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# Introduction

The Worker Scheduling Application project is designed to revolutionize how businesses manage employee shift assignments by delivering an intuitive, efficient, and fully automated solution. Across many industries, manual scheduling is still a time-consuming and error-prone task that leads to operational inefficiencies, higher labor costs, and employee dissatisfaction. These issues stem from the complexities of managing workforce needs while ensuring compliance with labor regulations. This project introduces an advanced scheduling platform that streamlines shift management through real-time adjustments, automated compliance tracking, and integrated payroll reporting. By optimizing shift allocation and ensuring adherence to labor laws, the system will enable businesses to reduce errors, improve productivity, and boost employee satisfaction, all while maintaining cost-efficiency and operational excellence.

## Purpose

The purpose of the Project Vision Document is to provide a clear and unified understanding of the Worker Scheduling Application's goals, ensuring that all stakeholders are aligned on the project's objectives, scope, and desired outcomes. It serves as a strategic guide to streamline communication, define project deliverables, and support decision-making throughout the development process. By outlining the business needs and opportunities the project addresses, the document ensures the team remains focused on delivering a solution that enhances operational efficiency and employee satisfaction.

## Scope

The scope of the Worker Scheduling Application project focuses on developing a comprehensive platform to automate and streamline employee shift scheduling and management. Key features include automated shift assignments, personalized dashboard management, real-time notifications, and functionalities for shift swaps and time-off requests. The platform will also generate payroll and invoices based on tracked hours, while providing advanced analytics to optimize workforce efficiency. Ensuring compliance with labor laws is a priority. However, areas like recruitment, performance management, external payroll integration, and benefits administration fall outside the project's scope.

### In Scope

The following areas are included within the scope of the Worker Scheduling Application project:

Shift Scheduling Automation: Development of an automated system to assign shifts based on employee availability, preferences, and business requirements.

Employee Management (CRUD Operations): Features to create, read, update, and delete employee profiles and availability data.

Shift Swapping and Time-Off Management: Implementing functionality for employees to request shift swaps, manage time-off requests, and handle last-minute schedule changes.

Real-Time Notifications: A notification system to inform employees and managers about upcoming shifts, shift swaps, time-off approvals, and schedule changes.

Payroll and Invoice Generation: Automated tracking of employee hours worked and generating accurate payroll and invoices based on this data.

Advanced Analytics and Reporting: Development of dashboards that provide insights into attendance, labor costs, shift efficiency, and other key performance metrics.

Compliance with Labor Laws: Ensuring that the scheduling system adheres to local labor laws, including regulations on overtime, breaks, and rest periods.

### Out of Scope

The following areas are not included in the scope of the Worker Scheduling Application project:

Recruitment and Onboarding: This project does not address the recruitment or onboarding of new employees.

Benefits Administration: Managing employee benefits such as healthcare, insurance, or retirement plans is not part of the project.

Payroll Integration with External Systems: The application will generate payroll and invoices, but integration with external payroll systems or providers is not included.

Training and Certification Tracking: The system will not manage or track employee training, certifications, or professional development.

Customization for Specific Industries: Industry-specific customizations beyond the general functionalities for scheduling and management

## Definitions, Acronyms, and Abbreviations

<This subsection provides the definitions of all terms, acronyms, and abbreviations required to properly interpret the Project Visiondocument. This information may be provided by reference to the project’s Glossary>

This section explains all of the terms and abbreviations that are being used in this document, for those who are unfamiliar with them. Not everybody who reads this document will understand all of the terms, so this section is helpful.

|  |  |
| --- | --- |
| Term | Explanation |
| |  | | --- | | Shift Scheduling |  |  | | --- | |  | | The process of assigning workers to specific time slots or shifts in an efficient and organized manner. |
| |  | | --- | |  | | Employee Portal |  |  | | --- | |  |  |  | | --- | |  | | A platform for workers to view schedules, request time off, and receive notifications. |
| Payroll | The system of tracking hours worked by employees and generating pay slips or invoices accordingly. |
| Availability | The time periods when workers are available to take shifts, as defined by their preferences or schedule. |
| Invoice | A financial document showing hours worked and payment due, automatically generated by the system, used for both payroll and client billing purposes. |
| Shift Swaps | The process of exchanging or replacing a worker’s assigned shift with another available shift or worker. |
| Real-time Alerts | Instant alerts sent to users, typically via email or SMS, to inform them of changes in schedules or other updates. |
| Manager Dashboard | A platform for managers to oversee schedules, assign shifts, and view analytics. |

## References

*<This subsection provides a complete list of all documents referenced elsewhere in the Project Vision****.*** *Identify each document by title, report number if applicable, date, and publishing organization. Specify the sources from which the references can be obtained. This information may be provided by reference to an appendix or to another document>*

| Reference File Name | Version | Description |
| --- | --- | --- |
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This section also contains links to all other places that were referred to in this document. These may include:

* Web sites
* URLs or network locations
* Research done for similar products

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| Name | Link |
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# Positioning

## Business Opportunity

The Worker Scheduling Application project addresses a significant business opportunity by automating and optimizing employee shift management. Many businesses currently rely on manual scheduling methods, which are time-consuming, prone to errors, and lead to inefficiencies such as overstaffing, understaffing, and communication breakdowns. This project provides an opportunity to streamline these processes, reduce labor costs, and improve employee satisfaction by introducing a more efficient, flexible, and data-driven approach to workforce management.

