

**Project 1: Smart Weather (Without Jira)**

***Name: Akhil Tamgadage***

*OBJECTIVES*

* *To apply the concepts learned in the Agile Scrum Master course by analyzing a hypothetical organization.*

*INDUSTRY RELEVANCE*

* *To facilitate all the communication and collaboration between leadership and team players to ensure a successful outcome.*

*DESCRIPTION*

*GTM systems is a large IT company with offices all around the world. The company delivers software products and services to corporate clients. One of the reasons for its enduring success and consistent performance over the years is the ability to leverage technology and find innovative applications for it.*

*PROBLEM STATEMENT AND MOTIVATION*

*While GTM has no expertise in meteorology, it proposes to aggregate weather data from multiple providers and uses analytics to correlate it with meaningful conclusions for businesses. Example use cases could be generating forecasts based on local weather conditions around,*

* *Consumption of hot versus cold beverages depending on cold, sunny, or rainy weather.*
* *Number of visitors to a tourist site or an open-air entertainment event.*
* *Likelihood of seasonal illnesses such as flu in particular locations the main system will comprise a web portal and a set of “apps” available on the popular mobile operating systems. Apart from this, clients can ask for specific services or apps based on the insights that the analytics can generate.*

***PERSONAS AND SELECTION CRITERIA***

***Industry Relevance:*** *Personas from the beverage, tourism, and public health sectors are chosen because weather significantly impacts these industries, making the system highly valuable to their decision-making processes.*

***System Versatility:*** *The diverse personas show that the Smart Weather system can be used across multiple sectors, increasing its appeal and market potential.*

***User-Centric Design:*** *Each persona highlights specific user needs and goals, guiding the system's design to ensure it meets the unique requirements of different roles.*

***Strategic Business Impact:*** *The personas illustrate how the system can deliver tangible benefits like increased sales, successful events, and improved public health, positioning it as a critical tool in each industry.*

### *Persona* ***1: Neha Sharma***

* ***Role:*** *Marketing Manager at a Beverage Company*
* ***Age:*** *32*
* ***Location:*** *Mumbai, Maharashtra*
* ***Goals***
  + - *Align marketing campaigns with weather-driven consumer preferences.*
    - *Optimize inventory based on weather forecasts.*
    - *Improve demand predictions for hot and cold beverages.*

***Typical System Usage:***

* + - *Logs into the portal daily to analyze weather and beverage consumption trends.*
    - *Uses forecasting models for planning seasonal promotions.*
    - *Generates reports for the sales team.*

***Preferences:***

* + - *User-friendly interface with visual data representation.*
    - *Real-time updates on weather changes.*
    - *Customizable dashboards for specific regions.*

### ***Persona 2: Rajesh Verma***

* ***Role:*** *Event Coordinator at a Tourism Company*
* ***Age:*** *40*
* ***Location:*** *Jaipur, Rajasthan*
* ***Goals:***
  + - *Predict visitor numbers at outdoor events based on weather.*
    - *Minimize event risks due to adverse weather conditions.*
    - *Optimize event planning and resource management.*

***Typical System Usage:***

* *Monitors weather forecasts leading up to events.*
* *Analyzes historical weather data to predict attendance.*
* *Sets alerts for weather changes affecting logistics.*

***Preferences:***

* *Detailed weather forecasts for specific locations.*
* *Mobile access for real-time updates.*
* *Integration with event management tools.*

### ***Persona 3: Dr. Meera Iyer***

***Role:*** *Public Health Analyst at a Government Health Department*

***Age:*** *48*

***Location:*** *Bengaluru, Karnataka*

***Goals:***

* *Monitor and predict seasonal illness trends based on weather.*
* *Inform public health initiatives with accurate data.*
* *Issue timely health advisories.*

***Typical System Usage:***

* *Analyzes weather data and its correlation with disease outbreaks.*
* *Monitors real-time updates to respond to health threats.*
* *Develops reports for public health campaigns.*

***Preferences:***

* *Access to detailed, location-specific weather and health data.*
* *Predictive analytics for disease forecasting.*
* *Tools that support collaboration with other health agencies*

