IT Rates: Model Could be Improved to Enhance Transparency and Decision-Making

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Executive Summary

King County Information Technology's (KCIT) rate model lacks transparency. Its unnecessary complexity hinders accuracy, consistency, and oversight. While the model follows several best practices, customers report confusion over IT charges and may not have enough information to make optimal decisions about IT services. In reviewing the model, we found inconsistencies, questionable assumptions, and errors, which have led to higher rates across the County. In addition, KCIT's workstation inventory process complicates accurate allocation of costs. In total, the problems with the model's structure prevent adequate review by oversight entities and could have a substantial budgetary impact. We make recommendations for KCIT to refine the structure of its model in order to improve accuracy, consistency, and accountability.

King County Information Technology Rates

REPORT HIGHLIGHTS

What We Found

The King County Department of Information Technology (KCIT) charges county agencies over $200 million per biennium for the information technology (IT) services it provides countywide. The rate model KCIT uses to bill agencies for IT services contains inconsistencies, errors, and questionable assumptions affecting over $20 million in customer charges. Some of these issues raise rates, and some lower them. These issues stem from a lack of transparency caused by the model's complexity and structure.

The rate model contains nearly 200 separate spreadsheets with inconsistent structures and assumptions. The size and complexity of the model hinders oversight by obscuring visibility into the model's assumptions that affect millions of dollars of rates.

KCIT follows several best practices in how it structured its rate model, such as calculating rates in great detail in an effort to provide customers choices in the type and volume of IT services they purchase. However, customers report that they have little insight into their IT charges, which hampers cost-informed decision making about IT purchases.

In addition, KCIT's process of counting user accounts and workstation inventory needs improvement. Because KCIT distributes its operating costs across the total number of users and devices, inaccurate inventory counts can result in rates that are either too high or too low. Inaccurate counts have also contributed to several million dollars in "true-up" charges, which may not be justified by additional costs.

What We Recommend

We recommend that KCIT work with the Office of Performance, Strategy and Budget to simplify its rate model, take steps to ensure that customers understand how their rates are determined, and continue to improve the accuracy of its inventory process.

Why This Audit Is Important

KCIT is one of the largest internal service funds in King County and spends over $100 million per year. KCIT designed its rate model to generate revenue equal to the cost of providing IT services to county customers. It should fairly allocate costs among customers and provide sufficient clarity so that customers can make cost-effective decisions about IT service levels. In addition, the rate model should be transparent enough to allow accountability to oversight entities such as the County Executive and County Council so they can understand the drivers of rate increases.

In 2011, King County consolidated IT services from individual departments into KCIT. Through an internal service fund, KCIT charges other county agencies for the cost of its services. Since its reorganization, KCIT has changed the methodology it uses to charge customers for service several times, which has resulted in confusion about the fairness and accuracy of its charges as well as concerns about the visibility of budget increases.

King County Information Technology Rates

TABLE OF CONTENTS

KCIT's Rate Model Structure

SECTION SUMMARY

Errors, inconsistencies, and a lack of accountability in King County's Department of Information Technology's rate model present problems for customers and stakeholders. King County Information Technology (KCIT) uses a rate model to allocate the $200 million biennial cost of information technology (IT) equipment and services used by King County agencies. While the model generally follows industry guidelines, like using a high level of detail to calculate and assign costs, we found almost $2 million in errors and an additional $9 million in questionable assumptions built into the model. Further, while one of the stated purposes of the model was to allow customers flexibility to choose appropriate service levels for their agency and charge them only for the services they receive, customers report that their rate is not transparent and that they have little influence over their agencies' IT costs. This could result in inefficient IT service choices, which could negatively affect agency budgets.

Rate model opacity creates challenges for customers

KCIT customers report that due to the opaque nature of the department's rate model, they are largely unable to make cost-informed decisions about their information technology use. KCIT's rate model is a complex set of almost 200 interlinked spreadsheets that describe the biennial costs of providing about $200 million of IT equipment and services for county agencies.[1] KCIT includes a high level of costing detail in its rate model so that it can accurately calculate and apportion costs for its products and services. This could allow customers to make cost-informed decisions when filling out their biennial IT service request forms, such as which software applications they want to keep, or how many user accounts or workstations they need. However, our survey of KCIT customers found that KCIT does not provide enough time for them to fully review inventory information to verify its accuracy, and that KCIT is often unable to answer questions about the rates. As a result, customers report that it is difficult for them to make informed service decisions. Department representatives told us that these issues affect agency budgets by reducing the amount of funding available for their work.

KCIT's rate and billing processes are not transparent and as a result, customers do not understand their information technology costs. As noted above, our survey of finance managers showed that over half of respondents were unclear on their IT rate determination process.[2] Specifically, 56 percent stated that they understand the rate determination process "to some extent" or "not at all."

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[1] King County spends about 3.4 percent of its operating budget on IT equipment and services, which KCIT provides to county agencies.

[2] We asked agencies to forward our survey to the person who reviews the rates KCIT charges their agency. Most of the respondents were budget or finance officers, or managers, but some were chief financial officers or other high-level staff.

Respondents stated that KCIT was unable to explain its methodology in determining rates and did not provide details on which costs were included in which groups. We noted differences in cost grouping between the request forms agencies use to select IT services, KCIT's rate catalog, and the central rate accounts finance managers use in budgeting. Further, almost half of respondents stated that they feel they have no influence on the amount they pay for KCIT products and services. Improved communication could help KCIT achieve its rate model goal of allowing agencies to gain insight into their IT costs and customize service levels. Without understanding how to influence their rates, finance managers may miss opportunities to optimize their IT costs. Clarifying the alignment between the IT services customers order and how they pay for them would assist in improving transparency and enable customers to make more efficient choices.

Recommendation 1

King County's Department of Information Technology should align cost groupings on service request forms, its rate catalog, and central rate accounts, or provide crosswalk information to customers.

