

# Renovation Revival: Mechanics Hall

## Abstract:

This project was sponsored by the Worcester County Mechanics Association to help update Mechanics Hall to modern entertainment standards at the budget of a non-profit organization. The goal of the team was to update the existing signage, improve the employee timekeeping system, and ensure that a new program would be able to manage the Hall's donors. Additionally, the team was tasked with creating a strategic plan in order to better engage the local youth demographic by introducing them to Mechanics Hall as a venue that suits their interests. The study was completed through various interviews, surveys, and online research. Through our work, we provided Mechanics Hall with a long-term plan to renovate the technological systems at the hall, as well as a social guideline to better involved the youth and young adult audience within the area. We are confident the deliverables we have provided to Mechanics Hall will allow them to continue their mission of hosting enriching and fulfilling experiences for future generations.



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# The Rise and Decline of Music Halls

Once viewed as the host to many of the greatest pastimes in society, performance venues have faced many changes over time. During the 1800's and early 1900's, the formation of traditional concert halls as a venue for entertainment began to emerge in many cities and small towns across the nation and globe. Originally formed as spaces for classical orchestras and opera concerts, concert halls were establishments for high class performances and gatherings. Previous to this time, musical performances had taken place in royal residences and private homes of the elite, but as the years progressed, a wider range of attendees from different social classes were drawn to concert halls, and the performances moved into ticketed concerts in spaces throughout western Europe [1]. Paris, Italy, Germany, and other European countries began to promote the arts in the mid-1800's, and concert societies were formed in order to promote national music.

During this time period of the mid-1800's, U.S cities began to construct similar concert halls. At this time industrial cities were the home of the wealthiest and most powerful individuals, and performance halls were a direct reflection of their socioeconomic status. Mostly centered in industrial cities such as Worcester, Cleveland, and Detroit, these halls became centerpieces of technological and economic growth, outlets for social events and

demonstrations of new technologies. However, in the 1900's, industrial cities across the United States saw economic decline as manufacturing progressively moved to areas with lower labor costs. As the United States became involved in World War II, many workers returned to the industrial field, but were unable to keep their jobs in this field following the war's end. This would lead to loss of jobs in manufacturing industries and a shrinking population as people moved out of these cities for job prospects in other cities [2]. In the economic slump, concert halls across these cities faced various financial troubles due to lack of concert attendance.

In the latter half of the twentieth century, audiences have begun to move away from traditional concert performances and towards other types of entertainment. Not only has there been a decrease in attendance to these traditional events, a more assorted demographic of people who are in the market for public entertainment experiences has increased. The population of people who attend these experiences has diversified where individuals of varying races and ethnicities, economic status, and social background are seeking these outlets of entertainment. Many of the individuals that currently attend the traditional events at these venues primarily consist of an older population. In the 21st century, individuals have a new exposure to technology and media that is different than what has been traditionally offered in these concert spaces. This is a new demographic that also needs to be considered when trying to attract a more diverse audience to concert halls [3]. In order to stay relevant and attract guests, venue spaces must have advanced technology in lighting, sound,

and other areas that would meet a variety of performers' and audience's needs to bridge the gap between the older existing audience to drawing in a younger audience. Founded in 1857, Mechanics Hall is a world-renowned concert hall and event venue known for its high-quality acoustics and overall aesthetic appeal. Originally founded as a

space to demonstrate the advanced technology of its time, Mechanics Hall developed the reputation of being a premier concert venue. However, advances in technology soon began to outpace the updates and renovations on Mechanics Hall, leaving it currently in an aged and outdated state [4]. In order to stay true to its reputation and to continue to attract clients and visitors, Mechanics Hall needs to undergo renovations in several aspects in order to stay technologically relevant in the technology-focused 21st century. The ever changing demographics of Worcester has presented a challenge to the hall in trying to pin down a set population to market to. Current systems that are in place for performances have been identified by the Worcester County Mechanics Association as areas for improvement. Another aspect that needs to be developed is the community outreach of Mechanics Hall, specifically programming targeted at youth and young adults as they make up more and more of the population of the city.

Specifically, in the city of Worcester, MA, several concert halls such as Tuckerman Hall, and Hanover Theatre were constructed for various events, concerts, and performances. Originally developed as high-tech spaces that attracted fame for their performances, in the mid 1900s, economic contraction in the Worcester area led to decreased concert attendance and lack of funding for these venues. These economic issues for the concert spaces across Worcester challenged the ability for these spaces to maintain revenue streams to keep modernized. Some concert halls even had to close temporarily, similar to Hanover Theatre in 1967, or be sold off permanently in response to the loss of profits.

The role of the project team was to assess the current signage, timekeeping, and donor management system in place and determine areas that are lacking or becoming obsolete in the Hall's goal to meet its clients' needs. This was completed through the documentation of existing systems combined with interviews and surveys. Additionally, the team researched ways for Mechanics Hall to expand its programming to better engage the larger youth and young adult demographic through connection with local youth organizations to obtain a better understanding of youth and young adult preferences. Then, the team proposed to the Worcester County Mechanics Association a vision statement and long-term blueprint that can be used in order to upgrade the Hall and its programming in a way that is both economical, and sustainable for several years.

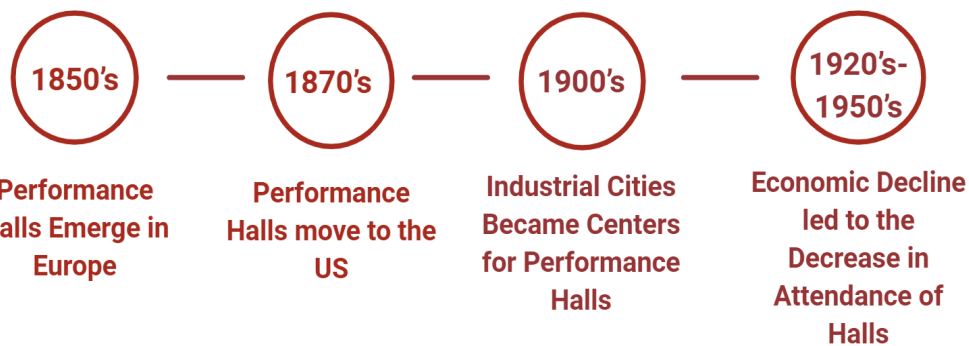


Figure 1 - Abroad timeline of the rise and decline of Musical Halls

## Historical Context of Performance Halls

Originating as a place of social gathering after a day of work or as a place to get away from day to day responsibilities for the working class, performance halls have endured various changes dating back to their founding in the 1800's. Although they had initial success, the fall of early performance halls led to the social and technological growth of modern styles. This led to the early style of performance halls ceasing to exist where they no longer were a place to go after work as previously mentioned. As the venues and the events that were hosted changed, the halls began to cater less to the working class and began to cater to individuals and performers of greater prestige. Eventually this was no longer true as well and halls began to attract nearly all to attend the events they would host. This change was the catalyst to introducing new genres of events hosted and the traditional layout that we see today.

Performance halls have had a long history since they first appeared in the 1800s. While traditional performance halls have the reputation of being an attraction of elegance and prestige to enjoy fine arts such as musical performances, dramas, and recitals, their original physical form and events hosted lack any resemblance to the present. Founded back in the early to mid-1800's in Europe, particularly England, performance halls resembled a modern-day casual bar. Music halls can be traced back to the taverns and coffee houses of 18th century London where men met to eat, drink and do business. The space exclusively catered to men, as in this time women were not



Figure 2 - The main stage of Mechanics Hall. The building's innovations can be seen in this image, with stage ability to be extended and the organ built into the wall itself.

presented the same opportunities as men [5]. They became very popular in the early stages of their development and more locations opened. In response, the tavern like Halls became very successful. The tavern like Halls were fairly small in size regarding maximum occupancy. In most cases, the performers were familiar with the audience personally and were designated to perform at one particular venue as opposed to travelling to various halls in the area. Also, events were not grabbing headlines on the front page of published papers within the area such as an event or venue with a much grander social reputation and significance. The overall social impression was a place of casual comfort and relaxation. Music halls began to evolve in the 1850's, in a way that would ultimately set the stage for modern day performance halls. These halls consisted of a large stage at

society. West End Music Halls were designed and constructed with its primary intention to host events as opposed to being a makeshift venue that has been altered to accommodate a performance. Attending a West End Hall was a formal event where individuals would attend for not only the performers, but the performance as well. The biggest stars of the era were brought to these venues that only helped to grow their fame. West End Halls helped to start the practice of contracted performers, where the act would stay at the location for extended periods of time. The ability for attendees to use the halls to increase their social standing, as well as the ability for performers to use the platform to grow their individual reputation, enabled the halls to grow in attendance and to become very profitable [6].

the end of the room with many tables in the open space in front of the stage. As more people flocked to the halls, the variety of performances grew that began to resemble the shows of today where individuals would perform by reflecting themselves in ways such as dance, plays, comedy, and new genres of music. Previously in the early 1800's, the performances primarily were events that would supplement the atmosphere of the saloon like venue. The first of these specially built halls was Canterbury Hall, which was established on May 17, 1852 in London by Charles Morton, who would later be called the Father of the Halls. The 700-seat hall took a year to build, and its opening was described as "the most significant date in all the history of music hall" [5].

The change of performers and growing popularity sprouted a new type of hall called the West End Music Hall, which had a new atmosphere with a large attendance catering to the wealthy and politically powerful members of

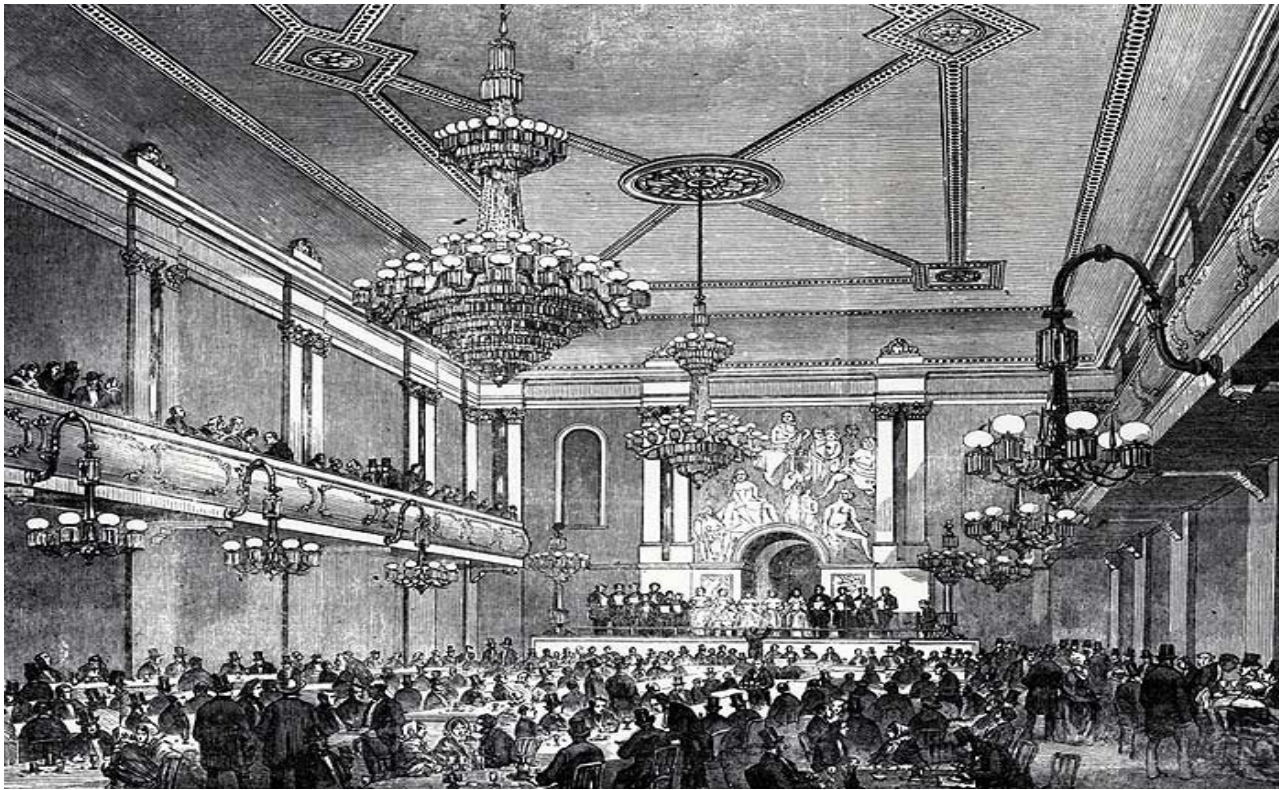


Figure 3 - Canterbury Hall circa 1852

## Economic Development of Industrial Cities

Cities of strong industry such as Worcester, Cleveland, and Detroit found themselves in the middle of an economic boom during the height of the Industrial Revolution, and as such were able to contribute more to the growth of the arts. Concert halls spread across the United States during the latter half of the 1800's and into the early twentieth century, many major cities such as New York City, Philadelphia, Washington D.C., and Boston became centers for concert halls and performances. In addition to the impact the Industrial Revolution had on the available work and

