

Worcester Polytechnic Institute

Renovation Revival: Mechanics Hall

Supplemental Materials

Brandon Franks, Christopher Letherbarrow,
Zachary Shaffer

Sponsor: Worcester County Mechanics Association

Advisor: Professor Katherine Foo

28 February 2019

Table of Contents

Appendix A: Authorship	2
Appendix B – Preamble, Expert and Professional Interview	4
Appendix C: Sponsor Interview Questions	5
Appendix D: Worcester County Mechanics Association	6
Appendix E: Long Term Plan	7
Appendix F: Existing Signage	11
Appendix G: Traffic Count Results	17
Appendix H: Proposed Bid Package	18
Appendix I: Plan View of Proposed Updates	19
Appendix J: Bartlett High School Interview Questions	20
Appendix K: Worcester Division of Youth Opportunities Interview Questions	21
Appendix L: Survey Results: Students of Bartlett High School	22
Appendix M: Sponsor Description	24

Appendix A: Authorship

Task	Completed By
Abstract	Christopher, Zachary
Introduction	
Initial Draft	Brandon, Zachary
Editors	Christopher, Zachary
Background	
Initial Draft	Brandon, Zachary
Editors	Christopher, Zachary
Methods	
Signage	Brandon, Zachary
Timekeeping	Christopher
Donor Management	Brandon
Youth Engagement	Brandon, Zachary
Editors	Zachary
Results	
Signage	Brandon, Zachary
Timekeeping	Christopher
Donor Management	Brandon
Youth Engagement	Christopher, Brandon

Editors	Zachary
Recommendations and Conclusion	Brandon, Christopher, Zachary
Works Cited	Christopher
Booklet	Zachary
Research	
Timekeeping - Literature Review	Christopher, Zachary
Timekeeping - Employee Demos	Brandon, Christopher
Signage - Literature Review	Brandon, Zachary
Signage - Company Contact	Zachary
Donor Management - Literature Review	Brandon
Donor Management - Employee Interview	Brandon, Christopher, Zachary
Youth Engagement - Literature Review	Brandon
Youth Engagement - Interviews	Brandon, Christopher, Zachary
Youth Engagement - Surveys	Brandon
Miscellaneous	
Scheduling Meetings	Brandon, Zachary
Meeting Notes	Christopher
Submittals to Advisor	Christopher, Zachary
Trello Scheduling	Christopher, Zachary

Appendix B – Preamble, Expert and Professional Interview

Thank you for meeting with us today. I am Brandon Franks. Assisting me is Christopher Letherbarrow and Zachary Shaffer. We are a team of Worcester Polytechnic Institute students working with Mechanics Hall to develop a strategic plan in order to better engage the local youth demographic by attracting and introducing them to Mechanics Hall as a venue that suits their interests. The purpose of this interview is to obtain additional background information specific to learning about the best possible way to connect the local youth to Mechanics with programming, scheduling changes, and new events.

You are not obligated to answer any question we ask, and if you do not want to answer a question please indicate this to us. You also have the right to review the information from the interview prior to publication of the report.

Appendix C: Sponsor Interview Questions

- 1.) What are the specifics regarding the technological inefficiencies?
- 2.) Is there an intended plan to update the website?
- 3.) Is the telephone and Wi-Fi service sufficient for internal employee usage and for visitors?
- 4.) In respect to the renovations that are planned to be made, are there any aspects that you intend to maintain without updating?
- 5.) For audio and visuals, is there team on staff that maintains and operates these systems?
- 6.) Do you plan to maintain the current staff following the changes with the audio and visuals or will the operations remain the same?
- 7.) Are there any renovations that you deem as an absolute priority and any that could postponed?
- 8.) Are there any organizations that Mechanics Hall collaborates with?
- 9.) Of these organizations, are any of the following local youth organizations?

