OHIO AUDITOR OF STATE
KEITH FABER

City of Upper Arlington

Performance Audit

October 6, 2020

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To the City of Upper Arlington community,

The Auditor of State's Office recently completed a performance audit for the the City of Upper Arlington (the City) at the request of the City Council. This review was conducted by the Ohio Performance Team and provides an independent assessment of operations within select functional areas.

This performance audit report contains recommendations, supported by detailed analysis, to enhance the City's overall economy, efficiency, and/or effectiveness. This report has been provided to the City and its contents have been discussed with the appropriate elected officials and City management. The City has been encouraged to use the recommendations contained in the report and to perform its own assessment of operations and develop alternative management strategies independent of the performance audit report.

This data-driven analysis of operations provides the City valuable information which can be used to make important financial decisions. Additional resources related to performance audits are available on the Ohio Auditor of State's website.

This performance audit report can be accessed online through the Auditor of State's website at http://www.ohioauditor.gov and choosing the "Search" option.

Sincerely,

Keith Faber
Auditor of State
October 6, 2020

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Introduction

A performance audit provides tools and guidance to government officials which can result in proactive governing decisions to ensure the continued well-being and safety of constituents. The Ohio Auditor of State's Ohio Performance Team (OPT) is able to provide performance audits to any government entity in Ohio.[1] These audits provide data-driven analyses and recommendations which can assist officials in improving the economy, efficiency, and effectiveness of both an organization as a whole, or a small department or program.

> ⚠ **NOTE TO REPORT USERS:**
>
> Information in this report is based on data available as of June 2020. The State of Ohio declared a state of emergency in March 2020 due to the COVID-19 pandemic. While the financial impact of the pandemic and ensuing emergency measures has not been fully realized and cannot be estimated, it may have a significant impact on the City's revenues and operations. Our analysis does not take into account the potential reduction in tax revenues.

While performance audits may be provided to entities as a result of certain fiscal concerns that are identified by OPT; any entity, regardless of financial condition, may request – and benefit from – a performance audit.

City of Upper Arlington

The City of Upper Arlington (the City or UA) is a suburb located in Franklin County northwest of downtown Columbus. The City covers nearly 10 square miles and had just over 35,000 residents as of 2018. Officials from UA requested a performance audit in order to obtain best practices and key performance indicators for selected city operations.
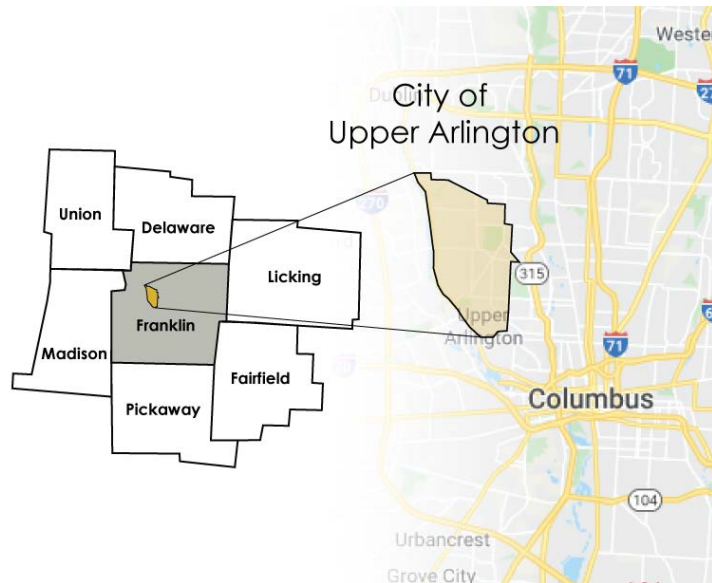
Governance

UA has a seven-member City Council. Council members are elected at large and serve four-year terms. A Council President and Vice-President are

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[1] Performance audits are conducted in accordance with generally accepted government auditing standards. See Appendix A for more information.

selected every other year by their fellow Council members to serve two-year terms. The Council President serves as the City Mayor for ceremonial purposes. UA also employs a City Manager who is responsible for managing daily operations of municipal business.

Finances

A city relies on a variety of revenue sources to provide services to residents, including property taxes, income taxes, licensing fees, and charges for services. These revenues allow a city to ensure roads are salted in the winter, police respond promptly to calls, and that city infrastructure is appropriately maintained. Much like an individual may have a checking, savings, and retirement account; cities operate using multiple types of accounts for various activities related to daily operations and long-term planning. Revenues are allocated based on a variety of factors, including legal authority, and these accounts allow for the transparent use of public dollars.

Fund Types

Government entities can maintain three different types of funds: Governmental, Proprietary, and Fiduciary. Governmental and Proprietary funds can be used for operations, whereas a Fiduciary fund contains resources held by a government but belonging to other individuals or entities. Upper Arlington uses all three types of funds.

Governmental Funds obtain revenue through various types of taxes and are similar to personal accounts that an individual might maintain such as a checking, savings, or retirement account. These funds are used for a variety of purposes for both the daily operations and long term goals of a city.

Upper Arlington uses the **General Fund**, a type of Governmental Fund, for the majority of City-wide operations. The General Fund operates like an individual's primary checking account. The majority of revenues go to the General Fund and can be used for the majority of day-to-day expenditures such as payroll or office supplies.

Other Governmental Funds are similar to retirement accounts; they are designated for a specific purpose and their use is restricted. UA has several Governmental Funds such as the Street and Maintenance Repair Fund, which is funded by motor vehicle and gas taxes and may be used only to pay for street maintenance and repair.

Proprietary Funds are similar to business accounts. They obtain revenue through fees for services or memberships and that revenue is used to pay for the expenses related to the specific business operations. For example, the City has a Solid Waste Management Fund which may only be used to pay for solid waste pickup.

Upper Arlington categorizes expenditures three ways: Operating, Capital, and Debt. Operating expenditures include costs of providing services such as public safety or parks and recreation.

Capital expenditures include purchases of equipment and capital improvement projects. Debt are expenditures used to pay back debt incurred to complete capital projects.[2]

Revenues and Expenditures

The City has historically demonstrated good stewardship over its financial resources. As an added precaution against potential fiscal concerns, the City maintains a reserve in the General Fund. This reserve, equal to 30 percent of annual operating expenditures from the General Fund, is required by City Council to cover unanticipated expenses or unanticipated revenue shortfalls. The required reserve is referred to as a restricted reserve while any reserve above 30 percent is referred to as the unrestricted reserve. This is the equivalent of an individual having an emergency savings account. At the end of 2019, UA had over $11 million restricted and $4.7 million unrestricted in its General Fund balance due to revenues outpacing expenditures. Total restricted and unrestricted reserves are equal to 43 percent of operating expenditures.

Income taxes are the largest source of revenue, and revenues have been gradually increasing during the last three years. In addition to good stewardship and conservative savings plans, this increase in revenue helps contribute to the City's overall positive financial condition.

Upper Arlington Revenue 2017-19
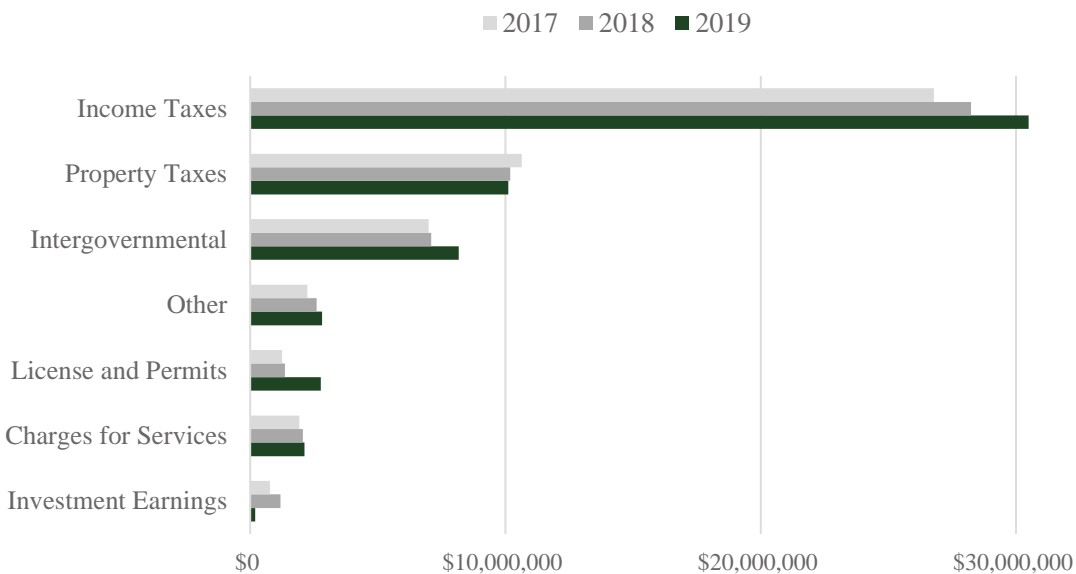
Source: City of Upper Arlington

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[2] Debt for long-term projects is typically issued in the form of bonds.

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Similar to the overall City revenues, the majority of General Fund revenues are from income and property taxes; as a city with an above average median income and high property values, tax sources raised more than $27 million in 2019. The total General Fund revenues for the year were approximately $38.4 million. In 2019, the City's General Fund expenditures were approximately $36.8 million, meaning that the fund operated at a surplus for the year.

There are several other funds which UA uses for restricted purposes. These funds, like the Street Maintenance and Repair Fund mentioned earlier, generally operated without significant changes to their balance.

Looking through the City's expenditures, capital outlays and public safety are the two areas where the City expends the most money. Capital outlay includes purchases of capital equipment and construction projects expected to last many years, such as major street projects.

During the past few years, UA officials have undergone efforts to address necessary work on the City's streets and sewer systems, which has resulted in significant capital expenditures since the passage of Issue 23 in 2018. These activities are funded through a variety of revenue sources, including bond proceeds and transfers from the General Fund.

