Results from the Central Help Desk Survey: 2002

Survey: Multnomah County employees were asked to rate 6 attributes of service (availability, accessibility, responsiveness, professionalism, impact on work, and expertise) for importance and satisfaction. These service attributes were selected because they have been determined to be key components contributing to best practices in the IT Industry[1].

Summary of Findings:
- **68% of the respondents reported that the Help Desk fixed their problem on the first call**
- **Respondents gave high ratings to the importance of all attributes of service**
- **County Health gave higher importance ratings to availability and accessibility than other departments**
- **Respondents gave high satisfaction ratings to all attributes of the service they receive from the Help Desk, this was also reflected by the types of comments they offered**
- **Respondents who report that their problem was fixed on the first call gave higher satisfaction ratings to every attribute of service**
- **A gap analysis shows that the Help Desk is meeting the expectations of the majority of the respondents**
- **The largest gap between importance and satisfaction was with impact on work**
- **The smallest gap between importance and satisfaction was professionalism County Health had a larger gap between importance and satisfaction with accessibility than other departments**
- **The gaps between importance and satisfaction for accessibility, responsiveness, professionalism, impact on work, and expertise were smaller for those who had their problem fixed on the first call compared to those who did not**
- **An examination of importance/satisfaction matrices shows that all attributes of service are well within desired performance**
- **Accessibility appears to be a potential area for improvement**
- **Help Desk should continue striving to help fix problems on the first call**

The Survey & Results:
A total of 874 Multnomah County employees were randomly selected from a pool of over 2400 employees who had used the Help Desk's services at least once in the 60 days prior to this survey. These employees were sent an e-mail request to visit a web link, fill out the survey, and submit it electronically, they had one week to reply. A total of 254 surveys were received for a response rate of 29%. Unfortunately, a large number of missing responses on some of the survey questions, likely due to a technical malfunction[2], reduced the number of surveys to 110. All reported findings are based on these 110 surveys.

Respondents were asked the following demographic questions: the average number of times they called the Help Desk per month, the department they worked for, their job title, and whether the Help Desk fixed their problem on the first call. The following table displays the percentage of surveys returned by departments and job titles[3].

Department	% Surveys	Job Titles	
Business & Community	38%	Managers	29%
		Non-managers	71%
County Health	40%	Managers	24%
		Non-managers	76%
Other Departments	22%	Managers	25%
		Non-managers	75%
Total		**Managers**	**26%**
		Non-managers	**74%**

The following table displays how many times, on average, the respondent calls the Help Desk and whether or not their problem was fixed on the first call by department. There were no statistically significant differences between the departments in terms of the average number of calls each month or in terms of whether or not respondents were helped the first time they called [4].

Department	Average # calls/month		Problem Fixed 1st Call	
Business & Community	Less than 3	81%	Yes	57%
	More than 3	19%	No	43%
County Health	Less than 3	80%	Yes	78%
	More than 3	20%	No	22%
Other	Less than 3	75%	Yes	71%
	More than 3	25%	No	29%
Total	**Less than 3**	**79%**	**Yes**	**68%**
	More than 3	**21%**	**No**	**32%**