Appendix D: Worcester County Mechanics Association

Worcester County Mechanics Association is a non-profit organization that is primarily funded by community partner organizations such as WPI, Bank of America, and Fallon Health. In addition to the community partner organizations, Mechanics Hall is also funded by private funds organized for Mechanics Hall (The Heart of the Community Fund and Bob Kennedy Legacy Fund). Kathleen Gagne, Executive Director of Mechanics Hall, will be working with our team by enabling connection to the board of trustees, the external sources of revenue, current employees, and with experts.

Appendix E: Long Term Plan

Due to the limited budget of Mechanics Hall as a non-profit organization, our team is unable to address all of the signage and lighting needs of the venue. Although our team has addressed many of the most necessary updates that are needed for the hall that can be implemented in the near future, our team has prioritized the updates and developed multiple long term plans to follow the immediate updates we have proposed. Our team has considered factors such as cost, user benefit, and current inefficiencies whilst determining when each of the updates will be completed in either the 3, 5, or 10 year plan.

3 Year Plan:

- Update all exit and bathroom signs: more visible and attract attention
- 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

To begin the first set of long term plans, our team has addressed the insufficient wayfinding signage to navigate the hall in an easier fashion. The existing wayfinding signage is not digital or illuminated, besides the exit signs. Due to not being digital or illuminated with quality accent lighting, the users of the hall face great difficulty recognizing and reading the signage. This was made apparent in our traffic count study at the Havana Cuba Concert on January 31, 2019 and speaking with employees and visitors that are frequently in the hall. During our study, we were approached with many questions regarding the location of the bathrooms, coat room, and the hall for the performance. Mechanics Hall currently uses easels to display signage for the coat room, the many halls within the venue, and the restrooms in some locations. The easels pose as a tripping hazard and are not very visible as previously mentioned. To update the existing easels, our team plans to replace them with illuminated signs that will be mounted to the walls relatively close to their existing locations. This will also be completed for the existing signage that is currently mounted to the wall such as the bathroom and boardroom signs. The exit signs throughout the hall are currently digital but are not very effective due to the limited brightness they have. With that being said, the exit signs would also be replaced with newer models that would provide additional brightness if not in good condition. If the sign is in good condition, the lamps within the signs would then be updated to a brighter lamp.

Upon arrival to Mechanics Hall, for individuals that are ADA, it is very difficult to navigate the hall. This is due to the minimal and insufficient signage indicating where ADA

individuals should enter and where the elevators are to get to the halls throughout the venue from the first floor. Currently, besides a very small sign that is located adjacent to the front doors of Mechanics Hall, there is not sufficient signage indicating where ADA should enter. The ADA entrance is through the rear of the hall at the Waldo Street entrance. Many that are not familiar with the hall will enter through the front doors due to not seeing the small sign indicating that they should enter from the rear entrance. This causes many to travel an unnecessary distance to reach the elevators. With that being said, upon entry through the front doors, there is not adequate signage indicating the location of the elevators and the Waldo Street entrance in the main lobby. It would not be necessary to install digital signage to indicate this information but it would be necessary to replace the existing message that is located between the stairs as well as updating the accent lighting that is projected onto the message to ensure ease of visibility. An ideal message would display ‘To Elevators and Waldo Street Entrance’.

Although the updates mentioned are the most necessary that will be completed not with the immediate updates, these updates are the least expensive of the long term plans. This can be accounted for the proposed updates for the new monitors that will be installed for internal and external signage that are very expensive. The budget for updates will be minimal at this time so ensuring low costs for updates is nearly as important as the application of the updates regarding the overall feasibility of them.

5 Year Plan:

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

Following the proposed plans for 3 years after the initial updates, our team has now prioritized further updates that would be ideal within a 5 year timeline. The updates that would be completed would primarily supplement the initial proposed updates by installing the signage in further locations as well as introducing new technology.

