



HPL_WIFI PROJECT

Submitted to

Business Analysis -Mohawk College Hamilton

By

Amna Sadiq, Avi Khurana, Luz Mejia, Assams Ogochukwu, Tina Vineham, Tam Truong

Overview

Sunday, November 15, 2020 1:18 PM

Prepared by: Ogochukwu Assams.

This report is focused on improving the WIFI usage in all the 22 branches of the Hamilton Public Library. It is mainly focused on finding solutions that will ensure a good WIFI coverage, signal strength and usage experience across all the branches. It includes Business Use cases, Stakeholders list and Interests, Document Analysis, Solutions, and Recommendations. We have identified some of the problems that are inhibiting WIFI signal strength and good user experience, such as agreement to T&C, insufficient coverage across the libraries and WIFI session time-out, etc.

In this report we have provided recommendations to solve some of these problems currently being faced by HPL with its wi-fi system and achieve the desired state of best user experience.

Background

Sunday, November 15, 2020 1:19 PM

Prepared by: Avi Khurana

The Hamilton Public Library with the help of its committed staff members offers a range of services to meet communities' needs and interests. One of the services to encourage the library's mission of "Freedom to Discover" is the availability of free W-fi services for its members as well as its guests. (Mission Statements and Values, HPL, 2020)

Hamilton Public Library (HPL) provides free Internet access at all branches via their wireless guest network (HPL_Guest), enabling members to use online resources and the Internet with their own wireless-enabled equipment(Computers & Wi-Fi,HPL,2020). Even though the libraries intend to serve the user's purpose optimally through their Wi-fi services, the 2017 Community survey reports highlighted that out of the total sample size, only 61% of our respondents were satisfied with the current Wi-fi services. With further analysis, it was identified that the library members as well as the business itself are facing constraints in regards to Wi-fi services at HPL. The customers mentioned that the user experience was compromised due to insufficient wi-fi coverage, session time-outs and the process of logging into the Wi-fi is frustrating. From the business perspective there is inflexibility in the current implementation. Analysis and customization of usage data and reports is complex and inconvenient.

Library members, staff and the guests depend on this free access to the Internet to fulfill their needs and unfold their learning opportunities. To enforce HPL's top priority of ensuring positive experience for its library members it is imperative that we enhance our Wi-fi services and retain our user base while attracting new ones (Strategic Priorities,HPL,2018-2021).

Goals & Objectives

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Prepared by: Ogochukwu Assams

GOALS:

The Hamilton Public library's main aim is to analyze the current issues related to WIFI service at HPL and analyze the data based on connectivity, coverage and signal strength. Another goal is to find solutions gathered from our analysis to improve the WIFI coverage and to ensure great user experience for its guests and members.

OBJECTIVES:

- Assessing and providing recommendations to HPL to enhance WIFI coverage, signal strength, capacity and connectivity across all 22 branches of Hamilton Public Libraries.
- Noting inconsistencies in the WIFI system and identifying opportunities for improvement.
- Improving the WIFI user experience and ensure that it is interactive, user friendly and easily accessible for all ages.
- To ensure that users have extended usage time as regards to wireless connection procedure. For example: Captive portal restrictions.
- Reduce the number of logins to access the internet for clients with or without a library card.
- Retain user base and satisfy library users with their wi-fi services.

Project Requirements

Sunday, November 15, 2020 1:20 PM

Prepared by: Avi Khurana

- Analyze the quantitative aspect of the data reports provided by Hamilton Public library about the Wi-fi usage in all the 22 locations.
- Conduct stakeholder interviews to elicit qualitative data on the current state of Wi-fi system at HPL and collect relevant information about business needs.
- Gathering requirements through document analysis for the successful implementation of the project.
- Conducting an environmental scan and preparing summarized reports comprising of internal and external factors interacting with the business.
- Communication at regular intervals with the project sponsors to ensure strategic alignment of the project with business requirements.
- Identifying and documenting the scope of the project to avoid scope creep and ensuring timely completion of the project.

Recommendations

Sunday, November 15, 2020 1:20 PM

Prepared by: Amna Sadiq, Avi khurana, Ogochukwu Assams

Recommendations:

- Conduct a site survey to identify dead spots and prioritize areas which need better coverage and invest resources in those crucial spots to provide sufficient coverage.
- Library card owners can agree to the T&C and it can be recorded to avoid multiple signs in.
- For HPL guests who do not possess a library card, Authentication can be made valid for 24 hours on login-in to Wi-Fi.
- Provide LAN cables to designated areas for guests to connect their laptops for using the internet instead of WIFI.
- Train the HPL CSRs to assist guest users in logging on the WIFI.
- Measure the volume of data usage, and throughput. See what type of usage, how much data is used for reading text, how much for streaming videos, how much for downloading. Look into usage pattern.

Business Case or Business Need

Sunday, November 15, 2020 1:21 PM

Prepared by: Avi Khurana

Hamilton Public Library has been serving the community of Hamilton and neighboring suburban areas to borrow, connect and discover, since 2001 with its 22 locations, a virtual branch and two bookmobiles. (Discover, participate, learn and grow, My Hamilton,2019). Library borrowing statistics suggest that Hamilton readers are among the most voracious in Ontario with a tentative footfall ranging up to more than 4 million every year (My Spectator,2017). All the initiatives taken at HPL revolve around its mission of providing its citizens 'Freedom to Discover'. The energetic board and staff at HPL ensure that they prioritize their tasks to provide exceptional user experience to all the library users. The strategic priorities in the 2018-2021 plan include being relevant and responsive to the emerging needs while broadening the scope of learning and innovation at the organization (Strategic Priorities,HPL,2018-2021).

Amongst several renowned services at HPL, Internet Access through WI-FI has driven the focus of the management as well as the library board over the past few years. The most significant drivers for this shift include a 60% surge in Wi-fi sessions from 2015-2019, low satisfaction rates (61%) with the current wi-fi system, numerous negative feedbacks from the guests and discrepancies in available usage data and reports.

According to the community survey findings of 2017, 76% of the total respondents felt that free Wi-fi is an essential service for them but the current wi-fi services lag behind in offering best user experience. Guests have showed concerns in regard to poor connectivity in certain areas of the library commonly referred to as dead zones in all the 22 branches. Agreeing to the Terms and Conditions page every-time is frustrating for the users and impacts their overall experience. Session time-outs, low signal strength and difficulties in logging on to the public wi-fi have also impacted the user experience at HPL tremendously. While gathering data from the Subject Matter Experts (SMEs), it was noticed that the staff at HPL was approached by the guests frequently for assistance in terms of connecting to the HPL guest wi-fi. They emphasized that the T&C page didn't come up automatically especially in the old devices and hence the users faced difficulty in connecting to the wi-fi. Although branch managers commented that reduction in the capacity of users in the library due to the pandemic have abridged the number of complaints related to signal strength, connectivity issues due to the infrastructural designs of the library continue to be a major constraint in wide range accessibility to high-speed internet.

One of the key findings from the available data was that the current bandwidth provided by Cisco (HPL's primary vendor) is insufficient to accommodate the usage traffic specifically in the busiest branches during peak hours. Some library branches have tried to overcome this barrier by installing wi-fi boosters and have accomplished in their initiative. But most of them still face signal obstructions due to concrete walls and multi-level buildings. The experts from the digital technology department suggested some measures to solve the problem of multiple logins by recording the user information by library card details however, the recommendation doesn't cater the users who do not hold a library card. Also, the library has a stringent privacy policy and management is adamant about limiting the amount of information gathered from its users.

The experts from the technical team highlighted that the current system is handled by the City of

Hamilton and any upgrades or changes required or proposed by the library must be approved by the City. This system of involving the third party in resolving Wi-fi issues impedes the speed of the process and leaves loopholes resulting in delayed implementation. The existing infrastructure is outdated as well as rigid which limits the options of improvements but updating to new systems could possibly help in expanding the range of wi-fi at libraries. Two pilot systems are in process to be implemented and tested at the Terry-berry and the Turner park branch with the existing infrastructure to determine if it is feasible to implement the solution city-wide. Adding access points is being considered as the most viable solution in the current situation but the results after its implementation are only futuristic assumptions and lack hard-data evidence.

To encapsulate, there was a consensus amongst the stakeholders interviewed that inconsistencies with the current Wi-fi system is an emerging issue and needs to be addressed to improve the overall experience at HPL. Also, the community survey results from the 2017 report show that 64% of respondents would be encouraged to use the public library more frequently once the wi-fi access service improves. Hence, improving the current Wi-fi system at HPL would help in the attainment of its goal of providing exceptional user experience while serving the strategic objectives of the business.