The next table displays the average number of calls per month and whether or not respondents were helped the first time they called by job titles. There were no statistically significant differences between managers and non-managers in terms of the average number of calls each month or in terms of whether or not respondents were helped the first time they called [5].
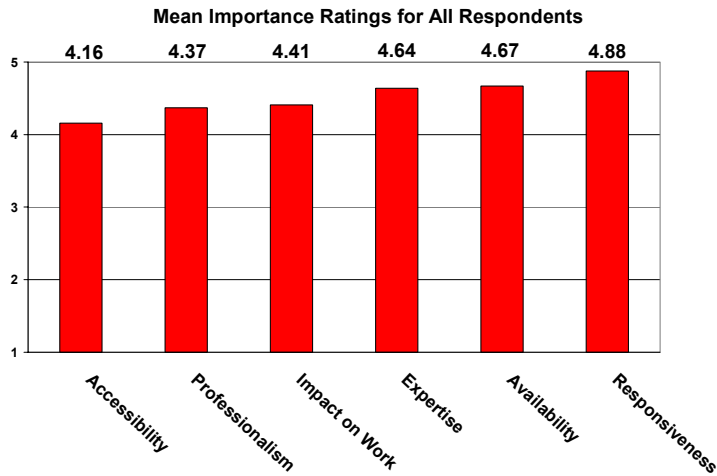
Job Title	Average # calls/month		Problem Fixed 1st Call	
Managers	Less than 3	69%	Yes	62%
	More than 3	31%	No	38%
Non-managers	Less than 3	83%	Yes	70%
	More than 3	17%	No	30%
Total	**Less than 3**	**79%**	**Yes**	**68%**
	More than 3	**21%**	**No**	**32%**

The survey examined 6 attributes of service. Respondents were asked to rate each for importance and satisfaction from 1 (least important) to 5 (most important). Respondents were also given the opportunity to offer written comments about their satisfaction. The various attributes are listed below with their definitions.

- Availability - The availability of a live Help Desk Analyst during business hours.
- Accessibility - The ability to access the Help Desk support through various options: direct dial, outside line, voice-mail, email, web form, etc.
- Responsiveness **-** The ability of the Help Desk personnel to answer your questions or queries in a timely manner, the problem resolution process, the escalation process to other areas of technical support, call back and follow-up.
- Professionalism - The interaction, communication skills, flexibility, people skills of the Help Desk personnel.
- Impact on Your Work - The Help Desk's impact on your ability to reduce costs or improve your productivity.
- Expertise - The accuracy, competence, business knowledge, technology skills, innovativeness and expertise of the Help Desk personnel.
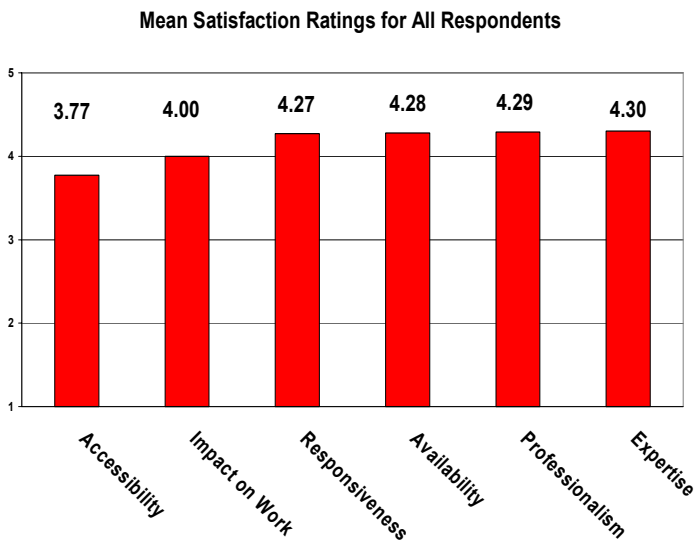
Importance:

Respondents gave high importance ratings to all attributes of service and gave the overall highest rating to responsiveness. It is interesting to note that responsiveness ratings only ranged from 4 to 5 while the other components had a full range of importance ratings[6]. The lowest importance rating was given to accessibility.

Mean Importance Ratings for All Respondents

Accessibility	Professionalism	Impact on Work	Expertise	Availability	Responsiveness
4.16	4.37	4.41	4.64	4.67	4.88

Respondents who work for County Health gave statistically higher importance ratings to availability and accessibility when compared to respondents who work for Business and Community. There were no other departmental differences in the importance ratings[7]. There were no differences in the importance ratings between managers and non-managers. Respondents who reported calling an average of less than 3 times per month gave higher importance ratings to accessibility, impact on work, and expertise than respondents who called an average of more than 3 times per month[8].

Satisfaction:

Respondents were asked to rate each service component for satisfaction. Respondents gave relatively high satisfaction ratings to all attributes of service and gave the overall highest rating to responsiveness. The lowest satisfaction rating was given to accessibility[9].

