sup> Payback Period = BlackBerry TCO / (Cumulative Returns / 365 days)

<sup>11</sup> BlackBerry ROI = Cumulative Returns / BlackBerry Net TCO

<sup>12</sup> Payback Period = BlackBerry Net TCO / (Cumulative Returns / 365 days)

## SCENARIO TWO

- Salary of \$100,000
- One-to-two ratio of mobile employee to other employees
- Value of time sensitive email or voice call is \$5 each

Source of Value	Dollar Amount	Cumulative Returns	BlackBerry TCO	BlackBerry ROI	Payback Period
Productivity	\$6,250	\$3,125	\$1,219	256%	142 days
Workflow	\$34,515	\$40,765	\$1,219	3344%	11 days
Immediacy	\$22,460	\$63,225	\$1,219	5187%	7 days

Source of Value	Dollar Amount	Cumulative Returns	BlackBerry Net TCO	BlackBerry ROI	Payback Period
Productivity	\$6,250	\$3,125	\$1,084	288%	127 days
Workflow	\$34,515	\$40,765	\$1,084	3761%	10 days
Immediacy	\$22,460	\$63,225	\$1,084	5833%	6 days

## SCENARIO THREE

- Salary of \$150,000
- One-to-four ratio of mobile employee to other employees
- Value of time sensitive email or voice call is \$10 each

Source of Value	Dollar Amount	Cumulative Returns	BlackBerry TCO	BlackBerry ROI	Payback Period
Productivity	\$9,375	\$3,125	\$1,219	256%	142 days
Workflow	\$69,030	\$78,405	\$1,219	6432%	6 days
Immediacy	\$44,920	\$123,325	\$1,219	10117%	4 days

Source of Value	Dollar Amount	Cumulative Returns	BlackBerry Net TCO	BlackBerry ROI	Payback Period
Productivity	\$9,375	\$3,125	\$1,084	288%	127 days
Workflow	\$69,030	\$78,405	\$1,084	7233%	5 days
Immediacy	\$44,920	\$123,325	\$1,084	11377%	3 days

## Conclusion

For SMB, BlackBerry ROI continues to be strong due to significant increases in personal productivity and workflow efficiency. For the market as a whole, ROI was calculated at a minimum of 238% with a payback period of 154 days. ROI takes slightly less time to achieve within the SMB market, for which it is at a minimum of 256% with a payback period of 142 days.

Personal productivity is a strong source of BlackBerry ROI as would be expected given that mobile effectiveness is the core objective of the BlackBerry solution. Under conservative ROI scenario conditions, BlackBerry pays for itself in approximately 5 months on average based on personal productivity benefits alone, which is consistent with the market as a whole.

Workflow efficiency goes in hand with personal productivity and concludes that BlackBerry is also very important to the colleagues of BlackBerry users whether or not they happen to be BlackBerry users themselves. For the SMB market, even under conservative ROI scenario conditions, with workflow included, the payback period for BlackBerry is 4 weeks, which is consistent with the overall market. The strength of the workflow numbers also suggests that companies without an effective wireless solution are seriously undermining their competitiveness.

Immediacy is a strong contributor to BlackBerry ROI although we recognize that some may not want to include immediacy in their ROI criteria or discount it even further than what has been presented here. The fact remains that many individuals credit BlackBerry with assisting in reaping significant financial gains and winning and holding clients. Immediacy is difficult to quantify but we trust that readers of this report will accept in principle that immediacy provides significant value for many BlackBerry users.

The 705 SMB IT managers that completed this study have reaffirmed that supporting BlackBerry inside organizations is not burdensome. Fifty percent of SMB IT managers report spending 5 hours or less per month supporting their BlackBerry Enterprise Server(s). Fifty percent of SMB IT managers report spending 7 hours or less per month supporting BlackBerry handhelds including new deployments. This equates to an average total IT time investment of 29 minutes per user per month. Although the total number of hours spent monthly on supporting BlackBerry is significantly lower for the SMB market than for the market as a whole, when converted to the average time spent per user, it is fact elevated (29 minutes per user per month for SMB as opposed to 23 minutes per user per month for the overall market).

Every working day, each SMB BlackBerry user recovers almost 2 times the monthly IT time investment through personal productivity alone. BlackBerry workflow benefits and immediacy benefits further justify the costs and internal resource commitments associated with deploying and managing BlackBerry.

***All of the questions in this study and the associated results apply specifically to BlackBerry. Any attempt to apply the results of this study to other mobile and wireless solutions is erroneous, and prohibited by copyright. Even small technical or performance differences between the other solution and BlackBerry can result in substantially different ROI results.***

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