Despite the model's complexities, KCIT has stated goals for the model and follows many best practices for rates. KCIT senior leadership indicated that it had two main objectives when developing the rate model:

1. to allow departments the flexibility to select the services that suit them best
2. to create a fair fee structure for agencies of various sizes.

This approach is consistent with many of the Government Finance Officers' Association (GFOA) suggested "best practices" for internal service pricing. For example, KCIT's rate model identifies goals of internal service pricing, includes direct and indirect costs, and allows agencies to customize service levels. While consistent with some best practices, the structure of the rate model presents several challenges we detail below.

Complexity creates communication challenges

Communication problems result from the lack of transparency of KCIT's rate model. GFOA guidelines warn that precise internal costing systems can be complex and complexity requires educating managers so they can use the detailed cost information. We found through a survey of agency finance managers that KCIT has not communicated its rate and billing processes well, creating frustrating experiences for some customers. Poor communication and education on the rate model undercuts KCIT's stated goal of allowing customers as much control as possible over their IT costs. In addition, the way KCIT constructed its complex rate model causes other problems that we will discuss in the following section.

Recommendation 2

King County's Department of Information Technology should develop and distribute materials to ensure that finance managers have adequate information to understand the relationship between their information technology (IT) product and service order and their agency's IT charges.

Structure and complexity of model leads to errors

Errors result from the large number of spreadsheets and calculations supporting the rate model and inconsistencies in how the calculations are structured. While KCIT finance staff are responsible for the rate model as a whole, it delegates the construction of many parts of the rate calculations to individual service managers within KCIT. The rate model includes about 200 separate spreadsheets supporting the rate calculations, and there are several different spreadsheet authors. In addition, KCIT has not provided a consistent template for the spreadsheets. As a result, these spreadsheets often have inconsistent structures and assumptions.

We found seven different errors totaling almost $2 million. Some errors result in rate increases and others result in rate decreases. These errors are simple mistakes, for example, linking to the wrong cell on a spreadsheet. Exhibit A shows the size and direction for each error we found. Since the largest error benefits KCIT's customers (results in lower rates), the net impact of these errors is to lower customer rates by slightly more than $1 million.

EXHIBIT A: Calculation errors both raise and lower the rate

Error	Impacted Rate	Amount of Rate Increase	Amount of Rate Decrease
Calculation references wrong cell in supporting spreadsheet	Unified communication rate	-	$1,358,901
Calculation double-counts one FTE	Enterprise data services rate	$360,244	-
Overhead calculation only includes one year, not biennial amount	Enterprise data services rate	-	$90,110
Cost of KCIT staff workstations double-counted	Platform overhead calculation	$64,776	-
One extra year of overhead for one staff included	Application computer rate	$24,601	-
2017-18 number referenced instead of 2019-20 number	Enterprise IT training rate	-	$54,618
Incorrect overhead rate applied	Operations management overhead rate	-	$2,575
Total		$449,621	$1,506,203
Total Errors		$1,955,824	

Source: King County Auditor's Office analysis of King County's Department of Information Technology data

Recommendation 3

King County's Department of Information Technology should update its rate model to reduce complexity and improve consistency, accuracy, and oversight. At a minimum, this effort should include the following elements:

  a) **reduce the number of calculations and spreadsheets supporting the model**

  b) **provide templates to rate model contributors for how to structure the calculations.**

Assumptions have significant impact on rates

Assumptions involving millions of dollars in customer charges go unquestioned. This could result in a mismatch between the amount customers are charged and KCIT's actual costs. Unlike the calculation errors discussed above, the problematic assumptions result in higher rates to customers. As discussed above, individual service managers—not KCIT central finance staff—prepare many of the 196 spreadsheets supporting KCIT's rate model. Because of this number of authors, as well as a lack of a consistent format, there are inconsistencies in assumptions used

for inflation and inconsistent methods used to identify the cost of the product or service among these spreadsheets. KCIT does its rate calculations very early in the budget process for the next biennium. Therefore, the model predicts future costs KCIT will charge to customers before the costs will occur. As with any forward-looking model, KCIT's rate model relies on assumptions to estimate future costs.

We identified four assumptions totaling about $9.5 million that were not thoroughly reviewed or approved by decision-makers. The complexity of the model makes thorough review by the Office of Performance, Strategy and Budget (PSB) and council analysts extremely difficult and prohibitively time-consuming, so many assumptions go unchallenged. When we reviewed the model, we noted several problematic assumptions that increase rates by about $9.5 million in the 2019-2020 biennium, as detailed in Exhibit B, below.

Our purpose in highlighting these assumptions is not to conclude that the assumptions are wrong or that rates are too high. Rather, our purpose is to shed light on these assumptions, because the complexity of the rate model results allows them to remain hidden in the details of the model and unquestioned by PSB or council staff.

EXHIBIT B: Questionable assumptions all benefit KCIT

Assumption	Amount of Rate Increase	Amount of Rate Decrease
Compensation inflation	$3,003,894	$0
Applications risk factor	$4,245,482	$0
Miscellaneous overhead charge	$1,614,720	$0
Training overhead	$ 605,520	$0
Total Questionable Assumptions	$9,469,616	-

Source: King County Auditor's Office analysis of King County's Department of Information Technology data

Several questionable assumptions total $9.5 million

Compensation inflation: The rate model assumes that KCIT staff salaries and benefits will grow by five percent in both 2019 and 2020, for a total of 10.3 percent over the biennium. PSB's budget instructions directed agencies to plan for 6.7 percent compensation growth over the 2019-2020 biennium. Had KCIT assumed compensation growth in accordance with PSB instructions, customers would be charged $3 million less.

Applications risk factor: KCIT calculates a unique charge for supporting each computer application used by county agencies based on the actual amount of time KCIT staff spent supporting that application in 2017. Therefore, KCIT bases the 2019-2020 application charge on actual costs from 2017 inflated to 2019-2020 dollars. However, on top of the actual cost-based calculation, KCIT adds a risk factor that varies based on the degree to which an application is standardized, off-the-shelf, or highly customized. KCIT applies this risk factor to every application used by every agency and adds over $4.2 million in charges to customers for application support.