Although the installing one digital signage monitor mounted to the wall adjacent to both the Main Street Entrance and Waldo Street Entrance would vastly improve navigation throughout the hall and present information for visitors, it is insufficient for the volume of foot traffic at each location. It is more than likely that traffic congestion will occur at each location with only one monitor. This can be accounted for the distance from the entrance to the monitors and the distance from the monitors to the stairs. There is not a significant amount of space for individuals to gather around the monitor to view the presented information without obstructing the stairs at each location. The stairs at the Main Street Entrance is the primary route to reach the various gathering spaces on the second and third floor; an essential to ensure ease of use. It is

very unlikely that large masses of individuals will be going up and down the stairs at the Main Street Entrance Lobby simultaneously so the addition would likely distribute traffic more evenly. The stairs at the Waldo Street Entrance are the only route to the box office when entering from the rear of the building, when tickets are being sold on the first floor. Congestion at this location is also not ideal due to this lobby being used for various purposes such as live music prior to the start of an event.

Upon observations and discussions with staff and visitors, our team has also concluded that a digital kiosk on the second floor in front of Washburn Hall is necessary for to be installed in the future. Due to the extensive costs of installation and for the kiosk itself, it is not feasible for this update to be completed with the initial set or within a 3 year timeline. With that being said, despite the easels that are placed by the stairs from the Washburn Hall Lobby to the third floor as well as the easels that are placed adjacent to the doors of Washburn Hall, signage for general wayfinding and information, upcoming events, and the event at that current time does not exist. The kiosk in this location would display similar information that a kiosk in locations such as shopping centers, amusement parks, or sports stadiums do but would be pertinent to Mechanics Hall using Chromecast. This location is very ideal for a kiosk due to the high volume of traffic in the location and would potentially become the catalyst to changing the location of ticketing when a third party opts to complete their own ticketing as opposed to going through Mechanics Hall. The ticketing that occurs in this space typically causes congestion due to queue of individuals purchasing and obtaining tickets accumulating in the space as well as the queue to enter the hall. Therefore, the kiosk could potentially resolve this ongoing conflict and resolve the ultimate problem of insufficient signage in the location.

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

Although the existing equipment and technology that is present in Mechanics Hall that will be addressed in the 10 year plan is sufficient in its current state, unlike the signage that will be addressed at an earlier date, it will eventually become outdated and ineffective. Also, the updates within the 10 year plan are the most expensive as well; requiring the longest time frame to be completed.

Currently, there are seven display cases within the first floor hallway. The display cases currently possess posters that display information regarding the hall such as scheduling, promotions, and general information. The posters are illuminated with accent lighting within the cases but do not attract the attention of visitors where the information contained within the poster

will be read. With that being said, the inconvenience of changing and obtaining the posters poses a problem as well. Within the 10 year plan, our team would like each of the display cases to contain a monitor to display slideshows, videos, and other visuals. Installation would not be of concern due to the current electrical in the case from the lighting and the overall cost would not be very significant. Similar to the other digital message boards that will be installed, the media displayed will be displayed using a Chromecast device that will be connected to each of the monitors.

When driving through or walking down Main Street during the evening, Mechanics Hall can blend in with the buildings it is connected to. Despite the facade being stone as opposed to brick like most that it is connected to, the front of Mechanics Hall often can be missed. This can primarily be accounted for the lighting that is present. The accent lighting for the signage that reads 'Mechanics Hall' and for the other companies that share a front with Mechanics Hall is insufficient. Requiring a lighting designer and or engineer to determine the best way to enhance the existing lighting, lamps and fixtures would have to be updated. This update would be fairly expensive in comparison to the installation of monitors throughout the lobby due to the consultation with the lighting designer, equipment, and installation. The installation would pose to be very difficult due to the height of the signage and connection to electricity. The lamps would ideally be LED's due to the minimal energy usage in respect to the lumens produced. With that being said, the fixtures would also have to be updated that correspond to LED lamps as well. A factor that will also be considered is the light pollution to the street that may cause distraction to pedestrians and drivers.

