TECH460 Final Project: *Proposal for Verizon Wireless*

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Introduction

- This project aims to enhance Verizon Wireless's mobile app by integrating AI-driven customer support and real-time diagnostics to improve user experience and efficiency.
- Key sections include:

1. **Organization Profile and Problem Statement**: Overview of Verizon Wireless and the challenges addressed.
2. **Proposed Solutions**: App features such as troubleshooting tools, data dashboards, and AI-supported chat.
3. **Implementation Strategy**: Steps for integrating these features into Verizon's operations.
4. **Expected Impact**: Benefits include better service, higher satisfaction, and improved efficiency.

- The project highlights how innovation can reinforce Verizon's leadership and customer service excellence.

Executive Summary

- **Problem:** Enhance Verizon's app with AI-driven support and diagnostics.
- **Solution:** Platform-specific extensions integrating AI features.
- **Outcome:** Improved user satisfaction, operational efficiency, and alignment with Verizon’s 5G goals.

Organization Profile and Problem Statement

Organization Profile

- **Name**: Verizon Wireless
- **Products/Services**: Wireless telecommunications, internet, and data services
- **Competitors**: AT&T, T-Mobile, Sprint
- **Established**: 2000, headquartered in Basking Ridge, New Jersey
- **Scale**: Over 135,000 employees
- **Revenue**: $128 billion annually
- **Market Share**: Largest U.S. wireless carrier, with a 30% share in 2023

Problem Statement

•**Objective:** Enhance Verizon Wireless's mobile app with AI-driven customer support and real-time diagnostics.

• **Proposed Features:**

- Interactive troubleshooting guide for network/device issues
- Customer data usage dashboard with real-time notifications
- Support chat for direct assistance and self-service tips

Technology Selection and Design

Alternative Technology Approaches

1.Progressive Web App (PWA)

1. Single platform for all devices (web, iOS, Android).
2. Lower costs and consistent design.
3. **Challenges**: Limited integration with native features.

2.Platform-Specific Extensions

1. Enhanced feature integration within existing apps.
2. Tailored experience for Android and iOS users.
3. **Challenges**: Higher development and maintenance costs.

Qualitative Analysis

PWA

- **Pros**: Faster to develop, lower costs, consistency across devices.
- **Cons**: Limited features and app store visibility.

Platform-Specific Extensions

- **Pros**: Better user experience, full feature integration.
- **Cons**: Higher costs, longer development time.

Quantitative Analysis

Development Costs:

- **PWA**: $17K–$20K
- **Platform-Specific Apps**:
  - Website: $17K–$20K
  - Android: $17K–$20K
  - iOS: $17K–$20K
  - **Total**: $51K–$60K (3x higher cost).

Additional Costs Considerations:

- Maintenance and updates for multi-platform apps.

Recommended Solution

Platform-Specific Extensions
Justification:

- Integration with existing Verizon apps ensures better customer satisfaction.
- Users can access new features without downloading separate apps.
- Supports Verizon's 5G and IoT goals by maximizing app functionality.

High-Level Design

Data Flow

1.User inputs data via app (smartphone, laptop).

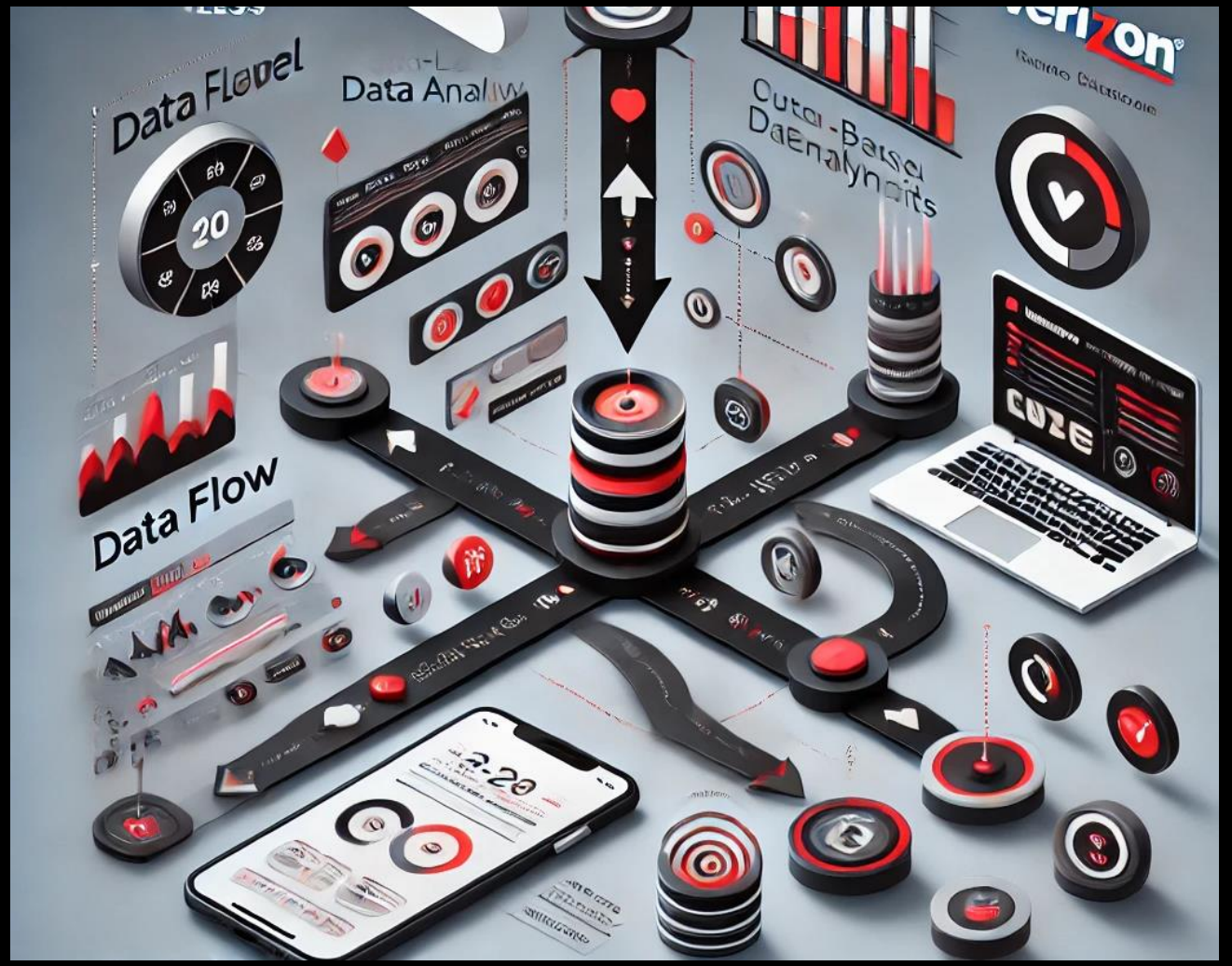
2.Data processed through Verizon Cloud.