This assumption is problematic because while it may be reasonable to expect any single application could cost more or less money to support in 2019-2020, it is not reasonable to assume that costs to support all applications across the County will be $4.2 million more in 2019-2020 than they were in 2017.[3]

Miscellaneous overhead charge: The rate model adds various overhead charges to staff salaries and benefits. KCIT calculates many of these charges on documented costs for things like office space, supplies, phones, and workstations for KCIT staff. However, it includes two charges not based on calculated costs. One of these is a "miscellaneous" charge of $2,000 per year added to the cost of each KCIT employee. KCIT has not provided documentation of any actual costs recovered by this "miscellaneous overhead" charge. This charge adds over $1.6 million to customer charges for the 2019-2020 biennium.

Training overhead: KCIT adds $1,500 per KCIT employee per year in overhead charges to pay for employee training. This number is also not based on a calculated amount, but instead a hard-coded number. We looked at KCIT expenditure accounts for 2017 and 2018, and found that KCIT is actually spending about $750 per KCIT employee on training and related accounts such as travel expenses. If KCIT included $750 per employee per year for training in the rates model instead of $1,500 per employee per year, the savings to customers would be about $600,000.

Adding an assumptions page to the rate model would both improve visibility and alternatives analysis. Well-structured models include a page listing the assumptions used. The model references that page to automatically update values based on changes in the assumptions. This structure would provide policy-makers visibility to the type and amount of the assumptions built into the model. It would also facilitate consideration of the impact of alternatives on rates. KCIT's model does not include an assumptions page.

Recommendation 4

King County's Department of Information Technology update of the rate model should include an assumptions page to improve visibility to policy-makers and facilitate alternatives analysis.

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[3] KCIT managers provided documentation that they had informed the executive budget committee that having older applications would increase rates, but they were not able to show that they had communicated the underlying assumptions or quantitative budget impact for decision-makers to review.

PSB does not review the rate model closely. Based on discussions with PSB staff, we learned that PSB does not review KCIT's rate model closely and has not explicitly approved some of the assumptions described above that are driving customer rates. Given the current complexity of the model, a thorough review is infeasible as it would take many hours. PSB staff has indicated an interest in working with KCIT on updating the model to reduce complexity and improve visibility.

Recommendation 5

King County's Department of Information Technology and the Office of Performance, Strategy and Budget should work together to ensure the updated rate model has clear assumptions and is reviewed prior to approval.

Inventory Counts Affect Rates

SECTION
SUMMARY

Inaccurate counts of workstations and users may have affected rates by $9.3 million in the 2019-2020 biennium. Two of KCIT's largest rates are for workstation support and workstation user charges. Together, these rates make up over $56 million in customer charges over the 2019-2020 biennium. However, the unit counts of workstations and users that KCIT used to set rates and true-up payments are of questionable accuracy. We calculated that KCIT may be overcharging customers by about $9.3 million in the 2019-2020 biennium due to issues with the inventory counts.

Accurate inventories are an important component of rates

Costs that KCIT customers pay, such as workstation support and workstation user rates require accurate inventory counts to ensure the department fairly allocates costs and collects adequate revenues. KCIT calculates rates for both workstation support and workstation user charges by dividing the total cost to provide these services or equipment by the total number of workstations or users respectively. Exhibit C shows this process.

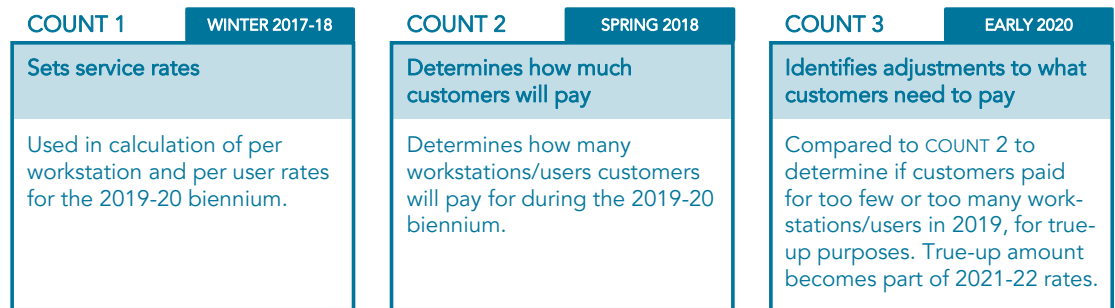EXHIBIT C: Rates rely on accurate counts of workstations and users
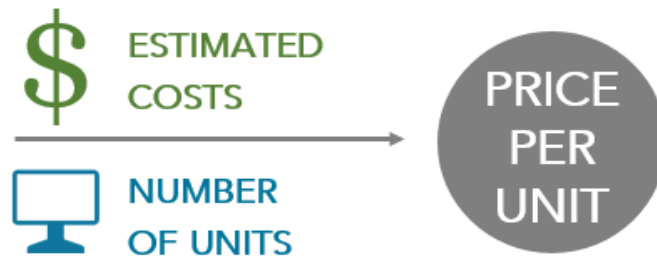
Source: King County Auditor's Office analysis of King County's Department of Information Technology data

KCIT counts workstations and users at several different times

KCIT uses several counts of workstations and users to set initial rates for budgeting purposes and to "true-up" the rates at the end of the cycle. This phased set of counts, and their timing, is shown in Exhibit D. KCIT counts workstations and users in the winter, midway through the biennium, and uses this count to set rates for the next biennium. A second inventory count in the spring of the second year of the biennium determines the workstation and user charges for the next biennium. KCIT compares a third inventory count, conducted in late fall of each year, to the second count and either charges agencies an additional amount or issues a refund depending on whether they had more or fewer workstations and users than the second count.