entertainment for Americans in the United States, it is primarily accountable for the divide that foreshadowed the existing classes of today. Due to the increase in jobs within factories and warehouses, internal management was implemented below the entrepreneurs and owners of the facilities. The newly introduced managers within these facilities warranted a pay increase for their additional responsibilities. Although the pay increase for the management was not a direct cause for many individuals and families to move away from the city, a correlation between an increase in pay and a moving to purchase homes elsewhere existed. Previously, nearly all individuals of the manufacturing field lived in apartments with other employees within the industrial cities. Although this was not the formation of a social class that would be referred to in today's society, it was the catalyst to many individuals moving away from the working class of the time period and to move in new remote neighborhoods. The formation of

new neighborhoods that divided the workers and management and upper level positions led to a social divide. Many of the individuals of the new white-collar group that moved away from the cities began to join new churches, clubs, and attend new restaurants and bars that the working class would not attend. One event that this divide was applicable to was attending concert halls for elegant and high-class performances. The working class could not afford to attend these events at the time; which led to a larger social divide driven by economics that already existed due to the geographic change that occurred.

In the late 1800's and early 1900's, labor unions were formed. The introduction of labor unions allowed the remaining workers of factories and manufacturing facilities to be more affluent than previously and to eventually move away from being what would be considered to be close to poverty at the time. The growth of labor unions moved some blue-collar workers up the income ladder toward middle-class lifestyles, while the development of department stores and other large offices led to a "white-collar proletariat." [7]. The workers and their families began to experience and attend events socially and financially that were not attainable due to the economic shift caused by the implementation of unions. The venues still geared towards the higher-class clients but the introduction of the middle class led to a significant increase of attendance and for the industry to grow.

Also helping to start this move was Roosevelt's New Deal starting in 1933. Besides providing education to many people that wouldn't have had access otherwise, the legislature led to a reform of capitalism that focused on expanding private spending and prosperity for the people. FDR ensured that while the government wouldn't necessarily manage the economy they would absolutely step in though if it benefited the general population and when single companies held too much power. The New Deal also included and was the catalyst to federal funding to help accommodate many needs of cities such as libraries, parks, theaters, and homes. The increase in household income as well as the funding to the public infrastructure directly led to an overall increase in the performing arts industry at the time.

Although the U.S. economy continued to grow in the post war era, the industrial sector shrank as the demands of total war ended. By 1947, government spending at all levels had dropped 75 percent in real terms, or from 55 percent of GDP to just over 16 percent of GDP. The

factories that were located in industrial cities that gained the ability to produce goods for the war efforts experienced a similar decline that occurred prior to the war. Suburban expansion during this time exacerbated the effect of urban industrial decline, as many businesses and services moved outside of the large industrial cities. The formation of new highway systems further enabled manufacturing and businesses to migrate from the industrial cities to suburban areas. The newly unemployed workers took their amassed skills and began offering a service as opposed to a product [8]. This trend can be seen directly in the city of Worcester, Massachusetts. To cope with the migration from the cities to the suburbs, many cities began to clear industrial land as part of the urban renewal of cities, demolishing buildings such as theaters, hotels, and factories. For the case of Worcester, the Warner Theater was demolished to follow with the renewal plan [22]. The cleared land was then used to incorporate retail businesses and commercial use. Decline in manufacturing jobs and the collapse of factories and other corporations across these cities that so heavily relied upon them would present more challenges for these concert venues.

Although it appeared to be very beneficial for society at the time for individuals to be attending college as opposed to directly entering the manufacturing workforce, purchasing homes and moving away from the city, and to make other large purchases such as appliances and vehicles, many were unable to pay for their purchases with the loans taken out for them. As credit cards became more prominent and common in the late 1900s, household debt became an epidemic that many Americans were facing, primarily the middle class. By 2009, about 21% of middle-class Americans have spent themselves to the limit. Due to the extreme overspending and loans, the middle class has slowly begun to diminish. The desirable purchases and events that the middle class enjoyed were no longer guaranteed as norms of their everyday lives. The middle class made up 50% of the U.S. adult population in 2015, down from 61% in 1971 [8].

As time continued to progress, many individuals and families in the United States have failed to maintain financial sustainability. In 2017, 44 percent of people in the US said they could not cover an unexpected \$400 emergency expense or would rely on borrowing or selling something to do so, down from 46 percent the year before, according to a separate report released last year by the US Federal Reserve [9]. Despite the minor decrease, many are

unable to afford and plan for unexpected financial emergencies such as medical bills, home and vehicle repairs, and loss of employment. Also, 43% of households do not earn enough to afford a monthly budget that includes housing, food, child care, health care, transportation and a cell phone, according to the United Way ALICE Project [10]. The undesirable circumstances of living paycheck by paycheck each week has been the result of many being financially constrained as previously mentioned. Generally speaking, for an individual or family to attend their desired entertainment such as an event at a performance hall, the cost of attendance and other expenses related to attending would not be feasible financially. The overall financial stability of many households has led to a decrease in attendance for many events. As most performance venues are located in cities, the cost of living in cities disallows many to find time and money to attend them. For example, there has been a 9% national decrease in concert attendance, and a 12% decrease in play attendance from 2012 to 2018, while there has been an increase by 6% in attendance to movie theaters in the same period of time [11].

## Entertainment Begins to Diversify

The rise of movie theaters in the 1900's began to chip away at the audience of music halls. Movie theaters were mostly enjoyed by the working class at beginning of the 20th century, which at the time posed no threat to music halls since most of their audience was in the upper class,

due to their expense and social standards. However, as the years went on, the upper class also began to migrate to this new form of entertainment, which posed a serious threat to music halls. Movie theaters first began appearing in the early 1900s with small storefront theaters that played a single film each night. Movies revolutionized the way that stories were told, as previously people had to go to a musical or play to see any kind of story told in a visual form, and these performances were very expensive for both the attendees and the theater since they had to pay for live actors and show staff. With a movie, you simply needed the projector equipment and you can play a film as many times as you wished, which gave the audience a guaranteed good experience and allowed repeatability at a lower cost of operation. And with tickets only ranging from 5-10 cents, it was much more affordable for the lower classes than high cost musicals and plays. Around 1905, similar storefront theaters called "Nickelodeons" made their debut, called so because they only charged a nickel for admission, and were very popular with working class individual due to their low prices [12]. Besides the prices, they also showed continuous viewings instead of having a single feature, and were very popular among women and families, which helped build up their reputation.

At the time, most music halls were expensive and

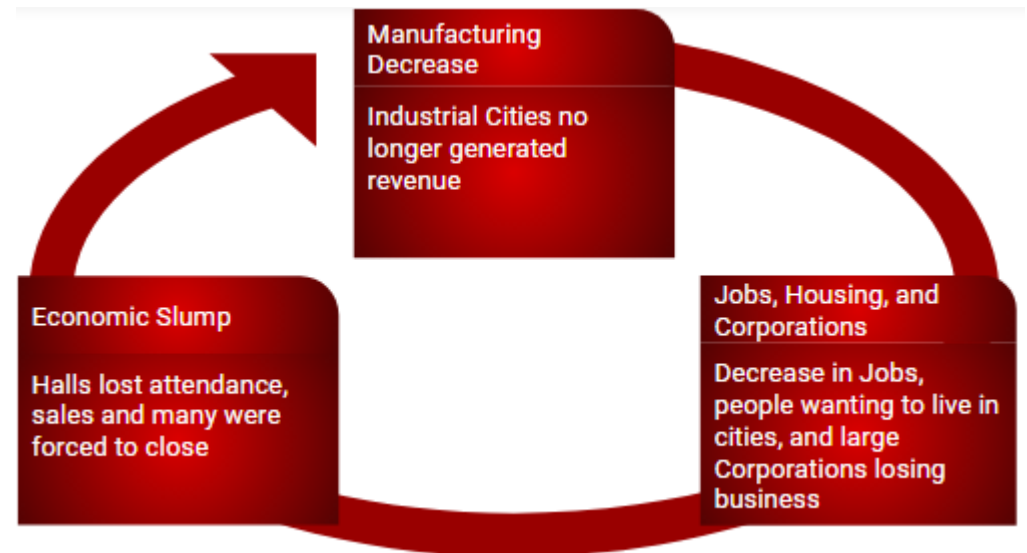


Figure 4 - The economic decline of industrial cities

formal, and as such were attended only by the upper class, so having more entertainment options for the lower class gave the Nickelodeon's an edge. These were succeeded in the 1910's by "Movie Houses", the term previously used to describe the modern day movie theater which were buildings specifically built for motion pictures. Also, around this time more extravagant movie theaters called "Movie Palaces" took the entertainment world by storm. These buildings featured large, performance hall style seating and became a staple in entertainment among the upper class, who formerly attended musical halls for plays and operas. As films became more popular among the lower and middle class, the upper class wished to join to movie going experience, but did not want to attend the cramped, socially, and physically dangerous Nickelodeons [13]. Because of this, movie palaces became one of the biggest competitors to Music Halls, as not only did they share a similar audience in the upper class as well as the lower and middle classes, but also because of lower prices of the events and repeatability without the need of live actors, which still stands to this very day.

Another competitor that split the audience even further was the rise of Major League Baseball, which brought people of different races and incomes together. At the turn of the century, Major League Baseball was created with a large following behind it already. Early stars like Cy Young and Ty Cobb enticed people to go see these games instead of going to a music venue. Baseball also managed to draw more people in as it was one of the first professional leagues that started to integrate black and white players. First the first time ever, people of all races could enjoy an activity like this together [14]. Many individuals that were not able to attend and preferred not to attend baseball games due to the previous discrimination adopted baseball as their favorite pastime. By 1962, Major League Baseball had completely absorbed the Negro League and was the foundation to the exponential growth that the Major League Baseball experienced. In today's society, baseball is viewed as America's pastime due to being able to attract individuals of all demographic backgrounds unlike forms of entertainment that is generally specific to a defined population. This became a crucial factor especially among the lower classes, because while the majority of the people who attended plays and musicals were of the upper class, which was predominately white, this attracted the minorities of the lower and middle classes, which not only increased sales do to more tickets being sold, but also had a

more cultural impact, and gained a huge standing in American culture. Despite primarily attracting individuals of the working and middle class, baseball was also very successful in catering to the upper class as well with higher end accommodations in a more casual atmosphere.