Mean Satisfaction Ratings for All Respondents

| Accessibility	Impact on Work	Responsiveness	Availability	Professionalism	Expertise
3.77	4.00	4.27	4.28	4.29	4.30

There were no differences in satisfaction ratings by departments, managers and non-managers, or in the average number of calls per month. An interesting result is that respondents who reported being helped on their first call gave significantly higher satisfaction ratings to every attribute of service[10].

Gap Analysis:
A Gap analysis was performed to compare how satisfied the respondents were in terms of how important they felt each attribute of service was. This technique allows us to evaluate performance by examining the "gap" between customer satisfaction and what they value the most. The gap is determined by subtracting the importance rating from the satisfaction rating. For example, if a customer gives a low satisfaction rating and a high importance rating, the gap will be a negative number. This would mean that the satisfaction is low in terms of what the customer values. If the satisfaction rating and importance rating are the same, performance and expectation are congruent. A positive gap would indicate "over performance" since satisfaction exceeds importance. The following graph displays the gap results for all survey respondents.

All Respondents
N = 111
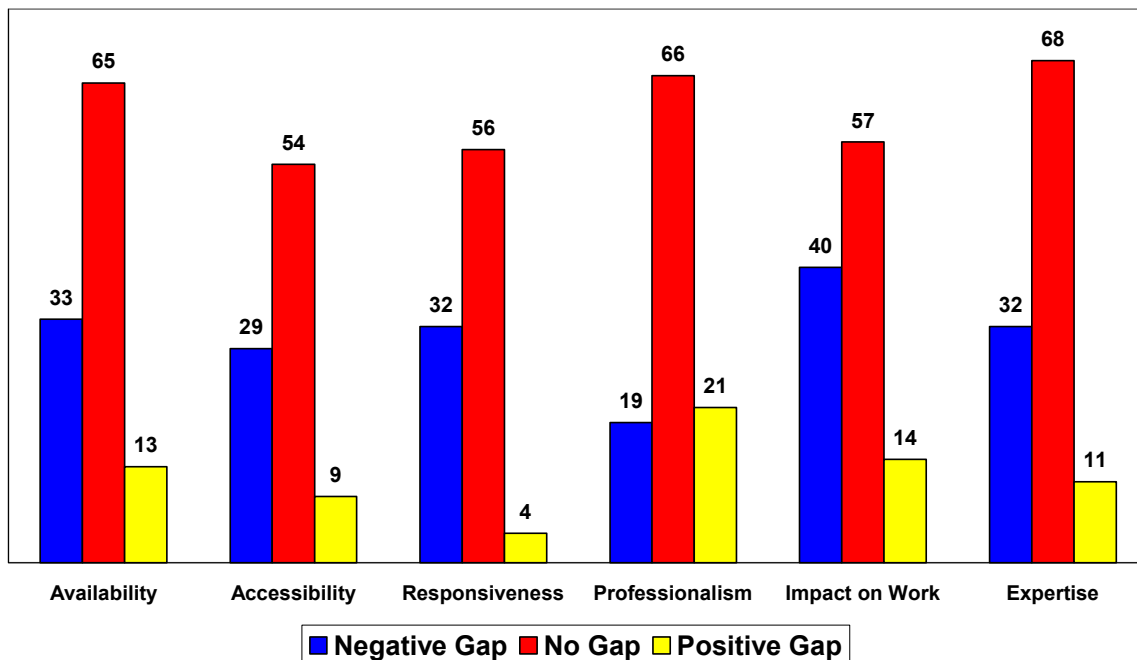
The largest negative gap identified for all respondents was on impact on work followed by availability, the smallest negative gap was observed for professionalism[11]. The largest frequency of negative gaps between importance and satisfaction for impact on work was observed in the County Health department; however, this was not a statistical difference. The only statistically significant difference between departments on the gap variables was for availability. The County Health department's negative gap between importance and satisfaction for availability was greater than the other departments[12]. A difference in the gap between the importance and satisfaction for professionalism was observed between managers and non-managers. The average gap for managers was positive while the average gap for non-managers was negative[13]. There were no gap differences observed between those who called an average of less than three times per month and those who called an average of more than three times per month. The gaps between importance and

satisfaction for accessibility, responsiveness, professionalism, impact on work, and expertise were all significantly smaller for those who had their problem fixed on the first call compared to those who did not[14].