EXHIBIT D: Workstations and users are counted several times thoughtout the rate calculation process

COUNT 1	WINTER 2017-18	COUNT 2	SPRING 2018	COUNT 3	EARLY 2020
Sets service rates		**Determines how much customers will pay**		**Identifies adjustments to what customers need to pay**	
Used in calculation of per workstation and per user rates for the 2019-20 biennium.		Determines how many workstations/users customers will pay for during the 2019-20 biennium.		Compared to COUNT 2 to determine if customers paid for too few or too many workstations/users in 2019, for true-up purposes. True-up amount becomes part of 2021-22 rates.	

Source: King County Auditor's Office analysis of King County's Department of Information Technology data

Counts are not accurate

Customer agencies told us that KCIT's counts of workstations and users are not accurate. They also said the timeframe provided by KCIT for agencies to verify and adjust their inventory counts during the budget process is too short. A majority of customers reported problems with accurate counts when we conducted a customer survey during the audit.

KCIT acknowledges issues with the workstation and user counts and is taking several steps to improve accuracy. For example, the agency is creating a process to cross-reference between various automated counts of workstations using software tools and an asset management system that logs the acquisition of new machines and disposal of old ones. Additionally, KCIT is planning to begin quarterly meetings with customers to keep inventory counts current, replacing the previous process of counting inventory once during the budget process. KCIT anticipates that the steps it is taking will result in more accurate inventory counts in the future.
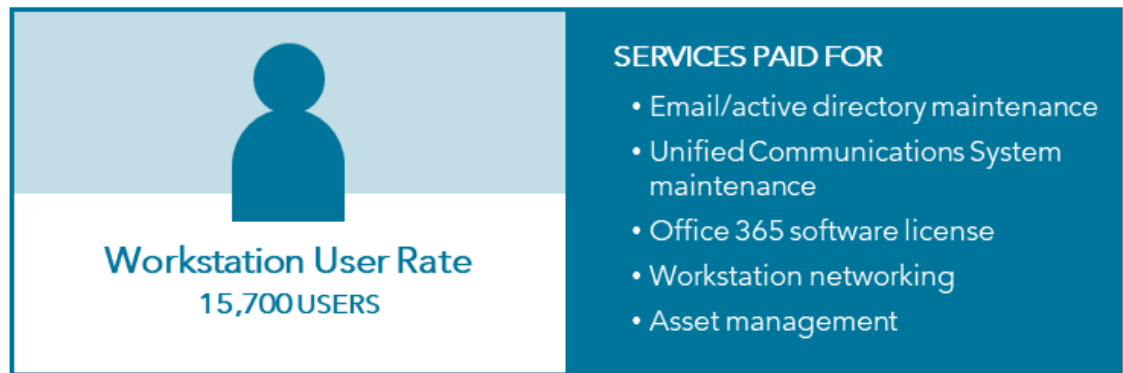
Recommendation 6

King County's Department of Information Technology should develop, document, and implement a plan to increase the accuracy of its process to count workstations.

Changes to count of workstation users adds $2.7 million in costs to customers

The 2019-2020 workstation user rate was set too high and will collect $2.7 million more from customers than KCIT estimated it needed for the biennium. Workstation user rates pay for costs associated with connecting workstations to the county network, for communications costs, and for enterprise-wide software such as Office 365, as shown in Exhibit E. KCIT estimates the costs associated with these services and spreads these costs evenly among the number of units to determine the cost per unit, which becomes the workstation user rate. [4]

EXHIBIT E: KCIT's workstation user rate includes a variety of services

Workstation User Rate
15,700 USERS

SERVICES PAID FOR
- Email/active directory maintenance
- Unified Communications System maintenance
- Office 365 software license
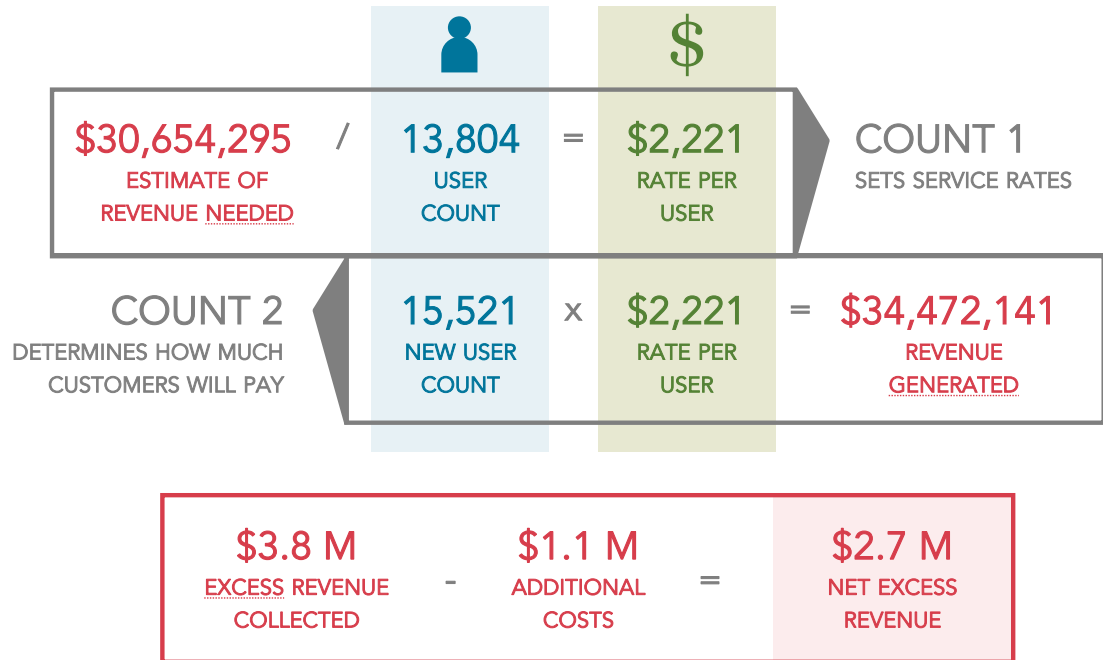- Workstation networking
- Asset management

Source: King County Auditor's Office analysis of King County's Department of Information Technology data

For 2019-2020, KCIT changed its method of counting for rate-setting purposes, which increased the final user count. In previous budgets, KCIT counted workstation connections as the unit for rate calculation purposes, and for 2019-2020, KCIT is now counting users as the unit. While KCIT has software tools to accurately count users, the change in method resulted in issues that needed to be resolved with customers before determining a final user count. As a result, the final user count for the budget (count 2) was significantly higher than the user count that set the rate (count 1).