Viewed as a very marketable and profitable industry, Worcester and the PawSox, the triple-A baseball team for the Boston Red Sox, came to an agreement for the PawSox to play baseball in the city in 2021. The new stadium that the team will be playing their home games at will be one of the most state of the art baseball stadiums technology wise and will be designed to embrace the culture of Worcester and the surrounding neighborhoods [15]. Although Worcester was previously home to many successful arts venues, the city has began to shift its entertainment options, baseball being a primary source, to accommodate to the change of interests of society, technology improvements, expansion of racial diversity and the growing and successful industry of baseball.

The last major competitor to performance halls was the start of television, allowing people to be a part of something happening on the other side of the country or world in almost real time. The invention of TV tape allowed the shows to be recorded for later broadcast and for egregious errors to be removed. Tapes enable people to access these shows who normally would not be able to view them due to the high ticket prices, which made it a much more desirable alternative amongst lower classes. Commercial television networks in the 1950s were dominated by programs showing high culture. As less people went to music halls to listen to these performances, more stayed home and watched live casts of Shakespeare's plays and ballets by Tchaikovsky [16]. Those in the middle class and below no longer had to spend a good portion of their paycheck to enjoy culturally rich events. In 1962 live television took another step forward as satellites were built with the capabilities of broadcasting a show from one country to another one halfway across the world [17]. While not perfect by any means, Telstar, the creator of the

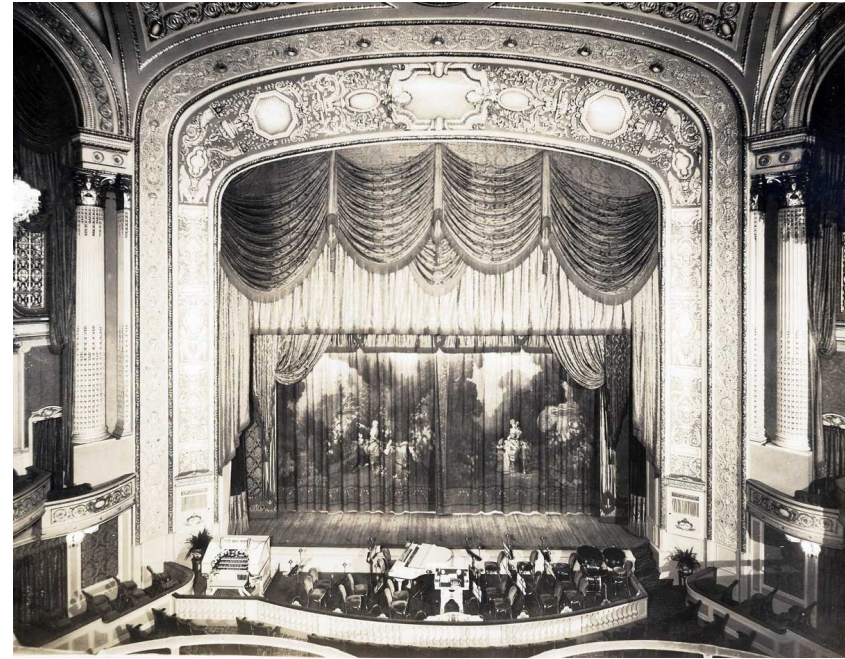


Figure 5 - Albee Theater, Cincinnati, OH built in 1927 [32]

satellite, managed to bring the entire population of Earth closer overnight. Whereas before culture had to be passed down from generation to generation by voice or text, from that point on, stories could be told to anyone, anywhere, and at any time. As time went on, more and more options became available, and live TV became the powerhouse industry in the 19th century. Live TV catered nearly all ages, races, and socioeconomic groups upon its emergence in society. From channels dedicated to specific forms of entertainment, such as sports, news, documentary, sitcom, and children's programming, to the fact that from then until the age of the internet it was one of the biggest providers of information on a national scale. Live events based on "classical" stylings became far less popular as individuals began to expand their interests due to the readily available options they could opt to view without restriction that attending classical hall or theater would pose. There was even a point when even the movie industry went under fire in 1950's [18]. It was at this point that most Music Halls were under the biggest threat, with many closing down due to lack of funds.

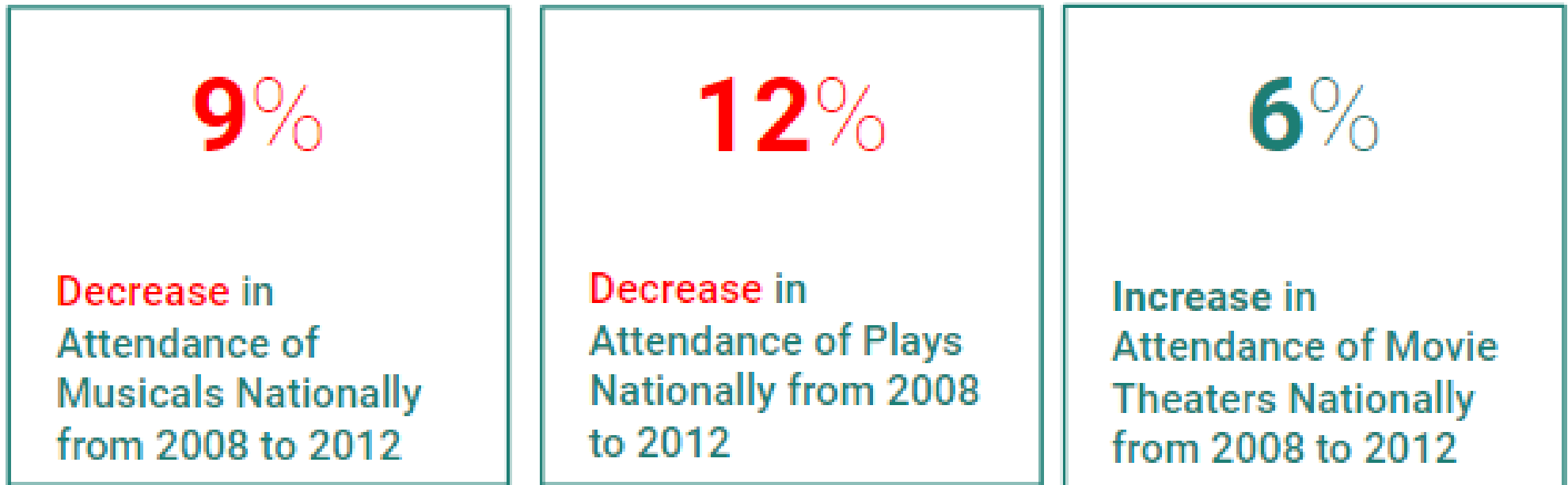


Figure 6 - Statistics detailing the change of interest in entertainment from 2008 to 2012, According to National Endowment for the Arts

## History of Worcester, MA and Mechanics Hall

Following a similar trend to many other cities in the United States, Worcester once was a thriving industrial city, growing through industrialization in the early 1800's. Worcester's textile mills were some of the most successful in the nation during this time, producing machinery for other manufacturing cities. In 1828, a new railroad system was developed from Providence to Worcester, and in 1835, the Boston and Worcester Railroad connected Worcester. With the arrival of this key transportation network, Worcester became a central transportation hub in New England. Many capitalists would move to Worcester due to the readily available and cheap means of exporting and importing goods. To support this burgeoning industry, Worcester once attracted many immigrants as an outlet for work to fulfill the idealized American Dream. Worcester became the home of many individuals and families of different ethnic backgrounds as many began to reside in the

newly constructed apartment homes. The education system within Worcester was also updated and enhanced to ensure that the factories within the city would be provided with a sufficient quantity of employees. Also at this time, the concept of a middle class begins to develop. The middle class that was developing at this time began to differentiate themselves from the working class where these individuals began to take on higher paying jobs such as skilled laborers, accountants, and manufacturing managers. Following The Great Depression, Worcester regained its status as being an industrial hub of the region as many due to the demand of needed goods from WWII. Similar to other industrial cities, following the war, Worcester's foundation of industrial production through the many mills and factories within the city was no longer the driving force of the city and began to diminish. This can be accounted for the updated machinery consolidating many operations where the numerous employees previously employed were no longer needed. As time progressed, many of the factories and mills attempted to adapt the social and industrial changes that Worcester and the nation faced by producing new goods and updating their means of industrial

production. However, these attempts were unsuccessful, with nearly all of the static factories being forced to close. Modern day Worcester has failed to recover its thriving status that it once had when it was a hub of production in the early to mid 1900's. Worcester today primarily caters to lower educated and skilled jobs such as food service but does also offer opportunity to those of higher education for higher paying jobs as the minority. A social divide exists currently exists in Worcester and the lower skilled jobs are not sufficient for families similarly to the factory jobs that many possessed in the 1900's [19].

Worcester in particular is an example of how the diminishing middle class that can be accounted for accumulating debt of loans and credit cards puts the economic divide that the United States is facing on display. Worcester has become the home of many high paying jobs such as doctors, medical professionals, educators, and engineers due to being the home of many hospitals, universities, and firms. Although the upper class has grown, the amount of individuals that make up the lower class of minimal paying jobs is significantly high as well. In many cases, it is difficult for families and individuals to be in the

middle class due in cities such as Worcester due to the significant social divide in which jobs, spending, and opportunities are geared towards extremes on both ends of the financial spectrum [10].

Many business and organizations have been struggling to remain open because of these economic shortcomings and one such establishment is Mechanics Hall. Originally founded in 1857 by the Worcester County Mechanics Association (Appendix B), the hall stood as a center for cultural and technical advancement of the city of Worcester in the 1800's. The space was the site for many modern technologies of the time, and was an opportunity for the Worcester County Mechanics Association to demonstrate their new technologies and craft. It was also a space for the Association to perform duties such as teaching trades and expanding their membership as the central place for those who wanted to transition from agricultural jobs into technical areas. This teaching element included classrooms on the bottom floor of the space, as well as a lending library for information on various technical trades. These teaching functions would last until the 1930s, where the Hall moved away from such teaching functions in favor of other technical and trade schools within the area. It was also a site of social events and many forward-thinking social ideologies. For example, the Temperance and Abolitionist movements within New England during this time period found Mechanics Hall a space for meetings, speeches, and other activities to progress their ideas. Over the years, many outstanding and famous performers such as Ella Fitzgerald and Yo Yo Ma desired to perform in the hall. Overall, Mechanics Hall supported these performers and the space itself drew in visitors in addition to the well-known performers. This site, originally founded to be the example of cutting-edge technology in the 1850s, fell to disrepair in the 1950s. Systems for performances, including audio equipment, lighting systems and visual effects are obsolete or lacking. Additionally, administrative systems such as security, ticket sales, and record keeping need additional support and modernization. Having to close temporarily and even be sold off permanently in order to recoup lost profits, it has seen the ill results of such economic decline. Mechanics Hall is currently operating and hosting a wide variety of events ranging from traditional concert performances to chef competitions. Although Mechanics Hall hosts a variety of events, the hall faces difficulties to accommodate staff, visitors, and clients due to the outdated technological and operational systems.