Comments:
Respondents were given 7 opportunities to offer written comments, once after rating each service attribute for satisfaction and again at the end of the survey. Every respondent offered at least one comment and there were 393 separate comments from 111 respondents. There were a number of common themes between the comments and, although the comments were solicited after each distinct service attribute, there was a great deal of overlap. In other words, respondents tended to extend common themes to distinct areas of services. For example one respondent had a complex problem that was mentioned four times for over four different service attributes. This type of inflated frequency could lead to false conclusions. Therefore duplicate themes from individuals were identified and comments were examined by themes. After combining comments with duplicate themes, 111 respondents offered a total of 241 comments.

The themes were categorized as positive, negative, and neutral. Positive comments were very similar and were not broken into separate categories. The majority of the comments were positive, 74% of the respondents offered praise and/or gratitude for the service they receive from the Help Desk and 34% of the total unique comments were positive. Comments were coded as neutral if they did not necessarily reflect on good or poor service experiences, but did offer some insight to the user's preferences and needs; 86% of the respondents offered neutral comments and 39% of the unique comments were coded as neutral. The most common theme in this category was about job urgency and dependence on computers to remain productive. Comments were coded as negative if they referred to any type of barrier to service such as delays, uneven service experiences, and special situations or problems. Negative comments where less frequent, 58% of the respondents offered comments that could be classified as negative and 27% of the unique comments were coded negative. The negative comments covered a broader range of themes, but a common theme among all of them had to do with delays in getting their problem solved, whether it was due to accessing the Help Desk or problem resolution. The most recurring theme in this category was that the respondent had experienced uneven service meaning they felt that the quality of the service they received was dependent on when they called or who they spoke to. The following table displays the frequencies of the themes as well as some quotes to illustrate the types of comments made by respondents.