Upper Arlington Expenditures 2017-19
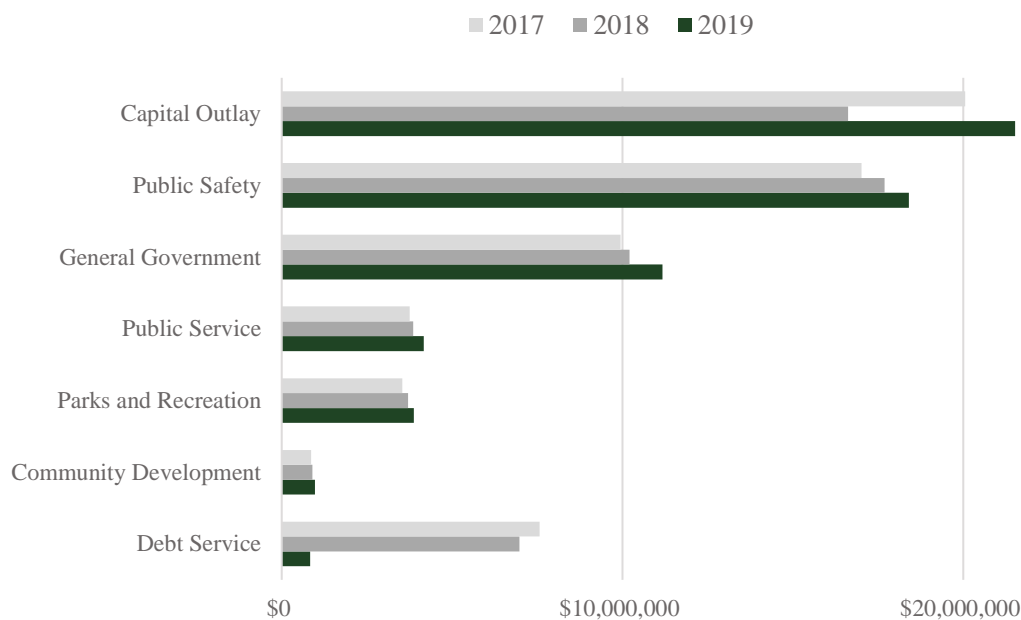
Source: City of Upper Arlington

Operations

The City maintains robust safety services operations that includes police, fire, and emergency medical services. There are also several parks that residents can use throughout the year, outdoor swimming pools that offer a summer swim season, and cultural and recreational programming offered through the Parks & Recreation Department. Roads are regularly maintained and cleared of ice and snow in the winter through the Public Service Department, which also provides curbside leaf pickup in the fall. The activities of the City are classified as follows:

- Public Safety – police, fire, and emergency medical services;
- Parks & Recreation – cultural arts, park maintenance, recreation programs, senior center, swimming pools and tennis facilities;
- Community Development – building, planning, and code compliance;
- Public Service – engineering, street maintenance, waste collection, water and wastewater line maintenance;
- Administrative Direction – elected and appointed positions of City Council, City Manager, City Attorney, and City Clerk;
- Administrative Support – all other departments; and
- General Administration – expenses such as postage and liability insurance.

Results of Audit

At the request of the City, we reviewed three areas in order to provide recommendations for improved operational economy, efficiency, and effectiveness. These scope areas were analyzed with specific objectives in mind. Where applicable, recommendations are based on industry standards, best practices, or peer comparisons.[3] Our audit resulted in the following recommendations for the City to consider:

- **Rec 1.1** The City should implement a revised purchase process and track process metrics using a software-based solution;
- **Rec 2.1** The City should collect vehicle utilization data;
- **Rec 2.2** The City should adopt optimized lifecycle expectations for pickup trucks and police sedans;
- **Rec 2.3** The City should reevaluate the practice of leasing light vehicles;
- **Rec 2.4** The City should replace City-owned passenger vehicles with personnel mileage reimbursement;
- **Rec 3.1** The City should develop a strategic plan to align IT operations and direction with the Upper Arlington Technology Master Plan; and,
- **Rec 3.2** The City should replace servers to address data security, storage, and recovery needs.

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[3] Peers were selected based on having geographic, financial, and demographic profiles similar to Upper Arlington. Peer cities used for comparison include Dublin, Hilliard, Hudson, New Albany, Westerville, and Worthington.

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In addition to the recommendations resulting from the analysis, our office also assisted the City in updating its detailed process map in relation to purchasing. The process map will allow City officials to institute a uniform purchasing process across various departments. Increasing uniformity and transparency in this process could lead to future efficiencies.

Procurement

From paper products to computer systems, every organization must purchase supplies and equipment on a regular basis. The processes that are used by a government entity to approve and track purchasing decisions can be difficult to manage across departments and divisions. Ensuring that purchasing procedures are clearly communicated and followed by employees is critical to streamlining the process and maximizing efficient operations.

At the request of the City, we reviewed the internal purchasing policies and procedures. This review was conducted in order to identify opportunities for improvement based on industry best practices and peer comparisons. Our analysis included a thorough review of UA's existing policies regarding purchasing. We also conducted a process mapping event with City to determine what practices were being followed by the various departments. The information we obtained was used to form the basis of a recommendation that could improve internal processes and ensure business continuity.

R.1.1: The City should implement a revised purchase process and track process metrics using a software-based solution.

Financial Impact

While this recommendation does not have an identified financial impact, ensuring that purchasing processes are clearly communicated and followed will allow the City to streamline procurement of goods and services. This streamlining can lead to increased efficiency in the delivery of those goods and services. In addition, improving transparency could lead to stronger oversight.

Background

The City has formal purchasing policies that are defined by City code.[4] The comprehensive ordinances which govern purchasing include details regarding competitive bidding process, the authority of the purchasing administrator, the management and execution of contracts, and the delegation of authority related to procurement.

Non-recurring purchases exceeding $7,500 require a competitive procurement process and the approval of the City Manager or designee.[5] This process involves seeking out proposals or quotes for goods or services and direct negotiation for terms. For purchases over $40,000, a competitive bidding process is required. A competitive bidding process includes issuing a

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[4] Upper Arlington Code of Ordinances § 138.01.
[5] A department will typically budget for materials and supplies in their annual budget to cover foreseeable, routine expenses such as office supplies.

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request for proposal and setting a deadline for sealed bids related to a specified scope of work. The City then reviews all bids, making a determination as to which is considered the best option based on internal criteria. Purchases made through competitive bidding also require approval from the City Council. All contracts must also be reviewed and approved by the City's legal department.

The ordinances which are set by City code are designed to ensure transparency in how public funds are spent. They also provide guidance to departments that should allow for uniformity in how purchases are made throughout all City operations.

Methodology and Analysis

We reviewed the City's ordinances as well as its existing process map which was created in 2016. Additionally, we interviewed key personnel, including the Purchasing Administrator, in order to determine if the process map was followed uniformly throughout the City's departments. We also conducted a peer survey so that we could identify any areas for improvement related to UA's purchasing and procurement process.

Our review of peer cities found that Upper Arlington is in line with peer purchasing requirements. For example, other cities also require approval from the City Manager or designee for purchases not included in the budget, the legal review of all contracts, and competitive bidding for large purchases.

While UA's current policies are similar to peers, we found through interviews that the purchasing process would be more efficient and easier to follow using a software-based solution. In addition, the City does not have a system in place to track the speed of purchase approvals, making it difficult to track performance metrics. These inconsistencies result in different outcomes — most notably differing turnaround times to accomplish purchases.

The process mapping event which our office conducted found further inconsistencies relating to the City's current purchasing practices to include the following:

- There may be confusion as to when a purchase order can be used as opposed to a contract;
- Lack of a formal tracking process or system to notify project managers of upcoming contract expiration; and,
- No consistently applied process to collect data related to the purchasing process, including information regarding the time required for each step of the process.

According to the National Institute for Public Procurement, the following metrics are helpful in measuring the procurement process:

- Input metrics, such as the resources used or demand for services;
- Output metrics, such as the number of new contracts or total amount spent;
- Outcome metrics, such as an assessment of the results of an activity and the determination as to whether expected results were achieved;

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- Efficiency metrics, a ratio of inputs to outputs or outcomes, such as average administrative cost per contract; and,
- Explanatory information that provides additional context regarding internal or external variables that affect performance.[6]

These metrics can be used by an organization to measure the procurement process against internal standards or goals based on specific criteria, such as peer groups.

The City does have a document management software program called OnBase that is available to all departments. While this software is currently used in a limited capacity, it does have the ability to serve as a centralized platform for managing the purchasing process. Currently, the option to search for contracts is not available to all OnBase users. Those employees that do have access to OnBase are only able to use a portion of its total functionality. Fully implementing OnBase is anticipated to have an additional cost.

The City should explore the relative costs and benefits of options such as expanding OnBase. If UA chooses not to make additional expenditures, it should consider using a less expensive tool to collect data, such as a spreadsheet that could track the speed of purchase approvals.

Conclusion

The existing purchasing process is not applied in a uniform manner, which results in variation in the overall purchasing process. Further, the City currently does not track purchasing metrics in a meaningful way, making evaluation of the process impossible. Communicating and implementing a new purchasing process across the City will allow for reduced paperwork and uniformity. Tracking this process using a software-based solution will allow the City to collect valuable data that can be used to assess the effectiveness of its process and proactively address issues that are identified.
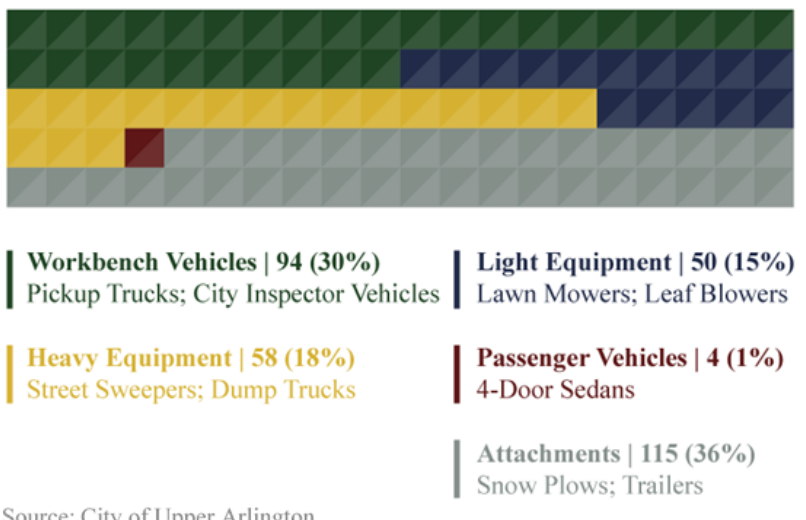
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[6] *Public Procurement Practice: Performance Metrics*, the National Institute for Public Procurement.

Fleet Management

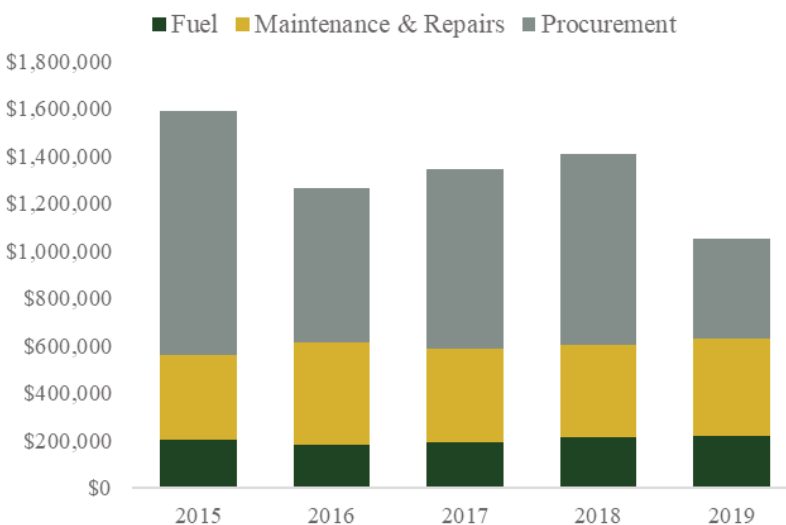Whether its police cruisers on patrol, fire trucks responding to an emergency, or heavy trucks to plow snow, fleet vehicles support many core functions of a modern city. The City's fleet includes everything from heavy trucks to lawn mowers. Each and every piece of fleet equipment is an important aspect of city operations. The City of Upper Arlington organizes its 321 vehicles and pieces of equipment into 5 distinct categories, with attachments (snow plows, trailers etc.) being the most common.