Increases in the user count resulted in increased revenue to KCIT. Because KCIT does not recalculate rates based on the changes to the number of units between the initial count for rate-setting and the final count for the budget, increasing the number of units resulted in KCIT receiving more revenue than it estimated it needed when it calculated the rates. In other words, the workstation user rate is too high based on the final user count. Exhibit F shows how user count changes during the budget process affect KCIT revenue.

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[4] One exception is charges for Office 365 licenses. Unlike other components of the workstation user rate where estimated costs are divided by unit counts to determine the rate, the cost of Office 365 licenses is fixed. So the rate is the cost of the license (plus some overhead charges), and the rate is multiplied by the user count to determine how much revenue KCIT needs to raise from customers.

EXHIBIT F: User count increased while rate stayed constant increasing revenue

$30,654,295	/	13,804	=	$2,221	COUNT 1
ESTIMATE OF REVENUE NEEDED		USER COUNT		RATE PER USER	SETS SERVICE RATES

COUNT 2	15,521	x	$2,221	=	$34,472,141
DETERMINES HOW MUCH CUSTOMERS WILL PAY	NEW USER COUNT		RATE PER USER		REVENUE GENERATED

$3.8 M	-	$1.1 M	=	$2.7 M
EXCESS REVENUE COLLECTED		ADDITIONAL COSTS		NET EXCESS REVENUE

Source: King County Auditor's Office analysis of King County's Department of Information Technology data

KCIT will collect more than it estimated it needed

As Exhibit F illustrates, KCIT will collect about $2.7 million more than it estimated it needed for workstation user services as a result of the increase in the final user count (used for the budget) over the count used to set rates. KCIT will collect about $3.8 million more than it estimated it needed when setting the rates, however, we adjusted this amount down to $2.7 million to reflect the fact that one of the components of the workstation user rates is licensing costs for Office 365 software, which is a cost that varies directly with the number of units.[5]

2019-2020 workstation support rate was set too low

KCIT's final count of workstations was lower than its initial count, so it will collect less revenue than it anticipated. The workstation support rate pays for the costs of KCIT staff who provide services related to customer workstations. These services include setting up new workstations with the proper software, responding to help requests from users, and decommissioning old workstations, as shown in Exhibit G. In setting the workstation support rate, KCIT estimates the cost of support services and spreads this cost evenly across the total number of workstations. The result of this calculation is a rate per workstation.

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[5] Our calculation of the $2.7 million net impact of changing the method of counting users assumes that KCIT's estimated costs for workstation user services will not change much as a result of changing user counts, except for Office 365 license costs.

EXHIBIT G: KCIT's workstation support rate includes a variety of services

SERVICES PAID FOR
• Set up email/network accounts
• Set up new computers, software
• Hardware/software support
• Current workstation inventory
• Employee off-boarding
• Decommission old computers

Workstation Support Rate
8,600 WORKSTATIONS

Source: King County Auditor's Office analysis of King County's Department of Information Technology data

For the 2019-2020 rates, the final count of workstations for the budget was lower than the initial count KCIT made for rate setting. Because of this, the price per workstation is lower than it would have been had KCIT recalculated the rates based on the final count. As a result, in 2019-2020, KCIT will receive about $600,000 less than it estimated it needed for workstation support when it calculated the rates, as shown in Exhibit H.

EXHIBIT H: Workstation count decreased while rate stayed constant, decreasing revenue

$25,609,636 / 8,800 = $2,910
ESTIMATE OF REVENUE NEEDED | WORKSTATION COUNT | RATE PER WORKSTATION
COUNT 1 SETS SERVICE RATES

COUNT 2 DETERMINES HOW MUCH CUSTOMERS WILL PAY
8,603 x $2,910 = $25,034,730
WORKSTATION COUNT | RATE PER WORKSTATION | REVENUE GENERATED

$25,609,636 − $25,034,730 = ($574,906)
ESTIMATE OF REVENUE NEEDED | REVENUE GENERATED | DEFICIT

Source: King County Auditor's Office analysis of King County's Department of Information Technology data

$7 million in workstation true-up charges may not be entirely justified

The $7 million in funds collected through the 2017 workstation support true-up may reflect changes in counting methodology and may exceed KCIT's actual costs. For the 2019-2020 rates, in addition to the workstation rate discussed above, KCIT is charging customer agencies over $7 million because KCIT's count of workstations at the end of 2017 was higher than the count that customer agencies agreed to on their 2017-2018 service request forms. KCIT calls this type of retroactive charge a true-up. Its purpose is to make sure customers pay their fair share if there are significant changes in unit counts during the year.

Unlike the rate calculations, which KCIT bases on forward-looking estimates of costs spread evenly among the number of units, true-up calculations are backward-looking. The true-up calculations compare the number of units KCIT counts at the end of the year (count 3 in Exhibit D) with the number of units used for the budget (count 2). Because there was significant growth in the count of workstations from count 2 to count 3, the true-up calculations result in $7 million of additional charges to agencies in the 2019-2020 budget.

True-up does not reflect increased costs

Charging customers $7 million for this true-up may not be entirely justified for three reasons:

1. **Accuracy**: KCIT bases its backward-looking true-up charge on 2017 workstation counts of questionable accuracy, and acknowledged that as its counts have grown more accurate, it has resulted in an increase in the total number of workstations. Thus, to some extent, customers will pay more in 2019-2020, because KCIT's inventory counts in 2017 were not accurate—not because of growth in the actual number of workstations during 2017. KCIT is in the process of making improvements in its inventory process, which should result in more accurate counts going forward.