| Type	Description	Percentage		Example
Positive	Consistent satisfaction with service or gratitude	Respondents	74%	"Every time I have had a problem someone has been here to fix it."
		Comments	34%	"Thanks for operating this program so efficiently and professionally!"
	Urgency of job and/or dependence on computers	Respondents	31%	"This is important to me because a lot of my work is time sensitive and all my work is done in my computer. I can't do my job without my computer."
		Comments	14%	"I supervise staff at 7 clinic sites and additional staff working at my location. I need the help immediately!"
	Comments about survey	Respondents	13%	"…system told me I told me I needed to choose. However, I wanted not to choose anything, because I had used only one method. This is a flaw in this survey."
		Comments	6%	"Where did you learn to do all that? Wow."
Neutral	Prefers talking to a "live" person over voice mail, e-mail, or web access	Respondents	10%	"I prefer live voice communication so I can know immediately the severity of my problem and the likelihood of a timely solution. I probably would not use a web form or e-mail even if they were available."
		Comments	5%	"I need a live person to help me asap. Most of the time I get that, so I'm happy."
	Happy with phone access	Respondents	12%	"All I've ever used is direct dial. That has always been fine."
		Comments	5%	"I use the phone as it is a familiar way for me to do business. I prefer not having a lot of options."
	Would like to use e-mail or web rather than phone	Respondents	10%	"I prefer email but function okay with phone connection."
		Comments	5%	"needs to be web based or email."
	Unaware of, not allowed to, or does not know how to access help via e-mail or web	Respondents	7%	"We are not allowed to e-mail our IT support people - we have to call 84357 and tell someone who has no understanding of our issues, who then calls our in-house team, who then calls me so I can explain my problem all over again."
		Comments	3%	"Would like more ability to access the Help Desk by email, this could be in place and I'm just not aware"
	Other non-specific comments	Respondents	5%	"I am not going to need a help desk when I am at home…"
		Comments	2%	"I fixed the problem before receiving a call back."
Negative	Service is not consistent	Respondents	14%	"Depends on time of day, what type of computer problem it is, and who is working."
		Comments	6%	"Staff not always available in a timely manner due to work load."
	Service was delayed	Respondents	8%	"Long wait holds up productivity at my office"
		Comments	4%	'It took over a week and three or four phone calls and an email message to get someone to reinstall TRAC and reset my icons after changing out my box.'
	Service from technician needs improvement	Respondents	8%	"Recently had to wait a couple days before getting on-site technician to reconfigure my e-mail/access."
		Comments	4%	"ISD great, IS definitely could requires improvement."
	Delays due to complex or rare problem/situation	Respondents	8%	"My computer crashes daily. (I don't call daily though)…"
		Comments	4%	"the problem was not resolved, but I'm not sure there was a fix for it."
	Phone delays due to voice-mail, busy signal, or forwarded calls	Respondents	7%	"Generally I reach someone at "another location" who has to forward my message to the health help desk. Although that process usually happens fairly quickly, I would prefer to talk directly to the desk that assists me."
		Comments	3%	"My calls get sent to HD and responded in the next day"
	Service needed before 8:30 AM	Respondents	6%	"frequent problems right when signing on at 7am, no help available then."
		Comments	3%	"Our business hours start at 7:00 AM twice a week and 8:00 the other 3 days. Sometimes we are unable to perform our job until problem resolved. There is none available at the Help Desk until 8:30 AM which frequently causes barriers for us."
	Need resolution, follow-up	Respondents	4%	"Very important to get a resolution, not just some suggestions and leave me to muddle through."
		Comments	2%	"…the person they had assigned my call too was out sick that day. The help desk staff should be aware of who is available to take calls… I am very unhappy about the way this was handled!"
	Difficult time accessing help	Respondents	3%	"The help desk has never been able to help me over the phone. They always have to contact the computer people for our bldg and they never seem to receive our information in a timely matter even for emergencies."
		Comments	1%	"Phone people have not ever been able to address the problem, and have sent the issue on the McCoy 10th floor people. Those people aren't in agreement on the problem, … because they gave out incorrect information, etc etc The two areas of people do not seem to get along and they always make it an issue for the caller."

Satisfaction/Importance Matrices:

An advantage of comparing satisfaction and importance levels using matrices is that it enables us to identify areas of performance that can be leveraged for positive change. The illustration shows that by identifying the "performance quadrants," we can determine where there is already desired performance (high importance, high satisfaction), identify areas that need improvement (high importance, low satisfaction), and prioritize efforts and resources by not focusing on areas that are either not important (low importance, low satisfaction) or that already indicate "over" performance (low importance, low satisfaction).

Gap Model
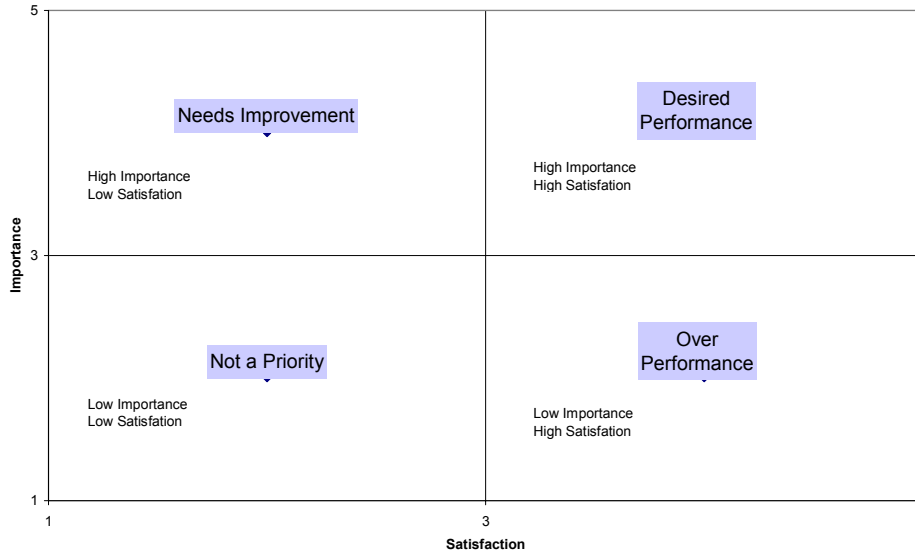
The difference between this analysis and the previous discussion is that the first approach looked at the distribution of the gaps for each variable without considering the mean differences between them. This approach allows us to view the gaps by mapping them using their mean importance and their mean satisfaction. The following chart displays the satisfaction/importance matrices for this survey for all respondents.