Due to being static in respect to changes and updates, the hall is failing to compete with its competitors within the entertainment industry. For Mechanics Hall to become the cornerstone of the Worcester community, the needs of the clients and attendees must be considered when completing these renovations.

## Methods

This project sought to evaluate the current technological and operational systems that exist in Mechanics Hall in order to assist the Worcester County Mechanics Association in developing preliminary plans regarding potential upgrades and renovations of these systems. To ensure clients and visitors experience satisfactory events at Mechanics Hall, this project had three major component objectives:

- Determine which aspects of the current signage, timekeeping, and donor management are outdated
- Determine which renovations are to be made, and a timeline for completion of these renovations
- Attract youth and young adults to Mechanics Hall events by developing a larger understanding of their entertainment interests in regards to performance halls

To address the problem of the outdated technological systems reputation of Mechanics Hall, data has been collected by the means of secondary and archival research as well as in the field. Whilst updating the technological systems of Mechanics Hall, our team also addressed the limited social outreach to a younger and more diverse demographic. For the completion of the project, Worcester County Mechanics Association has sponsored our team. The potential of improving not only the technical features but social outreach of Mechanics Hall will provide a more fulfilling experience to attendees, which Mechanics Hall may use to attract more long-time visitors and sponsors.

Over the years, many outstanding and famous performers such as Ella Fitzgerald and Yo Yo Ma desired to perform in the hall.



Figure 7 - Mechanics Hall: Circa 1865-1885 [33]

## **Objective I: Analyzing the Technological and Operational Systems of Signage, Timekeeping, and Donor Management**

To begin the initial research, it was necessary to assess the existing technological systems and equipment of signage, timekeeping, and donor management. The assessment involved determining which systems and equipment would be deemed as below societal standards. To begin the examination, we interviewed our sponsor, Kathleen Gagne. Throughout the meeting, an interview was conducted with predetermined questions regarding the technology and systems (Appendix A), while allowing the sponsor to share additional relevant information. Written notes were taken to record the information. While interviewing the sponsor, our team also toured Mechanics Hall to visually analyze the technology. Visually analyzing the space added an additional comprehension of components that perform well, and those that are lacking. Throughout the tour, our



team recorded the specifics regarding the existing systems and equipment such as the manufacturer, model, year of production, and type of equipment or system (Appendix D). Following the tour and recording the systems and equipment, the team documented this information in spreadsheet form in respect to its use, location, and specifications as previously mentioned.

## Objective II: Determining Renovations and Timeline of Completion

Following the initial documentation of the signage, timekeeping, and donor management, determining necessary renovations and prioritizing each renovation would take place. In addition, our team shadowed the employees who work with the signage, timekeeping, and donor management. The shadowing process would include sitting in on a day of work of an appointed employee by sponsor where our team would analyze and experience the difficulties that are faced on a day to day basis. A few aspects of the employees' work that would be considered and acknowledged would be efficient time usage, their means of organizing their work, and ease of completing

their work. Although it is not intended to be completed to the extent the tour with the sponsor as previously mentioned, notes may be also taken during the shadowing process to aid with determining renovations.

A cost/benefit analysis would be conducted following the multiple series of surveys and interviews that have been completed. This will be completed by documenting costs and benefits in a table formulated by the team to analyze the return of the changes made and potential growth regarding monetary, operational, and social value for Mechanics Hall. The costs that would be taken into consideration would be the monetary costs of purchasing and installing equipment and systems, upkeep and maintenance on these systems beyond their initial installation, licensing fees, training employees, and staff and positional adjustment. With that being said, the benefits would be increasing ticket sales, consolidation of the many operations and employee positions that currently exist, and the attraction of new visitors.

## Signage

To fully understand the most effective implementation of new and updated internal signage, our team plans to conduct a traffic count at an upcoming event. Our team selected the Havana Cuba All-Stars performance on January 31, 2019 at 7:30pm to conduct the traffic count. The traffic count began at 6:30pm and was concluded once the performance began. The traffic count would be conducted by documenting the amount of visitors that use the front and rear entrance of the hall by using counters. One individual was present at each of the entrances with counters. The other two members of our team were walking around to analyze and observe the visitors' interactions with the existing signage as well as common areas of congregation. These two members took photos of the signage that was deemed as inefficient by the visitors that evening and the areas of congregation as supplementation the numbers obtained from traffic count. Following the traffic count, it will then be clear which entrance of the hall should contain additional signage compared the entrance that is used as often. Factors that our team must consider upon completion are ADA accommodation and parking. These factors may cause a minor skew in the data and would be considered.



Figure 8 - An overview of the methods we used in the project

## Timekeeping

In order to get more important feedback about our proposed software, we plan on having a live demo with some of the employees at Mechanics Hall, using a trial period feature of several different software options. We will be going through the different tasks such as adding employees, managing time cards, and other features. Through this demo, we will demonstrate the potential of moving to a digital system, and also ask for vital feedback about the different programs in terms of ease of use, clarity of features, and integration with existing payroll software. Using this feedback, we will be able to better determine the best recommendation to give to Mechanics Hall, which we will present as a matrix of the different options that would be available to Mechanics Hall. This would include the specifics on the different features, the expected monthly cost, and employee feedback to help Mechanics Hall understand the best way to implement the new software. To ensure that our research and proposed ideas for the immediate updates will alleviate the concerns regarding aspects of Mechanics Hall, our team has sought feedback from the staff and employees. For each of the technical aspects that will be updated, our team has periodically gathered all of our findings and ideas and have brought them to our sponsor and the employees to ensure we moving in the right direction regarding feasibility and user experience. This process consisted of multiple iterations due to each technical aspect consisting of many complex components. Due to the timekeeping system being used by all employees to clock in and out when working, obtaining further feedback was required. Beyond checking in and presenting our findings to our sponsor and employees that affiliated with the field of our updates, we completed user testing of each timekeeping software candidate found. Prior to testing employees, each member of our time used the software to test the ease of use. If deemed as user-friendly, we then moved forward with the software to allow the employees to attempt to clock in and out. Throughout this process, our team documented any comments regarding usage, software interface, concerns, and positives. All in all, the feedback as a whole provided direction for each proposed update and confirmed our findings to be correct.

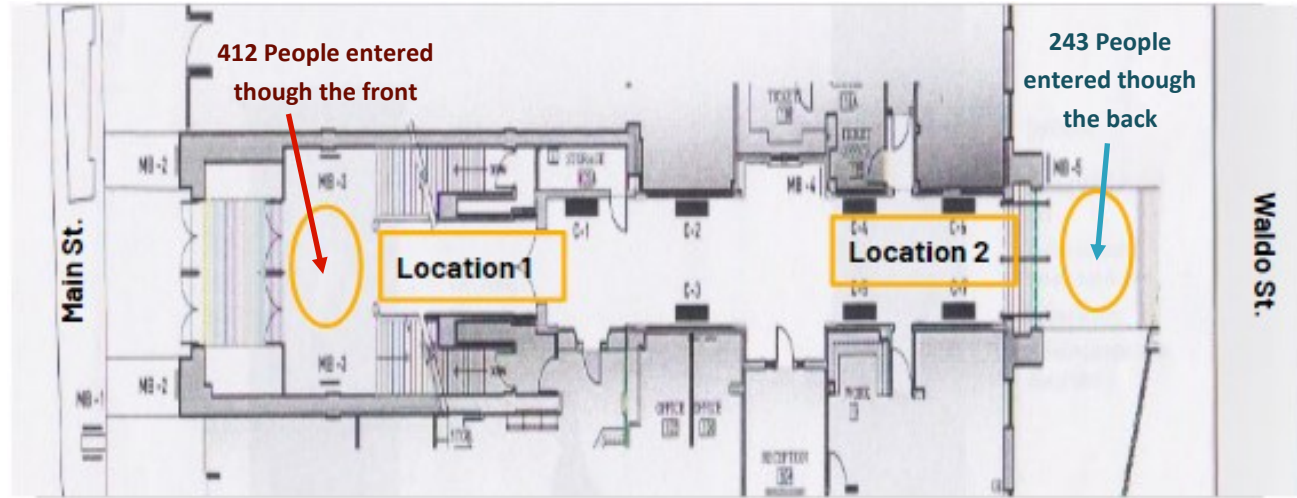


Figure 9: An overview of the positions we took during the Havana Cuba All-Stars

## Donor Management

In order to fully understand what was needed in a new donor management system, we shadowed Mechanics Hall staff to determine what was desired in a new management software and what was wrong with older programs used. To analyze several different programs, our team performed a cost benefit analysis in Excel. There were specific criteria that were deemed as important by Mechanics Hall to be included in an updated package. The first criterion for a donor management system is that it employs a cloud-based system, as it would give the staff greater flexibility in accessing it remotely or on-the-go should the situation arise. The cloud-based network should also be able to be accessed by more than one user at a time to increase its functionality as well. A second criterion was the ability to perform email blasting, a form of email marketing that involves sending commercial messages to potential and current customers, so that Mechanics Hall staff are able to send mass emails to donors quickly and efficiently. The email blasting should consider membership for ticket prices and sales when sending emails. Members receive different prices and offers than non members so it is necessary for the emails that are sent to differ automatically. Also, it should have a system to



Figure 10: One of the current sign booths in Mechanics Hall



Figure 11: The current outdated clock in use at Mechanics Hall

track and remind patrons about donations to inform them of upcoming donation dates and if they have not donated over an extensive period of time. Finally, the new software must be able to properly and accurately file reports for the staff. The current system at Mechanics Hall generates inaccuracies when tracking the finances of the hall. Based on these criteria, we performed research on each software's abilities, limitations, and cost to determine which software was the optimal for Mechanics Hall. Besides comparing the software programs to each other, we also compared them to the current system in place to evaluate whether each of the options was better than what is currently in place at Mechanics Hall. Once we had a finalized list of software choices, we would propose and demonstrate them to Mechanics Hall staff to see which ones they feel best fit their needs as well as which ones provide the best ease of use.

## Timeline of Renovations

A timeline of the renovations and changes will be formulated in respect to the sponsor's request. Due to the limited budget as previously mentioned, a plan in which renovations and updates are distributed will be formulated where each renovation is financially feasible in respect to time. The timeline would include nearly all the methods of investigation such as the employees' input and interviews. With the cost/benefit analysis conducted earlier, it would be possible to further expand the analysis to include the timing of each renovation would impact factors such as drawing in visitors and performers of specific demographics. The plans would include a 3, 5, and 10 year plan of renovations that can be made to other aspects of the hall that our team is directing our project scope on. From a technological perspective, various areas can be improved to meet the needs of a larger client base that can be included in the timelines of future plans. Improved lighting systems, audio equipment, and recording equipment will allow for not only an enhanced experience for concertgoers, but for the performers and producers as well. Operational and administrative systems such as ticketing systems, and Wi-Fi networks provide for a more cohesive attendee experience that goes beyond the concert performances.

Upon completion of project, our team's plans are to propose specific updates regarding the signage, timekeeping, and donor management that can be made within the near future. Although our team does plan to propose ideas for future plans for the signage, donor management system, and timekeeping in a 3, 5, and 10 year plan, upon request, it is necessary for imminent change.

