

Strategic Analysis of the Nashville Fire Department



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Executive Summery

The Nashville Fire Department is a modern and progressive all hazards organization. Tasked with the job of protecting a rapidly growing city who has recently faced a budget crisis, natural disasters, and now a global pandemic. With four different mayors and director-chiefs of the department within the last decade, it has never been a better time to find a new direction to navigate these uncertain times.

To develop a new strategic outline with the backdrop of a pandemic for the Nashville Fire Department a SWOT Analysis was cross referenced with the five step framework laid out by Venkatesh Shankar in his video titled, Take Risk to Manage Uncertainty (Shankar 2014). Ideas were formulated by working with both of these models to find effective strategies for not only a pandemic but also for the future of the department. Short, intermediate, and long term strategies have all been presented giving the department ideas of various scope and budget that can implemented over the coming decade. The NFD will continue to thrive and by implementing these ideas a safer and stronger department will emerge.

About the Nashville Fire Department

Nashville Tennessee is a booming city in the heart of the southern United States. Over the years the city has experienced unprecedented growth and a designation as the “It City” by many publications over the last decade including the New York Times (Severson 2013). This explosive growth can be credited to large centers of education, healthcare, and major corporations such as Amazon who are expanding headquarters and bringing 5,000 jobs to the downtown core (Palmer 2020). However, it is the county music industry who has propelled the city into the spotlight. The ever increasing popularity of country music as well as the national exposure from television shows, reality tv, and award ceremonies has driven tourism for the city. Up until 2020 the downtown bars and honky-tonks along Broadway have been the economic engine fueling the core of the city. The Nashville Area Chamber of Commerce and the RIAA say that the “music industry contributes 5.5 billion to the local economy” (Nashville Area Chamber of Commerce & RIAA 2020).

With a population approaching 700,000 residents and a metropolitan area of almost 2 million, Nashville is the largest city in the state of Tennessee and the organization tasked with protecting it is the Nashville Fire Department (nashville.gov & United States Census 2020). Founded in 1860, the NFD is one of the top 20 fire departments in the United States protecting 526 square miles ranging from dense urban high-rises to rural and inaccessible terrain (Nashville Fire Department 2 2020). With such a diverse geographical area, a growing population, and high national visibility the department is prepared for all fire, medical, rescue, or hazardous material situations that may arise.

Today the department consists of 39 fire stations, containing almost 100 pieces of apparatus and over 1200 employees all working to fulfill the mission of the department (Nashville Fire Department 2 2020).

“The mission of the Nashville Fire Department is to provide high quality fire, medical, and rescue emergency responses and community support services to the citizens and visitors within Nashville and Davidson County, so they can work and reside in a community where an all-hazard response minimizes harm to life, property and environment” (Nashville Fire Department 2020)

Introduction

Two main focuses of this strategic plan revolve around providing a better service to the citizens as well as improving employee working environments. As a public service organization, “the purpose is to promote the constant improvement of the services as to increase the level of satisfaction of citizens and enterprises” (Alberto 2013). In a video discussing Porter’s Value Chain by Mind Tools the speaker says, “A high performing team is essential to creating an excellent product or service. Hiring, training, and retaining exceptional people is a great way to add value” (Mind Tool 2017). By looking after the employees and providing world class training opportunities we can create value for the citizens of Nashville by providing a better service.

SWOT Analysis of the Nashville Fire Department

Nashville Fire currently faces many issues that have negatively impacted the moral and performance of the department. Years of misappropriation of funds, turnovers in management, and deferred maintenance have coincided with a natural disaster, a bankrupt government, and a global pandemic. It has never been a more critical time to complete an analysis of the department to gain a clear direction moving forward. The goal of this document is to look at some of the issues faced and then to offer some innovative solutions that can help NFD to navigate this difficult time while enhancing service for the community in the future. A SWOT Analysis has been completed and is located in Appendix A for reference. This analysis has considered internal and external factors some of which will be highlighted below. Solutions will then be offered to address short, medium, and longterm goals for the future.