All Respondents
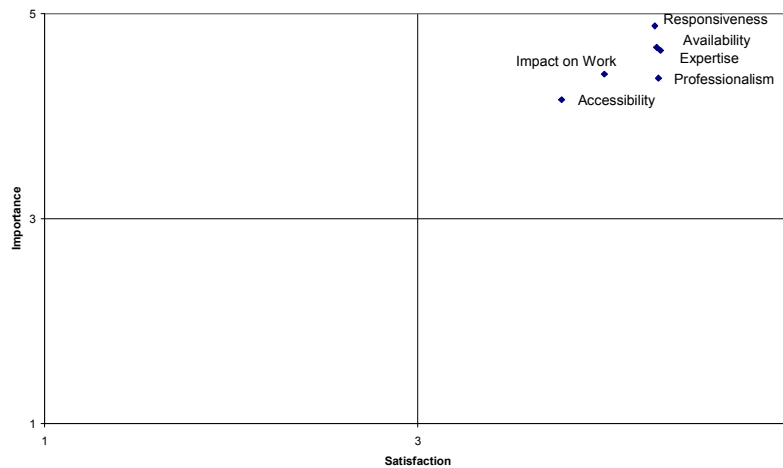
The results revealed that the Central Help Desk is well within the realm of desired performance. Although there was some variation, this same pattern held for departments, management/non-management, average calls/month, and whether or not respondents were helped on their first call.

Since part of an evaluation is to identify where we should look for areas that need improvement, the matrices were reexamined by focusing on the upper right quadrant and dividing that quadrant into relative performance quadrants. This allows us to see past the positive bias. The following chart displays the result of this analysis.

All Respondents
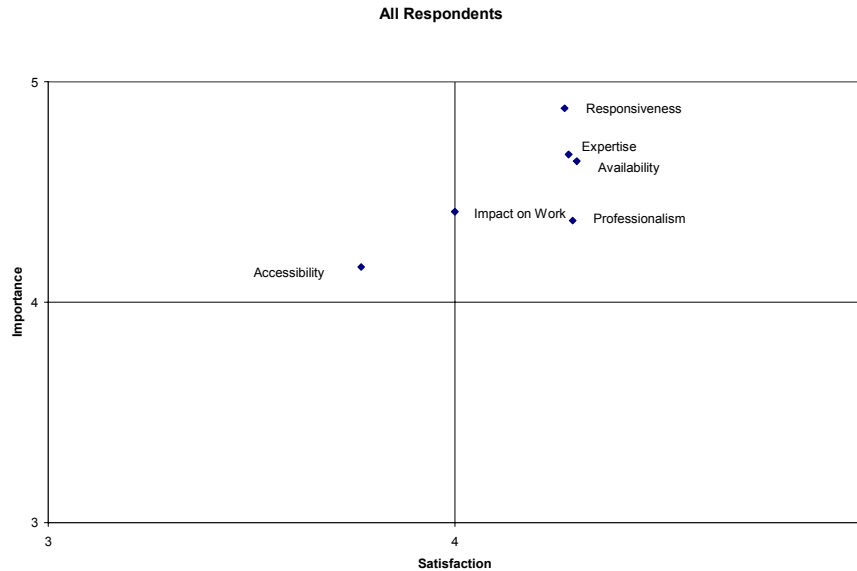
This suggests that, although performance is well within the desired realm, accessibility had the lowest satisfaction with respect to its level of importance. A further investigation was made by department, management/non-management, the average number of calls per month, and whether a respondent was helped on the first call. The following table displays the categories of respondents and which attributes of service are identified as needing improvement in relation to the other attributes of service.