Fleet Management Counts

Workbench Vehicles | 94 (30%)
Pickup Trucks; City Inspector Vehicles

Light Equipment | 50 (15%)
Lawn Mowers; Leaf Blowers

Heavy Equipment | 58 (18%)
Street Sweepers; Dump Trucks

Passenger Vehicles | 4 (1%)
4-Door Sedans

Attachments | 115 (36%)
Snow Plows; Trailers

Source: City of Upper Arlington

The cost of fleet management fluctuates annually due in large part to the varying costs of vehicles and equipment procurement. While maintenance and fueling costs have remained relatively consistent in the past five years, procurement tends to vary more widely. While there are policies in place regarding the procurement and cycling of Upper Arlington's vehicles and equipment, the cost of fleet management can vary from year-to-year due to uneven vehicle and equipment procurement and replacement needs. These policies, as well as the general importance of fleet management to City operations, offer the opportunity to explore efficiency and cost saving options.

Total Fleet Management Costs

Source: City of Upper Arlington

The Public Works Division within the City handles fleet management. This division is responsible for maintaining all vehicles and equipment owned by UA for all departments. A

software system referred to as FASTER manages Upper Arlington's fleet data. FASTER collects three major categories of vehicle and equipment data: Maintenance, mileage/fuel, and age. Technicians and managers associated with fleet management enter this data into FASTER so that the information can be used to make strategic decisions regarding vehicle procurement and cycling.

The FASTER software uses a point system to determine when it may be appropriate to remove an older vehicle or piece of equipment from the fleet. Every vehicle or piece of equipment earns points based on each of the three categories. If a vehicle or piece of equipment reaches a total of 15 points, it is replaced. When a vehicle or piece of equipment is nearing 15 points, it is checked by Public Works to either adjust its lifecycle schedule or dispose of it through online auction. Of the 102 vehicles or pieces of equipment projected to hit the 15-point mark by 2022, a total of 53 pieces, or 52.0 percent, are vehicles with license plates such as pickup trucks, SUVs, police cars, and dump trucks.

City Wide Replacement Schedule Count

Count of Equipment (y-axis: 0 to 120)

Projected Replacement Range (CY): '20-'22, '23-'25, '26-'28, '29
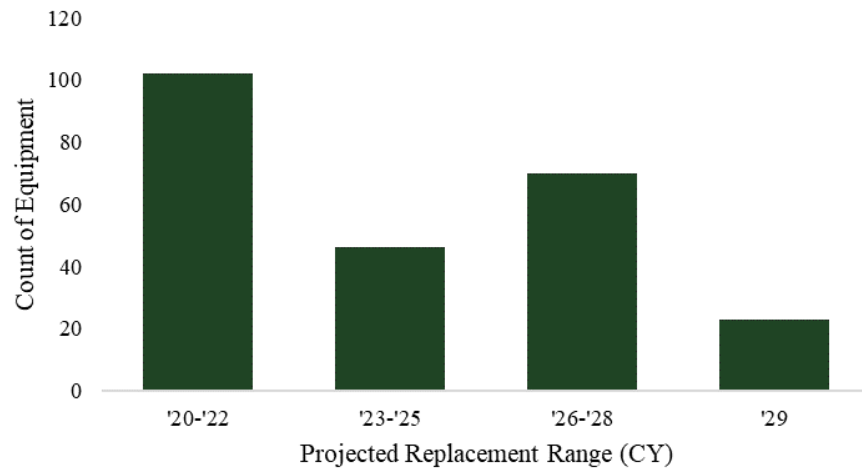
Source: City of Upper Arlington

The relative bubble of vehicles and pieces of equipment due for replacement during 2020-22 is the result the historical practice of adjusting lifecycle expectations even when a vehicle should be scheduled for replacement under the City's replacement policy. In the past, this has helped the City reduce expenditures on new vehicles and pieces of equipment, but at the cost of allowing an inventory of older vehicles to accrue. Beginning in 2016, the City began testing a leasing program to allow for the acquisition of new vehicles with a lower up-front cost in order to accommodate more aggressive fleet cycling while continuing to control annual costs.

As part of the overall assessment of fleet operations, the client requested a comparison between the City and peers in terms of average fleet sizes. The chart to the right shows the number of full time equivalent (FTE) employees per passenger vehicle. Comparing vehicles on per employee basis is one way to normalize fleet sizes for comparisons between cities. On this chart, a larger number is better. Upper Arlington has the second highest number of FTEs per passenger vehicle.
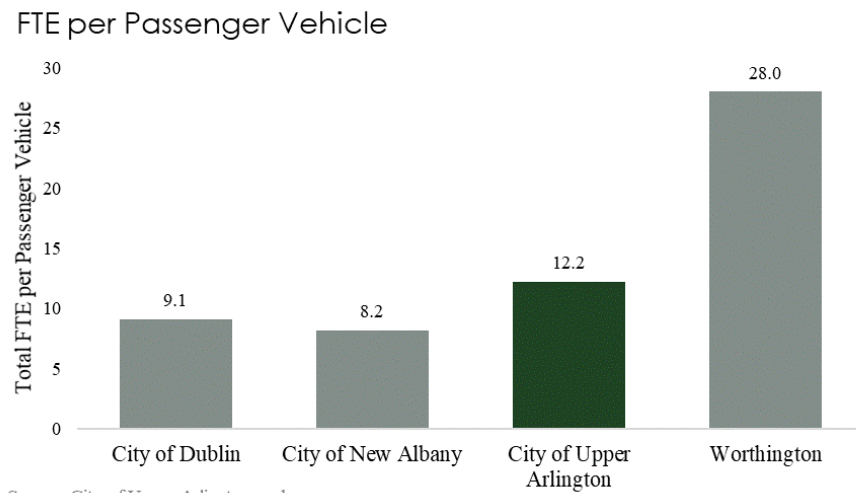
FTE per Passenger Vehicle

Source: City of Upper Arlington and peers

The chart below shows the number of police officers per police cruiser. Comparing the number of police officers per police cruiser is one way to normalize police fleets for comparisons between cities. On this chart, a larger number is better. Upper Arlington has the third highest number of police officers per cruiser relative to peer cities.

Police Officers per Police Cruiser

Source: City of Upper Arlington and peers

The chart on the following page shows park acres per tractor and mower. On this chart, a larger number is better. The City has the fourth largest number of park acres per tractor and mower.

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Park Acres per Tractor and Mower

Park Acres per Tractor & Mowers

- Westerville: 72.8
- City of New Albany: 41.2
- City of Dublin: 31.6
- City of Upper Arlington: 22.9
- Worthington: 15.4
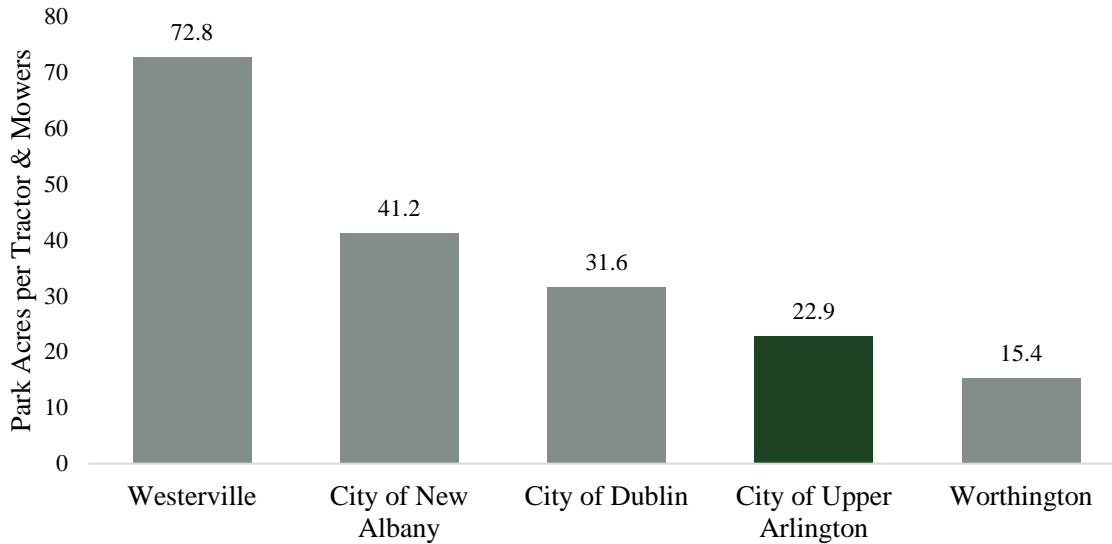
Source: City of Upper Arlington and peers

The following two charts show lane miles per dump truck and street sweeper, respectively. Comparing vehicles per lane mile can help normalize fleet sizes for comparison between cities. Larger numbers indicate that the City utilizes fewer dump trucks relative to the lane miles served.

Lane Miles per Dump Truck

Lane Miles per Dump Truck

- City of New Albany: 26.9
- Worthington: 21.7
- City of Upper Arlington: 19.2
- Westerville: 13.0
- City of Dublin: 11.5
- Hilliard: 8.1

Source: City of Upper Arlington and peers

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Lane Miles per Street Sweeper
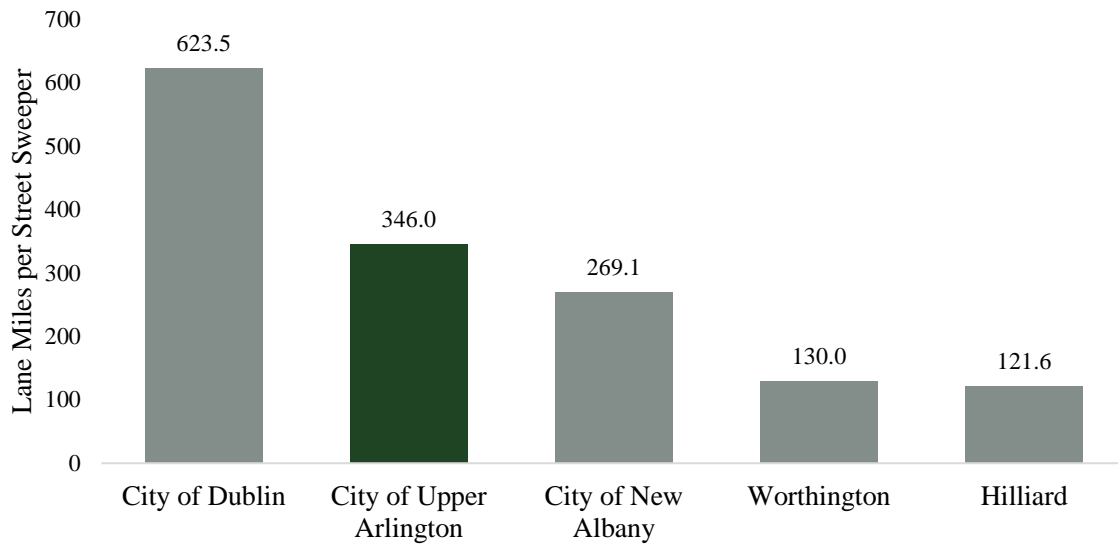
Source: City of Upper Arlington and peers

Recommendation 2.1: The City of Upper Arlington should collect vehicle utilization data

Financial Impact

While there is no direct financial impact resulting from this recommendation, the City may be able to optimize its fleet size after obtaining better utilization data.