## Objective III: Attracting Youth and Young Adults to Mechanics Hall

As traditional performance halls have lost their relevance and reputation developed throughout history, connecting and attracting youth and young adults to Mechanics Hall is important to ensure Mechanics Hall does not lose revenue, ticket sales, performers, and events booked. Similar to the signage, timekeeping, and donor management, our team conducted semi-structured

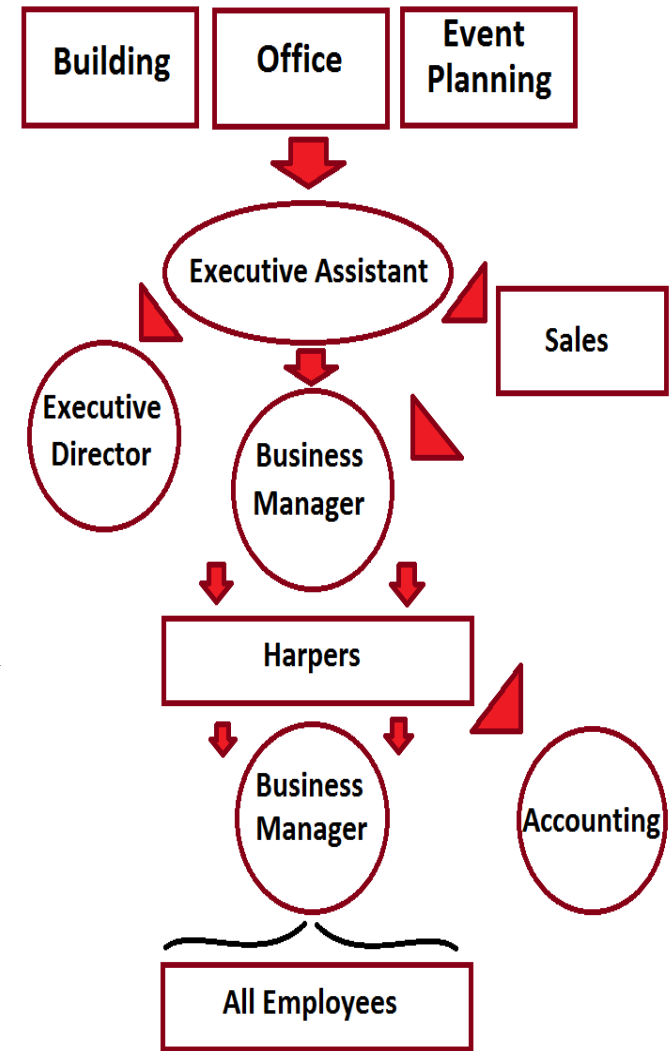


Figure 12 - The current order of how payroll is handled at Mechanics Hall. It is a constant back and forth between paperwork and computer, which adds more time and work for the Business Manager

interviews and conversations with staff and our sponsor. With that being said, our team has also sought advice from additional individuals that have experience working with youth and in the music field. The information obtained from these individuals included methods to work with the youth for them to be engaged and feel empowered, incorporating new technology for the youth, and some pros and cons of experiences throughout their careers. Our team was also able to interview students of the music department at Bartlett High School. The interviews with the students were also semi-structured interviews, but with a focus regarding their interaction with music and entertainment outside of the classroom. Each interview can be referred to in Appendix H. To supplement the series of multiple interviews, our team has also researched multiple other successful organizations with a similar mission to Mechanics Hall involving youth programming. The organizations that our team has gauged our focuses towards were LA Phil, Music and Youth and, Boy's and Girl's Club. The final inquiry conducted was a set of surveys asking the general public what types of events they would like to see be incorporated into Mechanics Hall. The results from the surveys have been organized in an excel spreadsheet that prioritizes the community's desires of Mechanics Hall.

The research and interviews conducted became the foundation to achieving the overarching goal of attracting a new audience to Mechanics Hall. To attract a new audience, our team has proposed a plan for the program directors of Mechanics Hall to target youth. The plan includes a social media outreach plan to compliment their existing social media pages, events that would attract a new audience, how to engage the youth with the events, and obtaining exposure. Attracting a new audience to Mechanics Hall would not only involve this new group of attendees in existing programming, but create new events to specifically target this population. The plan also includes methods and a plan to reconfigure future monthly schedules of events at the hall. The scheduling reconfiguration would cater to both the existing and new visitors; which would increase sales, overall attendance, and revenue. Our plan also includes how to develop partnerships with the local organizations to incorporate events such as a chorus to engage the organizations and members. This chorus, a personal interest of the sponsor, would perform at a scheduled time and day at the hall and would be hosted similarly to the events that are currently hosted whilst fitting into the proposed plan for the scheduling reconfiguration.

## Results

### Signage

The existing signage is primarily paper that is displayed behind glass casings throughout the interior on easels and on the exterior of Mechanics Hall. The overall objective of the signage is to provide information regarding ongoing and upcoming events, navigation throughout Mechanics Hall, community involvement, and advertisements. The signage that is responsible for information about upcoming events and showcase event are the two cases on the exterior at the front entrance, the ticket booth, and the brochure and information case that is adjacent to the ticket booth. The information regarding the events that is generally presented is the date, time, location in the hall, and group or performer. With that being said, the two signs at the bottom of each staircase in the Main Street Entrance, the easel at the entrance of Washburn Hall on the second floor, and the easel adjacent to the stairs that lead to the ticket booth must provide adequate wayfinding information.

Upon completion, the results of the traffic count are as follows: 412 people at the Main Street Entrance and 243 people at the Waldo Street Entrance. Our results from the traffic count have indicated that the Main Street Entrance is used nearly twice as much as the Waldo Street Entrance. These results have guided our team to prioritize our focus to the front entrance regarding signage.

We determined that the existing signage is very confusing for visitors. Many of the visitors were unsure of the location for the bathrooms, ticketing, Great Hall, and coat room. Our team was asked on numerous occasions the locations of the places previously mentioned. Despite signage being present, our team concluded that the signage did not attract the attention of the visitors or confused the visitors by the information that they display. An additional observation made was that many visitors opted to gather near and in front of Washburn Hall as well as near the stairs on the second and first floor prior to the event. As expected, ADA individuals entered through the Waldo Street Entrance due to the location of the elevators. However, individuals that entered at the Main Street Entrance were confused as to where the elevators were or if there were elevators present for public use.



Figure 13 - One of the paper calendars used by Mechanics Hall.

Based on the staff and the traffic count study, our team has proposed the following plan to our sponsor to address the immediate required signage needs such as displaying wayfinding information, general event information, and to disperse congregated areas. The proposed package offers a range of options that would cost Mechanics Hall between \$15,000-\$17,000, depending on their choice of renovations. This proposed price includes installation and labor, shipping, and equipment. The updated signage on the exterior includes two commercial grade outdoor monitors that would replace the existing signage that is located on the facade of the building at the Main Street Entrance. These monitors would be similar or the same dimensions as the existing signs, as the existing framing will remain, and will be able to withstand the multiple weather conditions such as freezing temperatures and the extreme heat. The immediate interior updates include consumer grade monitors to replace the posters within the existing casing as well as easels that are present. Two monitors would be located in the Main Street Entrance Lobby at the bottom of each staircase, one at the Waldo Street Entrance Lobby, and one at the Ticket booth

(Appendix G). To display the required information, the monitors will have a Google Chromecast device connected via HDMI. The device will display slideshows of information that would include images, schedules, videos, maps, advertisements and programming, and general information. To control the ongoing slideshows that will be played, a Mechanics Hall employee will be able to do so through a computer or mobile device on the same network as the Chromecast Device.

In addition to these prioritized, near-term changes, our team has also developed 3-, 5-, and 10-year plans based on factors such as cost, user benefit, and current inefficiencies. The primary goal for each of the following plans is to incorporate additional digital signage that will be more interactive for the staff and visitors. Second, our team also prioritized ease of visibility with the additional digital signage as previously mentioned and updating the accent lighting throughout the interior and on the exterior that is projected onto existing signage.

**3-Year Plan:**

Beyond the event wayfinding issues that will be addressed in the near-term plans with the new monitors that will be installed, the supplementary and exit signage for additional wayfinding is severely insufficient. Primarily through the vast quantity of attendees asking our team and other members of the staff throughout the traffic count and on a day to day basis when working in Mechanics Hall, and with the suggestions from staff and our sponsor, updating this signage possesses far greater value to all parties than the following plans. The initial immediate plans will be very costly where the next round of needs to be addressed were under great cost consideration in addition the problems they will address.

**5-Year Plan:**

Within 5 years of the initial updates, our team proposed further investments in digital signage in additional locations of need. Ideally, Mechanics Hall will be able afford further expansion of digital signage after 5 years of the initial updates that could not be completed initially or after 3 years. Although the immediate updates with the single digital sign at each entrance would significantly improve the means of displaying information, safety concern the easels posed, and navigation, the traffic

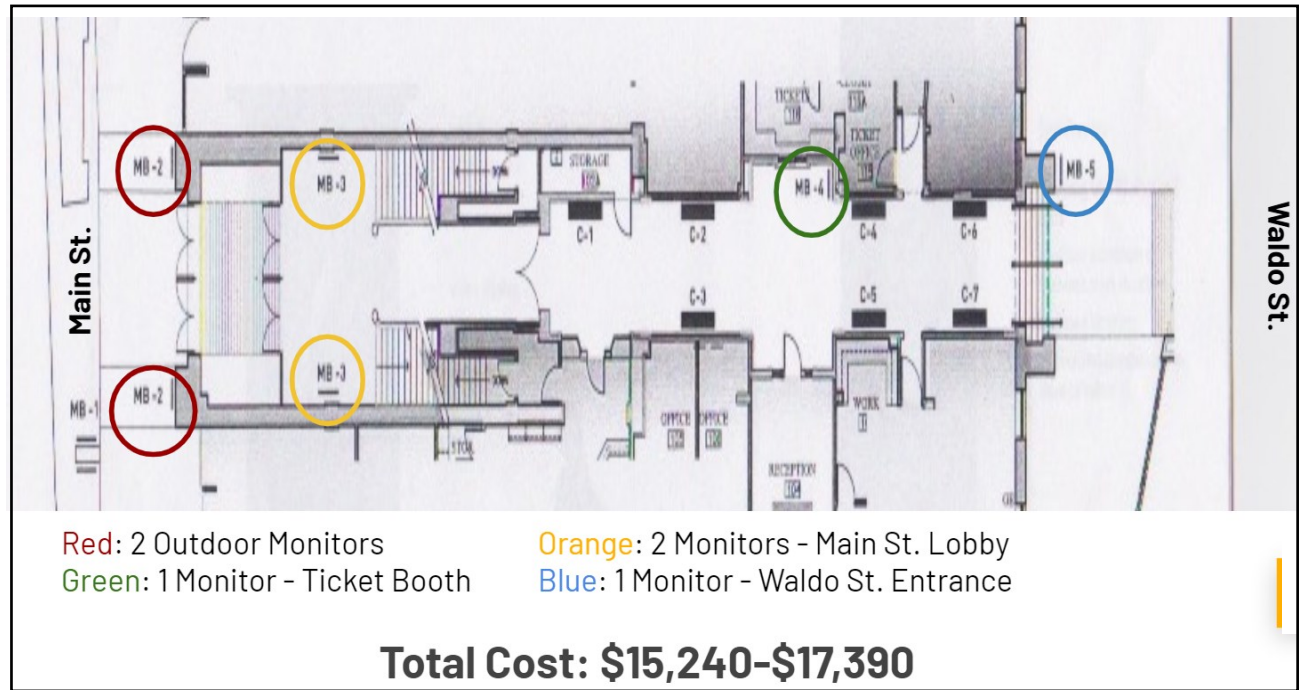


Figure 14 - An overview of our planned signage locations and costs

at each location could potentially cause conflict for individuals to travel through. Despite simulation not being conducted, the attendance and shear volume of individuals that will be present at Mechanics Hall in the near future is predicted to significantly increase by our team and sponsor. This is also viewed as an issue that currently exists on the second floor in front of Washburn Hall due to the lack of signage for general information and wayfinding. A kiosk to replace the easels that are currently used would resolve the conflict of the poor existing signage in that location. Similar to the additional monitors, the kiosk would also be very expensive, where it would not be possible to complete immediately due to the limited budget.