Respondent Category:	Relative Need for Improvement
County Health Department	Accessibility Impact on Work
Business & Community	None
Other Departments	None
Managers	Accessibility Impact on Work
Non-managers	Accessibility
Those calling less than 3 times per month	Accessibility
Those calling more than 3 times per month	Responsiveness
Those who were helped the 1st time they called	None
Those who were not helped the 1st time they called	Availability Accessibility Responsiveness Professionalism Impact on Work Expertise

After magnifying the desired performance quadrant to focus on areas of potential improvement, the most dramatic finding is that every attribute of service fell into the relative need for improvement for those who were not helped on their first call. Another interesting finding is that the importance and satisfaction means of respondents from the County Health Department indicate a relative need for improvement in both accessibility and impact on work while the importance and satisfaction means for the other departments indicate desired performance in these areas. It is also interesting to note that responsiveness only becomes an area needing relative improvement for those who call an average of more than 3 times per month.

Suggestions:
Due to the overwhelming number of positive responses from Multnomah County employees, the Help Desk's focus on IT Industry best practices appears to be working and this policy should continue. However, since not every response was positive, an effort should be made to determine what is causing dissatisfaction for some users. It is possible that those who did not have their problems fixed on the first call have a different service need than those who are helped the first time since they were the least satisfied group. This group of users also emerged as having the greatest relative need for service improvement. The negative comments also suggest that a different service profile (i.e. escalation) may be an underlying reason for dissatisfaction. It is important to identify what these underlying reasons are and how they can be addressed. Future survey methods should be developed to identify the type of service the respondent received along with their survey responses. Every effort should be made to tie Help Desk data such as volume of calls, the number of times the phone rings before being answered, staffing before 8:30 AM, to user satisfaction data. Another area to explore is how satisfaction may change over time or with events, therefore future survey methods should solicit user opinions on more than one occasion and these responses should be tracked over time. In addition, surveys should be administered a short period after the user has called and the respondent should be instructed to focus on a particular service call.

Endnotes:

[1] From Gartner group and literature reviewed by Chris Watkins when designing survey contents.
[2] The majority of missing responses came from the same 3 questions, and had been submitted the same day. Other possibilities were examined such as departments and locations to locate the source of the glitch, but there were no patterns found. Although only 73 surveys were complete, a decision was made to delete only those surveys that were likely to have missing data due to a technical glitch.
[3] More than 75% of the surveys returned came from Business and Community Services and County Health Services. The departmental characteristics of the sample were not tracked so it is not possible to determine if this return result is representative, however, the typical types of service profiles (i.e. TPX, PC/LAN, and SAP support) the Help Desk provides for these two departments does suggest that they would place a higher volume of calls. Department classification was changed due to a low number of surveys received (less than 7% each) from departments other than Business and Community and County Health. Job titles were also combined into management and non-management classifications because there were very few surveys from directors and non-professional IT. Respondents who did not check a job title but who did offer a written response were re-coded into management and non-management. The average number of calls each month were re-categorized into <3 and >3 times per month due to relatively low rates of respondents calling an average of 5+ times per month (less than 6% of all respondents).
[4] $\chi^2 (2, N = 111) = .353$, ns for average number of calls per month between departments; $\chi^2 (2, N = 111) = 4.364$, ns for having problems fixed on the first call between departments
[5] t = 1.566, ns for average number of calls per month between managers and non-managers;
t = -.819, ns for having problems fixed on the first call between managers and non-managers
[6] Means and standard deviations for importance ratings were: X = 4.67, sd = .69 for availability; X = 4.16, sd = 1.03 for accessibility; X = 4.88, sd = .32 for responsiveness; X = 4.37, sd = .79 for professionalism; X = 4.41, sd = .93 for impact on work; X = 4.64, sd = .60 for expertise.
[7] An ANOVA comparing the departments on importance ratings revealed that the Business and Community Services department rated both availability (F (2, 108) = 3.38, p< .05) and accessibility (F (2, 108) = 3.44, p< .05) lower than the County Health department (4.45 compared to 4.80 for availability and 3.86 compared to 4.42 for accessibility).