The application is designed to serve industries like security companies, where staffing needs frequently change, and managing shifts effectively is crucial for operational success. By automating shift scheduling, facilitating shift swaps, and generating real-time notifications, businesses can not only save time and resources but also adhere to labor regulations and improve overall productivity. The opportunity lies in offering a scalable platform that addresses the growing demand for digital workforce management solutions.

## Problem Statement

< Provide a statement summarizing the problem being solved by this project. The following format may be used>

|  |  |
| --- | --- |
| The Problem of | The problem of manual shift scheduling create insufficiency in work force management, leading to challenges such as miscommunication, scheduling conflicts, and time management. |
| affects | The stakeholders here will be the managers, employees and business. It impacts the organization efficiency and employee morale |
| the impact of which is | The impact of this problems includes diminished workforce productivity, poor employment engagement and lack of flexibility in managing work-life balance. |
| a successful solution would be | A successful solution will be automation of shift scheduling, providing real time notifications, advanced analytics and employee satisfaction. |

Table 1 Problem Statement

## Product Position Statement

< A product position statement communicates the intent of the application and the importance of the project to all concerned personnel >

|  |  |
| --- | --- |
| For | Managers and employees in industries such as security companies. |
| Who | Need a more efficient way to manage shift scheduling, provide analytics features, generate payroll and improve overall communication between managers and employees. |
| The ShiftSmart | Is workforce management and scheduling solution. |
| That | Automates shift scheduling, provides real-time updation, enables shift swaps, and includes payroll and analytics features, ultimately improving productivity, client and employee satisfaction. |
| Unlike | Manual scheduling processes such as basic spreadsheet-based tools and real time notifications. |
| Our product | Offers a fully automated, user-friendly platform with real-time communication, analytics dashboard, and payroll management capabilities, setting it apart by increasing efficiency and optimizing workforce between employee and client management. |

Table 2 Product Position Statement

## SWOT Analysis

|  |  |
| --- | --- |
| Strengths | Weaknesses |
| Automates scheduling processes, reducing errors and manual effort. | Initial development cost and time for implementation. |
| Real-time notifications and updates to handle last-minute changes efficiently. | Requires initial training for managers and employees to adapt to the new system. |
| Payroll integration streamlines the payment process, reducing errors and saving time. | Dependent on network connectivity for real-time features (may affect reliability in some environments) |
| User-friendly interface improves both employee and manager experiences. | Potential customization challenges for different industries and specific business needs. |
| **Opportunities** | **Threats** |
| Growing demand for digital workforce management tools in industries like security, retail, and manufacturing. | Security concerns regarding sensitive employee data like payroll and personal information. |
| Scalability of the platform for larger organizations or multi-location businesses. | Rapid technological advancements could make the platform obsolete if not continuously updated and improved. |
| Opportunity to integrate with other existing HR systems or third-party software. | Difficulty in ensuring compatibility with various legacy systems that businesses might currently use for workforce management. |

# Stakeholder and User Descriptions

< This section provides a profile of the stakeholders and users involved in the project, and the key problems that they perceive to be addressed by the proposed solution. It does not describe their specific requests or requirements as these are captured in a separate stakeholder requests artifact. Instead, it provides the background and justification for why the requirements are needed>

## Stakeholder Summary

| Stakeholder Name | Represents | Role |
| --- | --- | --- |
| Security Company Management | Represents overall business interests and project success. | Ensures project aligns with company goals, provides final approval, and makes key decisions. |
| Scheduling Manager | Represents day-to-day operational needs, especially around staffing. | Defines system requirements for scheduling, shift swaps, and handles operational concerns. |
| HR Department | Focuses on employee relations, payroll, and compliance needs. | Provides input on payroll management, compliance with labor regulations, and reviews the HR features of the platform. |
| Development Team (MMHS) | Responsible for developing the Worker Scheduling platform. | Develops and implements features, integrates feedback from security company stakeholders, and ensures delivery of the system. |
| End Users (Security Managers/Guards) | Represents the individuals who will be using the system daily. | Provide feedback during testing, ensure the system meets the practical needs of shift scheduling and management. |

Table 3 Stakeholder Summary

## User Summary

| User Name | Description | Responsibilities | Stakeholder |
| --- | --- | --- | --- |
| Company Owner | The individual responsible for the overall success of the company. | Sets strategic direction, oversees company operations, manages financial performance, manages client contracts and makes high-level decisions. | All Departments |
| Scheduling Manager | Responsible for overseeing employee shifts and scheduling. | Manages employee schedules, approves shift swaps, monitors attendance. | Scheduling Management |
| Employees | Workers who receive shift assignments via the platform. | View assigned shifts, Input Availability, request time-off, and request shift swaps. | HR Department |
| Payroll AdministatorsPayroll Administrators, Finance Team | |  | | --- | |  |  |  | | --- | | Handles payroll and client invoices. | | Processes payroll and invoices, ensures legal compliance. | HR Department |