Appendix F: Existing Signage

Interior:

Name	Location	Type	Dimensions	Description
MB-4	Ticket Booth	Paper Display		Paper Display within a custom wood frame and casing
C-1	First Floor Hallway	Poster Display	52x63	The Mechanics Ideal: First display case on left when entering from Main Street
C-2	First Floor Hallway	Poster Display	52x63	The People's Hall: Second Display on the Left when entering from Main Street
C-3	First Floor Hallway	Poster Display	52x63	Performance 1: First on Right when entering from Main Street
C-4	First Floor Hallway	Brochure Display	N/A	Information and Brochures Display: Second Display on right when entering from Waldo Street
C-5	First Floor Hallway	Poster Display	52x63	Performance 2: Second Display on left when entering from Waldo Street
C-6	First Floor Hallway	Poster Display	52x63	Architecture:

				First on right from Waldo Street Entrance
C-7	First Floor Hallway	Poster Display	52x63	Community: First on right from Waldo Street Entrance
Easel 1	In Front of Washburn Hall	Standing Easel Display	N/A	Information Regarding Current Event
Easel 2	Waldo Street Entrance	Standing Easel Display	N/A	Information Regarding Current Event

Exterior:

Name	Location	Type	Dimensions	Description
MB-2	Main Street Entrance	Paper display	46"	Displayed within a wood frame that is protected by glass casing
MB-2	Main Street Entrance	Paper display	46"	Displayed within a wood frame that is protected by glass casing