[8] Respondents who called an average of less than 3 times per month had an average importance rating of 4.27 (sd = .98) for accessibility compared to 3.74 (sd = 1.14) for respondents calling an average of more than 3 times per month (t = 2.25, p < .05).

[9] Means and standard deviations for satisfaction ratings were: X = 4.28, sd = 1.02 for availability; X = 3.77, sd = 1.21 for accessibility; X = 4.27, sd = 1.11 for responsiveness; X = 4.29, sd = .94 for professionalism; X = 4.00, sd = 1.06 for impact on work; X = 4.30, sd = .87 for expertise.

[10] Respondents who had their problem fixed the first time they called gave higher satisfaction ratings to all attributes of service than those who did not. An average satisfaction ratings of 4.42 (sd = .88) compared to 3.97 (sd = 1.22) for availability (t = -2.19, p < .05); 4.08 (sd = 1.00) compared to 3.07 (sd = 1.36) for accessibility (t = -3.98, p < .05); 4.49 (sd = .96) compared to 3.68 (sd = 1.28) for responsiveness (t = -3.29, p < .05); 4.50 (sd = .73) compared to 3.85 (sd = 1.16) for professionalism (t = -4.50, p < .05); 4.18 (sd = .98) compared to 3.60 (1.14) for impact on work (t = -2.77, p < .05); 4.50 (sd = .66) compared to 3.86 (sd = 1.09) for expertise (t = -3.84, p < .05).

[11] Means and standard deviations for the gaps between importance and satisfaction ratings were: X = -.3874 , sd = 1.17 for availability; X = -.49, sd = 1.31 for accessibility; X = -.60, sd = 1.13 for responsiveness; X = -.004, sd = 1.12 for professionalism; X = -.41, sd = 1.17 for impact on work; X = -.34, sd = .92 for expertise.

[12] An ANOVA comparing the departments on the gaps between importance and satisfaction revealed that County Health had a larger mean gap than the other departments, a mean gap of -0.76 (sd = 1.12) (F(2, 108) = 3.96, p< .05) compared to -0.14 (sd = 1.33) for Business & Community and -0.12 (sd = .68) for all other departments.

[13] Managers had an average gap of -.46 (sd = 1.20) compared to an average gap of .10 (sd = 1.06) for non-managers for professionalism (t = -2.35, p < .05).

[14] Respondents who reported having their problem fixed on the first call had an average gap of -.22 (sd = 1.13) for accessibility compared to -1.12 (sd = 1.47) for those who did not (t = -3.15, p < .05).

Respondents who reported having their problem fixed on the first call had an average gap of -.40 (sd =.92) for responsiveness compared to -1.12 (sd = 1.45) for those who did not (t = -2.81, p < .05).

Respondents who reported having their problem fixed on the first call had an average gap of .19 (sd =.88) for professionalism compared to -.56 (sd = 1.37) for those who did not (t = -3.40, p < .05).

Respondents who reported having their problem fixed on the first call had an average gap of -.21 (sd =1.05) for impact on work compared to -.86 (sd = 1.31) for those who did not (t = -2.78, p < .05).

Respondents who reported having their problem fixed on the first call had an average gap of -.11 (sd =.65) for expertise compared to -.83 (sd = 1.20) for those who did not (t = -4.03, p < .05).