**10-Year Plan:**

As prominent sources of information regarding Mechanics Hall, Worcester, upcoming events, and much more, the display cases that are present in the first floor hallway are adequate for being posters. With that being said, with input from the facilities manager of Mechanics

Hall, research regarding signage and message boards, and additional third party input, our team has concluded that within 10 years, the poster displays will become outdated. Additionally, for Mechanics Hall to not be left behind with the Main Street Reimagined updates that will be occurring, exterior components beyond the two monitors located on the facade of the Main Street Entrance must be incorporated. The city of Worcester has proposed for Mechanics Hall to install an outdoor kiosk at the Main Street Entrance. Also, for Mechanics Hall to also stand out and not be lost with the updates that will be made during the Main Street Reimagined project, the lighting that is projected onto the sign that reads 'Mechanics Hall' would have to be updated, according to the facilities manager. Each of these updates would pose a financial conflict to the preceding proposed updates where they must be completed further in the future than the rest, as they are not of equal importance.

### **3 Year Plan:**

- Update all exit and bathroom signs
- Update Sign for the Boardroom
- Update Signage to direct ADA to the elevator and the halls
- Update lighting for the To Waldo Street Sign in the main hallway that faces the front door

### **5 Year Plan:**

- Two Electronic Signs in Main Street Entrance Lobby
- Kiosk in front of Washburn Hall
- Two Electronic Displays at Waldo Street Entrance

### **10 Year Plan:**

- Update all display cases in first floor hallway to be monitors
- Install Kiosk on Main Street
- Update Outdoor Lighting of Main Street Entrance

*Figure 15 - 3, 5, and 10 year plans at a distance*

## **Timekeeping**

The current timekeeping system that Mechanics Hall employs relies heavily on paper and analog systems. In determining the existing timekeeping systems at the hall, we were able to identify three different groups of employees, based on the methods that they use in order to track their hours worked. Tricia Shea, the Facilities Director, she gave us a better understanding of how Mechanics Hall schedules its building staff. Each week, the full-time and part-time staff are scheduled on a paper calendar for each day and each shift that is needed. It is then the responsibility of each employee to confirm that they are able to work on the scheduled dates by signing their appropriate positions on the calendar. The employees then use a manual punch-clock with time cards in order to track their hours. Full-time office staff in the Administrative Office have positions such as sales, marketing, and event coordination. These staff members have an inconsistent method of tracking their hours worked, as some employees use paper timesheets while others use digital spreadsheets for tracking their hours. Event Staff, which include bartenders, servers, and other support staff for events, have a very confusing method of recording their hours. Event staff are tasked with writing down their hours for each event on paper sheets, which are then signed off by their supervisors. Once all three different groups of timekeeping sheets have been collected, they are then sent over to the Finance Director for processing. Kelsey Miller, the Finance Director is responsible for calculating the different pay periods, such as overnight, overtime, and weekend hours, which would contribute to an employee receiving additional pay as compared to their usual wages. This is inputted into various spreadsheets which take each employee, their hours, and additional payment considerations, and then calculate the total amount due to each employee for the pay week. These calculations are then sent off to the executive director for confirmation, then back to the Finance Director for being inputted into the overall payroll system of Mechanics Hall, done through Harper's Payroll system.

Our overall analysis of the existing payroll system is that it heavily relies upon manual tasks and paper systems, to the detriment of efficiency at Mechanics Hall. Each of the three groups of employees use predominantly paper methods to be able to record the amount of time worked, and there is several different steps of transferring

this data between paper records and digital records in order to properly submit information to pay employees. According to Tricia and Kelsey, two of the staff members heavily involved in this process, say that it takes approximately 10 hours or more per week in order to complete, alongside potential inaccuracies that was reported for their paper system. In order to help Mechanics Hall not only save time in managing their employee payments each week, but ensure these are more accurate, we proposed a digital timekeeping system.

We have identified several potential companies which provide software that are able to meet these needs in terms of servicing the employee tracking. Through online reviews [23, 24] and research of different companies, we were able to compile some of the top used and recommended services that we would feel that would meet our needs. We identified that an ideal system would allow for employees to clock in or out of their workdays digitally, allow for custom pay periods such as weekends and overnights, and export this information into other payroll software. Additionally, we narrowed our potential systems based on the size of the potential use case, which is expected to be under 100 employees, the ability for customer support and training for new users of the software, and the requirements needed in order to install the software on existing computers and equipment at Mechanics Hall

The strongest candidates that we feel have met these needs are TSheets, which is a software suite made by Quickbooks, and Timesheets.com. Both of these software packages allow for employees to clock in and out each day, allows for custom pay periods based on the time at which they are logged as working, and have export features to send the total amount to be paid out each week into existing payroll software. To ensure that the best software is recommended to Mechanics Hall, we conducted a test of those two packages with the employees of the hall. They were given both the manager and standard employee versions of the software to test for the needs stated above. When doing this test, we had a walkthrough of systems completing several tasks in each system to demonstrate the capabilities of the software. As an administrator, we demonstrated the process of how to add an employee to the system, how to add, edit, and approve their timecard of hours worked, how to schedule additional payment periods, how to manage paid time off or vacation time and how to schedule each employee's shift for the day. As an employee, we demonstrated the process of creating an

account, clocking in and out of a work day, managing a timecard of hours worked, and requesting vacation hours. We were also about to demonstrate the systems that made each program different from each other, specifically a clock in and out feature of TSheets called “Kiosk”, where employees have to simply press a button under their name on a computer to clock in, and the detailed approval and project management features of Timesheets.com.

After having this demonstration process, we were able to determine that our best recommendation was the TSheets software. Based on the feedback from our demo process, the TSheets system had several features that made it the more attractive software suite. The ease of use, mostly due to TSheets having more simplified layouts of its features, more graphical representations of employe hours, and the ability to incorporate custom payment rates for different periods beyond a basic time-and-a-half overtime, was a key feature. Additionally, on the employee use side, the Kiosk feature which allowed for a simplified clock in and out system was noted as being very important for the employees that currently work at Mechanics Hall, particularly the building crew who work at the events held in the Hall. The final key feature was the shift scheduling feature, where employees that were salaried and therefore did not need to clock in each day, could still record their hours worked each day, as well as schedule their work week. This system would cost Mechanics Hall approximately \$270 per month, based on a payment model

of \$20 per month plus an additional \$5 per employee, and Mechanics Hall having approximately 50 employees. Based on the feedback that we had received, we feel that the best recommendation for Mechanics Hall would be this TSheets system.

## Donor Management

To manage Mechanics Hall’s 1,200 donors, the staff use two programs. Following the shadowing process of Joan Stewart, the Director of Creative Programming and Community Engagement at Mechanics Hall, our team has developed a general awareness regarding the areas of concern of each program that is currently being used and the needs of a future program that would best suit Mechanics Hall. For Mechanics Hall to efficiently manage each donor, the donor management system requires the ability to record general information about each donor. These include age; donation history; whether they are a board member; amount of money donated; and whether they are a new donor or repeat donor.

Mechanics Hall currently uses two programs to track donor information: Network for Good and Abila. Although they both directly work with donations, each possesses specific and different capabilities and uses by the

staff and donors. Network for Good, which is directly linked to the Mechanics Hall website, is exclusively used as an outlet for individuals to make donations to the multiple funds that are connected to Mechanics Hall. Unlike a donation outlet such as GoFundMe where individuals donate once for a cause, Network for Good, allows donors to opt for recurring donations. Network for Good charges Mechanics Hall 3% of each donation, although donors may opt to pay for this fee in addition to their donation. The staff track and export the amount of donations and amount of money generated on a specific time interval from the donors to Abila where further analysis is completed. Per recommendations by the staff and our sponsor, Network for Good should continue functioning as a repository to receive general donations via the Mechanics Hall website, whereas Abila should be updated to another primary donor management program.

Abila is the program that is used to track and document information regarding all streams of revenue through donations and donor profiles. Mechanics Hall pays \$99 each month per user for its current Abila license. Mechanics Hall pays for only one user, which creates complications when multiple employees try to use the program at the same time. Abila is not a cloud-based software, for which information can be accessed from multiple computers, and instead it relies on information being merged and stored on each computer if choosing to work on it elsewhere. All of the primary data is stored and

<u>T Sheets vs TimeSheets</u>	
T-Sheets	Timesheets.com
◇ Kiosk Feature	◇ Individual Print Timecards
◇ Shift Scheduler	◇ More detailed time tracking
◇ Simple Interface	◇ Employee Profiles
◇ Custom Pay Periods	◇ Project Management

Figure 16 - T Sheets features vs TimeSheets features

tied down on one computer; therefore the data must be merged back to the original computer in order for the database to be accessed elsewhere. This setup severely constrains the functionality of the program when working on multiple computers. Despite Abila possessing the capabilities to develop extensive and precise reports for budget, financial statements, amount receivable (AR), and amount payable (AP), the ease of the reporting is minimal. It is very difficult to gather the reports due to the required knowledge of knowing each value's respective field and the overall required precision of the input data. Many reports are completed on different time intervals such as quarterly and annually where the input data will vary. In some cases, donations received are not subject to fees that would be reported as expenses; which would cause discrepancy and inaccuracy when documenting the donation to be computed. For example, if an individual is relatively familiar with the information and the program but does not work with it frequently to know about some special exceptions as previously mentioned, it is likely that the output data they receive will be incorrect due to the precision and expertise required for Abila.

