
# WAPSO (Web Application Platform for Scaling & Optimization)

## Business Requirements Document (BRD)

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# Version and Approvals

| Version History | | | |
|---|---|---|---|
| **Version #** | **Date** | **Revised By** | **Reason for change** |
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This document has been approved as the official Business Requirements Document for WAPSO, and accurately reflects the current understanding of business requirements. Following approval of this document, requirement changes will be governed by the project's change management process, including impact analysis, appropriate reviews and approvals.

| Document Approvals | | | |
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| **Approver Name** | **Project Role** | **Signature/Electronic Approval** | **Date** |
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# 1. Introduction

## 1.1 Purpose

The purpose of this document is to outline the business requirements development of a web application platform focused on scaling and optimization.

## 1.2 Scope

The platform will provide tools and functionalities to improve the scalability and performance of web applications, enabling businesses to handle increased user loads and optimize their overall performance.

# 2. Business Objectives

## 2.1 Improve Scalability

The platform should allow web applications to handle increased user loads without compromising performance or stability.

## 2.2 Optimize Performance

The platform should provide tools and techniques to optimize the performance of web applications, ensuring fast response times and efficient resource utilization.

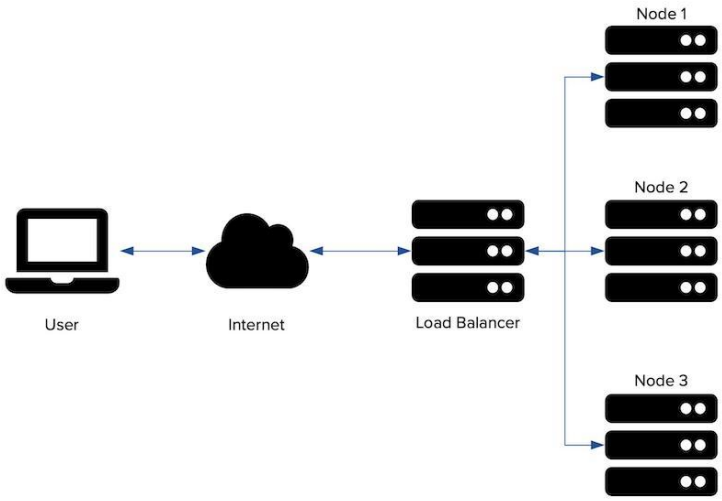
## 2.3 Enhance User Experience

The platform should contribute to an enhanced user experience by reducing page load times and minimizing downtime.

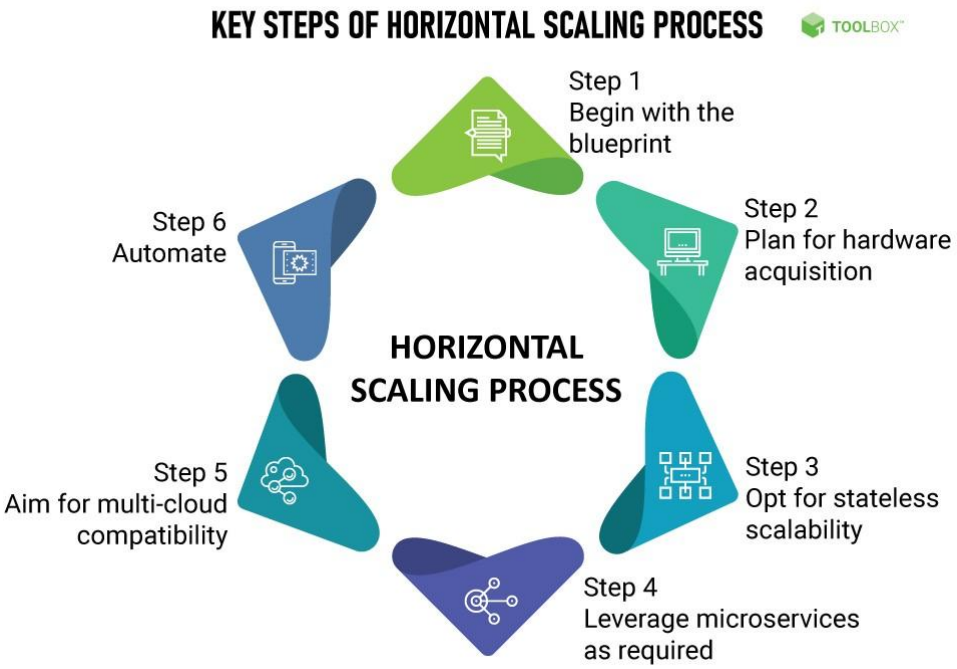
# 3. Functional Requirements

## 3.1 Scalability

- **Load Balancing:**
  The platform should support load balancing techniques to distribute incoming traffic evenly across multiple servers, ensuring optimal utilization and preventing overloads.



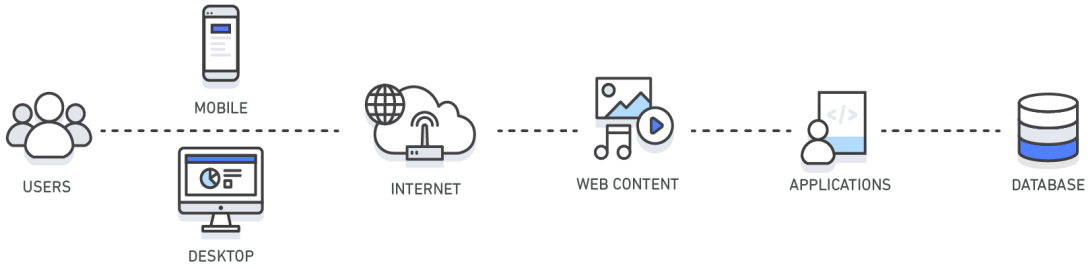

- **Horizontal Scaling:**
  The platform should enable web applications to scale horizontally by adding more servers or instances to handle increased traffic.