2. **Lack of additional 2017 expenditures**: KCIT made no supplemental budget requests for workstation support and was only able to document about $2 million in increased costs in 2017 in areas associated with workstations. Thus, agencies are being charged $7 million in 2019-2020 for additional costs associated with higher workstations counts in 2017, but KCIT could only document $2 million of higher costs incurred in 2017.

3. **Reduced 2019-2020 costs**: KCIT is planning on reducing workstation support costs in 2019-2020, so collecting an additional $7 million in 2019-2020 for changing workstation counts in 2017 is even more questionable.

The combined effect of the issues discussed above is that KCIT will receive $9.3 million in revenue in 2019-2020 based on unit counts that are of questionable accuracy, as shown in Exhibit I, below.

EXHIBIT I: Changes in inventory counts result in $9.3 million of additional charges to customers in 2019-2020

	Amount of Rate Increase	Amount of Rate Decrease
2019-20 workstation user rate: too high	$2.7 million	$0
2019-20 workstation support rate: too low	$0	$0.6 million
Questionable 2017 workstation true-up	$7.1 million	$0
Net impact on 2019-20 customer charges	**$9.3 million**	

Note: Net impact number is rounded up from $9.28 million

Source: King County Auditor's Office analysis of King County's Department of Information Technology data

More timely inventory would improve accuracy

KCIT has options to address inaccurate rate calculations. As discussed above, customer rates may be set too high or too low because of the changes in unit counts between the time KCIT calculates the rates (count 1) and the time customers agree to their unit counts when the final budget is set (count 2). KCIT suggested that its true-up process solves this problem, but the way KCIT currently calculates true-ups does not actually resolve the issue.

KCIT's current true-up process addresses changes in the unit count between budget finalization (count 2) and the end of the budget year (count 3). However, it does not address changes in the unit count between the count KCIT uses for setting the rates (count 1) and the count it uses for the final budget (count 2). There are at least two ways KCIT could resolve how changing unit counts impact the accuracy of the rates:

1. KCIT could recalculate the rates after it determines a final count (count 2). To the extent that KCIT improves its methodology for counting units, this should not result in a large change to rates. Doing so would ensure that the final rate results in the revenue KCIT estimates it needs during the rate-setting process.
2. KCIT could change how it calculates true-ups by adjusting the rate along with unit counts. Doing so would allow KCIT to collect the estimated or actual revenue it needs to provide services instead of maintaining a rate based on an inaccurate inventory count.

Recommendation 7

King County's Department of Information Technology should develop, document, and implement a process to ensure rates reflect its actual costs by either:

    a) **recalculating rates to reflect actual unit counts at the end of the budget process, or**

    b) **adjusting its true-up calculation to address how changing unit counts resulted in a rate that is too high or too low.**

KCIT can also take steps to eliminate the need for year-end true-ups due to changing inventory counts throughout the year. KCIT's true-up charges address the difference in inventory counts between the amount used for setting the budget (count 2) and the amount at the end of the year (count 3). Combined with the actions KCIT is taking to improve its inventory process, frequent updates would maintain more accurate unit counts throughout the year, thus reducing the need for large year-end true-ups. KCIT told us that it plans to discuss asset inventories with customers on a quarterly basis. However, if KCIT also recalculated customer charges based on updated unit counts on a quarterly basis, this would eliminate the need for an end-of-year true-up because KCIT would charge customers for their actual inventory as it changes over time.

Recommendation 8

King County's Department of Information Technology should adjust unit counts periodically throughout the year and adjust customer charges to reflect updated counts.

Auditor Response

Our audit identified issues with the accuracy and timing of King County Information Technology's (KCIT) inventory of workstations, which resulted in under- and over-charging customers for workstation services. To address this issue, we made a recommendation to KCIT to adjust unit counts during the course of the biennium to more accurately charge customers for the workstations they are using. KCIT is in the midst of improving its inventory process and stated that these actions would address the issues we identified, therefore, it did not concur with our recommendation. KCIT's inventory improvements in conjunction with implementing our other recommendations may address the issues we identified. Although KCIT did not concur with our recommendation, we will review the extent to which KCIT's actions address the issues with workstation services inventory and billing during our follow up process. If KCIT has been successful achieving the desired outcome by different means than we specified, we will consider the recommendation done.

Recommendation 7

King County's Department of Information Technology should develop, document, and implement a process to ensure rates reflect its actual costs by either:
   a) recalculating rates to reflect actual unit counts at the end of the budget process, or
   b) adjusting its true-up calculation to address how changing unit counts resulted in a rate that is too high or too low.

KCIT response:	**Partially concur**
Comment:	Starting in 2019, KCIT will charge agencies on an actual basis for Workstation leases. KCIT will adjust the future rates to address any over/under collections of support costs based on changing unit counts. KCIT will work with PSB to ensure the future rates are clearly understood and approved prior to implementation.

Recommendation 8

King County's Department of Information Technology should adjust unit counts periodically throughout the year and adjust customer charges to reflect updated counts.

KCIT response:	**Do not concur**
Comment:	As mentioned in the response to Recommendation 7, Workstation leases will be billed on an actual basis, thus agencies' monthly payment will reflect updated counts. However, adjusting the KCIT Enterprise O&M Services rate throughout the year based on updated counts will create an unnecessary administrative burden for KCIT and business partners. In addition, this action may have the unintended consequence of creating instability for customers' budgets. The County's financial policy for central rates states that central rates should be "predictable, reliable, transparent, and relatively stable over time."

Executive Response

King County

Dow Constantine
King County Executive
401 Fifth Avenue, Suite 800
Seattle, WA 98104-1818
206-263-9600 Fax 206-296-0194
TTY Relay: 711
www.kingcounty.gov

January 11, 2019

Kymber Waltmunson
King County Auditor
Room 1033
COURTHOUSE

Dear Ms. Waltmunson:

Thank you for the opportunity to review and comment on the proposed final report on IT Rates: Model Could be Improved to Enhance Transparency, and Decision-Making.

