MULTNOMAH COUNTY

MULTNOMAH COUNTY IT HELP DESK SURVEY

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A REPORT FOR THE DEPARTMENT OF BUSINESS SERVICES' INFORMATION TECHNOLOGY DIVISION

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MULTNOMAH COUNTY IT HELP DESK SURVEY

SURVEY: Multnomah County employees were asked to rate six attributes of service (availability, accessibility, responsiveness, professionalism, impact on work, and expertise) for importance and satisfaction. Data was analyzed by the Budget Office. 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:

- 768 employees of Multnomah County returned a survey out of 2350 total at a response rate of 32%.
- 76% of the respondents made 1 to 2 calls per month on average.
- Respondents gave high ratings to both the importance and the satisfaction of all attributes of the Help Desk service.
- 87% of the respondents reported that the Help Desk fixed their problem on the first call.
- Respondents, who reported that their problem was fixed on the first call, gave higher importance ratings to every attribute of service.
- Respondents, who reported that their problem was fixed on the first call, gave much higher satisfaction ratings to every attribute of service, in comparison to those whose problems were not fixed during their first call.
- Respondents, who were in management positions, rated the importance of the Help Desk's "Expertise" significantly higher than those in non-management positions.
- A Gap analysis shows that the Help Desk is meeting the expectations of the majority of the respondents.
- Respondents from all departments, except Dept. of Community Justice, rated the importance of "Responsiveness" the highest of all attributes (DCJ rated the importance of "Availability" the highest).
- The largest negative gap between importance and satisfaction was with "Responsiveness."
- Examining the mean Gap scores of all respondents, "Responsiveness" and "Impact on Work" appear to be potential areas for improvement.
- The smallest gap between importance and satisfaction was "Accessibility."
- The gaps between importance and satisfaction for all but one attribute (i.e., "Accessibility") were smaller for those, who had their problems 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.
- The rate of fixing problems on the first call improved significantly this year, compared to 2003 – 87% v. 68% respectively.
- Comparison of 2003 and 2004 respondents indicated that the 2004 respondents were generally more satisfied with the Help Desk service.

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[1] Design of survey contents was based on review of Gartner Group's literature by Chris Watkins, former Help Desk Manager.

THE SURVEY AND RESULTS:

A total of 2,350 Multnomah County employees, who used Help Desk services at least once within the 90-day window immediately preceding the survey period, were sent an e-mail request to visit a web link, fill out the survey, and submit it electronically (see Appendix).[2] A total of 768 surveys were received for a return rate of 32%, a typical response rate for a survey of this type. All reported findings are based on these 768 surveys.

Respondents were asked the following questions: the average number of times they called the Help Desk per month, the department they worked for, their job type, and whether the Help Desk fixed their problem on the first call. Table 1 displays the percentage of surveys returned by departments and job types. The distribution of survey respondents for each department was proportionate to the actual FTE distribution for the departments for exempt and non-exempt personnel. However, the respondents in management positions returned their surveys in a greater proportion than those in non-management positions.

Table 1.

Department	# of Respondents	% Surveys	Job Types[3]	
County Human Services	134	17%	Managers	19%
			Non-Managers	79%
Business and Community Services	144	19%	Managers	31%
			Non-Managers	67%
Department of Community Justice	131	17%	Managers	21%
			Non-Managers	78%
County Health Department	151	20%	Managers	28%
			Non-Managers	71%
Library	119	16%	Managers	28%
			Non-Managers	70%
Other Departments[4]	89	11%	Managers	27%
			Non-Managers	73%
Total	**768**	**100%**	**Managers**	**25%**
			Non-Managers	**73%**
			Missing Response	**2%**

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[2] Methodological limitations exist in data collection and likely impacted results. The survey instrument is designed to be a transitional tool for analyzing post-service satisfaction as they occur. It was not intended to be used as a global satisfaction tool as it was administered here. Therefore, results should be interpreted with caution.

[3] "Directors or Above" respondents (n=12) were included in the "Management" group and those who identified themselves as "Non-Management/Professional-IT" (n=16) were combined with the "Non-Management" group.

[4] "Other Departments" include Sheriff (n=21), District Attorney (n=5), BCC (n=2), Auditor (n=2), OSCP (n=18), and the 'Other' category (n=41) in the survey question. These departments were combined due to a low number of surveys returned from them (all less than 5%).