Methodology and Analysis

The Ohio Performance Team (OPT) found that Upper Arlington has good data on mileage; however, they do not track utilization data, including the number of times a vehicle is used per day. The area of the City itself is relatively small, so mileage itself may not be a sufficient measure of utilization.

There are several inputs that should be considered when determining the appropriate size of a fleet, including number of vehicles per lane mile and numbers of employees per vehicle. An additional input is vehicle use, which can be measured based on the number of miles driven in a given time period, the number of times a vehicle is used per day, or some combination of these measures.

Vehicle odometer data is captured each time a city vehicle receives fuel. This odometer data is sufficient to assess how far a vehicle travels between fueling. In addition, it is the practice of the police department to fill up vehicles at the end of each shift; however, daily fueling data may not present a complete picture of vehicle utilization. In addition, other departments do not fill up on a daily basis, and therefore fueling does not serve as an effective utilization proxy. Therefore, additional data on daily utilization should be collected.

The City of Dublin, a peer of Upper Arlington, uses a system known as KEYper which electronically tracks daily utilization using key check-in and check-outs. Implementing a similar technology solution, or developing a lower-tech solution such as using a log book, could provide the city with the data needed to better assess daily vehicle utilization for non-police vehicles.

Conclusion

Proper utilization data is a key metric for fleet management and would help UA to determine the appropriate size of the fleet in each department and to make decisions on obtaining additional vehicles in the future. Detailed records of vehicle utilization data would allow the City to gain more insight into vehicle demand.

Recommendation 2.2: The City should adopt optimized lifecycle expectations for pickup trucks and police sedans.

Financial Implication

The City can save $6,500 annually by implementing optimized fleet cycling for pickup trucks and police sedans.

Methodology and Analysis

All vehicles, whether personally owned or part of a fleet, have a lifecycle made up of a combination of variables including: age in years, miles, and hours of use. Eventually, the combination of these variables will make the vehicle unreliable and unsuitable for use. This concept is referred to as a vehicle's expected lifecycle. Fleet cycling is the process in which a fleet manager determines the optimum point in a vehicle's lifecycle to replace it. Ideally, a vehicle should be cycled out before it becomes excessively expensive to maintain, and while it still retains some value on the market.

Currently, the City has an expected lifecycle policy for each vehicle, based on vehicle data kept in FASTER. However, it is the City's practice to occasionally keep a vehicle in use beyond its expected useful life if City personnel conclude that the vehicle is in good condition and unlikely to experience mechanical problems.

In order to determine the appropriate lifecycle, OPT used data from 2015-19 to calculate a cost-per-mile (CPM) for each year that a given owned vehicle was in-service. OPT used the equation below to determine CPM. This equation allowed us to measure how the CPM changed as the vehicle increased in age and mileage. Analyses were completed based on the average CPM for each major vehicle type, such as police cruisers and ½ ton pickup trucks.

$$\frac{(\text{Fuel Cost} + \text{Maintenance Cost} + \text{Depreciation})}{\text{Annual Miles Driven}} = \text{Cost Per Mile (Owned)}$$

Once an average CPM was calculated for each vehicle type over a number of years and miles, it was possible to calculate an optimized lifecycle. Due to slight changes in annual maintenance costs, its normal for CPM to fluctuate somewhat from year-to-year, but the ideal point to cycle a vehicle out is before the cost of ownership increases dramatically. In addition, due to relatively low annual utilization for some workbench type vehicles, an annual cost of ownership was also calculated for each vehicle type. The optimized lifecycle seeks to find a balance between age and mileage to locate the point at which cycling a vehicle out of the fleet is most cost beneficial.

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The chart below uses the CPM for ½ ton pickups as an example of how vehicle costs can change over time. The vehicle experiences a low point in CPM before an increase due to age related cost increases between 9 and 12. For a more detailed look at one reason why costs increase as a vehicle ages, the second chart shows that the average cost per repair increases as a vehicle ages.
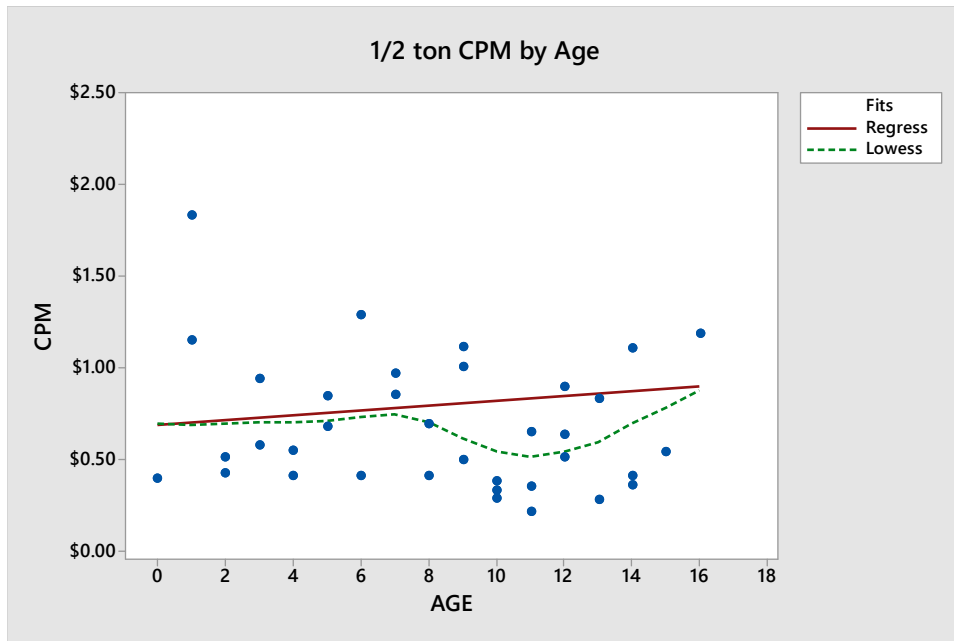
Source: City of Upper Arlington
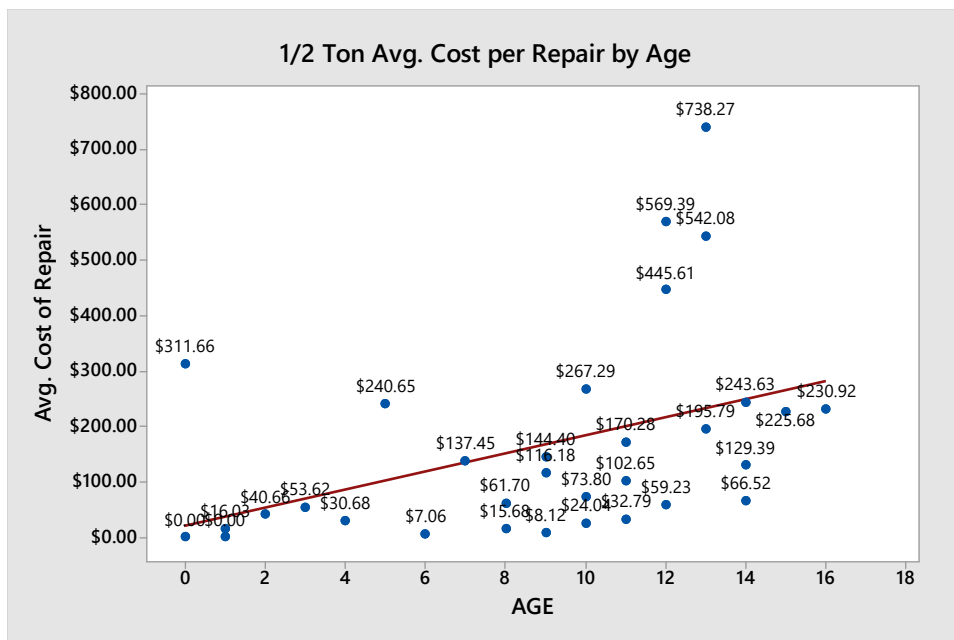
Source: City of Upper Arlington

The chart below shows how average annual cost of operations change over the vehicle's lifecycle. The bulk of expenses early in the lifecycle are related to depreciation, which is typically highest during the first couple of years; this is reflected in the first column on the graph below. Costs decline somewhat as depreciation costs fall, before increasing after the 12th year of service, when age-related repairs start to increase. This chart shows the lowest operating costs for a ½ ton Pickup occur if a vehicle is kept in service for 9-12 years.

Estimated 1/2 Ton Pickup Average Annual Cost
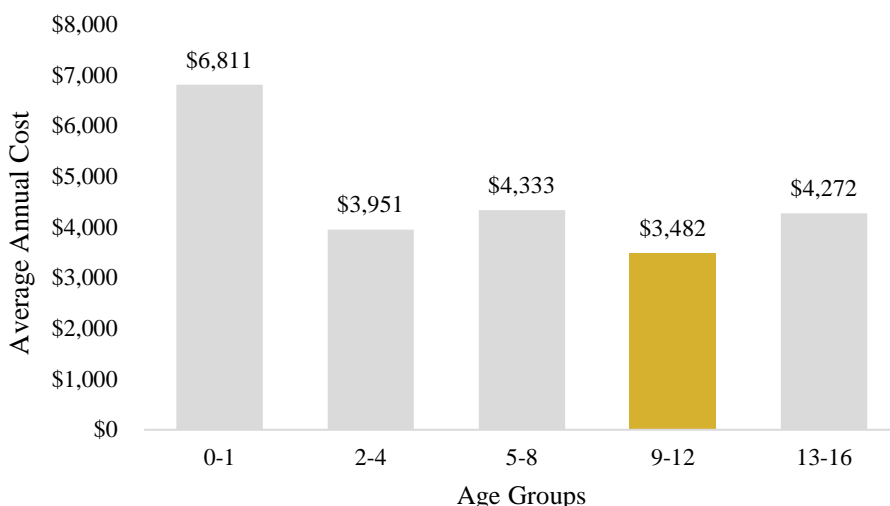
Source: City of Upper Arlington

Note: Vehicle driven roughly 5,000 miles annually for 17 years

UA has policies in place for each vehicle class type. However, there is a disconnect between policy and practice due at least partially to the City's relatively small size, which leads to a low annual mileage accrual. The City will then keep a vehicle longer, in terms of years, while the vehicle catches up in terms of mileage.