Technology is critical to advancing the delivery of efficient and effective services by executive departments and separately-elected agencies. As an internal services fund, King County Information Technology (KCIT) strives to support its business partners by providing sound advice when needed, flexibility where possible, and a range of clear, useful, and economical solutions. KCIT is committed to managing the costs of technology and appreciates the King County Auditor's assessment of the IT rates model.

KCIT fully concurs with six of the eight recommendations contained in the report, partially concurs with one, and does not concur with the last recommendation. KCIT does not agree with the recommendation to "adjust unit counts periodically throughout the year and adjust customer charges to reflect updated counts" because of the excessive administrative burden on KCIT and the instability for KCIT customers that this practice would create. The County's financial policy for central rates states that central rates should be "predictable, reliable, transparent, and relatively stable over time."

Thanks to the King County Auditor's Team for working with KCIT on this important assessment. KCIT is committed to ensuring that recommendations contained in the report are enacted as swiftly as possible.

We appreciate the collaboration on this important work. If you have any questions regarding our audit response, please contact George Vida, Interim Chief Financial Officer, KCIT, at 206-263-7899.

Sincerely,

Rachel Smith FOR

Dow Constantine
King County Executive

Enclosure

cc: Casey Sixkiller, Chief Operating Officer, King County Executive Office (KCEO)
        Rachel Smith, Chief of Staff, KCEO
        Dwight Dively, Director, Office of Performance, Strategy and Budget
        Tanya Hannah, Chief Information Officer, KCIT

Recommendation 1

King County's Department of Information Technology should align cost groupings on service request forms, its rate catalog, and central rate accounts, or provide crosswalk information to customers.

Agency Response

Concurrence	**Concur**
Implementation date	Q1/Q2 2019
Responsible agency	KCIT
Comment	KCIT will develop a Service Request Form (SRF) template and crosswalk to KCIT central rates by March 2019 and will share with agency representatives and the Office of Performance, Strategy and Budget (PSB) for their review and input in Q2 2019.

Recommendation 2

King County's Department of Information Technology should develop and distribute materials to ensure that finance managers have adequate information to understand the relationship between their information technology (IT) product and service order and their agency's IT charges.

Agency Response

Concurrence	**Concur**
Implementation date	Q2 2019
Responsible agency	**KCIT**
Comment	While KCIT works with business partners on technology needs on a daily basis, more efforts will be spent with finance managers to help them better understand the technology choices and associated costs.

Recommendation 3

King County's Department of Information Technology should update its rate model to reduce complexity and improve consistency, accuracy, and oversight. At a minimum, this effort should include the following elements:

    a) reduce the number of calculations and spreadsheets supporting the model

    b) provide templates to rate model contributors for how to structure the calculations.

Agency Response	
Concurrence	**Concur**
Implementation date	Q2 2019
Responsible agency	**KCIT**
Comment	Yes, KCIT will consult with PSB to reduce the number of calculations and spreadsheets supporting the rate model for 2021-2022. As part of this effort, KCIT will also develop templates and standard methodologies for its service owners on rate calculations.

Recommendation 4

King County's Department of Information Technology update of the rate model should include an assumptions page to improve visibility to policy-makers and facilitate alternatives analysis.

Agency Response	
Concurrence	**Concur**
Implementation date	Q2 2019
Responsible agency	**KCIT**
Comment	KCIT will work closely with PSB to improve the visibility of the assumptions used in setting rates.

Recommendation 5

King County's Department of Information Technology and the Office of Performance, Strategy and Budget should work together to ensure the updated rate model has clear assumptions and is reviewed prior to approval.

Agency Response	
Concurrence	**Concur**
Implementation date	Q3 2019
Responsible agency	**KCIT/PSB**
Comment	

Recommendation 6

King County's Department of Information Technology should develop, document, and implement a plan to increase the accuracy of its process to count workstations.

Agency Response	
Concurrence	**Concur**
Implementation date	2019
Responsible agency	**KCIT**
Comment	In 2017, KCIT implemented a process improvement project using the Lean methodology for inventory management. A plan was put in place that identifies further actions to implement process improvements during 2019.

Recommendation 7

King County's Department of Information Technology should develop, document, and implement a process to ensure rates reflect its actual costs by either:

c) recalculating rates to reflect actual unit counts at the end of the budget process, or

d) adjusting its true-up calculation to address how changing unit counts resulted in a rate that is too high or too low.

Agency Response	
Concurrence	**Partially concur**
Implementation date	
Responsible agency	**KCIT**
Comment	Starting in 2019, KCIT will charge agencies on an actual basis for Workstation leases. KCIT will adjust the future rates to address any over/under collections of support costs based on changing unit counts. KCIT will work with PSB to ensure the future rates are clearly understood and approved prior to implementation.

Recommendation 8

King County's Department of Information Technology should adjust unit counts periodically throughout the year and adjust customer charges to reflect updated counts.

Agency Response	
Concurrence	**Do not concur**
Implementation date	
Responsible agency	
Comment	As mentioned in the response to Recommendation 7, Workstation leases will be billed on an actual basis, thus agencies' monthly payment will reflect updated counts. However, adjusting the KCIT Enterprise O&M Services rate throughout the year based on updated counts will create an unnecessary administrative burden for KCIT and business partners. In addition, this action may have the unintended consequence of creating instability for customers' budgets. The County's financial policy for central rates states that central rates should be "predictable, reliable, transparent, and relatively stable over time."

Statement of Compliance, Scope, Objective & Methodology

Statement of Compliance with Government Auditing Standards

We conducted this performance audit in accordance with Generally Accepted Government Auditing Standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Scope of Work on Internal Controls

We assessed internal controls relevant to the audit objectives. This included a review of relevant county department procedures, guidance, plans, and processes. We conducted interviews with knowledgeable staff in the King County Department of Information Technology (KCIT) and the Office of Performance, Strategy and Budget (PSB). In performing our audit work, we learned that KCIT does not provide sufficiently clear information about its rate model to PSB, hindering its ability to review assumptions underpinning KCIT's rates. We recommend that KCIT work with PSB to revise its rate model so that the model has clear assumptions and is reviewed prior to approval.