Strengths

The Nashville Fire Department has a long and respected history of tradition and service to the community. Despite the negative outlook of some public service institutions in this day and age the fire department has maintained a highly respected position and has become an even more critical asset in the times of a global pandemic. This respect and image has consistently made working for the NFD one of the most competitive jobs in the Metropolitan Government of Nashville and Davidson County. Being an essential government institution we are blessed with consistent funding to maintain operations.

We are also protected by the charter of the city as the only provider of fire and EMS services reducing the threat of competition from outside forces.

Weaknesses

One of the greatest weaknesses of the department can be seen in its inconsistent leadership over the last decade. This in turn causes inconsistencies in goals, planning, and direction. Over this time the city has had four different mayors, a chart has been included below to illustrate some of the differences between the administrations.

Nashville Mayors Over the Decade

Dean Administration 2007-2015	Berry Administration 2015-2018	Briley Administration 2018-2019	Cooper Administration 2019-Present
Decreased Pay to Employees	Returned Pay and Benefits to Employees	Failed to Secure Funding for Increases	Left with Budget Deficit/ Tornado and COVID-19
Deferred Maintaince	Failed to Secure Funding for Increases	Increased Spending	Raised Property Taxes on Citizens 34%

During this same period the fire department also experienced four different director chiefs each with a different legacy, from deferring maintenance to the point of exhaustion, to restructuring administration positions and creating new ones, to rebuilding the departments facilities and vehicles. This can also be illustrated in the references below. I have included the last Strategic Plan made available by the department dated over six years ago and many changes in chiefs (Nashville Fire Department 3 2014).

Facing an uncertain path and budget constraints the department has failed to keep up with the historic growth that the city has experienced. To help illustrate this point a chart has been compiled in Appendix B for reference. This lays out the differences in the fire departments of the city of Nashville and our closest counterpart in the state, the city of Memphis. While also facing severe budget issues the Memphis Fire Department (MFD) has been able to maintain and even improve its position over the last decade, serving a smaller population and area with 44% more staff and 39% more equipment. Over this time MFD has instituted a paramedic training program and has achieved almost 100% conversion of its fire engines from BLS (basic life support) to ALS (advanced life support) (Logan 2014). In this same time Nashville has reduced its ALS engines by almost half. These cuts also extend to staffing which has continued to be cut to its lowest levels in years.

Opportunities

With many weaknesses the Nashville Fire Department has plenty of potential and opportunities on which to capitalize. The population of the city continues to grow and experts say that “Nashville’s housing demand likely won’t stop anytime soon” (Francis 2020). This will continue to bring an influx of businesses and tax revenue to the city when it needs it most.

In 2020 the city instituted a 34% tax increase to stabilize Nashville’s financial situation and to prevent a take over from the State of Tennessee (Jeong 2020) & (Jeong 2 2020). In the short term these funds will help cover Nashville’s deficits and allow they city to

recover its emergency funds. Long term this will provide NFD with the appropriate funds to expand services, develop new training programs, increase medically trained staff, and provide care to unserved populations.

While COVID-19 is a terrible reality for many it is just one of many examples of the growing need for the services that we provide for the city and its citizens. Securing our importance to the leaders and citizens for years to come.

Threats

The threats faced by the department are largely external risks to the budget and personnel that serve the community. The years of mismanagement of funds has left the city with depleted reserves exacerbated by the March tornado that destroyed the city and a global pandemic (Tennessean 2020). The mayors office estimated that "revenues from sales taxes and other activity taxes will be down between \$200 and \$300 million" (Cooper 2020). With these issues city leaders instituted a 34% property tax increase on the citizens to fix the budget shortfalls. This comes even as thousands were forced to stay home or lost their jobs altogether.

This brought on the threat of a property tax referendum by the citizens to overturn the tax increase putting the budget in greater jeopardy. The mayors office has said that "the referendum would create a \$322 million shortfall" and that cuts would have to be made. "The Nashville Fire Department estimates the department could see a 35 percent cut to

its budget and lose more than 500 positions including 12 ambulances” (Hammonds & Torres 2020) (Wallace 2020) (Reicher & Garrison 2019) (Shelton 2020).