Policy vs. Practice

Class Type	Current Policy	Current Practice
1 Ton Truck	15 years/50,000 miles	18 years/61,000 miles
1/2 Ton Pickup 2 Wheel Drive	10 years/70,000 miles	17 years/84,000 miles
3/4 Ton Pickup 4 Wheel Drive	10 years/70,000 miles	12 years/71,000 miles
Police Marked Sedan	4 years/110,000 miles	5 years/106,000 miles

Source: City of Upper Arlington

Note: Current Practice is based on average disposal age and mileage for class type.

The Optimized Policy Comparison table on the following page shows the policy comparison of ½ ton pickup trucks, ¾ ton pickups, and police sedans.1/2 ton pickups and ¾ ton pickups would benefit from moving to cycling model that more closely reflects the relatively low utilization those vehicles experience. In addition, police sedans would benefit from being cycled out at a

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lower lifetime mileage.[7] In the case of 1 ton pickups, the City would benefit from adhering closely to their existing policy. Holding onto vehicles beyond the optimized cycle can lead to the City incurring avoidable maintenance expenses.

Optimized Policy Comparison

Vehicle Type	Current Policy		Optimized State		
	Expected Lifecycle/ Mileage	Annualized Lifecycle Cost	Optimized Lifecycle/ Mileage	Annualized Lifecycle Cost	Difference
1 Ton Pickup 4 Wheel Drive*	18 years/ 61,000 miles	$2,044	15 years/ 50,000 miles	$2,012	$32
1/2 Ton Pickup 2 Wheel Drive	10 years/ 70,000 miles	$3,163	10-11 years/ 45,000 miles	$2,635	$528
3/4 Ton Pickup 4 Wheel Drive	10 years/ 70,000 miles	$3,821	9-10 years/ 32,000 miles	$2,097	$1,724
Police Marked 4 Door Sedan	4 years/ 110,000 miles	$11,881	4 years/ 66,000 miles	$7,623	$4,258
Total Annual FI					**$6,542**

Source: City of Upper Arlington

* Optimized state is to follow current Policy

As shown above, there could be savings if the City optimizes fleet cycling policies and practices. These savings assume that the City continues to own vehicles (see **R2.3**).

Conclusion

Managing vehicle lifecycle is a critical part of efficient fleet management. Currently, UA's practice of keeping some vehicles beyond their optimized lifecycle could be causing additional costs. By optimizing vehicles lifecycles, the City could avoid additional maintenance expenses which tend to accrue most quickly towards the end of a vehicle's lifecycle.

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[7] The 66,000-mile optimized state for police vehicles is based on current average annual utilization, whereas the current practice reflects police vehicles sold at auction between 2010-17.

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Recommendation 2.3: The City should reevaluate the practice of leasing light vehicles.

Financial Implication

If the City were to elect to switch from leasing to ownership for light vehicles, the City would save an average of $21,715 annually over the next five years.

Methodology and Analysis

Cities face different choices when it comes to the most cost-effective strategy to acquire a vehicle. If a vehicle is only needed for a short period of time, a city might chose to rent the vehicle. If it is needed for a longer time period however, choosing to lease a vehicle or purchase it outright may be more beneficial. Leasing has the advantage of requiring less cash outlay upfront, but a city will typically have to pay additional interest and fees.

Vehicle Class Type	Count
Pickup	8
SUV	10
Van	1
Total	**19**

Beginning in 2016, Upper Arlington leased a total of 19 vehicles as a test case to determine if leasing could be a cost effective way to meet fleet procurement needs.[8] The leased vehicles are of similar types, makes and models to the vehicles owned by the City. These vehicle types include ½ ton pickups, ¾ ton vans, Police SUVs, 2 Wheel Drive SUVs, and 4x4 SUVs. The leases are for five years and the City has an option to purchase the vehicle for 10 percent of purchase price at the end of each lease.[9] In addition, if the City elects to sell the vehicles, it can recoup anything above the book value.

In order to assess the relative costs and benefits of leasing, the CPM of leased vehicles was compared to the CPM of City-owned vehicles of the same type; i.e., the CPM of a leased SUV was compared to SUVs owned by the City. For leased vehicles, the annual cost of fuel, maintenance, and leasing costs all make up the annualized cost. "Leasing Cost" refers to management fees, interest, and depreciation costs. These costs were added together and divided by the annual mileage to determine CPM of leased vehicles.

$$\frac{(\text{Fuel Cost} + \text{Maintenance Cost} + \text{Leasing Cost})}{\text{Annual Miles Driven}} = \text{Cost Per Mile (Leased)}$$

The table on the following page summarizs the full average annual cost for the most commonly leased pickup trucks and SUVs compared to the same vehicle types currently owned by the City.

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[8] 11 leases in 2016, 1 lease in 2017, 4 leases in 2018, 3 leases in 2019.
[9] For example, a vehicle purchased for $20,000 will cost $2,000 to purchase once the five year lease runs out.

This table shows that leasing a vehicle costs the City between $2,600 and $3,000 more per year than if the City purchased the same type of vehicle and kept it through the typical lifecycle (see **R.2.2**).

Lease and City-owned Cost Difference

Vehicle Type	Average Annual Owned	Average Annual Leased	Average Annual Difference
1/2 Ton Pickup	$2,685	$5,645	$2,960
SUV 2 Wheel Drive	$2,358	$4,955	$2,597

Source: City of Upper Arlington

Ultimately, the 19 leased vehicles cost $30,596 more per year than if UA had purchased these same vehicles. To achieve these savings, the existing leases will have to run out, so it will take until 2024 before the City can completely transition. The table below shows the potential financial impact of discontinuing the practice of leasing vehicles and then purchasing those vehicles when the existing leases run out. By the time all the current leases expire, the City could save a total of $108,577, or an average of $21,715 per year between 2020 and 2025.

Financial Impact of Owning Leased Vehicles

CY 2019 Average Annual Lease Cost: $64,839

Year	Lease Cost	Cost of Payout	Average of Annual Cost per Vehicle (Owned)	Savings from Transition to Own	Running Total of Cost Avoidance of Lease
2021	$47,927	$20,531	$25,633	$1,764	$1,764
2022	$5,622	$2,624	$3,240	($243)	$22,051
2023	$5,669	$2,322	$2,130	$1,217	$25,892
2024	$5,622	$2,322	$3,240	$59	$28,274
2025	$0	$0	$0	$0	$30,596
				Total Savings	**$108,577**
				Average Annual Savings	**$21,715**

Source: City of Upper Arlington

The two tables above show that the leasing a light vehicle will always be more expensive on a cost-per-mile basis, when compared to ownership. However, the purpose of the fleet is to support overall city operations, so consideration should be given to how fleet purchases could impact other city functions. The chart below was calculated based on two hypothetical models: one where the City purchased 11 ½ ton pickup trucks and the other where UA leased the same trucks.[10] The chart shows that, while the purchase option is cheaper overall, purchasing to keep

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[10] The City leased 11 trucks in 2016.

up with the City's foreseeable fleet replacement needs will require large cash outlays, whereas leasing, while more expensive over a vehicle's lifecycle, requires a lower annual cash outlay. In the scenario shown on the chart, the first year cash outlay is over $175,000 higher to purchase compared to leasing.

Leased vs Purchase Annual Cash Outlay
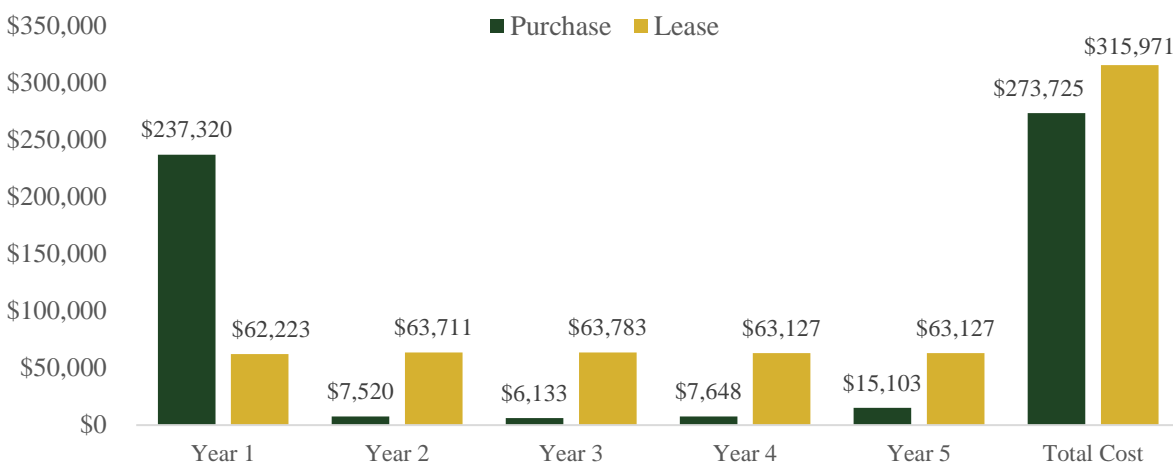
Source: City of Upper Arlington

The City will have to make future decisions about leasing by weighing the possible uses of cash in any given year. For example, UA may wish to purchase IT equipment or make other capital investments, instead of purchasing a large number of vehicles. At the same time, older vehicles can be more expensive to maintain (see **R2.2**), and leasing can help replace aging vehicles without requiring a large cash investment. UA should consider the following factors when evaluating fleet acquisition options:

- **Management Simplification** – UA has a relatively large number of vehicles that are nearing the end of their useful life. Historically, vehicle replacement has been at least partially limited by budgetary concerns, which has resulted in the City occasionally keeping vehicles beyond the replacement policy (see **R2.2**). Leasing could simplify the replacement process by reducing the budgetary impact of vehicle acquisition in any single year.
- **Improved Productivity** – If the City could use leasing to reduce vehicle lifecycles, it may be able to avoid repairs that occur later in the vehicle's lifecycle (see **R2.2**). Unexpected repairs inherently take a vehicle out of service and therefore leave a vehicle unavailable for use by essential employees. Newer vehicles may be more reliable and may make it easier for employees to accomplish their mission.
- **Flexibility** – The City can use leasing to pilot new practices or vehicle types. For example, UA recently leased two electric vehicles (EVs) (see **R2.4**).

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If the City does choose to continue leasing, it should consider taking full advantage of the options offered in the lease such as selling the vehicle and recovering any proceeds above the book value. This could help the City offset the additional costs of leasing.