*EPICS AND USER STORIES*

*Epic 1: Data Aggregation and Integration*

*Epic 2: Analytics and Forecasting*

*Epic 3: Web Portal Development*

*Epic 4: Mobile App Development*

*Epic 5: Custom Services and App*

*User stories can be as given with story points.*

### ***Epic 1: Data Aggregation and Integration***

***User Story 1:*** *Aggregate Weather Data from Multiple Sources - 5 points*

***User Story 2:*** *Implement ETL Processes - 8 points*

***User Story 3:*** *Validate Data Accuracy - 3 points*

***User Story 4:*** *Monitor Data Integration Pipeline Performance - 5 points*

***User Story 5:*** *Handle Data Quality Issues - 5 points*

### ***Epic 2: Analytics and Forecasting***

***User Story 6:*** *Develop Beverage Consumption Forecasting Model - 8 points*

***User Story 7:*** *Create Visitor Number Prediction Model - 8 points*

***User Story 8:*** *Analyze Seasonal Illness Trends - 5 points*

***User Story 9:*** *Develop Real-Time Weather Impact Analysis - 8 points*

***User Story 10:*** *Build Custom Forecasting Algorithms - 8 points*

### ***Epic 3: Web Portal Development***

***User Story 11:*** *Design User Interface for Web Portal - 5 points*

***User Story 12:*** *Implement Weather Data Visualizations - 8 points*

***User Story 13:*** *Develop Dashboard for Business Metrics - 8 points*

***User Story 14:*** *Integrate User Authentication and Permissions - 5 points*

***User Story 15:*** *Ensure Data Security and Privacy - 8 points*

### ***Epic 4: Mobile App Development***

***User Story 16:*** *Develop Mobile App for Weather Updates - 8 points*

***User Story 17:*** *Implement Push Notifications for Critical Alerts - 5 points*

***User Story 18:*** *Design Mobile App User Interface - 5 points*

***User Story 19:*** *Integrate GPS for Location-Based Weather Updates - 8 points*

***User Story 20:*** *Test Mobile App for Compatibility and Performance - 5 points*

### ***Epic 5: Custom Services and Apps***

***User Story 21:*** *Gather Requirements for Custom Solutions - 5 points*

***User Story 22:*** *Develop Custom Analytics Solutions - 8 points*

***User Story 23:*** *Provide Support for Custom Solutions - 5 points*

***User Story 24:*** *Create Customizable Dashboards for Clients - 8 points*

***User Story 25:*** *Implement Feedback Mechanism for Custom Services - 5 points*

*Version mapping and time frame*

* + *Version 1.0: Initial Release*
    - *User Stories: 1, 3, 5, 6, 7, 11*
    - *Time Frame: 3-4 sprints (6-8 weeks)]*
  + *Version 1.1: Enhanced Analytics and Web Features*
    - *User Stories: 4, 8, 9, 12*
    - *Time Frame: 2-3 sprints (4-6 weeks)*
  + *Version 1.2: Mobile App Enhancements and Custom Solutions*
    - *User Stories: 13, 14, 15*
    - *Time Frame: 3 sprints (6 weeks)*
  + *Version 1.3: Performance Improvements and Additional Custom Features*
    - *User Stories: 2, 10, 16*
    - *Time Frame: 2 sprints (4 weeks)*

***PRODUCT VIABILITY***

*To quickly launch the "Smart Weather" project while ensuring it provides value to users, the* ***Minimally Viable Product (MVP)*** *should focus on delivering core functionalities that address the most immediate and high-impact needs. The MVP should include features that are essential for the initial user base and that will allow the organization to gather feedback for rapid improvements.*

### ***MVP Features for Smart Weather***

#### **1. Data Aggregation and Integration**

* ***Core Feature:*** *Aggregate weather data from at least two reliable sources.*
* ***Why:*** *This is the foundation of the Smart Weather system, as all analytics and forecasting depend on the quality and comprehensiveness of the weather data.*
* ***Deliverable:*** *A functioning ETL pipeline that retrieves, cleanses, and stores weather data in a central repository.*

#### **2. Basic Analytics and Forecasting**

* ***Core Feature:*** *Provide basic forecasting models for one or two key use cases (e.g., beverage consumption and visitor numbers).*
* ***Why:*** *These use cases represent the immediate value proposition to businesses, allowing them to make informed decisions based on weather data.*
* ***Deliverable:*** *Simple but functional forecasting models that users can access via a basic interface.*

#### **3. Web Portal with Essential Features**

* ***Core Feature:*** *A simple web portal with a clean user interface, offering access to weather data visualizations and basic forecasting insights.*
* ***Why:*** *The web portal is the main touchpoint for users and needs to provide easy access to the insights generated by the system.*
* ***Deliverable:*** *A minimal, user-friendly portal with data visualization tools, a dashboard, and user authentication.*

#### **4. Mobile App for Basic Weather Updates**

* ***Core Feature:*** *A basic mobile app providing weather updates and simple notifications for critical weather changes.*
* ***Why:*** *The mobile app expands accessibility, ensuring users can receive updates on the go.*
* ***Deliverable:*** *A minimal version of the mobile app that offers location-based weather updates and notifications.*

#### **5. User Feedback Mechanism**

* ***Core Feature:*** *A simple feedback form integrated into the web portal and mobile app.*
* ***Why:*** *Gathering user feedback early allows for rapid iteration and improvement of the product based on real user needs.*
* ***Deliverable:*** *A feedback collection tool that can be easily accessed by users.*

### ***MVP Implementation Strategy***

1. ***Release 1.0: Initial Launch***
   * *Focus on the delivery of essential data aggregation and the web portal with core forecasting capabilities.*
   * *Include a basic version of the mobile app.*
2. ***User Feedback Collection***
   * *Deploy the user feedback mechanism to gather input from early adopters.*
3. ***Post-Launch Enhancements***
   * *Use feedback to prioritize enhancements for subsequent versions.*
   * *Gradually add more sophisticated analytics, custom solutions, and additional data sources.*

### ***Benefits of This MVP Approach***

* ***Quick Time to Market:*** *By focusing on core features, the product can be launched quickly.*
* ***Early User Engagement:*** *Engaging users early with a functional product allows for valuable feedback.*
* ***Scalability:*** *The MVP provides a solid foundation that can be expanded with more features and custom solutions in future iterations*

*PROJECT REFERENCE*

*Task 1 – Lesson 2,3,4*

*Task 2 – Lesson 4,5,6*

*Task 3 – Lesson 4,5*