Budget issues aside COVID-19 could prove to be the greatest challenge that the department could face this year. With record low staffing levels the Nashville Fire Department cannot afford to lose significant portions of its personnel. Given the nature of the job responding to all emergencies and hazards, staff are significantly exposed to COVID-19. Ben Hall of the local CBS affiliate reported that, “more Nashville firefighters and EMTs were off the job in November because of COVID-19 than during any other month of the pandemic.” Over 10% or “124 firefighters and EMTs have tested positive for the virus so far, but many others have been on quarantine because of exposure” (Hall 2020).

COVID-19 has implications on the operating budget of the department as well. Mark Young President of the Local 140 International Association of Firefighters said that, “when you have personnel out with COVID or other type of leave you have to backfill with overtime. You don't want to get to the point where you are thinking about shutting down or browning out equipment across the city” (Hall 2020). Last year the department spent more than \$4.8 million in overtime and is on track to surpass that number this year (Hall 2020).

Strategies to Navigate the NFD Through Crisis and Excel in the Future

I. Short Term Strategies

- A. Hire currently credentialed EMTs and Paramedics as well as state certified firefighters to reduce the cost and time associated with training new employees.
 - 1. Pros: This will help to alleviate short term staffing issues and deficiencies.
 - 2. Cons: May not be able to attract the appropriate ethnic make up required for the city. New hires will have less familiarity in the culture and operations of the NFD.

- B. Assign trained and experienced medical personnel at dispatch center in an effort to send the appropriate equipment and personnel required for the emergency call. Presently dispatch sends a maximum number of equipment and employees to each call, when often only one piece of equipment and a few trained medical staff are required for proper care.
 - 1. Pros: This will save in wear and tear on expensive equipment, save in fuel and maintenance cost, reduce fatigue on staff, and limit exposure to COVID-19 patients.
 - 2. Cons: Cost of adding medically trained staff to dispatch.

- C. Institute Telehealth visits to doctors and nurse practitioners in the field for less critical patients. One of the most common statements that we currently hear a patient say is that they do not want to go to the hospital over fears of COVID-19.

They have an issue that needs to be addressed but is almost not critical enough to risk exposure (JEMS 2020) (JEMS 2 2020).

1. Pros: This opportunity can reduce the amount of hospital beds in use saving those beds for more critically ill patients. Allowing hospital staff to focus on critical care. It will also save in wear and tear on expensive equipment in transports to emergency rooms, save in fuel and maintenance cost, reduce fatigue on staff, and limit exposure to COVID-19 patients. This would also improve the time in which a patient would be evaluated and treated versus spending hours waiting in an emergency room to receive medical care.
2. Cons: Cost of additional technology, equipment and training. As well as the cooperation and expense from the hospitals that must provide the healthcare professionals for the visits.

D. Instituting a system similar to the Healthcare Navigator offered by the Memphis Fire Department's dispatch center. This system would add to and be a compliment to the Telehealth system. MFD states that "EMS will now give you the right response, whether it's an ambulance, an immediate or upcoming doctor visit or a chance to speak directly with a healthcare provider, depending on your emergency. By catering to your specific needs, you can possibly avoid a visit to the emergency room, which has been standard practice." "Our overall goal is to serve the community, and part of that is connecting citizens to resources for consistent and total health care" (Memphis Fire Department 3 2020). This takes the Telehealth system one step further offering scheduled doctors visits, non emergency transports, and more.

1. Pros: This opportunity can reduce the amount of hospital beds in use saving those for more critically ill patients. It will also save in wear and tear on expensive equipment in transports to emergency rooms, save in fuel and maintenance cost, reduce fatigue on staff, and limit exposure to COVID-19 patients. While also improving the care experience for the patient.
2. Cons: Cost of additional technology, equipment and training as well as the expense of adding staff to dispatch. Requires cooperation of non emergency transport services, local clinics, and doctors offices.