Bibliography

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Prepared by: Team 4

CityLAB Project Agreement

[CityLAB Project Agreement 2020-2021-Enhancing HPL Wifi.docx](#)

CityLAB Hamilton

<https://www.citylabhamilton.com/>

Virtual Kick-off meeting

[HPL WIFI CLIENT KICK OFF MEETING - Summary Notes- Group 4.docx](#)

Community Survey report 2017

[Community Survey Summary Report 2017.12.12 AODA.pdf](#)

Mission Statement and Values. (n.d.). Retrieved December 09, 2020

https://www.hpl.ca/articles/mission-statement-and-values

Strategic Plan – 2018-2021

<https://www.hpl.ca/sites/default/files/HPLStrategicPriorities2018-2021.pdf>

Computers & WiFi. (n.d.). Retrieved December 09, 2020, from

<https://www.hpl.ca/articles/computers-wifi>

MyHamilton.ca: Discover, participate, learn and grow. (n.d.). Retrieved December 09, 2020, from

https://web.archive.org/web/20120524141831/http://myhamilton.ca/articles/hamilton-public-library-history

4 million: Visits surge to Hamilton's 22 library branches. (2017, January 27). Retrieved December 09, 2020, from

<https://www.thespec.com//news/hamilton-region/2017/01/27/4-million-visits-surge-to-hamilton-s-22-library-branches.html>

CONTROL PLAN: (Tina)

HPL organizational structure

<https://www.hpl.ca/articles/management>

how to plan a network- looking at coverage and capabilities

<https://www.tanaza.com/blog/network-capacity-planning/>

how to calculate needed bandwidth capabilities

<https://www.tanaza.com/tanazaclassic/blog/how-to-calculate-network-bandwidth-requirements/>

SolarWinds

<https://www.solarwinds.com/onlinequotes/#/addProduct>

The below two links are for SolarWinds- a bandwidth analyzer tool/software that HPL can invest in, or something similar too.

https://try.solarwinds.com/pdp/network-bandwidth-analyzer-pack?CMP=KNC-TAD-GGL-SW_NA_X_PP_CPC_LD_EN_PRODP_TIN-NTA-978193133~110753155585_g_c_test%20network%20bandwidth-p~472908714363~p57972027286&s_kwid=AL!11508!3!472908714363!p!!g!!test%20network%20bandwidth&ds_cid=7170000067389302&ds_agid=58700006421837722&network=g&device=c&keyword=Test%20network%20bandwidth&matchtype=p&creative=472908714363&feeditemid=&gclid=Cj0KCQiA5bz-BRD-ARIsABjT4nhZLSKVo21-QvRnwXRheimuDk6YLDRwooEcwMrY54vD41Wwe7riZbUaAjjKEALw_wcB&gclidsrc=aw.ds

Political Risks:

<https://www.hpl.ca/articles/privacy-policy-library-customers>

<https://www.hpl.ca/articles/technology-use-policy-library-customers>

<https://www.ontario.ca/laws/statute/90p44>

Interests Table

Sunday, November 15, 2020 1:22 PM

Prepared by: Amna Sadiq

Stakeholders	Description	Interest
Senior Management	Director and Managers in the Digital Technology & Creation department	Meeting the strategic goal of HPL by providing best Wi-fi user experience at HPL. Reducing the workload of HPL CSRs by improving the log-in process for guests at the library. Relieving the stress of the managers by providing better method of gathering usage data reports.
City of Hamilton	Digital Infrastructure department and Digital Technology Services department at HPL	Improving the Wi-Fi services at HPL and serving the community members of Hamilton. Involved in provision and release of budget for the project.
Middle Managers at HPL	Branch Managers and Support Managers	Increasing customer satisfaction at all 22 locations and reducing the burden on their staff members. Organized usage data reports for analyzing purposes and up-to date technology for day-to-day functions at the libraries.
HPL Board	Chief Librarian, two City Councillors and nine citizens from the community	Assisting the workforce engaged in the analysis and improvement of services, processes and systems. Directing resources toward the fulfillment of the organization's mission, values, and strategic priorities.
Library Staff	Customer service representatives, Supervisors, librarians.	Better customer service, contented customers. Reduced obstacles in work processes. Strong wi-fi connection in their personal devices.
Technical Team	Digital technology technicians	Installing the latest technology by introducing a new or specific vendor which will add a value to their technical skill sets.
Customers	HPL users and guests	Improved Wi-fi service, easily accessible internet access. Less issues in logins and T&C acceptance. Increased visits to the library.
Vendors	Primary vendor- Cisco and other service providers	Increased business and market recognition, developing a system or upgrading the existing services for the convenience of the end users/ customers.

Analysis

Sunday, November 15, 2020 1:22 PM

Prepared by: Amna Sadiq

Stakeholder Matrix :Degree of engagement (High, Medium, Low) for each stakeholder group

	Expertise		Willingness	Value	
Stakeholder Group	Contribution: Knowledge in X issue is of value to the	Legitimacy: Directly affected by our company's activity	Willingness to Engage: Proactive group that is already engaging	Influence: Relatively unknown group	Necessity of Involvement: Not an outspoken stakeholder
SH1-Senior Management	High	High	Low	High	Medium
SH2-City of Hamilton	High	Medium	Medium	High	Medium
SH3-Middle Managers at HPL	Low	Medium	Medium	Low	Medium
SH4-HPL Board	Low	High	low	Medium	Low
SH5-Library Staff	Low	Low	Medium	Low	High
SH6-Technical Team	High	Low	Medium	Low	High
SH7-Customers/End Users	Low	Medium	Low	low	Low
SH8-Vendors	High	Low	Medium	Low	High

Mapping

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Prepared by: Amna Sadiq



Mapping-Final

NOTE– Due to the online format, some of the editing in the documents is changing. If there is any confusion please feel free to ask us for an original document. We would be happy to email you or submit it on MyCanvas dropbox, depending upon your convenience.

ONEDRIVE Link -

[Mapping-Final](#)



Tactics

Sunday, November 15, 2020 1:23 PM

Prepared by: Amna Sadiq



Tactics

NOTE– Due to the online format, some of the editing in the documnts is changing. If there is any confusion please feel free to ask us for an original document. We would be happy to email you or submit it on MyCanvas dropbox, depending upon your convenience.

ONEDRIVE LINK:

[Tactics](#)



In Scope

Sunday, November 15, 2020 1:24 PM

Prepared by: Luz Mejia S.

- Explore HPL's public Wi-Fi service in all 22 branches and public spaces, including mobile libraries.
- Gather the user experience data in terms of guest Wi-Fi usage and Internet access.
- Analyze the reports related to Internet Speed, number of wi-fi sessions and the amount of data used by each library throughout the day.
- Gather qualitative data from the stakeholders and conduct a SWOT analysis.
- Recommend the optimal configuration for the wireless solution per building, in the different branches.
- Recommend improvements to the public Wi-Fi service in technology to use, connectivity method and user experience.
- Provide recommendations on a wireless access solution that would improve coverage and user experience.

Out of Scope

Sunday, November 15, 2020 1:24 PM

Prepared by: Luz Mejia S.

This challenge does not include:

- Recommending Internet Solution Providers.
- Specialized technical recommendations such as equipment or network configurations.
- The technical solutions to help the library adhere to the health and safety measures laid down by the Government during this pandemic.

Project Constraints

Sunday, November 15, 2020 1:24 PM

Prepared by: Avi Khurana

CONSTRAINTS IN REQUIREMENTS GATHERING:

1. Lack of HPL's autonomous power over usage data as it is third party managed.
2. Cumbersome data collection mechanism makes analyzing data difficult.
3. Site Surveys can be challenging during Pandemic. Individuals who will be performing site surveys might be reluctant to visit the locations of HPL and other possibilities could be with the evolving rising Covid-19 Cases libraries might be shut down or on-site staff will not be available to assist them.

CONSTRAINTS IN COMMUNICATION:

1. The technical support team at HPL is union based and is difficult to contact them to gather information from.
2. Some of the stakeholders interviewed from the digital technology department do not have direct interface with the customers so lack in identifying the root cause of the problem.
3. There is a communication gap between the Customer service representatives at HPL and the digital technology team because the issues pertaining to technology are only recorded in the form of issuing a ticket and are then handled by a support lead from the City of Hamilton.

CONSTRAINTS DURING OR AFTER CHANGE IMPLEMENTATION

1. Service disruption or degradation with respect to the change implementation can have bad user experience
2. Network security of the Wi-Fi is a major challenge that needs to be considered.

OTHER CONSTRAINTS:

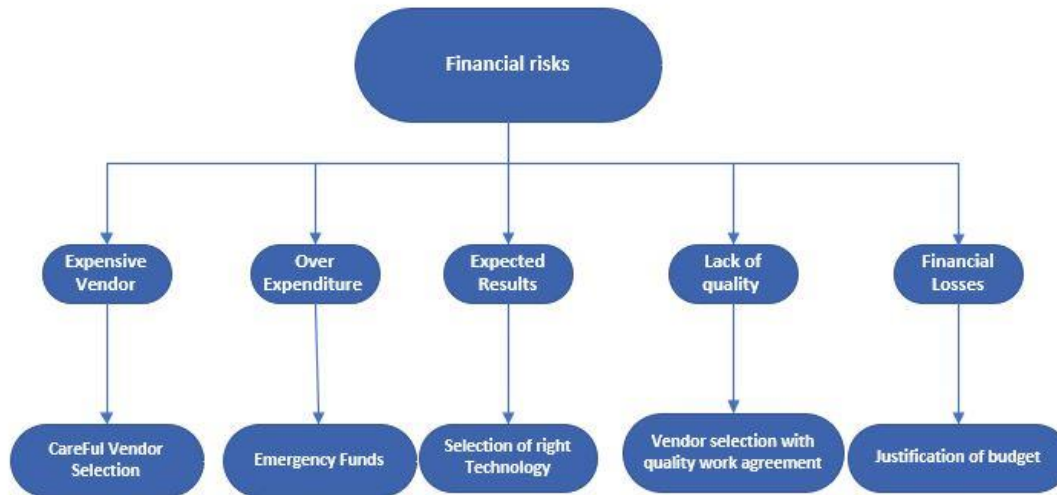
1. Rigidity in the current infrastructure(hardware) limiting the options for change implementation.
2. Outdated Access points approximately 8 years old.
3. Budget constraints from the City of Hamilton.