Conclusion

The City leases 19 vehicles. Based on its current usage, leasing leads to a higher overall lifetime CPM when compared to purchasing and cycling vehicles on an optimized basis. While it is more expensive, leasing can have additional benefits that the City should consider when evaluating the possibility of leasing in the future.

Recommendation 2.4: The City should replace City-owned passenger vehicles with personal mileage reimbursement.

Financial Implication

Switching from City-owned vehicles to mileage reimbursement could save $1,403 annually.

During the course of the audit, the City began implementation of this recommendation by replacing one of the existing passenger vehicles with an electric vehicle (EV).

Methodology and Analysis

This section analyzes best practices regarding passenger vehicles. For the purpose of this section, passenger vehicles will be defined as vehicles that are only used for travel within and outside the City. The passenger vehicles analyzed were identified by the client.

UA currently has two city-wide pooled vehicles, one owned and one leased, that are used for passenger travel with an existing travel policy. OPT compared the mileage reimbursement rate and the City's cost per mile to own its pooled vehicles over a 5 year period. We found that the City is incurring more costs by owning pooled vehicles compared to paying mileage reimbursement.

Cost per Mile Comparison of Passenger Travel

Source: City of Upper Arlington
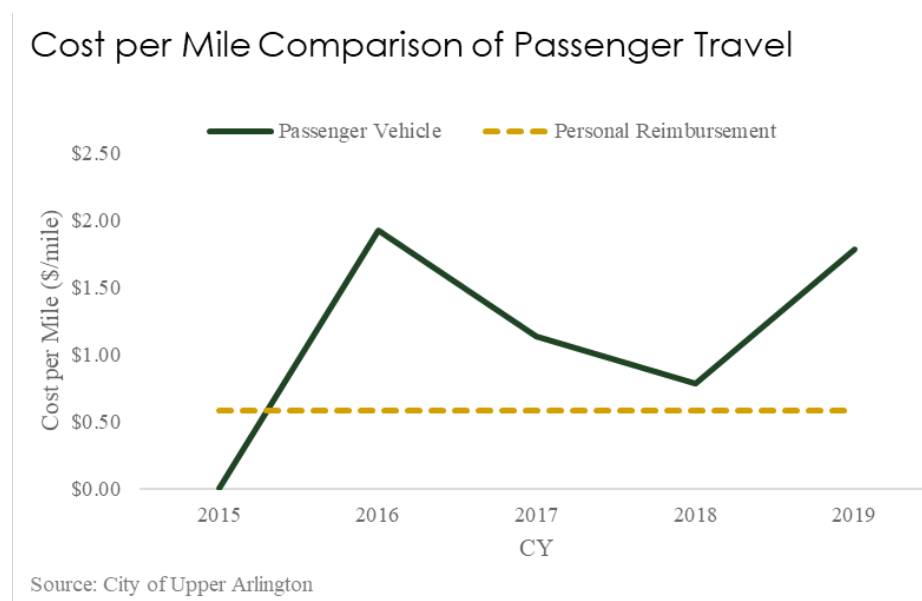
A more sustainable and cheaper option than owning pool vehicles is using personal mileage reimbursement, as allowed in the current travel policy. The CPM of passenger vehicles used for passenger travel were averaged and is represented by "Passenger Vehicle" in the graph to the left.

The comparison of these options follows the same methodology as the one used in the vehicle leasing section. The total miles, total operation cost, and total depreciation of lease payments accrued during a five-year range are collected in a table. The five-year average CPM was compared between personal mileage and UA-owned vehicles. One of the options is mileage reimbursement, which is set at the current Internal Revenue Service (IRS) rate of $0.58 per mile.

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In total, the City's passenger vehicles were driven an average of 15,864 miles per year. The table below presents two scenarios; one in which the City uses reimbursement for all passenger miles, and the other in which it divides all passenger miles between the two passenger vehicles. The analysis is performed in increments of 5,000 miles because UA performed routine maintenance every 5,000 miles.

Mileage Reimbursement Versus City-Owned Vehicles

	Fixed Annual Cost	Average Miles	1st 5,000 Miles	2nd 5,000 Miles	3rd 5,000 Miles	Extra Miles	Total Cost	Overall CPM
Scenario 1: All Mileage Reimbursement								
	N/A	15,864	$2,900	$2,900	$2,900	$501	$9,201	$0.58
Scenario 2: All Average Annual Miles on City Vehicles								
Leased SUV	$4,734	7,932	$1,017	$597	-	-	$6,348	$0.80
Owned Pickup	$1,040	7,932	$2,027	$1,189	-	-	$4,256	$0.54
Combined	*$5,774*	*15,864*	*$3,045*	*$1,785*	*-*	*-*	*$10,604*	*$0.67*
Annual Difference	**$5,774**	-	**$145**	**($1,115)**	**-**	**-**	**$1,403**	**$0.09**

Source: City of Upper Arlington

As shown above, shifting all passenger miles to City-owned vehicles results in a lifecycle CPM of $0.67, which is $0.09, or 13.4 percent more expensive than the reimbursement rate of $0.58.

There could be non-monetary advantages to having employees use City-owned vehicles, such as having vehicles with UA markings and making appropriate vehicles available to City employees who may not personally own a vehicle. However, from a strict monetary perspective, the small size of the City and relatively low demand for passenger travel, it is unlikely the City would accrue enough mileage to make passenger vehicle travel cost beneficial. In addition, the above analysis is based on the IRS reimbursement rate of $0.58 per mile. The IRS occasionally readjusts the reimbursement rate to reflect changes in the price of fuel. The City should remain alert for adjustments in the IRS rate.

Conclusion

UA currently meets passenger travel needs through a combination of personal mileage reimbursement and City-owned pool vehicles. Given the City's relatively low demand for passenger travel, owning or leasing passenger vehicles may not be the most cost-effective option for passenger travel. Switching travelers to personnel mileage reimbursement could be a more cost-beneficial option.

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Additional Consideration

In pursuit of a strategic goal to increase the City's sustainability, Upper Arlington leased two Nissan Leaf all-electric vehicles. As of the time of this audit, these vehicles have just gone into service; however, the estimated CPM to operate an EV is $0.49. Shifting personal mileage driven to the Nissan Leafs could be cost beneficial relative to mileage reimbursement assuming the reimbursement rate remains stable at $0.58 per mile.

Information Technology Management

Information technology (IT) is the central means by which a modern city communicates with residents, provide services, and monitors its own performance. In Upper Arlington, the IT Department supports City departments by offering the right technology/equipment in a timely and cost-effective manner. The IT department is headed by a Director and is staffed by Full-Time Employees (FTEs), including two Systems Engineers, a Web/Graphic Designer, and a Helpdesk Technician. The staff operates 12 in-house servers which are co-located at a third-party facility. Co-location means that the servers are housed together at a separate location.[11] Co-location can help reduce cost through economies of scale, and also increases security because servers are housed away from City Hall and therefore safe in the event a natural disaster damages a city building. Specific functions and services provided by the department include: help desk services, network management and support, technology training, fiber-optic network management, systems programming, and internet systems support.

The graph shows a categorized total of IT expenditures from 2017 to 2019 and gives a snapshot of the Department's expenditure history.[12] While most of the expenditure categories remain relatively consistent, there is a sharp uptick in 2019 total spending. This is due in part to the expansion of Upper Arlington's fiber-optic network development, which is categorized under "Infrastructure as a Service."

Upper Arlington IT Expenditures 2017 - 2019
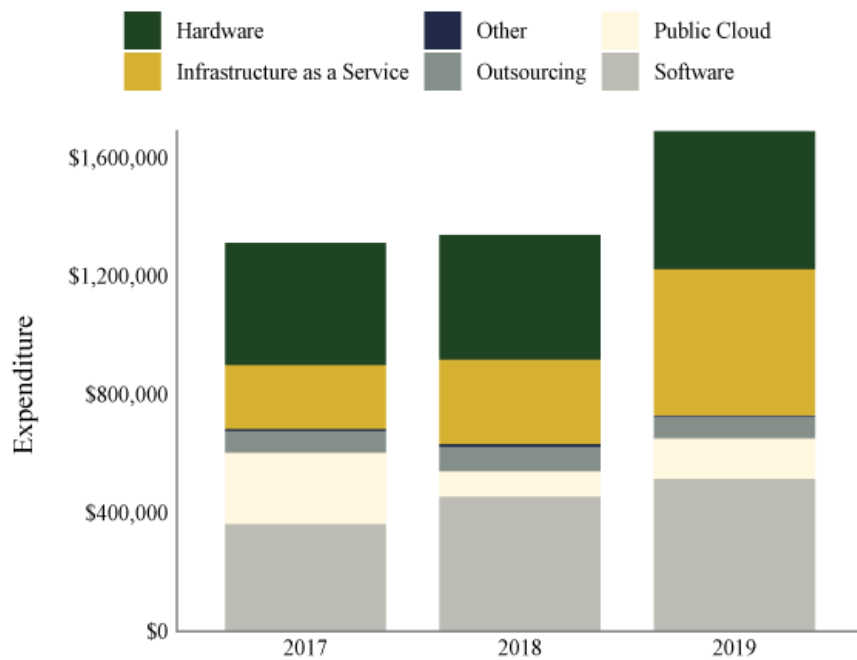
Source: City of Upper Arlington

Note: Commercial card expenditures, and non-categorized expenditures were removed.

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[11] The City uses a commercial vendor to provide co-location space.
[12] The graph excludes commercial card expenditures, non-categorized expenditures, and personnel expenditures because these expenditures were not directly related to IT department operations.

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IT Expenditure Comparisons

Category	Percent of Spending by Category	Peers' Percent of Spending by Category
Personnel	24.5%	45.5%
Software	23.0%	11.9%
Infrastructure as a Service	22.1%	1.2%
Hardware	20.9%	11.4%
Public Cloud	6.1%	2.1%
Outsourcing	3.3%	26.1%
Other	0.1%	1.7%

Source: City of Upper Arlington and peers

Upon request of the client, we conducted a benchmarking study to determine how UA expenditures compare to peer cities. We gathered data from the City and its peers for three years, from 2017-19. We selected the City's peers based on median income, geographic location and other similar comparable variables.

The most notable differences in the City's spending when compared to its peers are in the areas of personnel spending and infrastructure as a service. It currently spends more on Infrastructure as a Service due to the recent expansion of its fiber-optic network, which results in an increase in spending within its Hardware expenditure category.[13] UA's Personnel spending is significantly less than its peers, due in part to the small size of the Department's staff.

For the purpose of further benchmarking, OPT requested information from Upper Arlington's peers regarding city-wide FTEs, IT FTEs, and device quantities.[14] The chart listing these variables below shows that in most categories, UA is in the middle relative to its peers. In addition to benchmarking, the City also agreed that there would be value in reviewing its overall planning and approach to security in relation to leading practices.

