

911 Center

*Fiscal Years 2020 – 2023
Report Date: April 12, 2024*

OFFICE OF THE CITY AUDITOR

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REPORT NO. 23-03



Purpose



**TO DETERMINE THE EFFICIENCY AND
EFFECTIVENESS OF THE 911 CENTER**

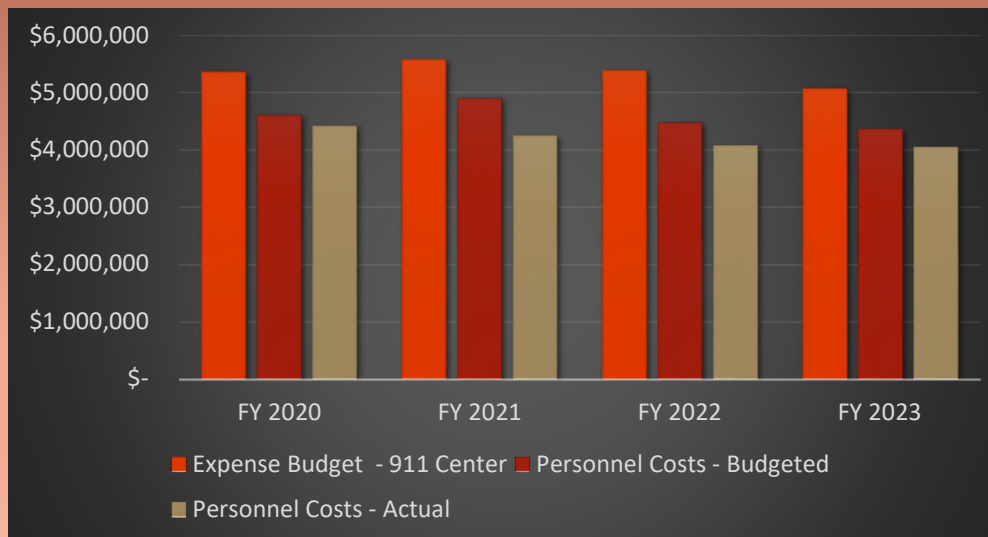
Scope



2020-2023

911 Center Overview

- The 911 Center was a division of the Department of Emergency Preparedness and Response – a special revenue fund
- Effective January 2024 911 Center restructured as a division of the Norfolk Police Department
- Major funding source – Emergency 911 Taxes
- Program type – management of the 911 emergency communications operation
- Personnel costs are majority of budget



The 911 Center provides critical 24/7 service to Norfolk residents, businesses and visitors

**Finding:
911 Center does not
meet performance
goals**

NENA (a) standard for call answering is 90% within 15 seconds

Norfolk FY 2023 = 54%



Staffing shortages result in increased workload – overburdened capacity



Delayed call answering hampers prompt emergency response resulting in increased danger to life and harm to property and negatively impacts City services reputation

(a) NENA – National Emergency Number Association

Incoming Call Volume

Incoming 911 Call Intensity – Volume to Total Population

Norfolk's population is just over half the size of Virginia Beach and Norfolk has nearly as many 911 calls.

Norfolk has similar population size to Chesapeake and twice as many 911 calls.

		Incoming Calls			Population
		FY 2020	FY 2021	FY 2022	2020 (a)
Norfolk		195,978	197,670	210,502	238,005
Virginia Beach		206,857	206,297	211,987	459,470
	Calls - % Norfolk to Virginia Beach	95%	96%	99%	
	Population - % Norfolk to Virginia Beach				52%
Chesapeake		123,181	108,956	101,912	249,422
	Calls - % Norfolk to Chesapeake	159%	181%	207%	
	Population - % Norfolk to Chesapeake				95%
Portsmouth		98,422	93,744	97,053	97,915
	Calls - % Norfolk to Portsmouth	199%	211%	217%	
	Population - % Norfolk to Portsmouth				243%

Norfolk does not meet NENA standard

Percentage of Calls Answered

	FY 2020	FY 2021	FY 2022	FY 2023
Norfolk (within 15 seconds)	72%	65%	59%	54%
Other Virginia Localities	59 - 97%	55 - 96%	44 - 94%	