Risk Analysis

Sunday, November 15, 2020 1:24 PM

Risk Name	Risk Description	Risk
Lack of time from senior leadership team	The Senior Leadership members are engaged in to many tasks and is not able to prioritize time for event.	Business
Over Expenditure	Expectation of overrun the costs used in the project.	Financial
Lack of quality	Fails to meet the value of the requirements on time and within budget.	Financial
Government Funding Students	The Government decides to provide funds to students.	Financial
Low Participation	Insufficient contestant participation means it is hard to attract strong sponsors for events. Unable to get the expected number of sponsors which may impact the fundraising.	Other
Scope Creep	The project takes on to many additional tasks that cause it to creep outside the scope.	Requirements
Not a seamless user experience	Not a user friendly interface and the online platform is not easily accessibility.	Requirements
Law of diminishing returns	Team members are pushed, depleted and not performing at their best capabilities.	Requirements
Lack of time from project sponsor	The project sponsor is engaged in too many tasks and is not able to prioritize time for event.	Requirements
Lack of resource(s) and/or resource(s) time	The project takes longer than the planned due to lack of resources available.	Requirements
Lack of project support due to lack of participation	Low participation from library technical support	Requirements
Lack of leadership form Project Manager(s)	Project manager is not devoting enough time and energy to make this is a quality project. Is not prepared for tasks, team coordination, and lacks communication tools.	Requirements
Do not follow COVID measurements set by the Government	The members of the team or the participants might neglect the Social distancing norms currently in place due to COVID leading to health risks.	Requirements
Dissatisfied stakeholders	Stakeholders are not satisfied with the requirements, needs or commitments of the project.	Requirements
Teams widely Dispersed	Due to the pandemic the team is more dispersed . Differences in time zones, cultures, and communication barriers.	Skills
Takes longer to complete tasks	The project takes longer than the planned due to incorrect estimation of time duration.	Skills
Project Team	People working in the project do not want to adjust with the	Skills

Resistors (Change)	project as changes are being made to ensure a successful project. They continue to maintain their status quo, are not willing to give information, or dissatisfied with the progress of project.	
Lack of knowledge to assist	Help desk and technicians are not able to perform a requested task due to lack of knowledge.	Skills
Lack of knowledge (End users)	The end users do not follow specification of the photo and video in context of size, format and relevancy (only sharing of Pets pictures and videos etc.)	Skills
Lack of focus while working from home	With the changes to the world most of the team will be working from home. Many distractions cause a lack of focus to complete tasks on time.	Skills
Lack of communication	There are communication gaps in the teams, and stakeholders.	Skills
Incomplete deliverables	Lack of detail for deliverables, when they are due, who is to complete them, who is available, etc.	Skills
Wireless Internet provider	The selected provider does not meet the standards required for the provision of the WIFI service	Technological
Technology Used	The choice of the selected technology does not meet the expectations of the project.	Technological
Cybersecurity Threats	Security Specifications Do Not Support a Cyber Threat	Technological
Complex to implement	The chosen solution is not complex to implement and takes longer than expected.	Technological
Accurate solution	The chosen solution does not support the WIFI connection given the constructive conditions of the library building	Technological

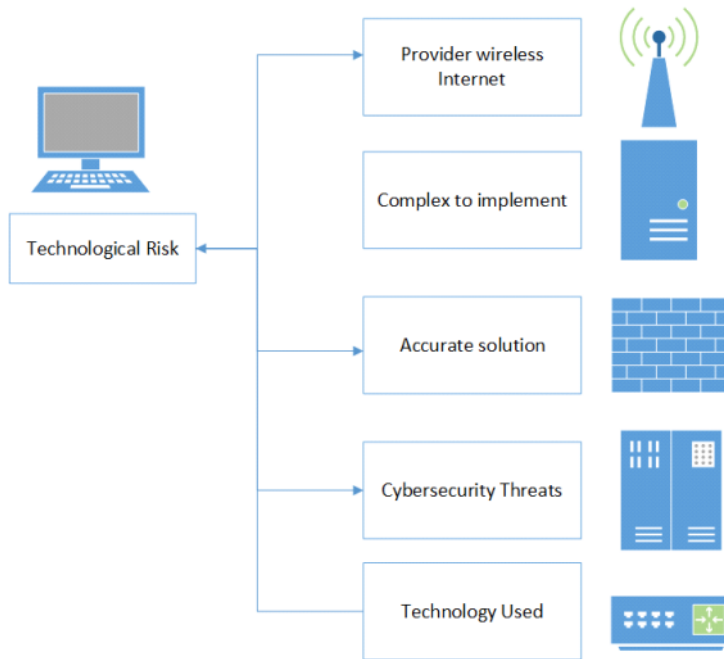


Risk Name	Risk Description	Mitigation
Expensive Vendor	Choosing the expensive vendor can lead to an over expenditure budget and cost inefficient project.	Vendor selection to be done carefully based on budget availability and who can meet the requirements
Over Expenditure	Expectation of overrun the costs used in the project.	Have an Emergency funds set aside for any unexpected costs that may arise.
Expected Results	The project which will be implemented does not meet the expected results. Will lead to a project failure and purpose.	Selection of technology according to the project requirement which meets current or near future expectations.
Lack of quality	Fails to meet the value of the requirements on time and within budget.	Choosing the vendor which provides the quality of work also after project support and warranty.
Financial Losses	Due to current Pandemic situation usage of HPL Wi-Fi is not same as before so huge investment in this project might raise questions from budget approvers or delays in work.	Justify the budget approvers that this upgrade applies not only now but good for next few years to come.

Technological

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Prepared by: Luz Mejia S.

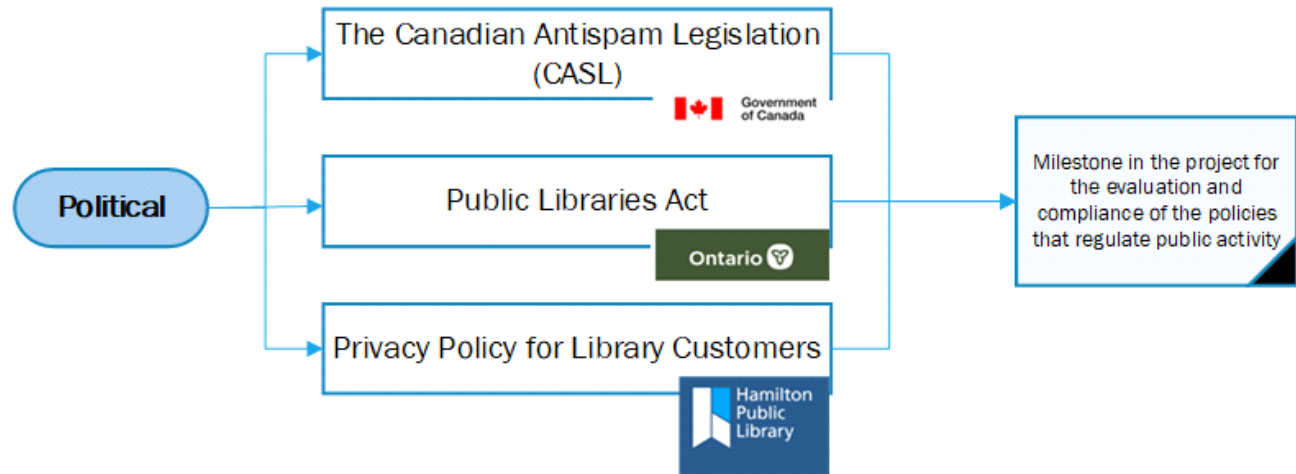


Risk Name	Risk Description	Mitigation
Wireless Internet provider	The selected provider does not meet the standards required for the provision of the WIFI service.	Make a provider evaluation that meets the required standards with the project requirements. Likewise, carry out a pilot test in a branch, evaluate the operation of the chosen solution, make the necessary adjustments, and thus massify.
Complex to implement	The chosen solution is too complex to implement and takes longer than expected.	Give them the details and requirements they just need. Escalate for approval processes that we find we can simplify in the execution within the scope of the project.
Accurate solution	The chosen solution does not support the WIFI connection given the constructive conditions of the library building.	The pilot test in one of the branches will provide us with an evaluation of the operation of the chosen solution, allowing us to make the necessary adjustments, before expanding. If we find some special conditions in a branch, we can suggest testing the connection in the basement, for example.
Cybersecurity Threats	There are frequents instances of security breach.	Have a milestone in the project to evaluate the solutions that allow us to comply with security standards in the face of a cyber threat and recommend constant updating during and after the project.
Technology Used	The choice of the selected technology does not meet the expectations of the project.	The pilot test in one of the branches will provide us with an evaluation of the operation of the chosen solution, allowing us to make the necessary adjustments, before massifying.

