Vision and Scope Document

for

Project TYR

Team Early Worms

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Contents

Revision History

Name	Date	Reason For Changes	Version
Jadin Sadler	12/8/22	Formatting the templates document to reflect projects / choosing sections for the document	0.1
Jadin Sadler	12/8/22	Filling out business requirements	0.1.1
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1. Business Requirements

The Washington Hospitality Association has tasked Washington State University with the development of a system to visualize the health of the hospitality industry in Washington state. The business requirements of the system are that it must be able to:

- Track and display key metrics related to the hospitality industry, such as revenue, employment, and wages
- Compare data across different time periods, year-over-year to see how the industry is growing or changing.
- Analyze data filtered by specific regions within Washington state to see how the hospitality industry is performing in those areas.
- Integrate data from multiple government agencies, to provide a comprehensive view of the industry.
- Provide easy-to-understand visualizations, such as charts, graphs, and maps, to make the data accessible to a wide audience.
- Update regularly to ensure the data is current and accurate.

Overall, the main goal of this project is to create a system that can provide valuable insights into the health of the hospitality industry in Washington state, helping the Washington Hospitality Association and others to better understand and plan for the future of this important industry.

1.1. Background

The Hospitality Industry Data Visualization Project is an initiative to create a system that can measure and visualize the health of the hospitality industry in Washington state. Currently there are no comprehensive tools in place to track and analyze the performance of the hospitality industry in Washington. This challenges the Washington Hospitality Association and others interested in understanding and supporting the industry's health.

To address this need, the Washington Hospitality Association is working with WSU to create a system that can aggregate, analyze, and visualize data related to the hospitality industry in Washington. The goal of this project is to provide concrete metrics of industry health for the association and others who are interested in understanding and supporting the hospitality industry in Washington state.

The need for this project arose from the recognition that the hospitality industry plays a significant role in the economy of Washington state, providing jobs and generating revenue. By creating a system that can track and analyze the health of the hospitality industry, the Washington Hospitality Association and others can gain valuable insights that can help them to support and promote the industry, make educated policy decisions, and to plan for its future growth and success.

1.2. Business Opportunity

This data visualization project is unique and valuable because it is the first of its kind in the United States to provide a visual representation of the health of the hospitality industry using government-collected data.

This data visualization system fills a gap in the market for tools that can track and analyze the hospitality industry in Washington because there are currently no comprehensive tools in place to do this. By creating a system that can collect, analyze, and visualize data related to the hospitality industry in Washington, the system addresses a significant need in the market.

The partnership with government entities to analyze data is a unique asset of this project. By partnering with government agencies, the system has exclusive access to a wealth of data that can provide valuable insights into the health of the hospitality industry in Washington state.

Third, the visualizations that this product provides are an important differentiator. By using easy-to-understand visualizations, such as charts, graphs, and maps, the development team will make the data accessible to a wide audience. This makes it easier for the Washington Hospitality Association and others to quickly understand and interpret the data, and to use it to make informed data driven business decisions.

Overall, the project is valuable, satisfies industry needs, offers unique features, and provides valuable insights into the health of the hospitality industry in Washington state. This makes it a great business opportunity for the Washington Hospitality Association.

1.3. Business Objectives

- To develop a system that can provide data-driven insights and recommendations to support the growth and success of the hospitality industry in Washington state.
- To create a user-friendly and engaging system that can provide valuable information and insights to a wide range of stakeholders, including policymakers, industry leaders, and the general public.
- To create a scalable and sustainable system that can be expanded and enhanced over time, with the potential to integrate new data sources and develop new visualizations and features.
- To provide valuable information and insight to the Washington Hospitality Association and other stakeholders that can be used to support the industry and inform decision-making.
- To increase awareness and understanding of the hospitality industry in Washington state, and to support its growth and success.
- To gain national recognition for WSU's expertise in hospitality industry research.

1.4. Success Metrics

The project will be successful if the system meets the following criteria:

- The metric set with which to determine the health of the hospitality industry is sufficiently comprehensive and detailed.
- The data covers all regions of the state
- The data is conveniently accessible by the public. (Can be accessed when and where desired over the internet)
- The data visualizations present the data in meaningful, insightful ways that provide value to users.

1.5. Vision Statement

The purpose of this product is to facilitate the analysis of data regarding the health of the Hospitality industry in Washington State to produce a neutral "Score Card" to show the effects of large-scale industry changes. The wishes of the client also include improving access to data relevant to business analytics, and potentially bring WSU to the forefront of hospitality business research in the country.

1.6. Business Risks

Risk	Severity	Probability	Mitigation
Insufficient data	High	Low	Maintain a good relationship with government entities that provide the data.
Technical challenges	High	Low	Creating a schedule to keep the project on track. Meeting with mentors and stakeholders for consultations on issues that may arise.
User adoption	Medium	Medium	Promote the website and teach users about features. Leverage relationship with WHA.

There are several factors that could prevent the success criteria for the Washington Hospitality Association Project from being met. Some potential challenges that the development team may face include:
- Insufficient data: One potential challenge is that the development team may not have access to all the data that is needed to create comprehensive and accurate data visualizations. This could be due to limitations in the data available from government agencies or difficulties in integrating data from multiple sources.
- Technical challenges: Another potential challenge is that the development team may encounter technical difficulties in developing and launching the web page, such as compatibility issues, bugs, or security vulnerabilities. These challenges could delay the launch of the web page and impact the ability of the product to deliver value to the Washington Hospitality Association and others.
- User adoption: A third potential challenge is that the web page may not be widely adopted by users, such as by business owners and policy makers. This could be due to lack of awareness of the product, or to difficulties in using the data visualizations provided by the web page.