Current NENA standard (effective 4/16/20) is 90% within 15 seconds

911 Center management monitors call activity using daily reports and periodic reviews of taped calls for quality control compliance with industry standards

Increase in Call Wait Duration

Fiscal Year	Number of Seconds (average)
FY 2020	20
FY 2021	27
FY 2022	34
FY 2023	43



Calls Answered (a)	FY 2020	FY 2021	FY 2022	FY 2023
Norfolk (within 10 seconds)	66%	58%	53%	48%

(a) Prior NENA standard was 90% within 10 seconds

Calls for Service

Emergency v. Non-emergency

	FY 2020			FY 2021			FY 2022			FY 2023	
Emergency Calls	195,678	50.5%		197,670	52.9%		210,502	53.0%		172,217	54.6%
Non-emergency Calls	191,985	49.5%		175,722	47.1%		187,001	47.0%		143,186	45.4%
Total	387,663			373,392			397,503			315,403	

Challenges



Hiring

- Rigorous job requirements – initial qualifications and robust training

- Competition for employees – both at local (cities and counties) and federal (Navy Regional Dispatch Center) levels

- Competitive salary – Norfolk EPR recently was able to have Telecomm employees classified as Public Safety employees with associated improvement in pay and benefits – these include step increases within pay grades and a \$5,000 hiring bonus

- Time-consuming Human Resources process - often results in candidates receiving and accepting offers from other employers first

- Initial request of 911 Center to reduce minimum time in position prior to advancement for Call Taker I position from 12-month requirement to 6 months was not supported by City Human Resources

Norfolk Vacant Positions

911 Center has experienced many long-term position vacancies



Number of Positions Vacant as of June 30	2020	2021	2022	2023
Public Safety Tele Call Taker (a)				12
Public Safety Telecomm I	22	15	8	5
Public Safety Telecomm II	8		2	2
Public Safety Telecomm III		2	3	5
Public Safety Telecomm Supv		1	1	

Average Number of Days Positions Vacant as of June 30 (b)	2020	2021	2022	2023
Public Safety Tele Call Taker (a)				192
Public Safety Telecomm I	346	358	339	491
Public Safety Telecomm II	152		243	497
Public Safety Telecomm III		147	401	530
Public Safety Telecomm Supv		130	495	

(a) New position type added in FY 2023

(b) Note that lower paid positions are typically filled before higher paid positions because there are few candidates for upper-level positions, and they want to promote from within