Political

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Prepared by: Luz Mejia S. and Avi Khurana



Project deliverables are contrary to:

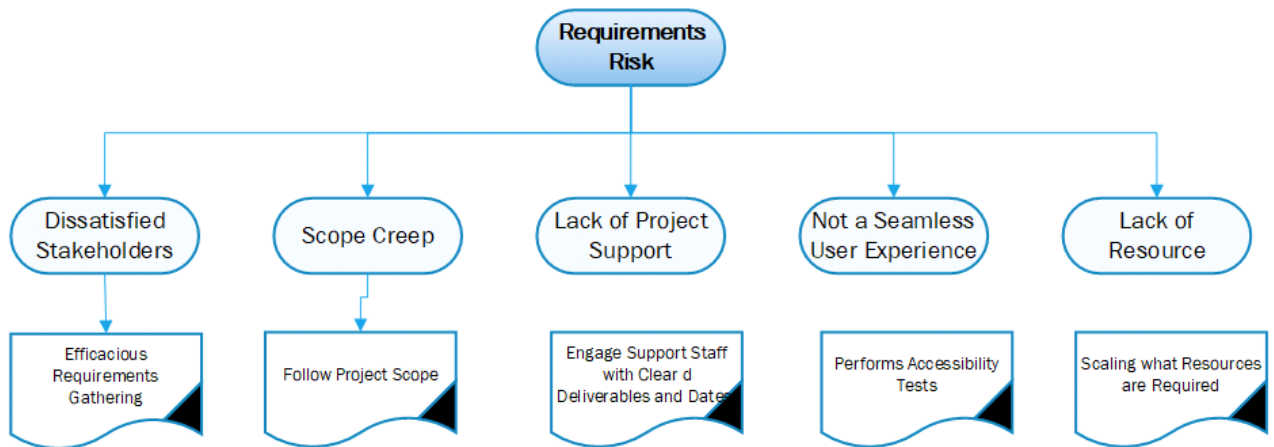
Risk Name	Risk Description
<ul style="list-style-type: none"> The Canadian Antispam Legislation (CASL) (Canada Anti-Spam Legislation.) 	Project deliverables violate Canadian antispam legislation (CASL).
<ul style="list-style-type: none"> Public Libraries Act (Municipal Freedom of Information and Protection of Privacy Act, 1990) 	Project deliverables violate the Public Libraries Act.
<ul style="list-style-type: none"> Privacy Policy for Library Customers (Policy Manual, HPL). 	Project deliverables violate the privacy policy for library customers.

To mitigate these, we recommend having a milestone in the project to evaluate the policies that regulate Public Libraries and government entities, and thus guarantee and comply with them.

Requirements

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Prepared by: Luz Mejia S.

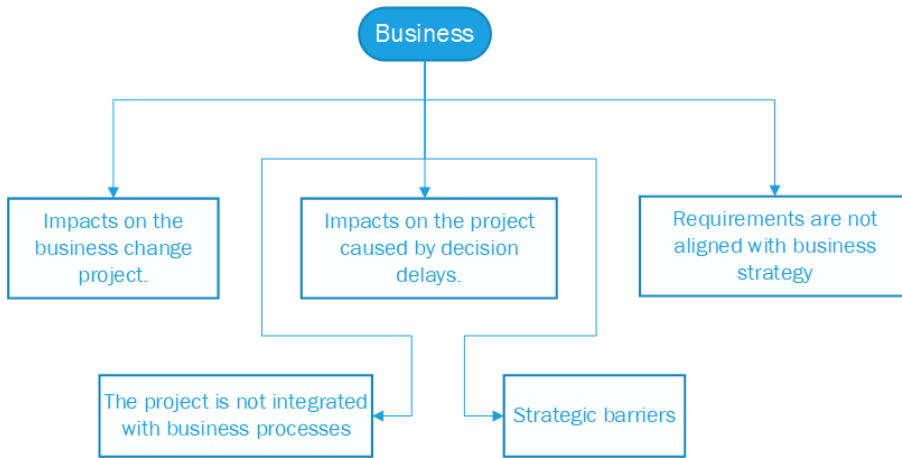


Risk Name	Risk Description	Mitigation
Dissatisfied stakeholders	Stakeholders are not satisfied with the requirements, needs or commitments of the project.	Plan meetings to obtain the necessary information with the interested parties to develop the project. If we find any gap in the information in the development of the project, raise the possible solutions for approval. Validate the deliverables from the project sponsor.
Scope Creep	The project takes on many additional tasks that make it out of scope.	The project manager and the project team follow the project scope and additional task is raised for approval and timeline adjustment.
Lack of project support due to lack of participation	Low participation from library technical support.	By creating more awareness of the project topic and goal, we engage support staff by assigning clear deliverables and dates.
Not a seamless user experience	Not a user friendly solution for users.	Performs accessibility tests, involving the branch staff and some users, incorporating their recommendations into the final design.
Lack of resource(s) and/or resource(s) time	The project takes longer than the planned due to lack of resources available.	Make sure that a person in charge of the team members is responsible for scaling what resources are required and not delaying the development of the project

Business

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Prepared by: Luz Mejia S.

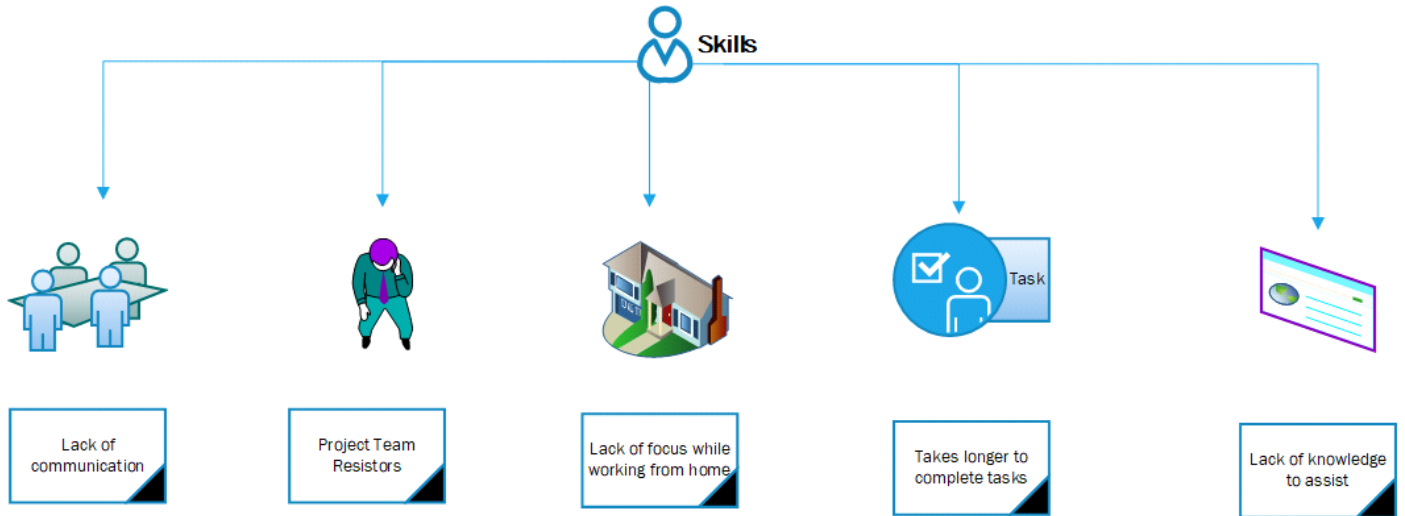


Risk Name	Risk Description	Mitigation
Impacts on the business change project.	Changes in the public environment could affect the development of the project.	Consider in project times the longest times in which you can make public decisions.
Impacts on the project caused by decision delays.	Significant changes in public entities may take longer than in other businesses.	Work closely with the project manager, project sponsor, and support teams to scale up decisions. Also, consider in project times the longest times in which you can make public decisions.
Requirements are not aligned with business strategy	The requirements are in conflict with the business strategy.	Starting from the strategy determined by the library, we guarantee alignment.
The project is not integrated with business processes	The proposed solution does not fit into the existing business.	Considering the processes currently determined by the library and knowing its operation, we can align the proposed solution.
Strategic barriers	Strategic barriers are sort of the infrastructure pieces because it's a third party and we don't have complete control over everything with the current system we have in place.	Based on the fact that we do not have complete control over everything with the system, we will propose the solution to ensure alignment with the entire management team.

Skills

Sunday, November 15, 2020 1:26 PM

Prepared by: Luz Mejia S.



Risk Name	Risk Description	Mitigation
Lack of communication	There are communication gaps in the teams, and stakeholders.	Establish periodic meetings to report the progress of the deliverables and obtain on-time feedback.
Project Team Resisters (Change)	People working in the project do not want to adjust with the project as changes are being made to ensure a successful project. They continue to maintain their status quo, are not willing to give information, or dissatisfied with the progress of project.	Establish change awareness sessions and demonstrate the need for this change to achieve the standards expected by management and the community. In these spaces, the messages from the upper management of the Library will leverage that all participants deliver their potential to achieve the project's objectives.
Lack of focus while working from home	With the changes to the world most of the team will be working from home. Many distractions cause a lack of focus to complete tasks on time.	Short-cycle monitoring by the project manager of the progress and closure of tasks.
Takes longer to complete tasks	The project takes longer than the planned due to incorrect estimation of time duration or lack of ability of the assigned person.	In the Short Cycle, the Project manager identifies this risk and takes actions to mitigate it and get back on track.
Lack of knowledge to assist	Help desk and technicians are not able to perform a requested task due to lack of knowledge.	Escalate to the project sponsor the lack of knowledge that we have in the project, and the requirements that we need to achieve the objectives of the project, in terms of training, expert personnel or additional resources.