- **Autoscaling:**
  Implement auto scaling capabilities that automatically adjust the number of servers based on traffic patterns and predefined thresholds.

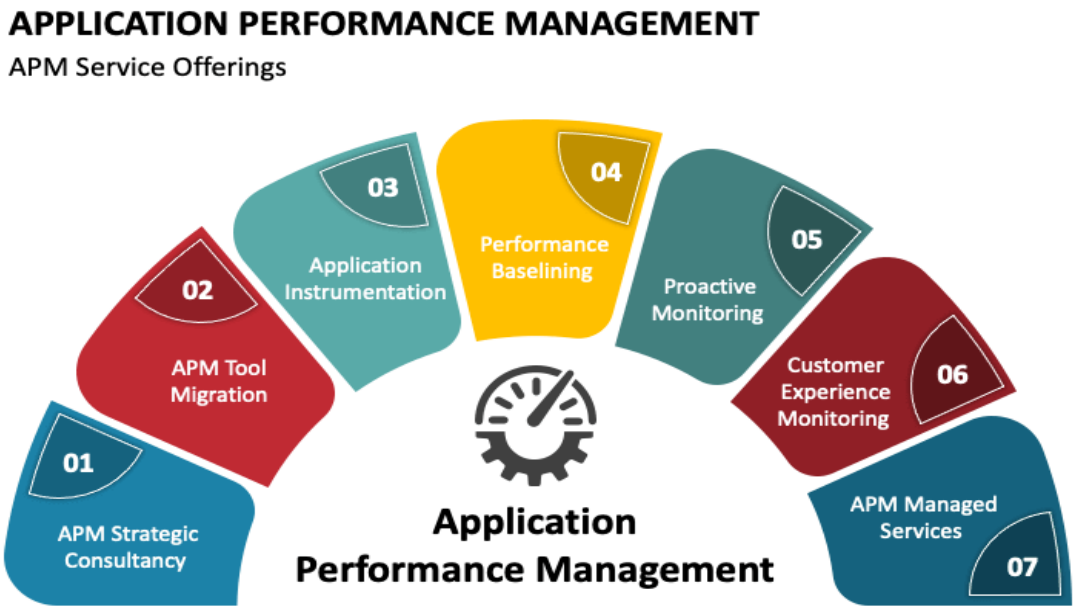
## 3.2 Performance Optimization

- **Caching:**
  Provide caching mechanisms to store and retrieve frequently accessed data, reducing the need for repetitive processing and database queries.




## 3.3 Monitoring and Analytics

- **Performance Monitoring:**
  Implement monitoring tools to track system performance, identify bottlenecks, and generate alerts for potential issues.




- **Analytics:**
  Provide analytics features to analyze user behavior, traffic patterns, and application performance, aiding in decision-making and optimization efforts.

### 3.4 High Availability and Disaster Recovery

- **Redundancy:**
  Support redundant infrastructure and data replication to ensure high availability and minimize downtime in case of server failures.
- **Backup and Restore:**
  Enable regular automated backups of application data and provide mechanisms for quick restoration in the event of data loss or system failures.

# 4. Non-Functional Requirements

## 4.1 Security

Ensure robust security measures, including data encryption, secure communication protocols, and user authentication mechanisms, to protect sensitive information.

## 4.2 Scalability

The platform should be designed to handle rapid scalability with minimal disruption to existing services.

## 4.3 Compatibility

The platform should be compatible with a wide range of web technologies and frameworks to accommodate different application requirements.

## 4.3 Ease of Use

Provide an intuitive and user-friendly interface for developers and system administrators to manage and configure the platform effectively.

## 4.3 Reliability

The platform should be highly reliable, with minimal downtime and the ability to recover quickly from failures.

## 2.3 Performance

Ensure optimal performance by reducing response times, minimizing latency, and optimizing resource utilization.

# 5. Constraints

## 5.1 Budget

The project should be developed within the allocated budget, considering the costs associated with hardware, software licenses and ongoing maintenance.

## 5.2 Timeframe

The development, testing, and deployment of the platform should be completed within the specified timeframe, ensuring timely delivery.

## 5.3 Compliance

The platform should adhere to relevant industry standards and regulations, such as data, protection and privacy laws.

# 6. Assumption and Dependencies

## 6.1 Assumptions

The development team will have access to the necessary infrastructure, hardware and software resources.

## 6.2 Dependencies

The web applications integrated with the platform will adhere to standard web development practices and frameworks.

[1] **Note:** This Business Requirement Documentation serves as a foundational document to capture the high-level business objectives and functional requirements of the Web Application Platform for Scaling and Optimization Project. It provides a basis for further discussions, analysis, and the development of detailed technical specifications and design documentation. The BRD should be reviewed and updated as necessary throughout the project lifecycle to ensure alignment with evolving business needs and technological advancements.

[1] This concludes the Business Requirement Documentation for the Web Application Platform for Scaling and Optimization Project.