Whilst considering ease of use, price, cloud capabilities, specifics when email blasting, multiple users at one time, and complete picture of output reports, the two best candidates from our research are Bloomerang and Kindful. As they both function by storing the data and information provided by the Mechanics Hall staff using a cloud-based system, both programs are not confined to one computer and do not require the extensive process of merging to work from a different computer. Both programs are priced by the amount of donors that the non-profit conducts business with as opposed to a per user fee. Mechanics Hall has approximately 1,200 as previously mentioned. A non-profit organization with 1,200 donors is considered to be small. Therefore, Mechanics Hall would receive the benefit of paying the smaller fee that corresponds with its size (1,001 to 5,000 donors). This is very marketable when compared to Abila due to Mechanics Hall paying the same amount as other non-profits that have more donors. Based on the current number of donors to Mechanics Hall, the two programs are comparable in price at \$199 per month. However, Kindful requires a \$499 startup fee, whereas Bloomerang does not charge a startup fee. Because one license would enable unlimited users, the users would not be kicked off of the program and lose progress if another employee signs in at the same time. Therefore,

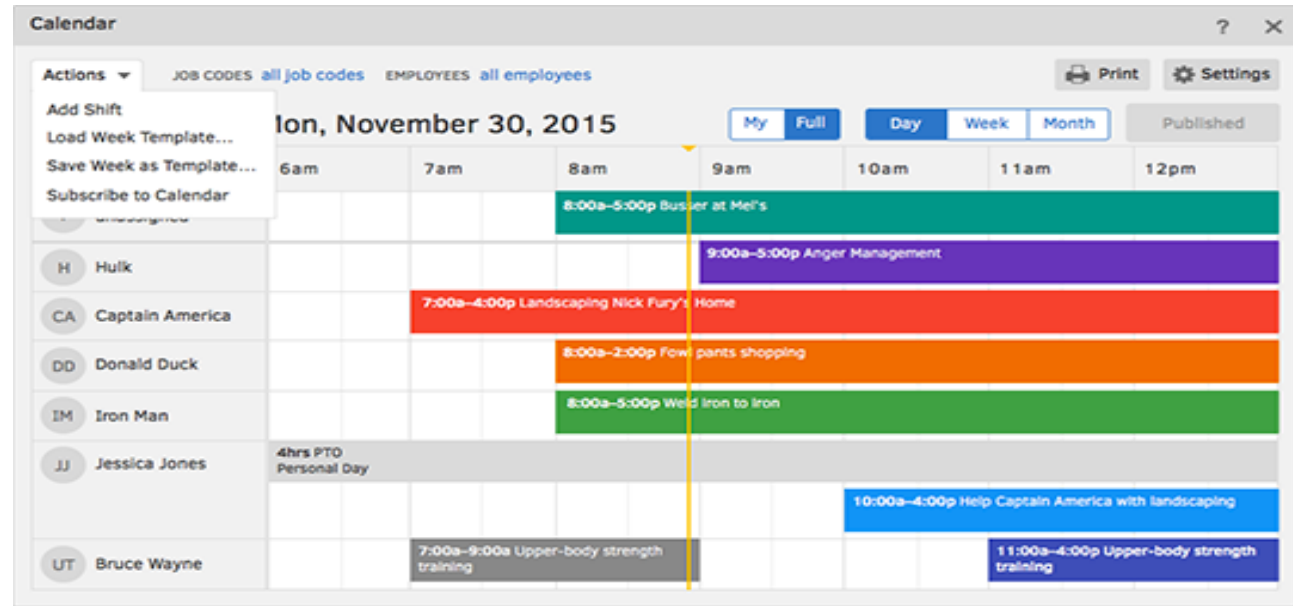


Figure 14: An example of T-Sheets in action

although both are more expensive than Abila, the sole ability for multiple users at once, not including the usability and additional features each provide, compensate the difference as a fair trade off.

Although both have the same reporting abilities with custom reports and pre-set templates that are competitive with Abila, our team reviewed features that are specific to each software. Upon completion of research, our team concluded that Bloomerang possesses the same capabilities and features as Kindful with additional features that would be very useful to the Mechanics Hall employees. One of the most important of these features is Bloomerang's "Smart Reports" feature. This feature creates meaningful and comprehensive reports by processing input information such as data and statistics for output reports. Bloomerang has a Constituent Timeline feature, which visually represents any type of interactions of data files that is organized by time of completion. Second, the data transfer features include simple importing and exporting of data sets and results, which enables the easy import of data from Network for Good regarding donors and donations.

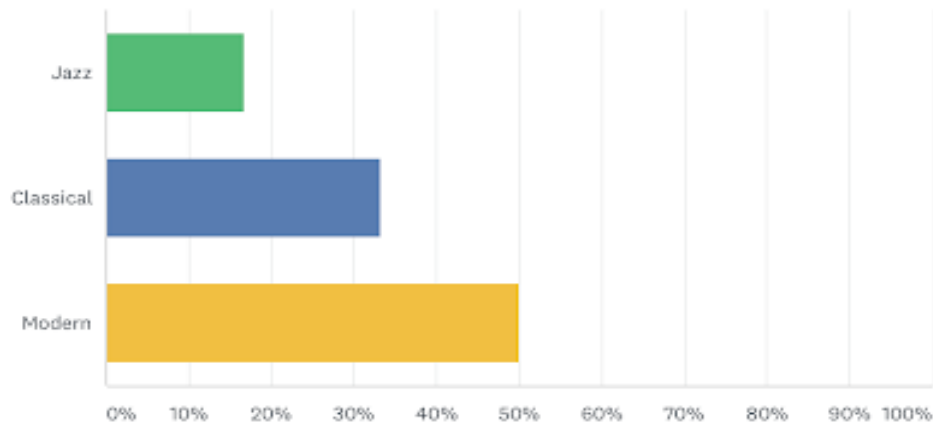
In sum, our team concluded that Bloomerang is the

superior candidate for a number of reasons: it does not possess an additional start up fee, the "Smart Reports" feature for easily accessible representation of data, and it allows the automatic and easy transfer of data. The third feature was ultimately the selling point for our team, as it would reduce the time spent of manually transferring data from Network for Good. Whilst reducing the time spent doing this, it abolishes all possibilities of error that could result from manually entering data. Additionally the interface of Bloomerang was the easiest to navigate in comparison to Abila, Kindful, and our other candidates such as Patron Manager and OvationTix. Finally, Bloomerang provides a free training program called Bloomerang Academy for the staff to become acquainted with its unique features. All in all, the additional features that Bloomerang provides, combined with the features that address the inefficiencies of Abila, may provide Mechanics Hall with a new foundation to make donor management easy and efficient.

Additionally, we recommend that Mechanics Hall incorporating a live practice by professional performers that could be sat in on by high school bands and other youth music groups. The sensation and feeling that is experienced by playing and or being present at a venue like Mechanics



## What genres of music do you prefer to play in class?



## What genre of music do you primarily listen to outside of the classroom?

Answered: 6 Skipped: 0

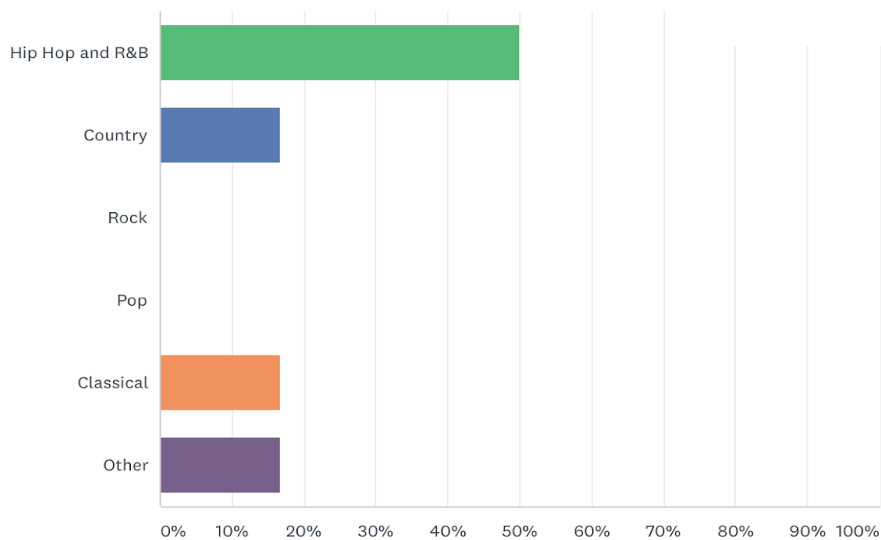


Figure 15: Survey Results from Bartlett High School

Hall is very empowering for youth and young adults that could be compared to playing with a large crowd during an important sporting event. To add incentive for the groups and individuals within the group to go, it would be hosted with two variations of attending. The first being that any group could sign up to go and pay the fee if applicable to attend. The second being that a specified amount of groups would be exclusively invited to watch and would be able to speak with the group afterwards in an information session. The second option would be operated through a contest in which the winner would be chosen off of parameters designated by Mechanics Hall such as random selection, video submission, or application.

Each of the new proposed events that could be hosted at Mechanics Hall would have the most success if they were low cost. Ensuring they are low cost is very important due to the economic standing of Worcester in comparison to Massachusetts where many households cannot afford to give their children money to attend events. It is also important to consider the funding and budgets of the many organizations and groups that would be interested in going. For example, according to Peter Twiraga, band director at Bartlett High School, “Our band program relies on fundraising that is conducted through the Webster Music Boosters as we are not funded like the sports programs”.

## Objective III: Connecting a New Demographic

As it primarily caters to an older and less diverse demographic, Mechanics Hall falls short of attracting youth and young adults. For Mechanics Hall to regain its status as being one of the world’s finest meeting and concert venues, our team prioritized adjusting how they engage the local general community and youth and the events that are hosted. There has been an initial effort to engage a more diverse demographic of varying ages, races, and social backgrounds through events such as the Brown Bag Lunch Concerts, Yoga in the Great Hall, and the annual Central District Senior High School Musical Festival. Although these efforts were implemented recently, they are beginning to solidify the foundation of introducing the many opportunities that Mechanics Hall can provide that will cater to a more diverse audience.

Mechanics Hall is a highly reputable venue for its acoustics and aesthetics within the performing community and frequent attendees. However, upon completion of the multiple interviews and surveys, our team concluded that the general public of Massachusetts is not familiar with the venue. According to Raquel Castro-Corazzini of the Division of Youth Opportunities for the city of Worcester, her impression of Mechanics Hall was that it is an exclusive place that caters to primarily affluent individuals. Raquel has worked with many other venues like Mechanics Hall in Worcester such as Hanover Theatre. Unlike Mechanics Hall, these venues have been open to inviting the youth within her organization for various events and performances. According to David Bickel, Executive Director of Music and Youth in Belmont, MA, "Prior to the contact from your team, I was unaware of Mechanics Hall being such a renowned venue". David attended the Berklee School of Music and has worked in the Boston area with music organizations for about 20 years. With his extensive musical background and geographical proximity to Mechanics Hall, an individual such as David should be aware of Mechanics Hall. This was also apparent throughout the surveys we conducted. The majority of the band students of Bartlett High School in Webster, MA were similarly unfamiliar with Mechanics Hall as well as the numerous musical performances that are hosted at the venue. Despite its previous role, Mechanics Hall is no longer the cornerstone of the Worcester community it once was.

The disjuncture in music genres and entertainment outlets account for why youth and young adults don't attend traditional venues such as Mechanics Hall. After interviewing and surveying 10 students of Bartlett High School, a major component of our findings concluded that classical music is unpopular with them. Less than 20% of the 10 Bartlett High School students preferred to listen to classical music outside of class and only 33% preferred to play classical music in class. Instead, 50% preferred to play modern music in class, and the majority preferred to listen to Hip Hop and R&B, Country, and other genres of music. Further, 8 of the 10 of students identified television, movies, and sports as their preferred entertainment source outside of the classroom. These findings display that younger individuals are not opting towards attending events that would be held at a venue such as Mechanics Hall. Finally, these students overwhelmingly choose to listen to music on demand in their everyday life, rather than travel to a venue to listen to it. Among those surveyed, all of the students' preferred method of listening to and obtaining music was through streaming

services such as Spotify and Apple Music as opposed to live music, CD's, and records. Although the sample size was small, the overarching message was that youth and young adults have adapted technology innovations into their everyday lives, particularly regarding music.

To accommodate the interests and preferences of youth and young adults, our team has developed a plan in which Mechanics Hall can implement to begin to attract this demographic. Our plan consists of three components for Mechanics Hall: introducing new events and performances that cater to the youth, reconfiguring the existing scheduling of events, and developing partnerships with local organizations.