As Is

Sunday, November 15, 2020 1:29 PM

INSTRUCTIONS:

Organization and presentation of this section will be graded based on innovative techniques for documenting the current state based on available data (eg. Data flow diagrams, use cases, other techniques). You can add new pages to subset and categorize this analysis.

If you use Use Cases, you need to submit the full suite of documents for Use Cases.

Prepared by: Tam and Avi

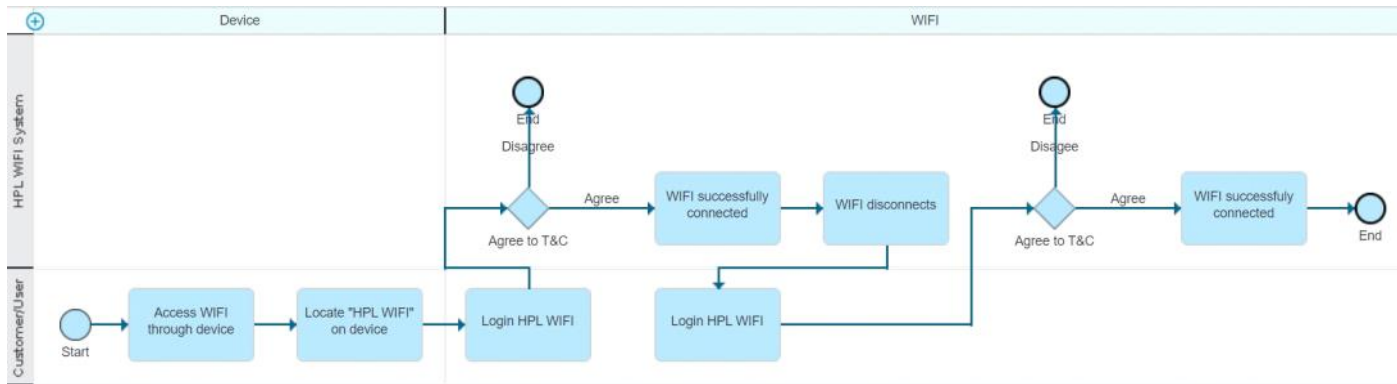
As is:

- Agree to T&C each login to HPL WIFI – Using BlueworksLive to create a process map to show how customers would have to agree to the T&C each time they login to HPL WIFI.
- WIFI data collection process at HPL – Using a Business Process Model and Notation to show how WIFI data is collected at HPL.

Process Map

Tuesday, December 8, 2020 10:43 PM

- T&C Acceptance for each login to HPL WIFI – Using BlueworksLive to create a process map to show how HPL guests have to agree to the T&C each time they login to HPL WIFI.



ONEDRIVE Link:

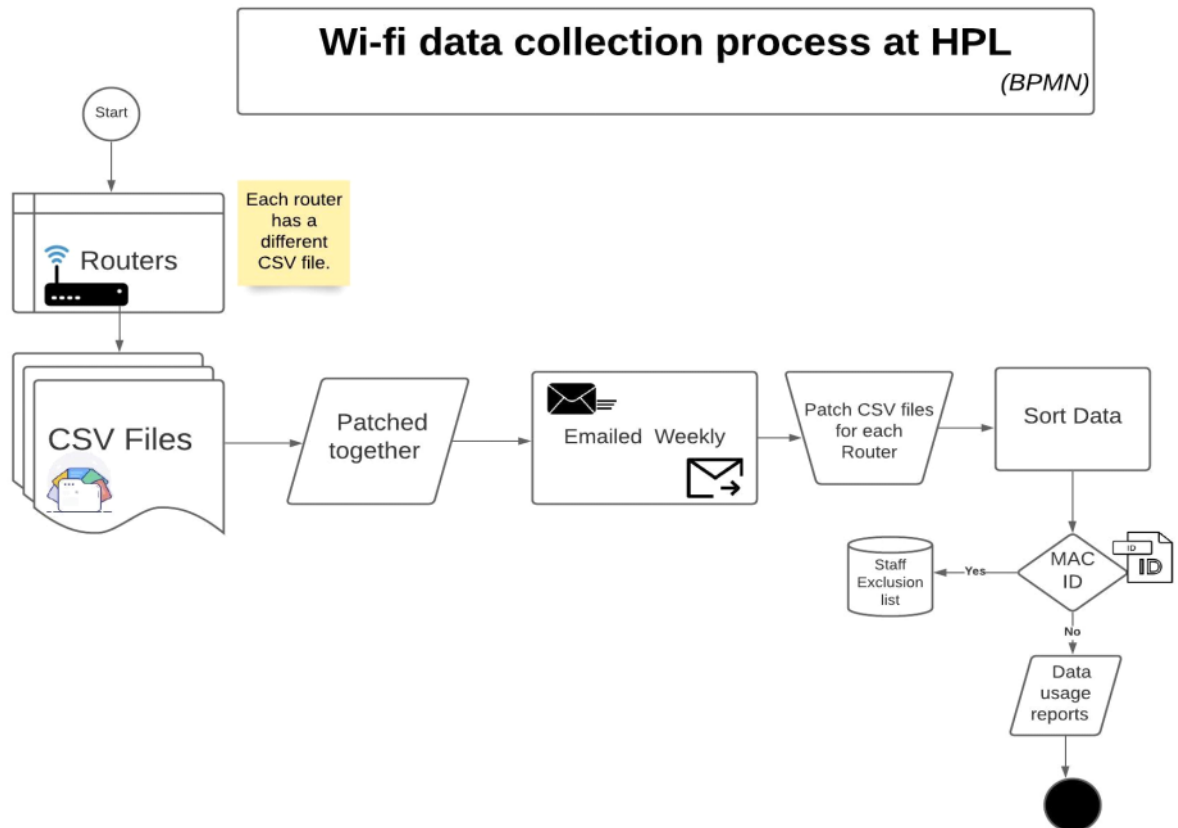
https://mohawkcollege365-my.sharepoint.com/:w:/g/personal/000368427_mohawkcollege_ca/EbMyGFI1wCZFvnT4jRoIPj8BMMWXO54MLK_BzTzpaOTwA?e=aOsNJf

BPMN 2.0

Tuesday, December 8, 2020 10:50 PM

Prepared by: Avi Khurana

- WIFI data collection process at HPL – Using a Business Process Model and Notation to show how WIFI data is collected at HPL.



Wi-fi data collection process

According to Krystin Parkinson - "The way HPL gets the data is currently very problematic so we have files for each and every router which are essentially CSV files that we then have to Patch together and they are emailed to our email weekly on Sundays. We have to Patch together each router CSV and then we have a process where if a Mac ID has been registered in a staff only area we then add that to the staff exclusion list and then we sort through them all. There is a separate Wi-Fi that staff can use and our work devices all log on to that but our staff devices and personal staff devices also access the public Wi-Fi."

ONEDRIVE LINK -

https://mohawkcollege365-my.sharepoint.com/:b:/g/personal/000811878_mohawkcollege_ca/EUr8DfTqjjpBjXqmfFGu-MsBLYzPBti80lc8M3xbPcCEQ?e=1GbRxm

To Be: Recommendations

Sunday, November 15, 2020 1:30 PM

INSTRUCTIONS:

Organization and presentation of this section will be graded based on innovative techniques for documenting the current state based on available data (eg. Data flow diagrams, use cases, other techniques). You can add new pages to subset and categorize this analysis.

If you use Use Cases, you need to submit the full suite of documents for Use Cases.

Recommendations:

1. Site survey - Using an Activity Diagram to show how to conduct a site survey in order to enhance HPL WIFI.
2. Request assistance - Using the full suite document for Use Cases to show HPL staffs assisting customers in connecting to the HPL WIFI.