II. Intermediate Strategies

A. Institute more FAST cars throughout the city. Nashville uses SUVs called FAST cars that are stocked with medical supplies and staffed by firefighters. These add to the emergency response capacities of a particular zone. They are an affordable option costing less to purchase, operate, and staff as apposed to a full fire engine or aerial ladder truck. Since these vehicles have no fire capabilities staffing should be moved from fire personnel to EMS personnel. This would further reduce the time to hire staff and coincide better with that divisions existing schedule. FAST cars could remain a fluid program increasing, decreasing, and relocating stations depending on the demand of the area on that day.

1. Pros: It will also save significantly in wear and tear on expensive equipment, save in fuel consumption, reduce fatigue on staff, and limit exposure to COVID-19 patients

2. Cons: Significant cost in adding vehicles and staff but more affordable than new stations and fire equipment.

B. Repair and reopen Station 14. Station 14 received heavy damage from the March tornado and due to its closure has created a void in the service area for East Nashville.

1. Pros: Cost to repair is significantly less than a new station and will reduce response times in the areas better serving the community.
2. Cons: Will require large capital investments during a difficult budget year.

C. Increase Ambulance Capacities. While the city has added units over the last decade it has failed to keep up with demand and as a result staff are overworked leading to more injuries, sick time used, and low moral. The city also frequently uses all of its capacity and must keep calls pending waiting on a unit to return to service. The importance of this can be seen in the chart comparing the NFD and MFD in Appendix B. The Memphis Fire Department has almost 30% more transport capacity than the Nashville Fire Department covering less territory and fewer citizens.

1. Pros: Increases the transport capacity of the city, reducing response times and transport times. It will reduce employee injuries and fatigue allowing for better decision making by the staff and providing better service to the citizens.
2. Cons: Significant cost in personnel, equipment, and vehicles.

III. Long Term Strategies

A. Paramedic Training Program offered by the NFD Training Academy. A growing trend in the emergency services is to increase the level of medical care offered by local responders. Rural areas are increasing services previously offered by urban areas and many departments throughout the country including the Memphis Fire Department are going to an all ALS response. Nashville's response has been cut the ALS engine program by almost half. Retired Chief Gary Ludwig stated in Firehouse that "studies have shown the clear advantage of early intervention with ALS with respect to better survival rates. As a result of these studies, many fire departments have "front-loaded" their first responder programs with ALS engines. Better and faster advanced life support means better service to your citizens" (Ludwig 2003).

1. Pros: Significant increase in higher trained personnel to respond to incidents around the city giving citizens, no matter where they are located, equal access to the same high quality care. Consistent training and certification also allows for higher levels of cross training in various positions giving a greater pool of personnel to backfill during vacations and sick time.
2. Significant cost and time to implement. This program and conversion will take many years to develop and establish.

B. Conversion of fire apparatus from BLS to ALS.

1. Pros: Gives citizens equal access to the same high quality care in all parts of the city at all times.

2. Cost of medical equipment for fire apparatus.

C. Increasing Fire Stations. With housing being built at record paces, the population is growing faster than the city can keep up with demand. Condo towers are being built in commercial areas, raw farm land is being developed into neighborhoods, and established neighborhoods are being torn down to build two to three times the number of homes previously there (Francis 2020) (Reicher 2017). The increasing density of neighborhoods is even more taxing on the department due to the close proximity of the structures (Alund 2018). It is imperative that the department stays on top of population and housing growth to provide the best service no matter where people live in the city. The intermediate strategy of using FAST cars to fill holes and provide increased service should eventually be phased out and replaced by permanent stations and equipment for those areas of growth.

1. Pros: Provides faster response times and higher quality care evenly dispersed throughout the city of Nashville. Reduces ISO (Insurance Services Office) rating for the city providing better protection but also reduces cost of insurance coverage for the citizens.

2. Cons: Significant costs in acquiring land, building infrastructure, purchasing equipment, and hiring personnel.

D. Deferred maintenance is a massive issue NFD will face in the coming years.

Previous administrations ignored upkeep and allowed the equipment and buildings to fall into disrepair. While the department has done a good job in recent years replacing its fleet of fire apparatus, the buildings have been neglected.