Easel 1



Easel 2



First floor display case

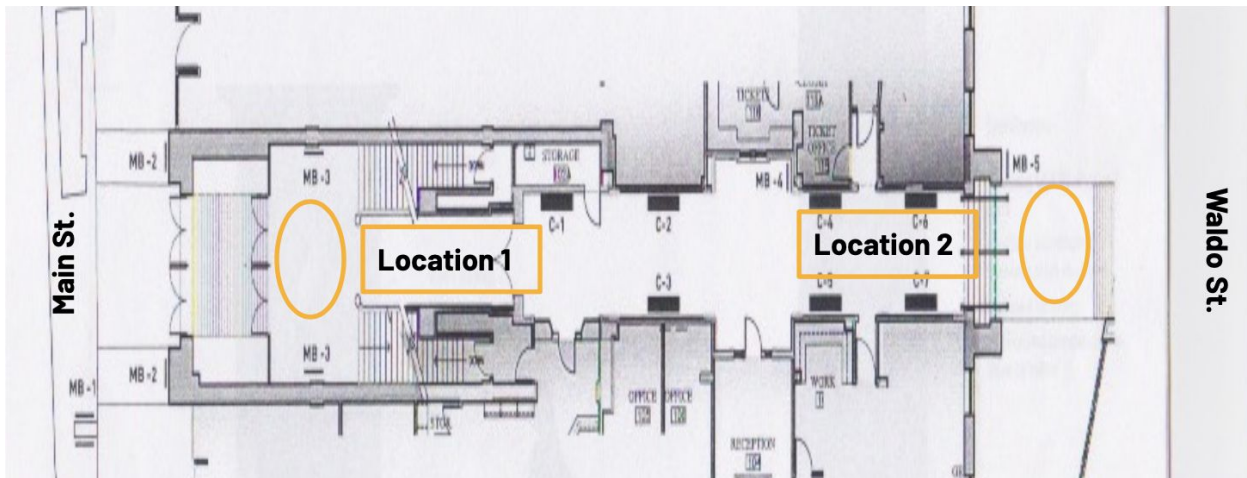


Current Exterior Signage



Bathroom directions in the Great Hall

Appendix G: Traffic Count Results



Event: Havana Cuba All Stars

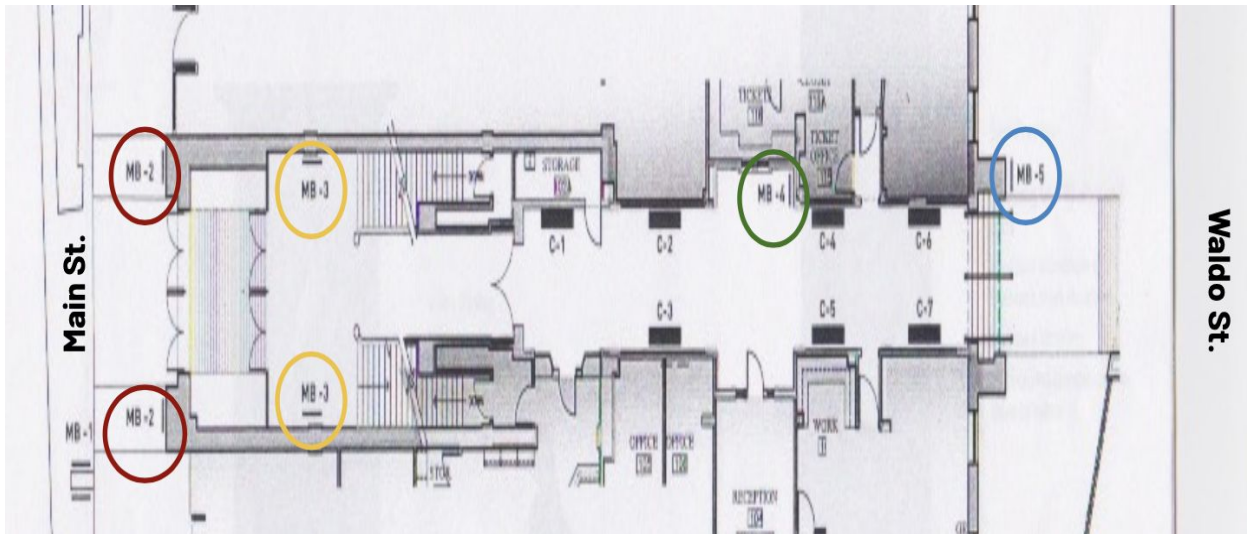
Date: January 31, 2019: 6:30 pm-7:30pm

- Location 1: 412 People
- Location 2: 243 People

Appendix H: Proposed Bid Package

Name (Option #) (Quantity)	Location	Type	Manufacturer	Model	Dimensions	Price	Installation	Function/Use		
MB-2 (1 of 2)	Sides of Front Doors	Full Outdoor Tv	Skyvue	C-NXG-4670-L	46"	2700-3500	Standard Mounting	Can be upgraded w/ Roku for 199. Fully weatherproof.		
MB-2 (2 of 2)	Sides of Front Doors	Full Outdoor Tv	Skyvue	C-NXG-4670-L	46"	2700-3500	Standard Mounting	Can be upgraded w/ Roku for 199. Fully weatherproof.		
MB-3 (1 of 2)	Main Street Entrance	Smart 4K UHD Tv	LG	UK6090PUA	55"	400-550	Standard Mounting	Can use built in wifi to stream intended visuals		
MB-3 (2 of 2)	Main Street Entrance	Smart 4K UHD Tv	LG	UK6090PUA	55"	400-550	Standard Mounting	Can use built in wifi to stream intended visuals		
MB-3 (Option 2)	Main Street Entrance	Smart 4K UHD Tv	Samsung	UN55NU7100FXZA	55"	500-600	Standard Mounting	Will use Device to Display images		
MB-4	Ticket Booth	Smart HD TV	Samsung	UN32N5300AFXZA	32"	250	Standard Mounting	Will use Device to Display images		
MB-4 (Option 2)	Ticket Booth	Smart HD TV	TCL	32S327	32"	170	Standard Mounting	Will use Device to Display images		
MB-5	Waldo Street Lobby	Smart 4K UHD TV	LG	UK6090PUA	55"	400-550	Standard Mounting	Can use built in wifi to stream intended visuals		
MB-5 (Option 2)	Waldo Street Lobby	Smart 4K UHD TV	Samsung	UN55NU7100FXZA	55"	500-600	Standard Mounting	Will use Device to Display images		
Chromecast Device (6)	All	Streaming Device	Google	GA00439-US	N/A	35	HDMI Compatible	Will Stream photos from computer/phone		
Flash Drives (Option 2) (6)	All	Streaming Device	SanDisk	Cruzer CZ36	64 GB	11.59	USB Drive	Can store slideshows to be display on screen		
Wall Mount (6)	All	Vesa	Mount Plus	MP-KL21G-44F	N/A	30	Fixed to Wall	Low Profile		
Labor and Electrical	All					7500				
					Total:	15,240 - 17,390				