IT Department Peer Comparisons

Peers	Devices per IT FTE	IT FTEs	Number of Devices	Number of FTEs	Devices per FTE
Upper Arlington	**59.6**	**5**	**298**	**267.7**	**1.1**
New Albany	117.0	1	117	90.0	1.3
Worthington	75.0	4	300	196.5	1.5
Hudson	47.8	4	226	158.0	1.4
Dublin	40.9	15	613	406.0	1.5
Westerville*	-	13	-	-	-

Source: City of Upper Arlington and peers

*Westerville did not report all data points listed.

UA also commissioned two consultant reports (received in 2019) that provided additional benchmarking standards. The reports described weaknesses in the City's IT infrastructure that should be addressed. One consultant report used the National Institute of Standards and

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[13] Fiber-optic network costs are shared with Upper Arlington City Schools and the Upper Arlington Public Library.
[14] Devices were defined as desktop PCs, laptop PCs, and tablet computers such as IPads.

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Technology Cybersecurity Framework (NIST CSF) and the other focused on the standards set by the Center for Internet Security Critical Security Controls (CIS CSC). Both reports evaluated and addressed the network security of the City. The security report identifies security improvements that could enhance the security posture of the City technology infrastructure. These improvements/controls were the following: introduce further access controls at the virtual local area network level to further protect the organization from a widespread attack, deploy a local administration password solution known as (LAPS) to manage Administrator password access, and to expand the use of multi-factor sign-in authentication. These standards were not used among the City's peers, but were used to identify potential considerations towards IT security improvements.

Recommendation 3.1: The City should develop a strategic plan to align IT operations and direction with the Upper Arlington Technology Master Plan

Financial Implication

While no financial implication is associated with this recommendation, a strategic plan can assist an entity in appropriately allocating funds for future capital expenditures.

Background

The City of Upper Arlington utilizes a Master Planning document for its strategic direction that helps set policy implementation goals in the short and long term. This document is divided into sections, and assigns departments to implement the Master Plan, with the Technology section being generally overseen by the IT department. The City's stated Goal in the Technology section is to:

> *Maintain and develop technology-related facilities, services and infrastructures that are high quality, cost-effective and accessible to the entire community. These new, expanded and improved technologies are meant to improve delivery of community services, including but not limited to economic development, parks and recreation, communication, public safety and finance.*

> \- City of Upper Arlington 2016 Master Plan

UA recognizes the importance of maintaining and developing technological services to its customers. The Master Plan references different strategies to implement this goal such as:

- Expand the use of technology to deliver City services;
- Support the enhancement of Internet access;
- Support the enhancement of data services;
- Support the use of new technology to provide utility services;
- Create an information technology steering committee;
- Support the use of cloud and virtual technologies;
- Support the expanded use of Geographic Information Systems (GIS) and related technologies;
- Investigate and, if appropriate, engage in information technology shared services with other, communities, and work to become an information provider; and,
- Support technology that provides or enhances methods of communication to interact with residents.

While each of these strategies resonates with the goal of technological improvement and offers insight into the direction of the IT department's expectations for providing services, it offers little in terms of specified time frames, budgets, and strategic planning.

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Methodology and Analysis

The City's planning documents were compared to industry standards for strategic planning. UA does not currently maintain an IT Department strategic plan. *CIO* magazine's article entitled "Anatomy of an IT strategic plan in the era of digital disruption" (2017) and Gartner's "9 Steps to Successful Functional Strategic Planning" (2019) outline the best practices for IT strategic planning. The articles recommend maintaining a strategic direction and planning document specifically for reaching technological goals that outlines the step-by-step processes involved in reaching these goals, along with clearly outlined timeframes. *CIO* recommends organizations should start by looking at the Master Plan. They recognize the need to develop the planning process, strategize swiftly, make mid-term time horizon goals, include metrics for measuring success and adherence, recognize key components in reaching the goals, and match planning frequency to seasonal demands.

The development and maintenance of a strategic plan specifically addressing the technology goals of the IT Department provides a framework for decision making. Employees will be able to know exactly what the department is trying to accomplish and over what timeframe. This line of thinking will ultimately allow the Department to act more autonomously and efficiently.

A strategic plan, used in conjunction with the recommendations from the two consultant reports completed in 2019, would enable the IT Department and City to coordinate accomplishment of City goals in areas such as Personnel Management, investment in IT Hardware and Infrastructure, and in IT security controls.

Personnel Management

UA currently splits IT security duties among employees, as opposed to having a single employee dedicated to security. Some peers have dedicated IT security personnel, which the the City referred to as a potential means towards improving the City's overall security apparatus. Upper Arlington does not currently have dedicated security personnel, and the responsibilities for security are split among employees. As enterprises expand their IT capabilities, the risks to enterprise security also expand. Dedicated personnel may mitigate these risks, which include network security and sensitive information security. These risks may be identified within a strategic plan, and personnel can be assigned to manage these risks accordingly.

Peer Dedicated Security Staff

Peer	IT Staff	Dedicated Security Staff
Dublin	15	2
Westerville	13	4
Worthington	4	0
Hudson	4	0

Source: City of Upper Arlington and peers

The table above outlines which peers have dedicated security staff. The information was provided by the peers themselves. Worthington does not have an employee dedicated to security, but members of their team spend considerable time on security. Hudson's IT Manager handles security in addition to other management responsibilities. A strategic plan for the Department

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would facilitate personnel discussions for security, workload balancing, and city goal accomplishment.

Investment in IT Hardware/Infrastructure

The consultant report recommended that the City set aside a fund to be used for equipment replacement in the IT department. The City maintains and operates 12 servers, and each server costs roughly $15,000 and has a useful lifespan of 10 years. Therefore, setting aside money each year designated for server replacement would cost approximately $18,000 per year. A strategic plan for regular replacement of hardware and additional considerations surrounding IT infrastructure would align IT Department operations with city budgets and goals, and more clearly establish the opportunity costs for decisions.

Security controls

The consultant reports suggested that the City improve security through software-specific solutions. Upper Arlington has made plans to implement the security recommendations. To meet NIST CSF and CIS CSC criteria, the city must:

- Deploy LAPS (Local Administrator Password Solution that allows randomization of local admin accounts across the domain);
- Deploy Network IPS (Intrusion Prevention System, which examines network flow to prevent exploits);
- Configure offline backups (copying files and data);
- Begin network segmentation and filter traffic between VLANs (Virtual Local Area Network);
- Deploy MFA for privileged accounts (Multifactor Authentication); and,
- Centralize Logging (consolidate log data into one central, user-friendly interface).

A strategic plan may expand on these security controls and evaluate additional controls, their cost, and when they should be implemented.

Conclusion

Strategic planning could better inform decisions in the long run, and align vendor selection with enterprise management and other factors that affect IT department performance. The development of a strategic plan will allow the Department to respond to change, give employees parameters for creative thinking and problem solving, and help communicate intentions to senior leadership. Perhaps most importantly, an IT Department strategic direction and planning document would outline specific time frames and approximate budgets for achieving the City's goals.

Recommendation 3.2: The City should replace servers to address data security, storage, and recovery needs

Background

The City of Upper Arlington is operating a server database that contains critical information for the City. However, the servers are obsolete and no longer receive software support. UA can either purchase new servers from the current vendor or seek out a new vendor that could offer additional services. It has already developed a request for proposal (RFP) for a new vendor that will allow it to consider multiple options that meet the security, storage, disaster recovery, and cost requirements.

Methodology and Analysis

IT departments are susceptible to physical and cyber threats. To identify threats, OPT utilized the National Institute of Standards and Technology Cyber-Security Framework (NIST CSF). When we compared the current state with the NIST CSF, with additional insight from the client, we identified the server database as a cyber-security risk. The City has mitigated physical threats through the use of the co-located facility, which is built to be secure from physical threats. However, UA still has a server stored on site, and should therefore consider disaster recovery when planning for the future acquisitions. The security, storage, and disaster-recovery options to address these weaknesses are presented below.

Security

There are a range of security threats that IT departments must understand when making system decisions. Unprepared information systems are vulnerable to malware, ransomware, hacking, phishing, and other threats. The City needs to be able to detect and respond to threats to the network and computer systems as well as provide a history of threats to the server. NIST CSF outlines additional considerations in managing IT assets for security, which includes data-at-rest protection and data-in-transit protection.

Data exists in three states; at-rest, in-use, and in-motion/transit. At-rest data is data that is not being actively changed, while in-use data is being actively processed by one or more applications and in-transit data is moving across a network, such as local storage to the cloud. The data is in varying degrees of security throughout these states. The NIST CSF recommendation for data protection is typically ensured through data encryption. Encryption refers to the safeguarding of the data through sign-in factor keys and other security methods with varying levels of certified protection. Data encryption typically ensures the NIST CSF recommendation for data protection is met, and is widely considered a best practice.

Storage

Storage is another aspect of a server that will play a key role the City's decision to find a suitable replacement. One storage option is a Solid-State Drive (SSD), which is a storage device without moving parts, whereas "flash" refers to the method by which data is stored (typically on a silicon chip that is generally much faster than other types of storage). A flash drive, refers to a SSD that utilizes flash storage. These storage devices can be arranged and configured to deliver enterprises significant benefits through deduplication and compression to create converged and hyper-converged IT infrastructure.

Server-side flash reduces latency and utilizes memory caching for data storage, allowing more common data requests to be accessed more quickly. All Flash Arrays have broad appeal for their scalability, high input/outputs per second, and hyper-converged approach to IT infrastructure.

Disaster Recovery

Disaster Recover refers to the strategy in place for IT operations to recover in the event of a disaster. The two key metrics involved in this strategy are recovery-point-objectives (RPO), and recovery-time-objectives (RTO). RPO is the point in time prior to a disaster that you want to recover and is dependent on backup frequency, while RTO is the amount of time after a disaster to fully recover operational capacity. The City's RFP requested an RPO/RTO of at or near zero.

A backup to cloud will backup data to a public cloud service provider. This allows an enterprise to create a virtual copy of their infrastructure, making full operations possible in the event of a disaster, with additional benefit of cloud-based redundancy. Backups to cluster occur instantly, as data is copied from one server cluster to another; therefore, there is a true RPO/RTO of zero in the event of a disaster.

The table on the following page shows examples of how different vendors offer various solutions to security, storage and data recovery. This type of comparison can help the City select an appropriate solution.

Vendor A is the vendor that best meets the NIST CSF security criteria. In addition, storage should be matched with operational needs to allow for scalability and high connectivity. Flash storage can be configured in different ways to maximize benefits to the enterprise, with server side flash and all flash arrays allowing for different operational advantages.