Station 2 located in the heart of downtown servicing both skyscrapers and very dense residential areas was shut down last year and could no longer be repaired. This left a significant hole of coverage in one of the most dense areas of the city, signifying the need to prioritize the importance of maintaining assets to our department (Abell 2019). With such a high cost of replacement and time commitment to rebuild, planning should begin on this process immediately and remain on a steady pace for long into the future.

1. Pros: Maintaining existing properties allows them to be used longer into the future and costs savings for the department. It reduces disruptions in service to the local community and keeps response times low.
2. Cons: Cost to maintain and update existing structures. However, if done consistently can be lower than replacing structures.

E. Increase Ambulance Capacities. Due to the continued reliance and use of emergency prehospital care and transport the demand for our services will not likely decrease. Repeating this item not only shows the importance of the service but also the importance of the continual planning of it as well.

Sticking to the Strategy

With the fire department having a long and proud history of traditions it has also been notorious for being reluctant to change. Over the last decade alone many new ideas, directions, policies, and processes have been started and fizzled out all before they even got going. Using Kotter's 8 Step Change Management Model is a tool to help see these ideas forward.

- The need to create urgency and explain when change must happen
- A strong team needs to be formed, leading by example
- A clear and understandable vision must be formed
- This vision needs to be communicated
- Obstacles to these changes need to be removed
- The ideas need to be achievable and broken down into attainable pieces
- The process needs to be repeated
- Lastly, the new ideas must become part of the new culture

(Kotter 2020) (Madsen 2016)

A recent successful change of culture came with the documentation of incident reports. This has historically been an area where complacency excelled. Thousands of reports were either not completed or incorrect every year. With pressure from the state to submit more accurate data the NFD promoted Chief Lester Kelton to a Commander position to oversee the implementation of new reporting software as well as the oversee the goal of 100% reporting. Many of the steps previously listed were followed and with training,

direction, and leadership the culture over the last year has changed. Commander Kelton stated that “accountability and persistence” were the keys to success.

Conclusions

Alberto states in his paper titled, An Innovative Public Value Chain to Improve Public Services that “public services organizations have been set up to perform a 'social' function, that is to produce and deliver services the community can benefit from, thus fulfilling important public requirements” (2013). Having consistent leadership and a clear vision from a strategic plan will help the department to make great progress in its mission to provide the best service possible to the citizens of Nashville and Davidson County. The use of Kotter’s Change Management is a process that can help to ensure success in this endeavor. Director-Chief Sawnn stated that “if it's an emergency and people call 911 they expect us to show up, and that's exactly what we will do” (Hall 2020).

Appendices

A. SWOT Analysis

Strengths Stable Funding Low/No Competition Respected by Community Easy to Fill Positions	Opportunities Growing Population Tax Increase Federal/State Funding Always a Demand for Services More Training Opportunities Incentivizing More Training
Weaknesses Leadership Turnover No Skilled Dispatch Personnel Time to Train New Employees Cost to Train New Employees Not Keeping Up With Growth of City Deferred Maintenance Minimal Staffing	Threats Property Tax Referendum Threats from City Leadership COVID-19 Budget Crisis/Funding Reductions

B. Comparison of the Nashville Fire Department and Memphis Fire Department

	Nashville Fire Department	Memphis Fire Department
Population	694,144	651,073
Coverage Area	526 square miles	324 square miles
Stations	39	57
Fire Engines/Pumpers	39	57
Ariel Ladder Trucks	12	27
Rescues	4	2
Ambulances	26	35
Staff	1205	1899
ALS Fire Equipment	6	56
Paramedic Training Program	No	Yes
ISO Rating	4	1

(United States Census 2020)

(United States Census 2 2020)

(Burke 2019)

(Nashville Fire Department 2 2020)

(Memphis Fire Department 2020)

(Memphis Fire Department 2 2020)

(Tennessee Fire 2020)

(McGee 2014)

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