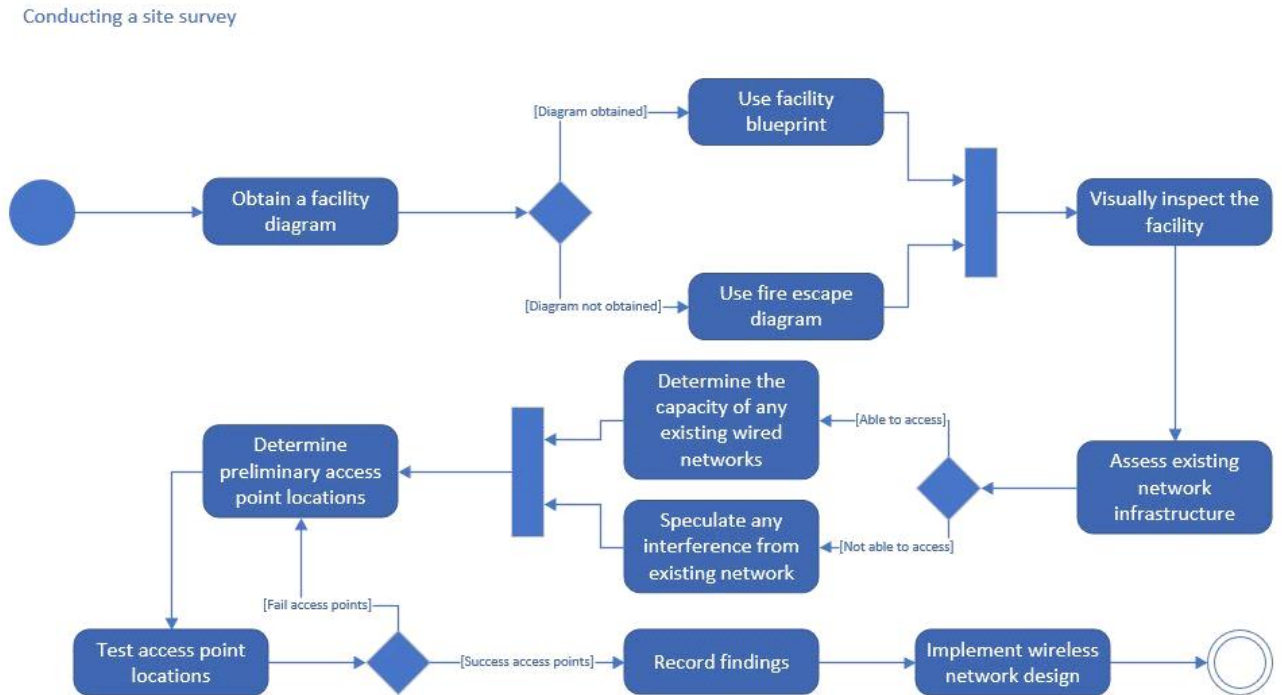
Activity Diagram

Wednesday, December 9, 2020 4:41 PM

Prepared by: Tam Truong

Recommendations:

1. Site survey - Using an Activity Diagram to show how to conduct a site survey in order to enhance HPL WIFI.



Use Case Suite

Wednesday, December 9, 2020 4:41 PM

Prepared by: Tam Truong

2. Request assistance - Using the full suite document for Use Cases to show HPL staffs assisting customers in connecting to the HPL WIFI.

ONEDRIVE link for our USE CASE SUITE: Including Use Case brief, Use Case diagram and an Activity Diagram.

[Requesting Assistance for Connection Error.docx](#)

Capstone Requirements Summary

Tuesday, November 24, 2020 1:11 PM

Students have worked in teams applying what they have learned about how to make data-driven decisions to a real business case Enhancing Wi-Fi at HPL. The Capstone requirement for Facilitating Change (BUSN10258) will include the team devising a plan of action for optimizing data itself to provide key insights and analysis, and to describe the interaction between stakeholders.

Deliverables

1. Component One: Team Charter for the Enhancing Wi-Fi at HPL Project: As a team, prepare a Team Contract that outlines roles, responsibilities, principles and guidelines for an effective team, consequences for not meeting requirements as a member of an effective team, other criteria as determined by the team.

- Team Charter Template or
- Team Contact Link : <https://h5pstudio.ecampusontario.ca/content/8288>

2. Component Two: Two (2) Project Meetings, as a BA use different types of project meetings to ensure progress stays on track. Types of Meeting may include Project Team meeting, Status Updates, Stakeholder Engagement and Management/Faculty team meeting.

Virtual Meeting: Capture audio and video meeting recording

Agenda: Provide a meeting agenda is a list of topics or activities to cover during your meeting

Follow-up Meeting Minutes (Action Items): Include decisions made, next steps and action items

3. Lessons Learned for effective reflection moving forward to future success on other projects

Lessons Learned Summary: Uncovering what project team & stakeholders believe was done well and what could have been done better.

- Project Planning
- Project Execution
- Communication
- Obstacles
- Other

Team Charter

Sunday, November 15, 2020 1:35 PM

Edited by: Avi Khurana

Participation

- Division of tasks – Authority to choose their area of expertise to contribute to the team for effective utilization of individual strengths.
- Participation in meetings – Expected active listening and brainstorming for idea generation.
- For video conferencing, it will always be preferable to have video cameras on, however, it is not mandatory.
- Feedbacks - Transparent and respectful without any hesitation or fear of recrimination from other team members.
- Meeting deadlines – Deliver as promised or inform at least 24 hours in advance in case of emergencies.
- Decision Making - Democratic in reaching a consensus through simple voting in case of ambiguity in decision-making.
- Over commitments - We would stay away from over commitments and agree to those deliverables only which we are qualified for and capable of doing. We would not feel ashamed of our drawbacks and be open to request help from other team members to learn and grow as a team.

Communication

- No physical meetings, strict adherence to Health and Safety protocol of social distancing, a
- Virtual platforms.
- Informal communication - WhatsApp Group because all the team members check WhatsApp accounts more frequently as compared to any other modes of communication.
- Formal Communication - Outlook Emails – to transfer files and data or communicating important information. Microsoft Teams and Zoom for team meetings.
- Individual Expectations - All team members are expected to communicate any problems or issues that arise from conflicts and respectfully respond to each other. In case of delays in individual submissions to the project, all team members should be notified so that we can come out with a plan to handle the situation, to avoid any disruptions in the progress of the project.
- (NOTE– We respect the cultural diversity in our group but to avoid any kind of discrimination we will all communicate in the common language - ENGLISH.)

Meetings

- Team meetings would be conducted at the discretion of all the group members after evaluating the necessity of the meeting who would also contribute to setting up the agenda.
- Responsibilities relating to meeting facilitation would be rotated among team members.
- In case a member is absent from a meeting, the content discussed in the meeting would be communicated through meeting notes.

- There would always be an agenda for effective utilization of meeting time and attainment of meeting goals.
- We would have notes taken for every meeting for future reference and data accountability. It will also be useful for reviewing and backtracking.
- Start and end time of our meetings would be trailed as it will help slice time slots for review, discussion, actions, decision, and task assignment to the participants.
- Every meeting would end with a session dedicated to evaluating the progress of the meeting and the fulfillment of its purpose.

Conduct

- Our team agrees to behave in an inclusive, considerate, respectful, and collaborative manner.
- All the team members will be punctual to the meetings and try to avoid any disruptions in the background whenever possible.
- Due to different personality types, we would provide equal opportunities to the introverts to present their ideas and not make them feel excluded from the team to encourage open discussions and innovative ideas from all the members.
- We would be patient while listening to different ideas and be very polite in demonstrating disagreement.
- We agree not to use any abusive language or harsh words which would hurt the sentiments of others and poison the team's work environment.
- We promise to be considerate and adjust meetings and internal deadlines to accommodate all.

Conflict Resolution

- First resort - Confront the individual in a safe space this could be done privately or publicly depending upon where the team members feel most comfortable.
- We will communicate in an empathetic manner and take into consideration each person's perspective. We will approach negotiation with an open mind knowing opinions may vary and everyone may not agree with each other and reach an agreement based on consensus.
- However, in certain cases, our approach to resolving a conflict will be as follows. If a team member fails to submit his/her deliverable on time, the team would decide via WhatsApp group to divide the work to avoid any hindrance in the overall progress of the project.
- Secondly, the issue would be discussed in the following meeting, and methods of delegating work would be reconsidered. Also, we will try to avoid such a situation by discussing in advance if anyone has any challenges with deadlines.
- If a team member commits to attending a meeting and doesn't show up, we would wait for 10 minutes before diving into key discussion points and just inform him/her to be more punctual next time. If a similar behavior is observed again, we would provide a humble warning twice.
- If the behavior continues, we will provide a final warning before escalating the issue to the faculty. If a team member fails to participate in the group work, shows a lack of responsibility and participation, the team would send 3 reminder emails before escalating the issue to the faculty.

Our team agrees to a **Zero-Tolerance policy** in case of misconduct with other team members. If a team member behaves rudely or abruptly the first action would be to calm the person down and request an apology for the behavior of the individual. If he/she disagrees to change his/her behavior or apologize, we would inform the faculty right away to help us deal with such behavior. We all agree to accommodate unanticipated circumstances and other adversities in life but misbehavior in any form would not be tolerated in our team.