3.Results displayed in-app with visual insights.

User Interface Enhancements

•Real-time data analytics.

•Interactive features for troubleshooting and live support.



Implementation Plan

Recommended Solution

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Work Breakdown Structure

- **Planning Phase**
- Conduct stakeholder meetings.
- Define project scope and objectives.
- Gather system requirements and assess feasibility.
- **Design Phase**
- Develop wireframes for the app interface.
- Architect data flow and integration points.
- Finalize AI models and diagnostic logic.
- **Development Phase**
- Build platform-specific extensions for Android and iOS.
- Integrate AI-driven diagnostics and troubleshooting guides.
- Develop customer data usage dashboard with notifications.
- Implement chat support functionality.

Work Breakdown Structure (continued)

- **Testing Phase**
- Perform unit testing for individual features.
- Conduct system and integration testing.
- User acceptance testing (UAT) with real-world scenarios.

- **Deployment Phase**
- Roll out features to existing Verizon apps.
- Train staff on new functionalities.
- Perform post-deployment monitoring.

Schedule

Phase	Timeline
Planning	Weeks 1–2
Design	Weeks 3–5
Development	Weeks 6–12
Testing	Weeks 13–15
Deployment	Week 16

Validation

- **Pilot Testing:** Test features with a small group of users to gather feedback.
- **AI Model Validation:** Use historical data to ensure accuracy in diagnostics.
- **Load Testing:** Simulate heavy usage to verify performance under stress.

Evaluation and Continuous Improvement

- **Customer Feedback:** Integrate app store reviews and surveys for ongoing enhancements.
- **Analytics Monitoring:** Track app usage and issue resolution metrics.
- **Periodic Updates:** Regularly update AI models and interface designs to reflect evolving user needs.

Legal, Ethical and Cultural Considerations

- **Privacy Compliance:** Ensure adherence to GDPR and CCPA for data protection.
- **AI Ethics:** Mitigate bias in diagnostic AI models.
- **Cultural Sensitivity:** Localize app features and support for diverse user demographics.

Incorporation of Feedback

- **1. Organization Profile**
- **Feedback:** Too much general info.
- **Improvement:** Simplified to focus on core attributes like market share and revenue.

- **2. Problem Statement**
- **Feedback:** Needed clearer benefits of features.
- **Improvement:** Added brief explanations on how each feature improves user experience and efficiency.

- **3. Introduction**
- **Feedback:** Lengthy and repetitive.
- **Improvement:** Streamlined to focus on purpose and key project sections.

Career Readiness

- Completing this project has enhanced my ability to design solutions using AI-driven tools and real-time diagnostics, which are valuable in today's technology-driven industries. It improved my critical thinking, collaboration, and technical communication skills—key to advancing my career in tech and innovation. I will use this project as a portfolio piece to demonstrate my problem-solving abilities and readiness for leadership roles in technology.

Conclusion

- **Project Goal**: Enhance Verizon Wireless's mobile app with AI-driven tools for improved customer support and diagnostics.

- **Key Features**: Interactive troubleshooting guide, real-time data usage dashboard, and AI-powered support chat.

- **Outcomes**: Improved customer satisfaction, faster issue resolution, and enhanced operational efficiency.

- **Conclusion**: The project strengthens Verizon’s market position by delivering a better user experience and addressing customer needs effectively.

References

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