Overall, the success of the Washington Hospitality Association Project will depend on the ability of the development team to overcome these and other challenges and to deliver a high-quality product that meets the needs of the Washington Hospitality Association and others who are interested in understanding and supporting the growth of the hospitality industry in Washington state. By achieving the main success criteria and managing risks, the development team can help to make WSU the hospitality industry research capital of the world, and to improve the efficacy of decisions related to the hospitality industry.

1.7. Business Assumptions and Dependencies

Assumptions:
- The project requirements and specifications will not change
- The data visualization tool will be used by WHA
- The project will utilize data given by the Department of Revenue and other government agencies
- Once the system is created, it will be scalable to new data sources.

Dependencies:
- AWS for hosting and processing data
- Microsoft Power BI for creating visualizations.
- Washington state government entities supplying data for visualization
- WSU hosting the public-facing website

2. Scope and Limitations

2.1. Major Features

Feature list
- Automatic data ingestion process with obfuscation and aggregation.
- Persistent data storage in the cloud.
- Aggregated data made publicly available through read-only database.
- Descriptive and easy to read data visualization
- Neutral representation of given data
- Summary PDF generation

2.2. Scope of Initial Release

All major features listed above will be implemented in the initial release. The initial release of the project will include a website containing 9-12 Microsoft BI dashboards that display information covering 9 different metrics over several Washington State regions. This data will be updated quarterly, and sourced directly from the Department of Revenue, ensuring its accuracy and relevance.

2.3. Scope of Subsequent Releases

Subsequent releases will include API releases to hook into the aggregated database on the AWS platform for more bespoke access to the data for research purposes, and to assist in deployment of similar broad data analysis tools like this one.

The project may also be scaled in future releases to include data relevant to other commercial industries, or data from other states.

2.4. Limitations and Exclusions

Due to the efforts of previous teams and the time we've spent organizing and outlining the requirements given by the client, we have been able to schedule out the totality of the features requested. There will be no feature exclusions.

3. Business Context

3.1. Stakeholder Profiles

Stakeholders:
- The Department of Revenue. This department is a key stakeholder in the project, as it is the source of the data used in the visualization. The department is interested in the accuracy and reliability of the data and its security.
- The hospitality industry in Washington state. This industry is a key stakeholder in the project, as the visualization would be providing insights and information about the health of the industry.
- Policymakers and government officials. Policymakers and government officials in Washington state would also be stakeholders in the project, as the visualization could provide valuable insights into the impact of policy on the hospitality industry in the state.
- Washington State University. WSU is a key stakeholder in the project because they are facilitating its development. A successful launch of the project will be good for WSU's reputation and will provide long term benefits in terms of research opportunities for the university.

- Washington Hospitality Association. WHA is a key stakeholder, they funded the initial development of the project, and will utilize the data insights the most.

Stakeholder	Major Value	Attitudes	Major Interests	Constraints
The Department of Revenue	Maximizing data usage	Concerned about the security of their data	Seeing the data be made more useful	Legal obligations, coordination with WSU to send data
The hospitality industry	Having data with which to make data driven business decisions	Supportive of the project as a whole	Concise, customizable data visualization	Not centralized, hard to ensure resource reaches everyone
Policymakers and government officials	Improved policy making through data informed decisions	Supportive of having access to data, in as much as it aligns with political objectives	Customizing data visuals to fit political narratives	Consider the political slant of how the data is presented.
WSU	Increased research opportunities utilizing the data research opportunities	Wants to expand the system as much as possible, and customize it for their purposes	Easy scalability and maintenance	Limited personnel, bureaucratic overhead
Washington hospitality association	Increased credibility via data, as well as improved report creation efficiency	Supportive of the project, wants to see it deployed and scaled as soon as possible	Clarity and ease of access to the data.	Non-technical, focused on usability.

3.2. Project Priorities

Dimension	Driver (State Objective)	Constraint (State Limits)	Degree of Freedom (State Allowable Range)
Schedule	Complete the initial delivery of the project by 05/23/23	Limited total work-hours available	No flexibility
Features	Include 6 key features	Limited resources (e.g., time, personnel)	15% feature delivery flexibility
Quality	UI is satisfactory to client; code is easy to maintain.	Limited testing, lack of UI expertise	25% flexibility (able to improve the quality by up to 25% with additional expertise)
Risks	Mitigate identified risks to the project	Limited risk management resources	15% flexibility (able to address up to 15% of additional risks with additional resources)

Resources	Minimize operation costs	WSU budget	10% flexibility (able to adjust the allocation of resources by up to 10%)

3.3. Deployment Considerations

Effective deployment will require a public-facing website. Storage requirements will scale linearly with time as the amount of data increases year over year, but users will not be contributing to the subject data. Users will likely be within or near the state of Washington, so considerations need not be taken to facilitate the distribution of the data to other regions. The development team is working with the WSU Marketing team to produce a press release kit to help market the project. The team will be working with Integrated Strategic Communications students to produce this press release kit. Once deployed, the website's maintenance will be given to the Carson College of Business and WSU Metro team.