SIGNED BY: Team Members

Luz Mejia Sierra - 000819118 – 07/12/20

Tam Truong - 000368427 – 07/12/20

Amna Sadiq - 000821654 - 07/12/20

Ogochukwu Assams - 000820408 - 07/12/20

Tina Vineham – 000766701 - 07/12/20

Avi Khurana - 000811878 -07/12/20

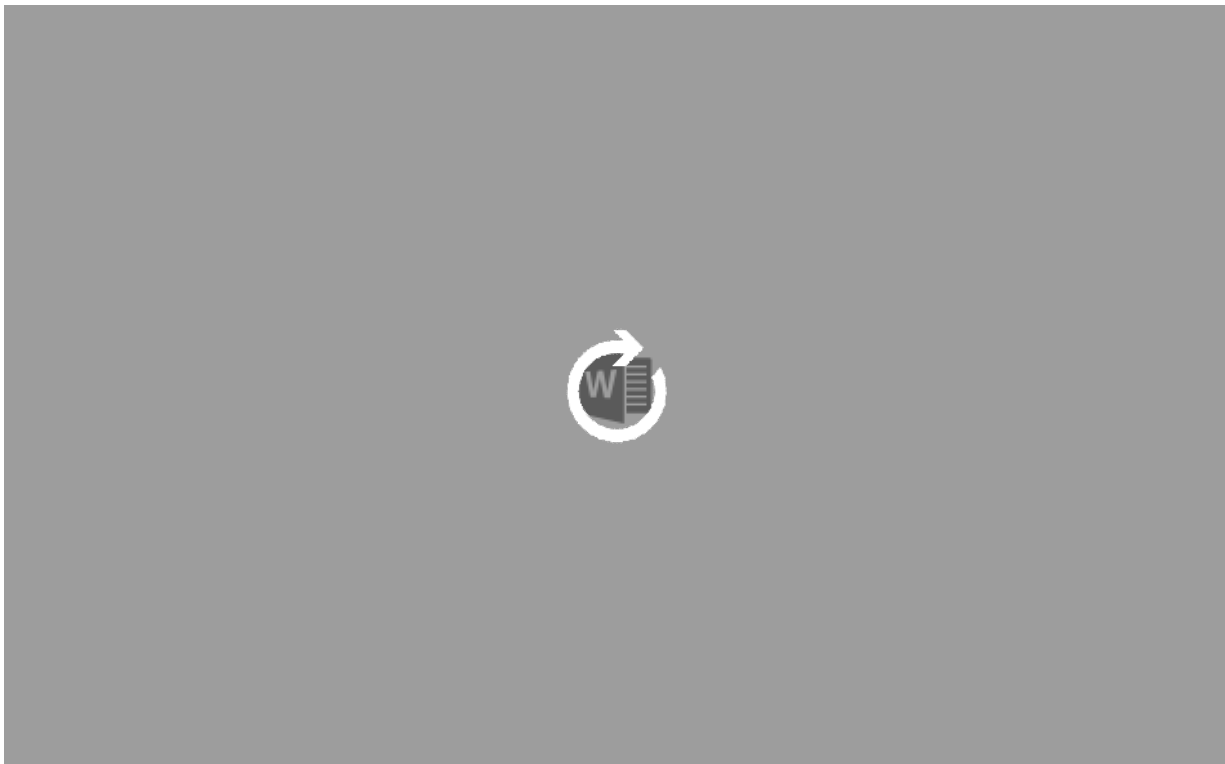
Meeting No.1

Sunday, November 15, 2020 1:36 PM

Prepared by: Tina Vineham

ONEDRIVE link for the Agenda document:

https://mohawkcollege365-my.sharepoint.com/:w:/g/personal/000811878_mohawkcollege_ca/EQTjzQqH27NApD2rNAeF-DwBzge_WFoWKJxU4Hv2y9Zukw?e=Ugyb69



ONEDRIVE link for the Meeting Minutes document:

https://mohawkcollege365-my.sharepoint.com/:w:/g/personal/000811878_mohawkcollege_ca/EbnMaCLGsPFCu8fpM81sR00BuH7T0zuleZSYX7SUKS2Kqw?e=1cVNjs



ONEDRIVE link for the recording:

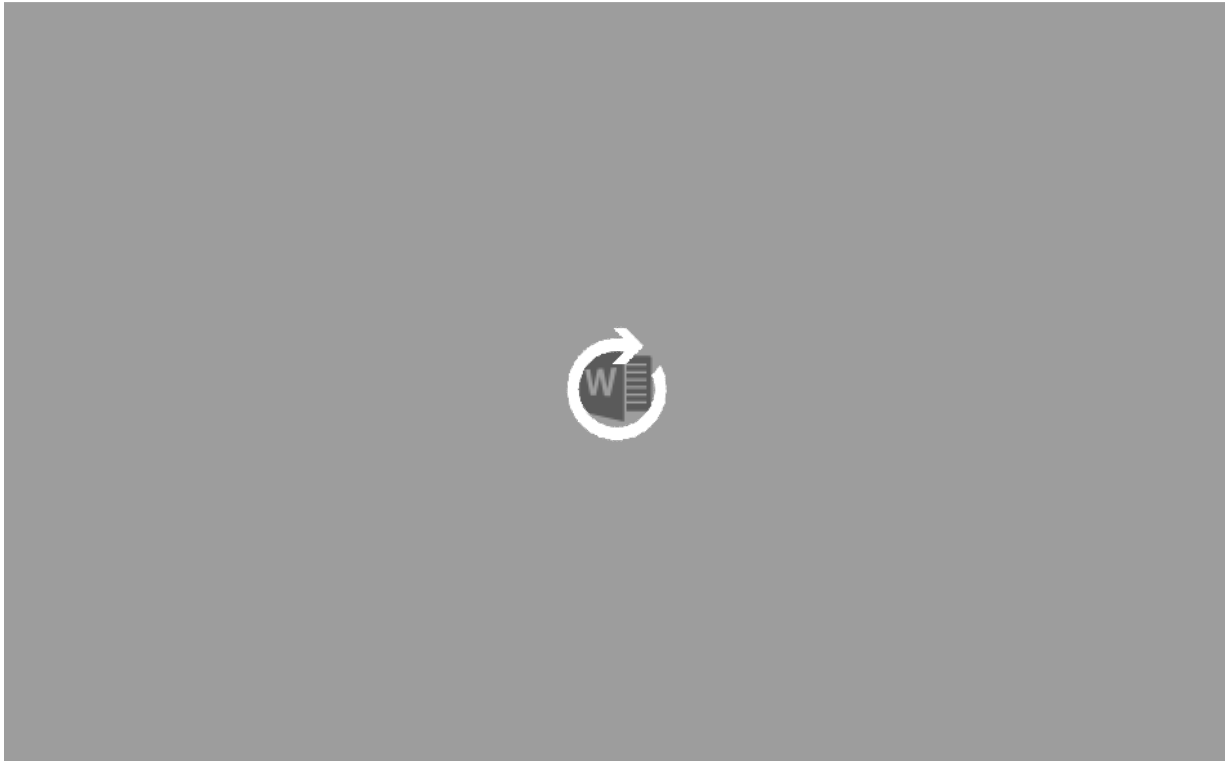
<https://mohawkcollege365.sharepoint.com/:v:/s/group4capstoneprojectf2020/ESbmaeCcbI1Hkwdy0j23AwIBFibi5pQemlIWhSLIH4fDhw?e=sVNecd>

Meeting No.2

Sunday, November 15, 2020 1:36 PM

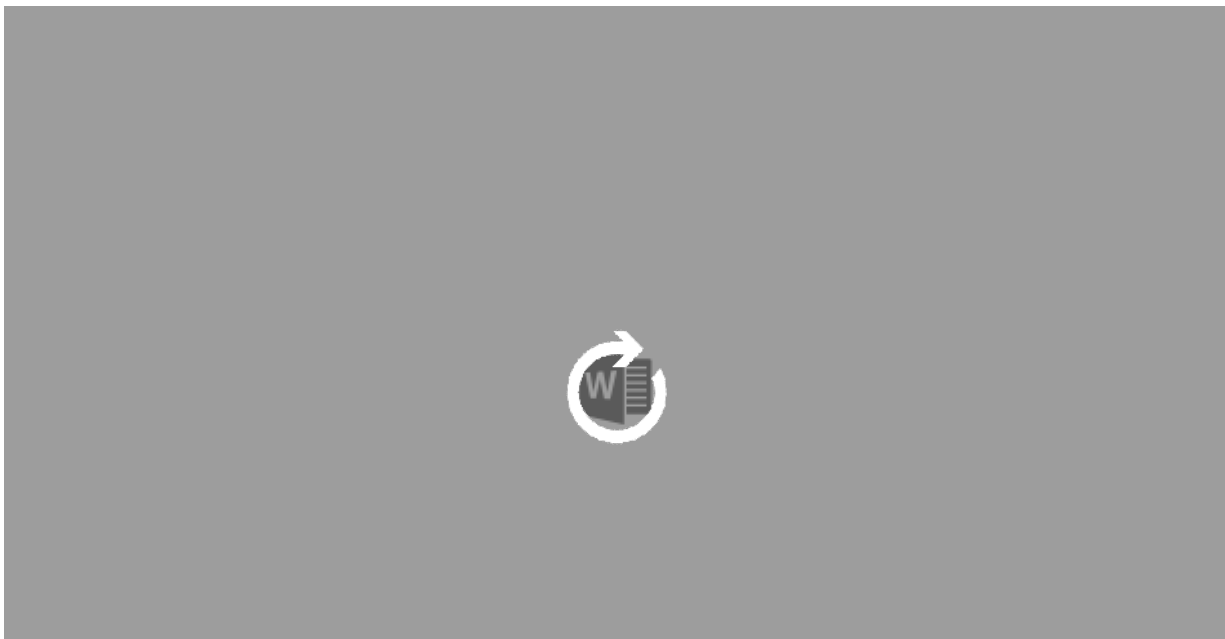
ONEDRIVE link for the Agenda document:


[HPL Capstone Meeting #2 Agenda](#)



ONEDRIVE link for the Meeting Minutes document:

[HPL Capstone Meeting #2 Meeting Minutes](#)





ONEDRIVE link for the recording:

<https://mohawkcollege365.sharepoint.com/:v:/s/group4capstoneprojectf2020/EVsxBoTzt8NItxrgNTpkDyEB5IBJeYI5Dpa-mpdnFdC1oA?e=IKhLXc>

Lessons Learned

Sunday, November 15, 2020 1:37 PM

Prepare a summary that outlines the Lessons Learned by the team in regard to team effectiveness, team meetings, etc. As it relates to the course. Use a template or technique of your choice to complete this section.

Prepared by: Team 4

Lessons Learned Summary: Uncovering what project team & stakeholders believe was done well and what could have been done better.