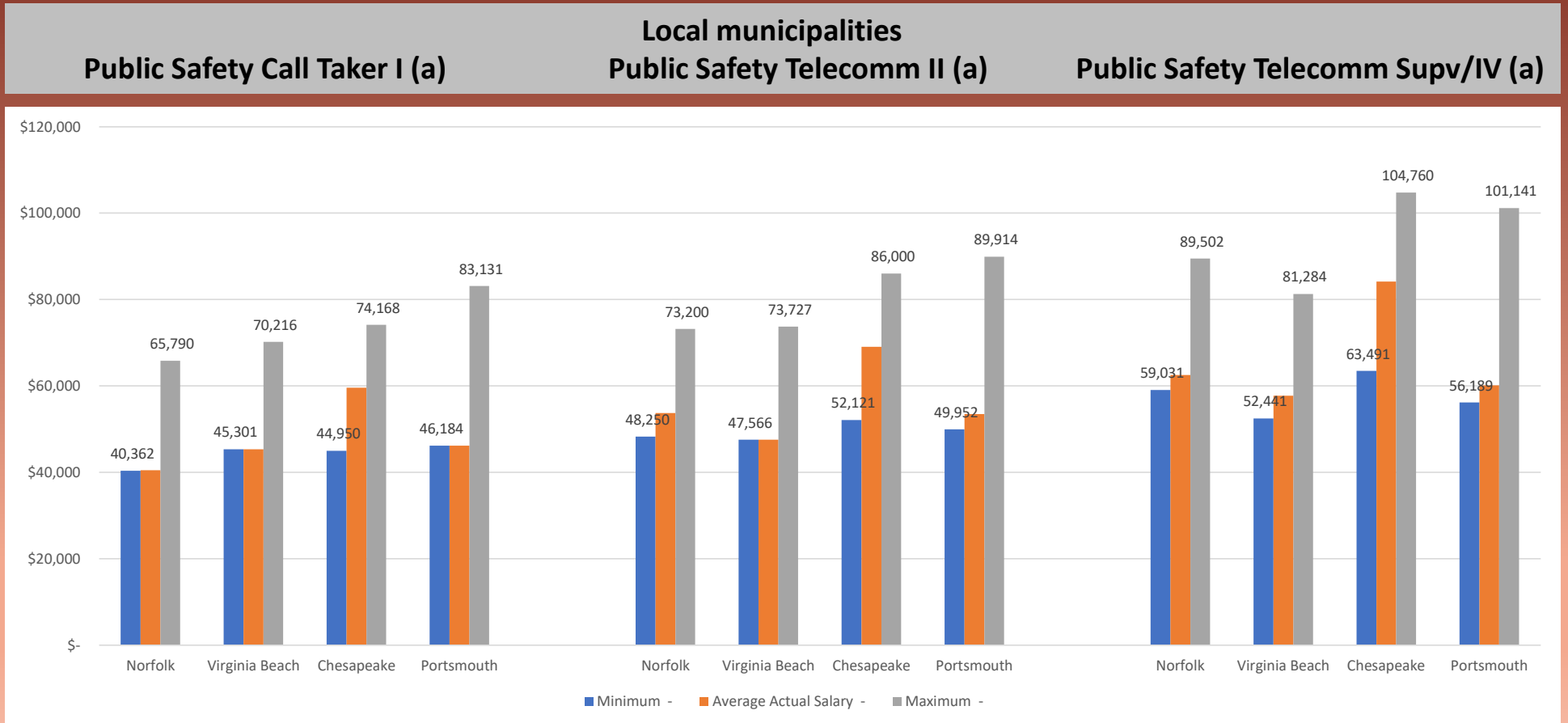
Challenges



Retention

- Highly stressful occupation
- Shift work - 12-hour shifts - day and night required in addition to weekends and holidays
- Pay compression - pay to incumbents with experience typically not meaningfully more than for new hires
- Lack of night-shift differential pay
- Lack of across-the-board incentive bonuses for all positions including leadership

Comparative Pay – Compensation Plan Salary Ranges and Actual Average Salary Three Examples



Comparative Pay – Salary Ranges and Average Salary Three Examples



Norfolk currently ranks lowest or next to lowest in minimum and/or maximum salary which adversely impacts both recruitment and retention

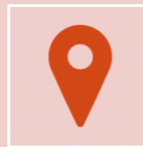


Average salaries are affected by existing salary range and employees' years of service