Table 4 User Summary

# Stakeholder Requirements

< Categorize and list the requirements from the perspective of the business stakeholder and potential system users >

| ID | Requirement | Stakeholder |
| --- | --- | --- |
| R1 | Automate shift scheduling based on employee availability to reduce manual errors and conflicts. | Business Manager |
| R2 | Enable real-time notifications for schedule updates, shift swaps, and approvals. | Business Manager/ Employees/ HR Department |
| R3 | Generate payroll and invoices based on hours worked, reducing reliance on manual record-keeping. | Payroll Administrators |
| R4 | Implement an intuitive, user-friendly interface for both managers and employees to manage shifts easily. | Employees, Business Managers |
| R5 | Offer advanced analytics and reporting to optimize labor costs and improve scheduling efficiency. | Business Managers, HR Department |
| R6 | Allow employees to submit availability and request time-off directly through the platform. | Employees |
| R7 | Provide secure access control and role-based permissions to protect sensitive data**.** | Business Manager |

Table 5 Stakeholder Requirements

# System Features

< List and briefly describe the system features. Features are the high-level capabilities of the system that are necessary to deliver benefits to the users. Avoid design. Keep feature descriptions at a general level. Focus on capabilities needed and why (not how) they should be implemented >

| ID | Feature | Stakeholder Requirement ID |
| --- | --- | --- |
| F1 | Automated Shift Scheduling: Automatically assigns shifts based on employee availability and business needs, reducing manual errors and ensuring optimal staffing. | R1 |
| F2 | Real-Time Notifications: Alerts managers and employees about upcoming shifts, schedule changes, and shift swaps in real-time, improving communication and reducing last-minute confusion. | R2 |
| F3 | Payroll and Hours Tracking: Tracks employee working hours and integrates with payroll systems to streamline payment processing, reducing administrative overhead. | R3 |
| F4 | Intuitive User Interface: Provides an easy-to-use platform where employees can view their schedules, submit time-off requests, and manage availability, enhancing user experience. | R4 |
| F5 | Advanced Analytics and Reporting: Generates reports on workforce performance, labor costs, and shift efficiency, enabling managers to make data-driven decisions. | R5 |
| F6 | Employee Self-Service Portal: Allows employees to manage their availability, request time-off, and swap shifts with approval, giving them more control over their schedules. | R6 |
| F7 | Secure Role-Based Access: Implements secure access controls to ensure that only authorized personnel can view or modify sensitive scheduling and payroll data. | R7 |

Table 6 System Features

# Assumptions

*<List all assumptions made about any of the content provided in this document. Assumptions should be applicable to the scope, desired solution, requirements, business process, and stakeholders >*

1. Availability of Resources: It is assumed that all necessary technical resources, including developers, testers, and project managers, will be available throughout the project lifecycle.
2. Stakeholder Participation: Stakeholders, including business managers, employees, and IT administrators, will provide timely feedback during the design, development, and testing phases to ensure that the application meets their needs.
3. Data Accuracy: It is assumed that all employee availability, working hours, and payroll data input into the system will be accurate and up to date.
4. Regulatory Compliance: The application will be built to comply with applicable labor laws and regulations. Any changes in regulations will require system updates.
5. User Training: It is assumed that users, including managers and employees, will receive sufficient training to effectively use the platform’s features.
6. Integration Readiness: The existing HR and payroll systems in the organization will be compatible with the Worker Scheduling Application for seamless integration
7. Internet Connectivity: It is assumed that users will have reliable internet access to use the cloud-based features of the platform, including real-time notifications and updates.
8. Data Security Measures: Assumes the system will implement necessary security protocols to protect sensitive employee and payroll data, adhering to organizational and legal data protection standards.

# Constraints

*<List any process constraints, external constraints or other dependencies >*

Process Constraints:

* Project Timeline: The development must be completed within the given timeframe, that limits the scope of potential features and enhancements.
* Regulatory Compliance: The system must adhere with labour laws and regulations, potentially requiring additional time to design it.
* User Adoption: It the user interface should be easily adaptable to employees and managers and use the new scheduling system.

External Constraints:

* Network Reliability: Cloud-based features such as real-time notifications depend on consistent internet connectivity, and poor network performance may impact the system’s functionality.
* Data Privacy and Security Regulations: Adherence to GDPR, CCPA, and other data protection regulations is mandatory, restricting how employee data can be collected, stored, and shared.

Dependencies:

* HR System Integration: The Worker Scheduling Application depends on accurate data from existing HR and payroll systems for employee information and payroll processing.
* User Feedback: Continuous feedback from business stakeholders and end-users is essential to ensure that the system meets the actual needs of the organization.
* Software Updates and Maintenance: Future updates to integrated third-party systems may require modifications to the scheduling platform to maintain compatibility.