### New Events and Performances

The first area of our plan, which would act as the catalyst to the following components, is to introduce new events and performances. To address the interests that youth and young adults, our team recommends that Mechanics Hall develops new events that incorporate technology and performances of genres other than classical music. Given our literature review and the interests expressed by our research participants, we specifically suggest that Mechanics Hall introduce a movie night. The movie shown would be rated appropriately for viewers all of ages where viewer discretion would not be an area of concern. Due to school,

after school activities, parents' work schedules, and the duration of most movies, an ideal time and day for a movie night to occur would be at night on the weekend. Another technology-focused event that could potentially hold youth interest is "esports", or competitive video gaming. The video game industry is a massive technology-focused market, especially popular amounts youth and young adult audiences. Competitive video game events are opportunities for video game enthusiasts to play in tournaments of their respective games against other players. These events have gained more popularity in recent years, and have even expanded to be hosted in major convention centers, school auditoriums, and other event spaces. For example, the TD Garden in Boston, usually host to professional basketball and hockey games, hosted a tournament for the game League of Legends on September 2nd and 3rd, 2017. Gaming events like this at a smaller scale could be an opportunity to bring an entirely new demographic of young people to the space of Mechanics Hall.

We suggest that pop-up events would have the ability to attract an audience of all demographics to Mechanics Hall. Pop-ups events are where a location is selected to host temporary random events that can vary from dining events to art galleries. In particular, the type of pop-up event that would be ideal for Mechanics Hall is a pop-up store. Considering the goals and general use of Mechanics Hall, the pop-up store would consist of vendors that sell and promote music and entertainment items. The items could vary from movies, records, instruments to general fan merchandise of specific groups or performers. For this event to be of interest of youth and young adults, the overall theme of the stores must consider pop culture, genres of music that are preferred by young adults, and modern means of listening and viewing. Vendors that sell merchandise and records of Hip Hop and R&B artists and groups would likely be very successful. Our findings have shown that this genre of music was most preferable by youth. Incorporating this genre of music to Mechanics Hall in this fashion would not conflict with Mechanics Hall and would fulfill the consumers' interests. Young adults and youth also prefer other genres such as country where vendors would also cater to these individuals. For this event to be successful, it would be best hosted during the day on the weekend to ensure all are able to attend.

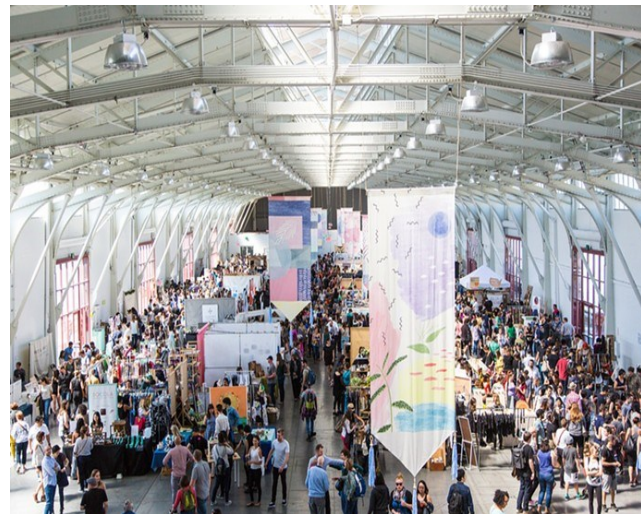


Figure 16: Pop-Up Market in Seattle [34]

## Social Media

Following this fieldwork, our team recommends that Mechanics Hall increase their social media presence. Social media is the primary information outlet for individuals today that should be utilized by businesses and organizations such as Mechanics Hall. Despite being currently active on Twitter, Instagram, and Facebook, Mechanics Hall's promotion of events and community engagement is lacking and minimal through their social media pages. Each of their pages promote events that are being hosted at the hall and when Mechanics Hall is being recognized in a media source such as an online newspaper. Their Twitter and Instagram accounts have 600 and 1,000 followers, respectively, which is relatively small. The schedule in which they post on each platform is fairly infrequent as well. Moreover, the posts focus on a one-way stream of communication from Mechanics Hall to their followers through the promotion of specific events in the form of posters that is not engaging. To build their social media presence, Mechanics Hall should cultivate two-way communication with their followers on social media. They may do this by liking and responding to comments, and by creating posts designed to engage and build relationships that will attract returning and new visitors to attend an event hosted at the hall.

To address the concern of the unengaging social media promotions, the current images and advertisements that are posted to promote upcoming events could be improved by hiring a social media marketing agency such as LYFE Marketing and Max Audiences to produce their graphics and to develop the content of their posts. Incorporating additional posts that focus on key areas would engage and attract new and current followers. The key areas that have been suggested to our team from our studies are music production, how-to videos, information about general music, and sharing posts and information from entertainment outlets such as new music that is being released and news about artists and performers

As shown in the images to the right (25 & 26), The Hanover Theatre uses their Twitter page to update their following with information about performers and individuals that have and will be working in their venue.

Although the posts on the next page (27 & 28) do not directly promote each page, the posts cater to each of their followings' interests. Their followers have become

accustomed to obtaining general news and information from each page. Reposting and sharing posts from pages such as these would add an additional dimension to Mechanics Hall's social media pages. This dimension would be that their followers use their pages as a source of news and information where they would visit each page more frequently.

One final aspect of their social media outreach that needs to be addressed is the activity between their pages and their followers. It is very important for a follower to be able to receive responses through comments and or suggestions made on their page. The increase in engagement will impart the feeling of sincerity and empowerment to their followers; which is key moving forward with programming and attracting new visitors.



[25]

The post on the next page (30) was retweeted by the Boston Symphony Hall's twitter page. This interaction between the user and the venue builds relationships between the two. In this example, they promote themselves

by displaying a partnership they have developed with their community that appeals to the emotions of the individuals that view the post as opposed to the static advertising that is typically posted by Mechanics Hall. Currently, Mechanics Hall hosts about 15-20 events each month that range from naturalization ceremonies to orchestra performances. The existing scheduling and events is optimal for the current audiences that are targeted. If Mechanics Hall were to remain static with the events that are hosted each month and their frequency, the hall would likely face a dilemma in which the attendance would remain the same or eventually decrease. As previously mentioned, dedicating an allocated time each weekend for an event that would primarily cater to a younger audience would lead to great success. This could lead to Mechanics Hall becoming a destination in which groups of friends go to each weekend. Once a foundation of young adults that frequently attend develops, expansion of the audience will follow, as many will invite their friends and indirectly promote Mechanics Hall as a place they enjoy to go. Another way to reconfigure the



[26]



XXL Magazine @XXL · Feb 25  
Ten years ago, these albums reigned supreme



**55 Hip-Hop Albums Turning 10 in 2019 - XXL**

From Rick Ross' 'Deeper Than Rap' LP to the Black Eyed Peas genre-bending album 'The E.N.D.,' XXL takes a look back at the most pivotal rap xxlmag.com

14 111 404

[27]

mechanicshall

21 likes  
mechanicshall #Free Brown Bag Concerts begin Wednesday, March 13 at @mechanicshall! Join us at noon for free jazz programming!

#jazz #organmusic #freeconcert #noontime

[29]



Natural Music Tutorials  
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February 12 at 4:57 PM

I'll Fly Away - Intro Lesson

To gain access to all of our gospel piano lessons, go to [www.naturalmusicstore.com](http://www.naturalmusicstore.com) and click the "Get Started" button to sign up for our monthly paid program. You will instantly have access to every piano lesson currently on our site, as well as new ones added regularly

16 Shares 1.4K Views

[28]



Mrs. Crockwell @MrsCrockwellMHS · Feb 14

Thank you @BostonSymphony for an amazing rehearsal experience. My string students @MHSString truly enjoyed the beautiful music and was in awe. They are now inspired to practice even more!



2 5 27

[30]

scheduling would be to host the Brown Bag Lunches more frequently. The Brown Bag lunches are on Wednesdays a few days a month. They are free of charge and open to all that choose to attend. Increasing the frequency of the Brown Bag Lunches to every Wednesday when possible and potentially one day over the weekend would be very beneficial. The Brown Bag lunches follow the trend of being low cost that would prove to be very successful by catering to youth and young adults and would also bring additional awareness to Mechanics Hall. The Brown Bag lunches as well as the many new events our team has proposed to be introduced to Mechanics Hall require minimal work to set up and break down equipment where they are unlikely to interfere with events the day before and or the following day. All in all, Mechanics Hall is underutilized by the youth of Worcester that could be properly used upon these introductions.

Introducing new events, utilizing their existing social media platforms, and reconfiguring the scheduling will work into the long term goal of programming with local organizations for the community outreach our team plans to achieve. The initial step to develop programming partnerships is to begin the contacting the desired organizations. Raquel, Director of the Division of Youth Opportunities, has not received invitations for the many groups within her organization from Mechanics Hall. She has received many invites from other venues and spaces located in Worcester but not Mechanics Hall. Many organizations seek invites and contact from representatives of venues, as it shows sincerity and interest for the venue to provide an empowering and thoughtful experience for their group. The organizations our team determined to be the best fits for Mechanics Hall with the new events and scheduling we have proposed are Worcester Boy's and Girl's Club, Worcester Roots, Division of Youth Opportunities of Worcester, and Central Massachusetts High schools. Each of these coincide with the values and goals of Mechanics Hall where a mutualistic partnership could be developed. For instance, the details of a partnership with a local high school would be to invite them to performances that would enhance their learning experience in the classroom and to invite them to perform. The partnerships between the organizations and groups with Mechanics Hall would entail many invitations to events that would prove to be useful and empowering to the youth of each group, to perform at the venue, and being able to utilize a dedicated space for practicing and developing music when available.

## Recommendations & Conclusion

This project developed recommendations for several technological improvements to Mechanics Hall regarding signage, timekeeping, and donor management. In particular, we suggest that Mechanics Hall digitize its signage for better wayfinding by visitors, digitize a new timekeeping system for more efficient management of staff time management, and incorporate a new donor management system to facilitate the donation ecosystem that keeps Mechanics Hall funded and operational. We believe that our work presents Mechanics Hall with a plan to allow for a more informed visitor experience, save time for its workforce, and better promote donor support of the Hall's mission.

Additionally, this project provided several recommendations designed to diversify the audiences attending events at Mechanics Hall. These efforts aimed to connect a younger demographic to Mechanics Hall, as the average age of attendees to the Hall is 60 years old. This plan includes an update to their social media outreach as well as suggestions for improving partnerships with youth organizations to plan events at the venue, including Worcester Boy's and Girls Club, Local High schools, Worcester Roots, and the Division of Youth Opportunities of the City of Worcester. These recommendations will allow the hall to establish a broader audience for future events and attract an audience that will become a future donor base.

Despite the many improvements our team has proposed for Mechanics Hall to implement in the near future, they compose a subset of the suite of updates planned by the Hall. Our team has provided a foundation for the staff, board of trustees, and future IQP teams to complete the further updates to the Hall. In the coming years, Mechanics Hall will expand renovations to encompass nearly all of the operational aspects of the Hall, such as the security, bar operation, and technical aspects such as the audio and visual systems.

Overall, this project has been a massive learning experience for all of us. None of us had ever worked with a lot of the systems that are in use at Mechanics Hall, so initially there was a period of acclimation where we had to

figure out exactly what needed to be done. While this was challenging at first, in the long run it helped us to grow as a team and individually in completing our goals on time. We also appreciated the opportunity to cultivate our professional development skills. In particular, we enjoyed experiencing business conference calls as well as meetings with board members. We also gained skills in leading interviews and meetings with people younger and older than us. Hopefully the plan that we have submitted to Mechanics Hall will help them to grow and prosper over the next decade.

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### Supplementary Materials

<https://wp.wpi.edu/wcpc/mechanics-hall-2019/>

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