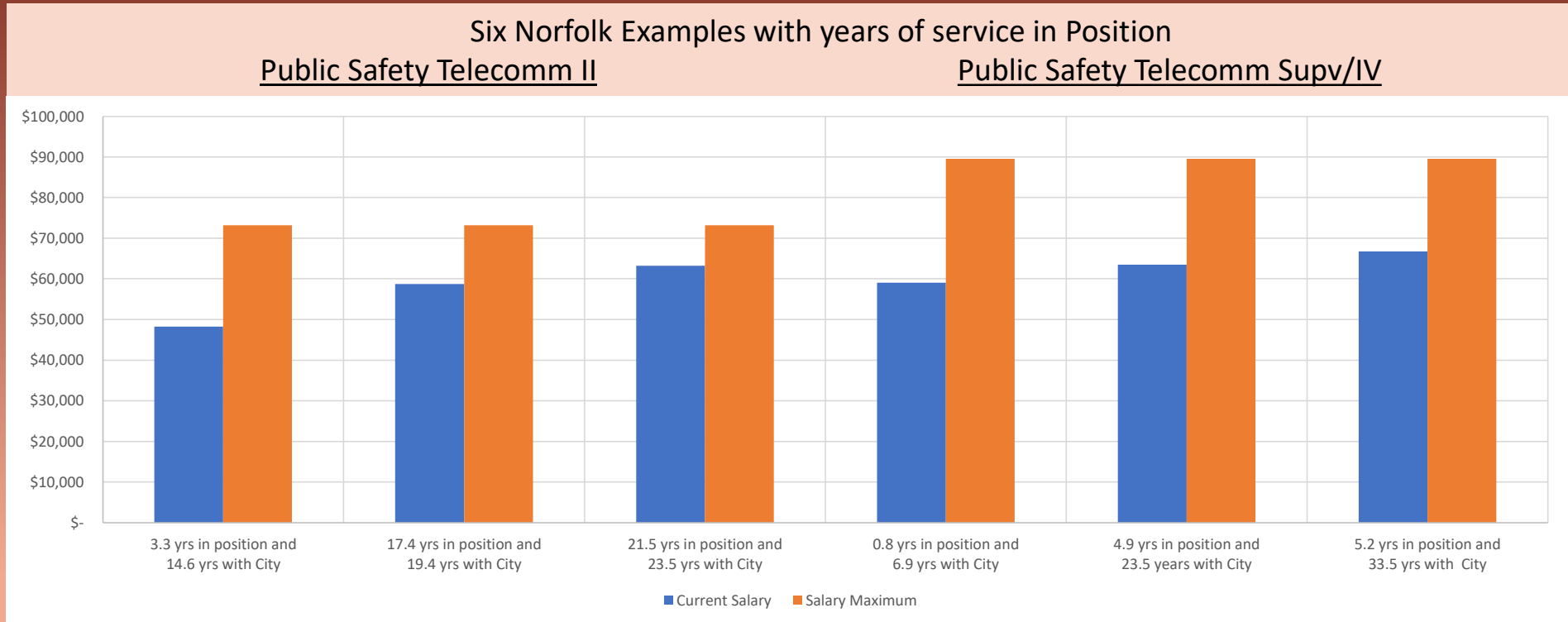
Call Taker I is a new position (FY 2023) for Norfolk and thus employees are at the lower starting range of what is the lowest range compared to other cities

Initial requirement for 12 months experience. Human Resources denied a recent reclassification request from NPD to change the experience level to 6 months to favorably compare with other localities and encourage retention and advancement opportunities.



Other factors include high workload due to Norfolk's high volume of calls compared to other cities

Comparative Pay – Current to Maximum Salary



- There is room for increasing current salaries within the existing salary ranges

Recruitment Concern



Background Checks – Criminal History Record

We note and emphasize the importance of the 911 Center hiring process being managed by Public Safety Human Resources.

- Required for 911 Center employment
- City code (Sec. 2.1-38 7/1/13) requires fingerprinting be forwarded through Virginia State Police Central Records Exchange to the Federal Bureau of Investigation
- As a pre-hire review Emergency Preparedness and Response has submitted fingerprints electronically to Norfolk Police Department which uses the Virginia State Police system and receives responses as quickly as 24 hours
- The process used by Human Resources (HR) can take several weeks
- We expect increased efficiencies in the hiring process with 911 Center becoming a part of NPD with the retention the NPD human resources unit because of accessibility to resources such as electronic submission of finger printing and background checks. Transferring the unit back to the City's HR could adversely impact efficient recruitment and hiring efforts.

Timely performance of critical tasks is hindered by insufficient available personnel

Audit Conclusions

1- Industry performance standards are not achieved by 911 Center

- Norfolk, being a concentrated urban city, has a high volume of calls per capita

2- Staffing shortages result in delayed call answering

- Staff burnout
- Hiring and retention challenges

3- Obtaining qualified staff for this demanding work is difficult

- Work is specialized
- Competition is intense for the limited number of applicants
- Complicated application and vetting process including testing and training not required for other City positions

4- Norfolk 911 salary ranges at the low end of nearby localities

- Impediment to both hiring and retention

Recommendations

Develop a process to reclassify current call taker I positions and periodically monitor, and upgrade Norfolk salary ranges to be more competitive

Consider providing a night-shift differential pay and quarterly bonuses for all employees, including leadership, to incentivize retention


Management Response

A salary increase proposal was submitted to the City Manager's Office on February 27, 2024 and is currently pending approval. Once approved, our salary range for these positions will be competitive with the surrounding agencies in Hampton Roads. Moving forward on a semi-annual basis, we will formally review surrounding agencies salaries to remain competitive at all positions.