Scope

The audit evaluated the group of almost 200 spreadsheets that together comprise KCIT's model for calculating rates for the services it provides to King County customers. To determine the extent to which customers are able to understand the rates charged by KCIT, the audit team conducted a survey of King County finance managers.

Objectives

The objective of the audit was to determine whether KCIT structured and implemented its rate model in a manner consistent with best practices and applicable policies, and review the extent to which KCIT clearly communicates information technology charges to customers.

Methodology

We reviewed KCIT's rate model for the 2019-2020 biennium, as well as supporting financial information from 2017 and 2018. In order to understand how the rate model was structured and developed, we analyzed how each rate was calculated by mapping the inputs through all of the supporting spreadsheets. To identify the extent to which KCIT clearly communicates information technology charges to customers throughout the KCIT inventory and rate-setting process, we conducted a survey of all finance managers across King County's various divisions and departments. The survey was distributed via email and completed using the third-party survey tool SurveyMonkey. Responses to survey questions were anonymous, but respondents were provided the option to provide additional identifying information in the case a follow-up was required. The survey had 41 respondents out of a total of 57 individuals contacted (a 72 percent response rate). We grouped short-answer responses into the following recurring themes: transparency, accuracy, consistency, communication, and ability to answer questions. We also interviewed customers from various county departments to understand their experiences and concerns regarding KCIT rates.

List of Recommendations & Implementation Schedule

Recommendation 1

King County's Department of Information Technology should align cost groupings on service request forms, its rate catalog, and central rate accounts, or provide crosswalk information to customers.

IMPLEMENTATION DATE: Q1/Q2 2019

ESTIMATE OF IMPACT: By aligning the cost groupings that KCIT uses across its various forms or providing crosswalk information to customers, KCIT can provide greater clarity and information to their customers. This would improve transparency and enable customers to make more efficient service choices.

Recommendation 2

King County's Department of Information Technology should develop and distribute materials to ensure that finance managers have adequate information to understand the relationship between their information technology (IT) product and service order and their agency's IT charges.

IMPLEMENTATION DATE: Q2 2019

ESTIMATE OF IMPACT: By providing finance managers with information to understand the relationship between their IT product and service orders and their agency's IT charges, KCIT can better enable their customers to make cost-informed decisions.

Recommendation 3

King County's Department of Information Technology should update its rate model to reduce complexity and improve consistency, accuracy, and oversight. At a minimum, this effort should include the following elements:

　　a) **reduce the number of calculations and spreadsheets supporting the model**

　　b) **provide templates to rate model contributors for how to structure the calculations.**

IMPLEMENTATION DATE: Q2 2019

ESTIMATE OF IMPACT: By reducing the number of calculations and spreadsheets included in the rate model and by providing templates to model contributors, KCIT can reduce the number of errors and inconsistencies found throughout the rate model. The net impact of correcting the errors we found would be to lower customer rates by slightly more than $1 million over the biennium. This would also facilitate review by outside entities.

Recommendation 4

King County's Department of Information Technology update of the rate model should include an assumptions page to improve visibility to policy-makers and facilitate alternatives analysis.

IMPLEMENTATION DATE: Q2 2019

ESTIMATE OF IMPACT: By including an assumptions page in the rate model, KCIT can facilitate review and oversight by policy-makers by facilitating evaluation of the impact that alternatives may have on rates. These assumptions affect millions of dollars in rates.

Recommendation 5

King County's Department of Information Technology and the Office of Performance, Strategy and Budget should work together to ensure the updated rate model has clear assumptions and is reviewed prior to approval.

IMPLEMENTATION DATE: Q3 2019

ESTIMATE OF IMPACT: By working with PSB to update the rate model to clearly indicate assumptions, KCIT can ensure that outside entities can easily review assumptions, increasing transparency and facilitating oversight.

Recommendation 6

King County's Department of Information Technology should develop, document, and implement a plan to increase the accuracy of its process to count workstations.

IMPLEMENTATION DATE: 2019

ESTIMATE OF IMPACT: By increasing the accuracy of the workstation inventory process, KCIT can ensure that it accurately allocates costs for its services and products.

Recommendation 7

King County's Department of Information Technology should develop, document, and implement a process to ensure rates reflect its actual costs by either:

    a) **recalculating rates to reflect actual unit counts at the end of the budget process, or**

    b) **adjusting its true-up calculation to address how changing unit counts resulted in a rate that is too high or too low.**

IMPLEMENTATION DATE: 2019

ESTIMATE OF IMPACT: By ensuring that rates reflect actual costs, KCIT can 1) ensure that its charges generate adequate revenues to cover the services it provides, and 2) mitigate the risk of undercharging or overcharging KCIT customers for workstation services.

Recommendation 8

King County's Department of Information Technology should adjust unit counts periodically throughout the year and adjust customer charges to reflect updated counts.

IMPLEMENTATION DATE: The Executive's Office has indicated it does not concur with this recommendation

ESTIMATE OF IMPACT: By periodically updating unit counts and adjusting customer charges to reflected updated counts, KCIT can ensure that bills agencies the correct amount even if unit counts change. Further, implementing this recommendation would reduce the need for large, end-of-the-year billing adjustments, which can negatively impact agency budgets.

KING COUNTY AUDITOR'S OFFICE

Advancing Performance & Accountability

KYMBER WALTMUNSON, KING COUNTY AUDITOR

MISSION   Promote improved performance, accountability, and transparency in King County government through objective and independent audits and studies.

VALUES   INDEPENDENCE - CREDIBILITY - IMPACT

ABOUT US   The King County Auditor's Office was created by charter in 1969 as an independent agency within the legislative branch of county government. The office conducts oversight of county government through independent audits, capital projects oversight, and other studies. The results of this work are presented to the Metropolitan King County Council and are communicated to the King County Executive and the public. The King County Auditor's Office performs its work in accordance with Government Auditing Standards.

AUDIT

This audit product conforms to the GAGAS standards for independence, objectivity, and quality.