Table 2 displays how many times the respondents reported calling the Help Desk per month and whether their problem was fixed on the first call, by departments. Statistically significant differences were found between the departments in terms of the average number of calls per month and in terms of whether or not respondents were helped the first time they called. It appears that the Library had a higher frequency of respondents, reporting to have called 3-4 times per month on average (37%). This is more than twice the amount as the overall average (17%).[5] A look at the comments by the Library respondents indicates that, unlike other departments, the Library calls the Help Desk for problems encountered by the public, who uses the computers in the libraries. Not only are there many more computer terminals at the libraries, but also there are many more users per computer. Therefore, this difference in frequency of calls may be due to the nature of work between customer's need-driven (Library) and employee's need-driven.

Table 2.

Department	Average # Calls/Month*		Problem Fixed 1st Call*	
County Human Services	<1	7%	Yes	79%
	1-2	76%	No	21%
	3-4	17%		
Business and Community Services	<1	8%	Yes	85%
	1-2	88%	No	15%
	3-4	4%		
Dept. of Community Justice	<1	4%	Yes	92%
	1-2	80%	No	8%
	3-4	16%		
County Health Department	<1	8%	Yes	88%
	1-2	76%	No	12%
	3-4	16%		
Library	<1	7%	Yes	91%
	1-2	56%	No	9%
	3-4	**37%**		
Other Departments	<1	6%	Yes	82%
	1-2	79%	No	18%
	3-4	16%		
Total	**<1**	**7%**	**Yes**	**86.5%**
	1-2	**76%**	**No**	**13.5%**
	3-4	**17%**		

*Statistically significant group difference for "Average # Calls/Month," $\chi^2(10)=53.34$, p<.001: for "Problem Fixed on 1st Call," at $\chi^2(5) =13.94$, p=.016.

The survey examined six 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.

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[5] Comparison of the respondents from Library and all the other respondents was statistically significant, $\chi^2(2) =38.68$, p<.001.

- 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:

Table 3 shows the average importance and satisfaction ratings of all respondents, along with the Gap score for each attribute (see Gap Analysis below for explanation). Respondents gave high importance ratings to all attributes of service and gave the overall highest rating to "Responsiveness." The lowest importance rating was given to "Accessibility."

The only statistically significant group difference on the importance ratings of the six attributes among departments was on the "Availability."[6] While the Library staff gave the highest average rating of 4.79, the County Human Services rated it the lowest at 4.55.

As for the comparison between managers and non-managers, statistically significant group differences were found on the importance rating on "Expertise."[7] Respondents, who reported calling an average of 3-4 times per month, gave a higher importance rating to "Responsiveness" than those who called less often.[8]

SATISFACTION:

Respondents were asked to rate each service component for satisfaction. As seen in Table 3, respondents gave relatively high satisfaction ratings to all attributes of service and gave the overall highest rating to "Professionalism." The lowest satisfaction rating was given to "Impact on Work." An examination of comments made by the respondents reflects this lowest rating. Respondents made statements regarding how their productivity would be negatively affected, if the Help Desk support were not available in a timely manner (e.g., "…we literally cannot function without our computers…," "major impact because the few times I needed help were also those times when I was on deadline," "when a system is not working, it can hurt a whole day's work").

Statistically significant group differences among departments were in the satisfaction ratings on "Availability," "Responsiveness," "Impact on Work," and "Expertise."

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[6] Analysis of Variance (ANOVA), $F(5,767)=3.526$, $p=.004$.
[7] $t(752)=3.629$, $p<.001$. Managers' mean importance rating was 4.74, as compared to 4.54 for non-managers
[8] $F(2,767)=3.298$, $p=.038$.

Respondents from Department of Community Justice rated "Responsiveness," "Impact on Work," and "Expertise" higher than the other departments.[9]

Interestingly, respondents who reported being helped on their first call gave significantly higher satisfaction ratings to every attribute of service.[10] It is clear that the individuals, who got their problems resolved during their first calls to the Help Desk, were more satisfied with its service quality than those who had to call again.

Analyses of satisfaction ratings by managers and non-managers, or in the average number of calls per month resulted in no statistically significant group differences.

Table 3.

Attributes	Importance	Satisfaction	Gap*
Responsiveness	4.73	4.15	-0.58
Expertise	4.60	4.21	-0.38
Availability	4.64	4.28	-0.36
Impact on Work	4.23	3.97	-0.26
Professionalism	4.25	4.35	0.09
Accessibility	3.93	4.01	0.08

*Organized in the order of the Gap scores from the highest to the lowest or each attribute (N=768).

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 an evaluation of 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.