Management Response

We concur with the difficulties associated with the 911 industry and with implementing bonuses for 911 staff. We would recommend they occur on a semi-annual basis to recognize staff for the difficult work they do. Additionally, we'd request a budget funding line for the bonuses rather than rely on vacancy savings.

Recommendation



Review current application and review process to maximize efficiency and minimize duration

Management Response

The 911 Emergency Communications Center became a part of the Norfolk Police Department in January 2024. We are currently working towards moving all hiring duties and responsibilities under Public Safety Human Resources to remain consistent with hiring processes for civilian positions within Public Safety.

Public Safety Human Resources works closely with the Norfolk Police and Fire-Rescue departments which allows a streamlined hiring process.

Auditor's Comment

The 911 Emergency Communication Center was transferred to the Norfolk Police Department during the audit. As long as NPD Human Resources is retained, we believe the transfer would continue to positively impact and improve the hiring process.

Audit Observation

Given the persistent challenge of meeting NENA standards, reducing staff workload, and addressing acute staffing issues, particularly understaffing, it is imperative for management to consider innovative solutions. We propose conducting a feasibility study to assess the viability of implementing artificial intelligence (AI) for handling non-emergency calls and leveraging geofencing technology to mitigate call redundancy and support 911 operations.

Audit Observation Cont'd

AI for Non-Emergency Calls: Investigate the potential benefits and risks associated with integrating AI solutions into call handling processes for non-emergency situations. This includes evaluating AI's ability to accurately identify and categorize non-emergency calls, its capacity to provide relevant information and assistance to callers, and its impact on operational efficiency and staff workload.

Geofencing Technology: Explore the feasibility of implementing geofencing technology to reduce call redundancy and streamline 911 operations. Assess how geofencing can be utilized to automatically route calls based on location, ensuring that calls are directed to the appropriate jurisdiction or service provider without unnecessary duplication.

Benefits/Risks

Benefits:

- Increased operational efficiency: AI can handle routine non-emergency calls, allowing human operators to focus on high-priority emergencies.
- Reduced staff workload: AI automation can alleviate the burden on human operators, enabling them to respond more effectively to emergencies.
- Enhanced resource allocation: Geofencing technology can optimize call routing, ensuring that resources are allocated efficiently based on geographic location and urgency as well as reduce call redundancy for the same incident.

Risks:

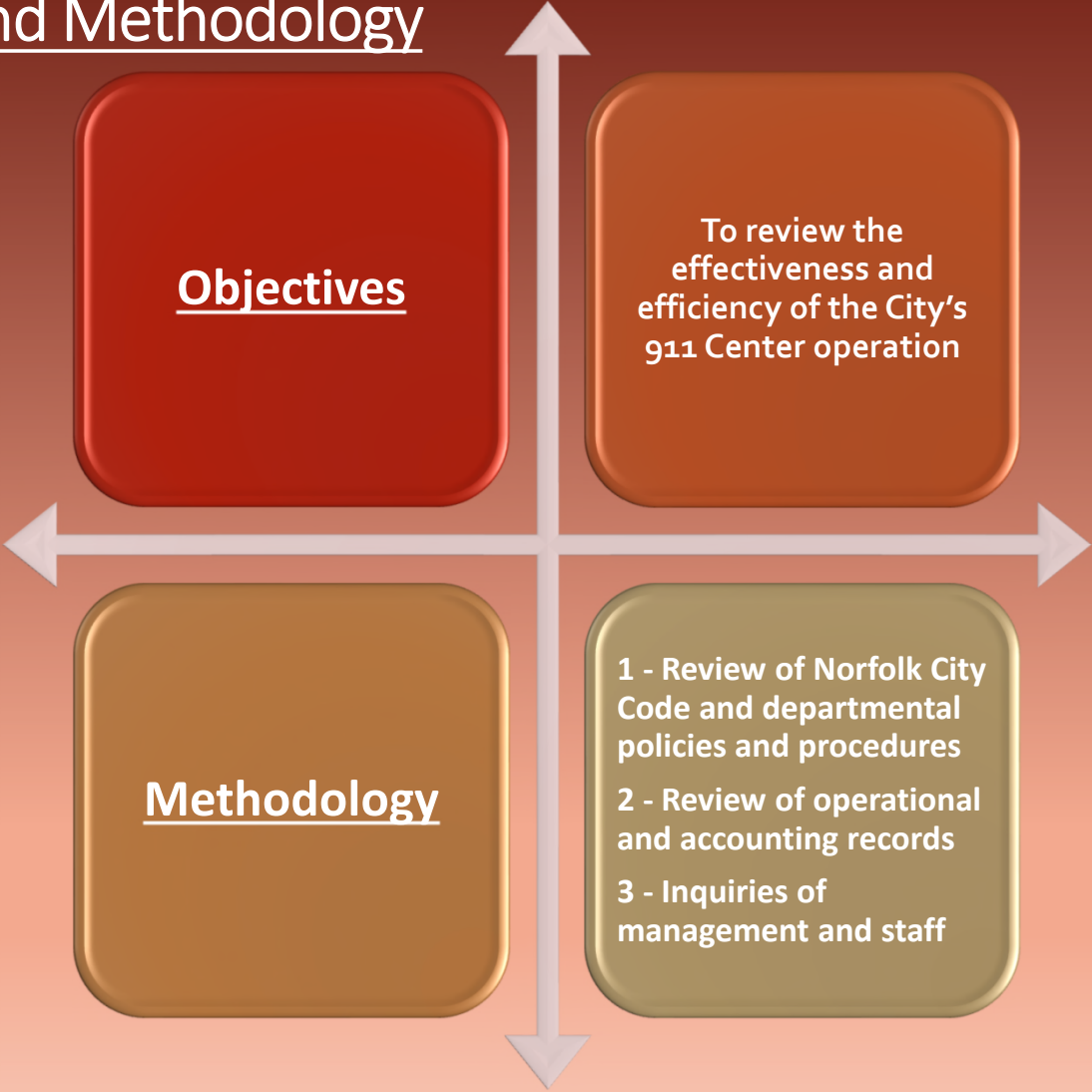
- Technical limitations: AI may encounter challenges in accurately understanding and responding to diverse caller inquiries and situations. However, when this occurs, call can be rerouted to a human operator.
- Privacy and security concerns: Implementing AI and geofencing technologies requires careful consideration of data privacy and security measures to protect sensitive information.
- Public perception and acceptance: There may be resistance or skepticism from both staff and the public regarding the use of AI for emergency services, necessitating clear communication and transparency throughout the implementation process. Therefore, it is essential to establish and adopt policies around the implementation of AI.

Observation Conclusion

By conducting a thorough feasibility study and carefully assessing the benefits and risks associated with implementing AI and geofencing technologies, management can make informed decisions to improve operational efficiency, reduce staff workload, and address staffing challenges in 911 operations.

Embracing innovative solutions is essential to meeting evolving demands and ensuring effective emergency response services for the city's communities.

Audit Objectives and Methodology





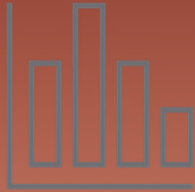
GAGAS Standards

- 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.

Statement of Independence

- Norfolk City Code Chapter 11 states that the City Auditor is appointed by City Council and that employees under the City Auditor serve exclusively at-the-will of the City Auditor. Accordingly, the members of the Office of the City Auditor are independent of City Management and thus independent per the GAGAS requirements.

Data Reliability




Internal Control

We assessed internal controls as required by GAGAS and determined the significance of internal controls to the audit objectives. We did not find significant internal control deficiencies.

We relied on data generated from the City's Advantage Financial Management System (AFMS) and certain subsidiary systems for this audit. The extent of our evaluation was dependent upon the expected importance of the data to the final report, strengths or weaknesses of any corroborating evidence, and anticipated level of risk in using the data. We determined the financial information from AFMS which was used as the basis for the external audited financial statements and data from work management systems and processes to be reliable and, therefore, the level of risk from using this information to be low.

We relied on the data generated from the PeopleSoft personnel management system and the Virginia ECaTS system for this audit. These systems are in widespread use with highly accepted reliability, and we consider the risk from using this information to be low.



thank
you

*We thank the Office of
Emergency Preparedness and
Response for its cooperation
and responsiveness to our
requests during this audit.*

CITY OF NORFOLK
OFFICE OF THE CITY AUDITOR

If you have any questions, I can be reached at 757-409-2518 or via email at
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