Appendix I: Plan View of Proposed Updates



- Red: 2 Outdoor Monitors
- Yellow: 2 Monitors - Main Street Entrance
- Green: 1 Monitor - Ticket Booth
- Blue: 1 Monitor - Waldo Street Entrance

Appendix J: Bartlett High School Interview Questions

Date and Time: February 14, 2019 1:00 pm

Location: Bartlett High School

Interviewees: Peter Twiraga and Bartlett Students

Interviewers: Brandon Franks, Christopher Letherbarrow, Zach Shaffer

Questions for Peter Twiraga:

- 1.) Could you state your name and some of your experience and background in the music field?
- 2.) Are there any notable performances and events that you have been involved in personally or as an instructor you can think of?
- 3.) Have you taken a group to a traditional venue such as Mechanics Hall?
- 4.) Throughout your teaching career, are there any methods or practices that have given you the most success to engage your students?
- 5.) As media and entertainment options are changing, have you made any alterations to your teaching and or performances in respect to these changes?
- 6.) Are there any changes that you would like to see to engage your students more?

For Students:

- 1.) As a student that is involved in an organized group, are there any reasons in particular that can you think of that attracted you to performing arts such as playing an instrument?
- 2.) Although many of you may enjoy nearly all aspects of your class, are there any components that could be changed or added to enhance the overall music interaction experience?
- 3.) Could you possibly describe any ways you are involved in music not involving this class? Such as recording, making music, playing/singing for pleasure.
- 4.) Generally speaking, what types of entertainment do you seek in your free time?
- 5.) What genres of music do you typically listen to and what is your primary method of listening to music?

Appendix K: Worcester Division of Youth Opportunities Interview Questions

Date and Time: February 21, 2019 10:30 am -

Location: Brew on the Grid

Group: Division of Youth Opportunities; City of Worcester, MA

Interviewee: Raquel Castro-Corazzini

Interviewers: Brandon Franks, Christopher Letherbarrow

Questions:

Could you please state your name and organization?

Can you provide some information regarding your experience working with youth?

Could you provide a brief description of the goals of your work?

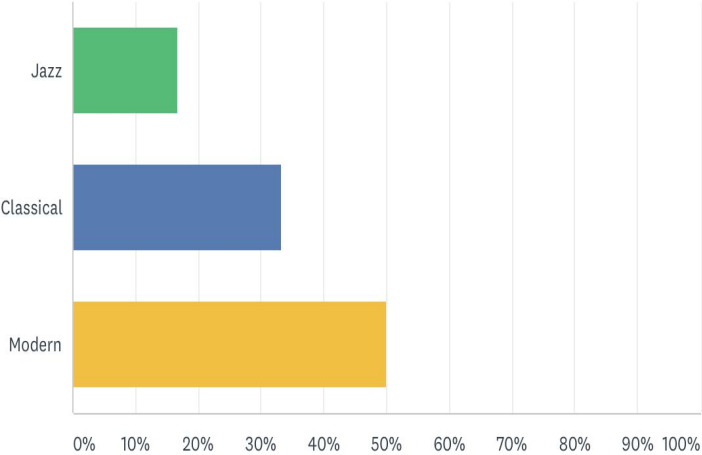
Throughout your career, are there any methods or practices that have given you the most success to engage younger individuals?

Can you think of any success stories that have directly correlated to youth involvement with entertainment such as playing music?