Vendor Comparisons

Variable	Best Practice	Vendor A	Vendor B	Vendor C
Security	Encrypted data	Data at rest encryption, Data in-transit encryption, Data in-use encryption	Encryption available at additional cost	Not addressed
Storage Type	User Preference	Server Side Flash	All Flash Array	All Flash Array
Disaster Recovery	Backup to cloud	Backup to Cloud	Backup to Cluster	Available through different vendor
Cost	N/A	$199,750	$247,310	$506,071
Length of Contract	N/A	5 Years	5 Years	5 Years
Additional Services	N/A	$0	$47,105	$47,105
Cost w/ Additional Services	N/A	$199,750	$294,415	$553,176
Total Cost Per Year	**N/A**	**$39,950**	**$58,883**	**$110,635**

Source: City of Upper Arlington

Conclusion

The City is currently operating a server that is at the end of its useful life. Running technology that is no longer supported by the vendor can result in an elevated security risk. UA should select a vendor that best matches their operational security, storage, and data recovery needs in a cost-effective manner.

Client Response Letter

Audit standards and AOS policy allow clients to provide a written response to an audit. The letter on the following page is the City of Alliance's official statement in regards to this performance audit. Throughout the audit process, staff met with City officials to ensure substantial agreement on the factual information presented in the report. When the City disagreed with information contained in the report, and provided supporting documentation, revisions were made to the audit report.

September 22, 2020

Mr. Keith Faber, State Auditor
Office of the Auditor of State
88 East Broad Street, 5th Floor
Columbus, OH 43215

Auditor Faber,

In January of 2020, the City of Upper Arlington contracted with the State of Ohio Performance Audit Team to complete a review of City operations. The audit team reviewed aspects of Information Technology, Purchasing, and Fleet purchasing and cycling to identify possible efficiencies.

We appreciate the thorough review of the City's operations and all of the recommendations provided by the Performance Audit Team. The audit provided seven recommendations in the three service areas that were examined.

Recommendation #1.1: The City should implement a revised purchase process and track process metrics using a software-based solution;

The City is currently working to expand the use of its document management software to include workflow functionality and tracking for purchasing contracts.

Recommendation #2.1: The City should collect vehicle utilization data;

The City currently tracks the mileage, fuel usage and maintenance of its vehicles using a software program called FASTER. The performance audit identified hours of use as an additional metric that would be useful to track with vehicles. The City currently tracks hours of use for its police vehicles

Recommendation #2.2: The City should adopt optimized lifecycle expectations for pickup trucks and police sedans;

The City will be reviewing the recommendations of the performance audit, which in several instances identified vehicles that should be replaced on a more regular basis in order to reduce maintenance expenses in the later years of vehicle usage.   In recent years the leasing program has helped to significantly reduce the age of the City's fleet, and has proven to be a

useful financial mechanism to smooth out capital equipment spending and accelerate the replacement of older vehicles.

Recommendation #2.3: The City should reevaluate the practice of leasing light vehicles;

As noted above, the leasing program has allowed the City to accelerate the replacement of older passenger vehicles.   The leasing program is slightly more expensive, but has significantly reduced the age of the City's passenger vehicle fleet, thereby reducing maintenance expenses with older vehicles.   Leasing has also helped to smooth capital equipment spending and has built in structural cycling that helps to maintain a newer fleet. It is important to note that leased vehicles are available for purchase by the City at various points during or at the end of the lease.

Recommendation #2.4: The City should replace City-owned passenger vehicles with personnel mileage reimbursement;

This recommendation appears to be focused on the expense of two City pool vehicles that are used by various employees as needed. These pool vehicles originally replaced several dedicated vehicles and were seen as a mechanism to more efficiently use capital equipment resources where irregular vehicle needs existed across the organization.

The report notes that the cost per mile of gasoline powered vehicles is currently higher than IRS milage rates for the reimbursement of milage for personal vehicles, but notes that with electric vehicles the cost per mile was lower than current IRS reimbursement rates.

Earlier this year, the City replaced one of these two pool vehicles with an electric vehicle as part of a test of this new technology and charging stations that were recently installed at both the PSC and MSC.

Recommendation #3.1: The City should develop a strategic plan to align IT operations and direction with the Upper Arlington Technology Master Plan;

The City has a technology replacement plan and IT staff regularly meet with Department Directors and other staff to plan for the upgrade and replacement of technology items.   The City recognizes that formalizing this process would be of benefit in order to better document the future replacement of technology.

Recommendation #3.2: The City should replace servers to address data security, storage, and recovery needs;

The City actively replaces servers and works to upgrade security and technology needs throughout the organization. A major focus of this work has been to virtualize servers using technology from VMWare that allows multiple servers to share hardware.   In 2020, the City went through an extensive process to seek proposals to replace one of these virtualized server hardware units after the existing vendor announced, unexpectedly, that the existing hardware would no longer be supported. The replacement of this unit has been authorized by City Council and is expected to be implemented by the end of 2020.   The City appreciated the input of the Auditor's office during this most recent replacement as we were required to go through this process in the midst of this audit.

The City will continue to use this Performance Audit as we strive to provide the highest level of service possible to the residents of the City of Upper Arlington. Operational efficiencies and a balance between service level and costs are of the utmost importance. We thank the State of Ohio Performance Audit Team for all of their hard work and assistance.

Sincerely,

Steven R. Schoeny
City Manager

Appendix A: Purpose, Methodology, Scope, and Objectives of the Audit

Performance Audit Purpose and Overview

Performance audits provide objective analysis to assist management and those charged with governance and oversight to improve program performance and operations, reduce costs, facilitate decision making by parties with responsibility to oversee or initiate corrective action, and contribute to public accountability.

Generally accepted government auditing standards (GAGAS) require that a performance audit be planned and performed so as to obtain sufficient, appropriate evidence to provide a reasonable basis for findings and conclusions based on audit objectives. Objectives are what the audit is intended to accomplish and can be thought of as questions about the program that the auditors seek to answer based on evidence obtained and assessed against criteria.

We conducted this performance audit in accordance with GAGAS. 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.

Audit Scope and Objectives

In order to provide the City with appropriate, data-driven recommendations, the following questions were assessed within each of the agreed upon scope areas:

Summary of Objectives and Conclusions

Objective	Recommendation
What opportunities exist to improve the efficiency and effectiveness of the city's purchasing processes?	**R1**
What opportunities exist to improve the efficiency and effectiveness fleet management practices?	**R2.1, R2.2, R2.3, R2.4**
What opportunities exist to improve the efficiency, effectiveness, and transparency of the provision of IT services?	**R3.1, R3.2**

Although assessment of internal controls was not specifically an objective of this performance audit, internal controls were considered and evaluated when applicable to scope areas and

Efficient   •   Effective   •   Transparent

objectives. The following internal control components and underlying principles were relevant to our audit objectives[15]:

- Control environment
  - We assessed the City's exercise of oversight responsibilities in regards to detecting improper data entry in the fleet management information system.
  - We assessed the City's purchasing polices and processes.
- Risk Assessment
  - We considered the City's activities to assess fraud risks.
- Information and Communication
  - We considered the City's use of quality information in relation to fleet and IT data.
- Control Activities
  - We considered the City's compliance with applicable laws and contracts.

There were no internal control deficiencies significant to audit objectives identified during the course of the audit. Additional information relevant to internal controls will be discussed within the text of the recommendations.

Audit Methodology

To complete this performance audit, auditors gathered data, conducted interviews with numerous individuals associated with the areas of City's operations included in the audit scope, and reviewed and assessed available information. Assessments were performed using criteria from a number of sources, including:
- Peer Cities;
- Industry Standards;
- Leading Practices;
- Statues; and
- Policies and Procedures.

In consultation with the City, we selected cities similar in population and other demographics to form the peer group for comparisons contained in this report. These peers are identified as necessary and appropriate within the section where they were used.

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[15] We relied upon standards for internal controls obtained from *Standards for Internal Control in the Federal Government* (2014), the U.S. Government Accountability Office, report GAO-14-704G

Appendix B: Additional Analyses

Police Fleet Analysis

Because UA's police department has guidelines regarding daily fueling, we were able to conduct additional analysis regarding the police fleet. This chart shows the number of police vehicles that received fuel on a single day throughout the year. This is the type of analysis that could be performed city-wide if the City had daily utilization data for all vehicles. Daily utilization can be one metric used to properly gauge appropriate fleet size. In the case of marked cruisers, daily use was inconclusive by itself because UA's number of cruisers per officer is similar to that of its peer cities.

Marked Police Utilization

Source: City of Upper Arlington

Efficient   •   Effective   •   Transparent
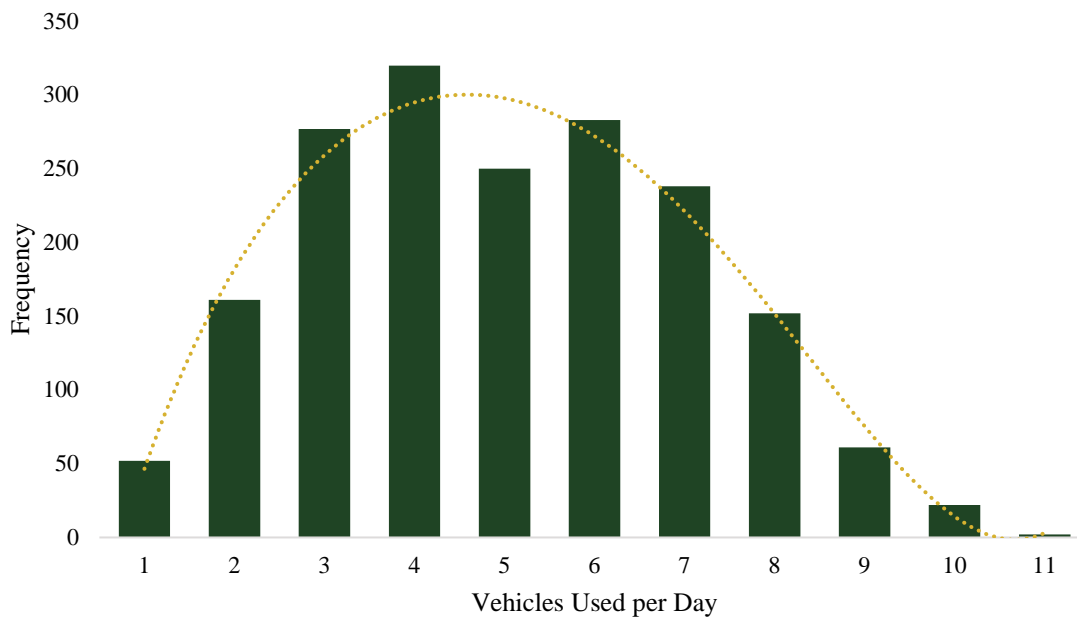
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OHIO AUDITOR OF STATE
KEITH FABER

CITY OF UPPER ARLINGTON

FRANKLIN COUNTY

AUDITOR OF STATE OF OHIO CERTIFICATION

This is a true and correct copy of the report, which is required to be filed pursuant to Section 117.26, Revised Code, and which is filed in the Office of the Ohio Auditor of State in Columbus, Ohio.

Certified for Release 10/6/2020