As seen on Table 3 above, the largest negative gap identified for all respondents was on "Responsiveness" followed by "Expertise"; the smallest negative gap was observed for "Impact on Work." The results indicate that the survey respondents were not as satisfied with the quality of "Responsiveness" at the degree of importance they placed them. It appears that the Help Desk support was right on target for "Professionalism" and "Accessibility" (i.e., the ratings of importance and satisfaction were congruent).

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[9] "Availability" $F_{(5, 767)} = 4.731$, $p<.001$; "Responsiveness" $F_{(5. 767)} = 2.981$, $p=.011$; "Importance" $F_{(5, 767)} = 3.088$, $p=.009$; and on "Expertise" $F_{(5, 767)} = 2.656$, $p=.022$.

[10] The following *t*-test results were significant at $\alpha<.01$ level between a group of 664 whose problems were fixed on the first call and a group of 104 whose problems were not fixed: "Availability" $t(766)=7.648$; "Accessibility" $t(766)=4.569$; "Responsiveness" $t(766)=11.504$; "Professionalism" $t(766)=5.793$; "Impact on Work" $t(766)=10.334$; and "Expertise" $t(766)=11.339$.

The negative Gap score between importance and satisfaction for "Availability" and "Expertise" also showed statistically significant group differences. For instance, while the Library had the largest frequency of negative gaps for "Availability", the Business and Community Services had the lowest. As for the Gap score on "Expertise," the County Human Services had the most frequent negative gaps, compared to the Other Departments', the lowest negative frequency among all the department categories.[11]

A difference in the gap between the importance and satisfaction for "Expertise" was observed between managers and non-managers.[12] The respondents, who reported calling less than once a month, and those who called 3-4 times per month on average had a statistically significant group difference on the Gap score for "Responsiveness," with those with a more frequent calling pattern having a higher mean Gap score. Also, the Gap scores between those who called 1-2 times and 3-4 times per month differed significantly for "Responsiveness."[13] The gaps between importance and satisfaction for all attributes except for "Accessibility" were all significantly smaller for those who had their problem fixed on the first call compared to those who did not.[14]

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 (Figure 1) 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, high satisfaction).

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[11] An ANOVA comparing the departments on the gaps between importance and satisfaction revealed that, on "Availability," the Library had the largest mean gap of -.65, $F(5, 767)= 5.89$, $p< .001$. The Library also had the largest mean gap on "Responsiveness," -.83, $F(5, 767)= 4.71$, $p<.001$. County Human Services had a larger mean gap of -.51, $F(5, 767)=2.92$, $p=.013$ than the other department categories.
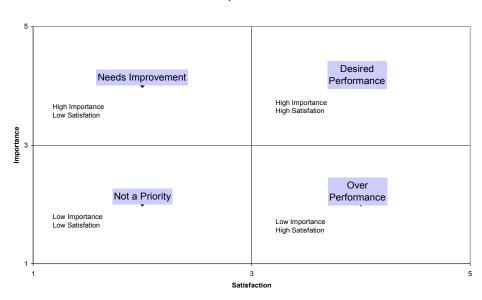
[12] Managers had an average gap of -.49, compared to an average gap of -.34 for non-managers for "Expertise", $t(752)=2.115$, $p=.035$.

[13] $t(181)=2.194$, $p=.030$ between the respondents who called less than once per month on average and those who called 3-4 times per month. $t(715)=2.945$, $p=.003$ between those who called 1-2 times and those who called 3-4 times per month.

[14] $t(181)=2.194$, $p=.030$ between the respondents who called less than once per month on average and those who called 3-4 times per month. $t(715)=2.945$, $p=.003$ between those who called 1-2 times and those who called 3-4 times per month.

Figure 1.

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. Figure 2 displays the satisfaction/importance matrices for this survey for all 768 respondents.
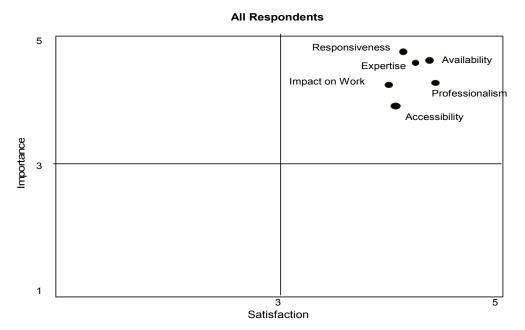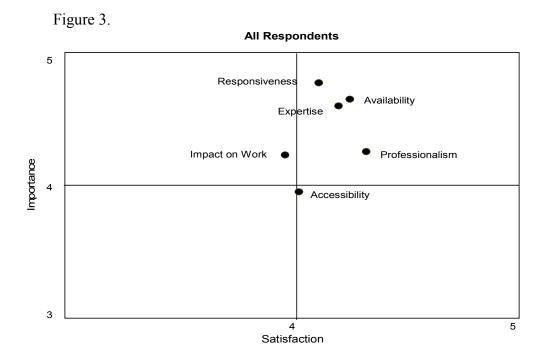
Figure 2.