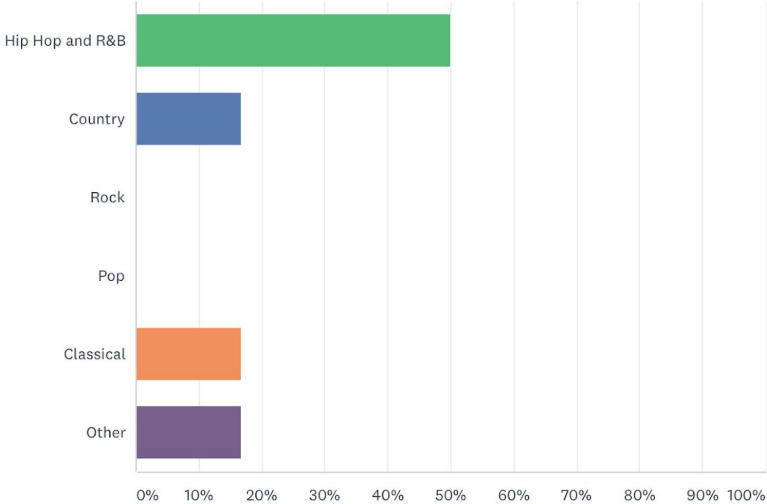
Have you encountered any changes of interests with the individuals you and your colleagues work with? Such as them being engaged and drawn in to a specific activity and no longer being interested.

Appendix L: Survey Results: Students of Bartlett High School

What genre of music do you prefer to play in class?



What genre do you typically listen to outside of the classroom?



What types of entertainment do you enjoy outside of the classroom?

<input type="checkbox"/> Movies and tv	2/20/2019 9:42 PM	View respondent's answers	Add tags ▼
<input type="checkbox"/> Concerts and plays	2/20/2019 2:14 PM	View respondent's answers	Add tags ▼
<input type="checkbox"/> I like to watch television and movies and attend concerts.	2/20/2019 2:13 PM	View respondent's answers	Add tags ▼
<input type="checkbox"/> Watching movies and going out to places	2/20/2019 1:56 PM	View respondent's answers	Add tags ▼

Appendix M: Sponsor Description

Mechanics Hall is a cultural gathering place and event center that hosts several events such as concerts, business events, galas, and non-profit meetings that is operated by the Worcester County Mechanics Association. Mechanics Hall is a renowned hall that, beginning in its opening in the 1850s, was known for its cutting-edge technological features that were the example of the work of the Worcester County Mechanics. However, in more modern times, the Hall's status as an example of modern technology is diminishing due to obsolete and outdated features. The mission the sponsor has set in place is to assess the current technology and systems in place, and determine specific problem areas that are in need of improvement while considering the longevity and costs of the potential improvements.

The Worcester County Mechanics Association is a non-profit organization that is primarily funded by community partner organizations such as WPI, Bank of America, and Fallon Health. Additionally, donation funds and membership fees supply more funds to the hall. The community partner organizations aid operationally and financially where deemed necessary. The two primary funds that generate capital for the hall are The Heart of the Community Fund and Bob Kennedy Legacy Fund where individuals have multiple options for various donations to the hall and to the Worcester County Mechanics Association. The sources of capital have been formed to ensure that visitors, members of the community, and staff can experience memorable events at the venue.

Kathleen Gagne, executive director, is primarily responsible for connecting Mechanics Hall with external sources of capital and support through the two primary Funds, as well as other community partner organizations. Kathleen is also responsible for proposing potential changes to the Worcester County Mechanics Association Board of Trustees to ensure financial and operational needs are met. The president of the Board of Trustees is Margaret Wong where she has multiple individuals on the board with that contribute to the decision making regarding Mechanics Hall as well. The staff that are currently employed at Mechanics Hall such as the facilities director (Tricia Shea), Director of Communications and Donor Relations (Jennifer Roy), and Director of Community Engagement and Creative Programming (Joan Stewart) in particular work under the supervision of Kathleen Gagne are highly influential to the decision making of the board and Kathleen due to working directly with finances and the internal operations of Mechanics Hall.