Project Planning

What went well:

- We were able to schedule our meetings according to every member's availability, despite of conflicting schedules.
- Delegation of work went smooth, everyone was flexible in choosing a part and completed it within the time frame with acceptable quality.

What can be improved:

- For virtual interviews with the stakeholders, when we viewed the recordings, 20-25 minutes people were either preparing for the meeting or waiting for the stakeholder to join the meeting. Also, some interviewees didn't turn their cameras on so we could not gauge the expressions.

So, in future we should be absolutely prepared before starting the meeting, because apparently virtual environment is a norm.

- We had a team member who is a part-time student and she was not a part of the BASE course – Strategy Analysis so she didn't have on-time access to all the available information and documents.
- There were some discrepancies in research from our side. A thorough analysis of the available quantitative as well as qualitative data could have been done.
- We didn't get an opportunity to interview the Digital technology experts due to their unavailability. We think that they would have been one of the most useful resource to gather information.

Project Execution

What went well:

- We had a diverse team so we had an advantage of diverse ideas and perspectives. All the team members came from different backgrounds and experiences bringing their individual strengths to perform optimally as a team.
- Every member provided an update of their individual assigned parts and completed their deliverable on time.
- All the team members are in Canada and follow the same time-zone so it was beneficial for us to divide work, schedule meetings and get deliverables according to everyone's ease.

- We had good amount of time in the final weeks of the semester because our course coordinator helped us reduce our burden from other courses. Also, we didn't have any classes so we were able to devote our time thoroughly for the capstone project.

What can be improved:

- Our team meetings didn't start on the scheduled time. We had to wait for at least 5-10 minutes for all the team members to join which delayed our overall duration of the meeting. So, we can improve upon that in the future by joining at least 5-10 minutes before the scheduled time..
- Some of the rubrics and given information was unclear and difficult to comprehend for some of our team members, which delayed their contribution and limited their participation in the team meetings. So we can help our team members clarify the expectations beforehand and provide them an opportunity to contribute more in future.

Communication

What went well:

- We were able to review interviews from all the stakeholder through the dashboard, so we got qualitative data for our requirements gathering process. Similarly, all the data was available on the same platform in Strategy Analysis course like recordings for the kick-off meetings, excel sheets for data, survey reports etc.
- We had multiple platforms to communicate which included, MS teams for meetings and recordings, SharePoint for sharing documents so everyone had access to it, and WhatsApp for informal communication and discussions.
- Collaboration, flexibility in decision making and understanding between the team members helped us avoid conflicts to a significant extent.

What can be improved:

- Virtual meetings: We had some aspects of the project (infographic) where working on virtual platform like (Venngage) was difficult because we had limited access and we had to work on only one person's account, so everyone couldn't participate except of feedbacks and comments, so we had to work together in a meeting which was very difficult.
- All our communications were through virtual platforms which limited our scope of understanding our team members and getting to know them on the personal level.

Obstacles

- Internet usage reports were raw in format. It was time-consuming to sort the data and come up with organized charts Limited resources available, discrepancies in data took a lot of time.
- Virtual Environment – We could not conduct in-person visits to the library due to the pandemic situation. It limited our requirements gathering process.
- Difficulty using One note for tables, graphs and diagrams. Just a suggestion for future capstone projects for students, a SharePoint group with faculty and team members participating in it would provide an opportunity to upload documents and would also help the faculty gauge participation as it gives in-time updates with the team member's name.

Other

What went well:

- Some of our team members has personal emergencies during the entire project, so all other team members were considerate and didn't exclude that member completely from the team. Also, each team member contributed their 100% even though the proportions in the deliverables varied, as a whole it was full commitment and participation toward the team.
- Acknowledgement of team members and their contributions.
- Our project was one of the top 3. We got an opportunity to be a part of the project showcase conducted by the CityLab.
- We had multiple Best-Practices meeting, so we learnt from the other peers in the class as well.

What can be improved:

- No contact with the customers who are end-users for the Wi-fi.
- We were hoping to have an access to all the teams work not just the top three because we believe that everybody has something unique to learn from.

Control Plan

Sunday, November 15, 2020 1:38 PM

See instructions in MS Excel

https://mohawkcollege365-my.sharepoint.com/:x/g/personal/001108340_mohawkcollege_ca/EW6rGWfIbhJCloBr97VV4HsBLTPyDc1sg_LVLJS0OY7IWw?e=qQzGWT

LinkedIn Project Statements

Sunday, November 15, 2020 1:39 PM

Update the experience section of your LinkedIn Profiles with:

Student Business Analyst: Hamilton Public Library WiFi Project

Create 3-5 statements that outline your skills and knowledge utilized for this project

Copy Your LinkedIn Profile URL and paste It into the following table

Student Name	LinkedInProfile URL
Avi Khurana	www.linkedin.com/in/avi-khurana-04021998
Tina Vineham	https://www.linkedin.com/in/tina-vineham/
Tam Truong	https://www.linkedin.com/in/tam-truong-045147199/
Luz Mejia Sierra	www.linkedin.com/in/luz-mejia-s
Ogochukwu Assams	www.linkedin.com/in/ogochukwu-assams-038401127
Amna Sadiq	https://www.linkedin.com/in/amna-sadiq-1898671b5/

LinkedIn Recommendation

Sunday, November 15, 2020 1:39 PM

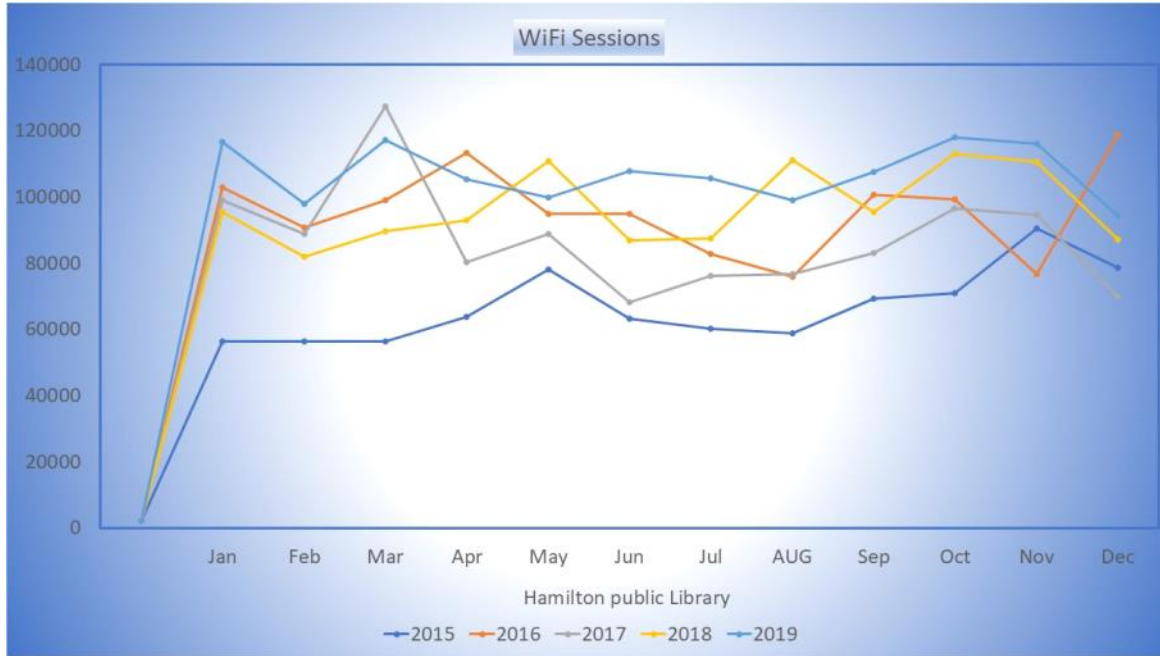
Request an endorsement for a specific skill from the Program Coordinator for your LinkedIn Profile. The skill must be relevant to Business Analysis.

Appendices

Monday, November 30, 2020 12:12 PM

Add in additional information that supports this document such as a link to the Interview SWOT Analysis, data analysis etc.

1. Line Graph for Number of sessions at HPL from 2015-2019



Hamilton public Library												
	Jan	Feb	Mar	Apr	May	Jun	Jul	AUG	Sep	Oct	Nov	Dec
2015	56250	56250	56250	63739	77967	63166	60101	58858	69197	70917	90491	78529
2016	102772	90863	99111	113286	94729	94745	82728	75903	100745	99338	76794	118725
2017	98876	88748	127421	80328	88753	68147	76139	76599	82949	96591	94635	69786
2018	95539	82058	89752	92815	110951	86794	87326	111088	95384	112908	110430	87201
2019	116693	97857	117031	105264	99753	107728	105617	98859	107420	117942	116110	94180

2. Sorted Quantitative Data

https://mohawkcollege365.sharepoint.com/:w:/r/sites/group4capstoneprojectf2020/_layouts/15/Doc.aspx?sourcedoc=%7BD89123B1-517B-4DB1-B01E-4AAD9F2F322E%7D&file=Quantitative%20Data%20Analysis.docx&action=default&mobileredirect=true

3. SWOT ANALYSIS - Interview Dashboard

NOTE– Due to the online format, some of the editing in the documents is changing. If there is any confusion please feel free to ask us for an original document. We would be happy to email you or submit

it on MyCanvas or dropbox, depending upon your convenience.

[My working copy 2 HPL Wifi Interviews](#)