All Respondents

The results revealed that the 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 closer examinations of areas for improvement.   Figure 3 displays the result of this analysis.

Figure 3.

All Respondents

This suggests that, although performance is well within the desired realm, "Responsiveness" and "Impact on Work" can be improved. When the mean Gap scores were examined for each department category, all but the 'Other Depts.' category (i.e., a combination of 5 departments and the 'Other' category in the survey) had a slightly positive Gap score, indicating over-performance. The Other Departments had a mean score of -.09. The County Human Services had the largest negative Gap score for "Impact on Work" at -.48.

As seen in Figure 3, although the respondents rated the importance of the Help Desk's ability to resolve problems in a timely manner ("Responsiveness"), they were not as satisfied with their experience with this quality. An examination of the comments on this attribute confirms this finding. Twenty percent (n=43) of the comments on "Responsiveness" (N=217) were negative, by far the largest frequency among the six attributes. They centered around two themes of delayed response and inability of the Help Desk personnel to resolve problems without sending the requests to someone else. The two themes are closely inter-related. If Help Desk personnel could not fix a problem and had to find someone else to handle the problem, the resolution would then be delayed. A few respondents also mentioned a decline in this quality in relation to the

new centralized IT support system (e.g., "I can talk to someone, but response to problem solving has continuously declined over the last 18 months"; "… less familiar with our department-specific problems…").

The most dramatic finding was that every attribute of service fell into the relative need for improvement for those who were not helped on their first call. This group of respondents was less satisfied on "Accessibility" and "Impact on Work" because their work was negatively affected when reply to their calls was delayed and/or when their problems were not resolved promptly.

The majority of respondents chose to make neutral comments about their need for IT help. For example, 28% of the comments on "Availability" and 59% on "Accessibility" were neither positive nor negative comments about each attribute, but were statements of why respondents needed prompt and accurate IT support in order for them to continue working. Such comments all relate to how the Help Desk's quality for "Responsiveness" affects the productivity of the employees, "Impact on Work."

COMPARISON OF THE 2003 AND 2004 SURVEY RESULTS:
Several of this year's respondents made comments about the switch to the shared service model this year as an influence on quality of IT support. To examine possible differences in response patterns, survey data from last and this year were compared.[15] Due to some technical problems and limited survey distribution, a sample size was much smaller last year, N=111, compared to this year, N=768. Although the distribution of respondents was actually even among six department categories for this year (see Table 1), the respondents were grouped into three categories for the specific purpose of this comparison as displayed in Table 4. For the purpose of this particular comparison, only the Business and Community Services and the County Health Department were examined.

Table 4.

Year/Department	2003		2004	
	N	% of Survey	N	% of Survey
Business and Community Services	42	38%	143	19%
County Health Department	45	40%	152	20%
All Other Departments*	24	22%	473	61%
Total	**111**	100%	**768**	100%

*All Other Departments includes Sheriff, District Attorney, BCC, Auditor, OSCP, Library, Dept. of Community Justice, County Human Services, and the 'Other' category in the survey.

A look at a question as to whether the problems were fixed on the first call indicates that the 2004 responses were significantly more positive than the 2003 ones (87% and 68% respectively).[16] In particular, the 2004 respondents from the Business and Community

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[15] The survey instrument and the data collection methodology were the same for 2003 and 2004.
[16] $t(877)=4.968$, $p<.001$.

Services and the Health Department reported that their problems were fixed on the first call significantly more often than 2003.

The satisfaction rating of "Accessibility" was the only significant group difference of the six attributes between the respondents of the two years.

Next, the satisfaction ratings were examined by departments and by year. The 2004 respondents from the Business and Community Services rated the satisfaction of "Accessibility" higher than 2003. No differences were found on the average satisfaction ratings for any of the attributes among the respondents from the County Health Department.

Examinations of Gap scores between importance and satisfaction average ratings suggest that the "Accessibility" is the only attribute that was rated differently between the two years. While the gap for 2003 was negative, meaning that the respondents were less satisfied than the level of importance they placed for this attribute, the Gap score for 2004 indicates congruence between importance and satisfaction, showing improvement.

As to the differences by departments, both "Availability" and "Accessibility" improved significantly in terms of differences between the importance and the satisfaction ratings among the County Health Department respondents. The Gap scores of the Business and Community Services respondents also indicate improvement on "Accessibility." The comments from 2004 reflect this improvement on the two attributes. The following are some of examples of the comments: "Whenever I call, there is always some live person who can help me…," "With all the options (e.g., phone, e-mail), the Help Desk is always accessible," "It's nice to have voice mail for items that are not urgent, important to have a live person when the matter is urgent." Out of 1,386 comments, only four mentioned "Shared Services" as a negative effect on the Help Desk's quality.

Despite the systemic change this year to the "Shared Services" model, comparisons of responses between the 2003 and 2004 surveys seem to indicate only a slight change in ratings of the Help Desk IT support over all. Accessibility of the support appears to have improved and for the respondents from the Business and Community Services and the County Health Department. Based on the last year's Gap analyses, "Accessibility" was suggested as the area for improvement.

RECOMMENDATIONS:
The overwhelming majority of Multnomah County employees, who sent in the Help Desk survey, had positive responses. The results seem to indicate that the Help Desk continues to do well with its focus on the IT Industry best practice model. One of the most interesting findings was the different ratings across most areas between the respondents, whose problems were solved on the first call, and those who did not get their questions answered on the first call. Although 87% of the respondents reported that their problems were fixed on the first call - a much better result than last year (68%) - the effort should be continued by the Help Desk to solve problems when employees call the first time. 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.

FUTURE RESEARCH:
To better understand the feedback of the Help Desk users, the following are suggested in the future survey format: 1) Direct respondents to answer questions regarding one anchor incident (e.g., "Remember the most recent call you made to the Help Desk…"); and 2) Request to fill out survey continuously as the services were performed for a longer period to create a bigger sample.

Appendix

Multnomah County Help Desk

Central Help Desk Customer Survey

Multnomah County Help Desk

County MINT IT Main

Central Help Desk Customer Survey

	<1	1-2	3-4	5+
1. On average, how many times, a month, do you call the Help Desk?	○	○	○	○

2. For each of the following criteria, rate the importance to you on a scale of 1 (least important) to 5 (most important)

Required fields are marked with *

	Least Important			Most Important	
	1	2	3	4	5
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.	○	○	○	○	○

3. For each of the following, rate your satisfaction with our ability to meet your needs on a scale from 1 (least satisfied) to 5 (most satisfied). If you scored a one (1) or a five (5), please tell us why.

Required fields are marked with *

	Least Satisfied			Most Satisfied	
	1	2	3	4	5

Availability* - The availability of a live Help Desk Analyst during business hours.

◌   ◌   ◌   ◌   ◌

Comments:

Least Satisfied			Most Satisfied	
1	2	3	4	5

Accessibility* - The ability to access the Help Desk support through various options: direct dial, outside line, voice-mail, email, web form, etc.

◌   ◌   ◌   ◌   ◌

Comments:

Least Satisfied			Most Satisfied	
1	2	3	4	5

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.

◌   ◌   ◌   ◌   ◌

Comments:

Least Satisfied			Most Satisfied	
1	2	3	4	5

Professionalism* - The interaction, communication skills, flexibility, people skills of the Help Desk personnel.

◌   ◌   ◌   ◌   ◌

Comments:

Least Satisfied	Most Satisfied

	1	**2**	**3**	**4**	**5**

Impact on Your Work* - The Help Desk's impact on your ability to reduce costs or improve your productivity.

| | ☐ | ☐ | ☐ | ☐ | ☐ |

Comments: [text field]

Least Satisfied			**Most Satisfied**	
1	**2**	**3**	**4**	**5**

Expertise* - The accuracy, competence, business knowledge, technology skills, innovativeness and expertise of the Help Desk personnel.

| ☐ | ☐ | ☐ | ☐ | ☐ |

Comments: [text field]

4. In which organization do you work?

☐ County Human Services   ☐ Business and Community Services   ☐ Community Justice

☐ Sheriff   ☐ Health   ☐ District Attorney

☐ BCC   ☐ Auditor   ☐ Library

☐ OSCP   ☐ Other

5. What is your job title?

☐ Director or above   ☐ Non-management/professional

☐ Manager or Supervisor   ☐ Non-management/professional - Information Technology

Other [   ]

6. Has the Help Desk been able to resolve most of your problems on the first call ?   ☐ Yes   ☐ No

7. General Comments:

If you would like to leave your name and phone, or a comment about this survey, please enter here.