Disease Tracking & Public Health Intelligence Application

Document 1 - Definition of Done (DoD) for Disease tracking and public health intelligence Application.

Purpose: The Definition of Done is a shared understanding of the criteria that must be met for a user story, sprint, or release to be considered complete. It ensures that all deliverables meet the required quality standards and are ready for deployment.

User story: DOD Checklist	**Sprint: DOD Checklist**	**Release: DOD Checklist**
✓ Code builds with no error	✓ Satisfied DoD for each user story in the sprint	✓ Satisfied DoD for each sprint in the release
✓ Unit testing is complete	✓ Marketing feedback is implemented	✓ Production environment is ready
✓ Code review is complete	✓ Legal/compliance review is complete	✓ CI/CD verified and working
✓ Localization & translation is complete	✓ User help guide created or updated	✓ User help guide localized
✓ Localization testing passed	✓ Training video created or updated	✓ Training video localized
✓ Browser and/or device compatibility testing is complete	✓ Refactoring is complete	✓ Rollback process is documented
✓ Regression testing is complete	✓ configuration or build changes documented	✓ Smoke testing scenarios are ready
✓ Automation tests are written and passed	✓ Performance testing is complete	✓ Customer support team is trained
✓ Acceptance criteria are met	✓ Security testing is complete	✓ Release communication is sent
✓ Signed off by product owner	✓ Sprint marked as ready for deployment	✓ All stakeholder signed off for the release

Document 2 - Product Vision

Scrum Project Name:	Disease Tracking and Public Health Intelligence Application.		
Venue:	Pune		
Date:	Start time:	End time:	Duration:
Client:	Mr. Arun	Mr. Raj	Miss. Lily
Stakeholder list:	Mr. Sam		
	Mr. Adrian		
	Mr. Martin		
Scrum Team			
Scrum Master:	Mr. Tarik		
Product owner:	Mr. Yash		
Scrum Developer 1:	Miss. Alexander		
Scrum Developer 2:	Miss. Karina		
Scrum Developer 3:	Mr. Jack		
Scrum Developer 4:	Mr. Khan		
Scrum Developer 5:	Mr. Malik		

Vision:

To develop a centralized application to create a real-time, data-driven platform that enables early detection, efficient monitoring, and proactive management of diseases. It aims to empower healthcare providers, policymakers, and the public with actionable insights to prevent outbreaks, improve response strategies, and enhance overall community health and safety.

Target group	**Needs**	**Product**	**Value**
Market Segment: Government and Public Health Agencies. **Target Users:** Government and Public Health Authorities. **Customers:** <u>Primary</u> – Govt. Health Dept. <u>Secondary</u> – RnD, Pharma and Biotech Companies. <u>Tertiary</u> – General Public	**Problem:** Due to Inefficient manual processes, the delayed or inaccurate data reporting is done. **Benefit:** Centralized system for managing Data and track diseases. Early detection of disease, Data-Driven decision making is done and improve public health outcomes.	**Product:** A cloud-based Data Management System with Intelligence platform with disease tracking and public awareness tool. **Desirability:** Real-time data access, user-friendly interface, and scalability for multiple disease tracking. **Feasibility:** Yes, with the right team, tools, and agile development approach.	**Benefit:** Increased early data detection and rapid response, reduced time and costs, and improved Surveillance and monitoring and public awareness and education. **Business Goals:** 1. Enhance Public Health Surveillance. 2. Support Data-Driven Decision Making. 3. Improve response time and resources Allocation. **Business Model:** 1.Data analytics services for research

			organization and pharma companies. 2. Subscription plans for hospitals, labs, and govt. agencies.

Document 3 - User Stories

User story No: 01	Tasks: Create user account with role-based permissions.	Priority: High
Value statement: As a System Administrator, I want to Create new user accounts and assign specific roles so that user ensuring security and compliance of data and relevant function to their jobs.		
BV: 500	CP: 8	
Acceptance criteria: A dropdown allows selection from pre-defined roles (Epidemiologist, Clinician, Public) The new user account is saved in the database with the correct permissions.		

User story No: 02	Tasks: Deactivate or delete a user account	Priority: High
Value statement: As a system administrator,		

I want to deactivate or delete user account so that former employees or compromised accounts can no longer access the system.	
BV: 500	CP: 13
Acceptance criteria: A deactivate button is present next to each active user. Upon deactivation, the user cannot log in. Deactivated users are moved to a separate list and can be reactivated.	

User story No: 03	Tasks: Audit user login and data access logs.	Priority: Medium
Value statement: As a Security officer, I want to view a log of all user logins and data access events so that I can monitor for suspicious activity and maintain an audit trail for compliance.		
BV: 200	CP: 08	
Acceptance criteria: A dedicated “Audit Log” page exists. Logs can be filtered by user, data, time, and action type (login, data view, data edit) Logs are exportable to a CSV file.		

User story No: 04	Tasks: Manually upload case data via a CSV template	Priority: High
Value statement: As a Data entry Clerk, I want to upload a formatted CSV file containing new case reports		

so that data from labs and clinics without direct API integration can be quickly added to the system.	
BV: 200	CP: 13
Acceptance criteria: A template CSV can be downloaded. The system validates file format and required columns (e.g. patient ID, disease, data, location). Success and error message are shown, with a summary of rows added/failed.	

User story No: 05	Tasks: Configure and manage API connection to lab systems.	Priority: High
Value statement: As an IT integrator, I want to configure API endpoints and authentications details for connected laboratory systems. so that case data is automatically ingested in near real-time.		
BV: 500	CP: 08	
Acceptance criteria: A configuration page exists for API settings (URL, API Key, sync frequency) The system can test the connection and return a status (Success/fail) A log of API sync attempts and results is maintained		

User story No: 06	Tasks: Map incoming data fields to internal data model	Priority: Medium
Value statement: As a Data Manager, I want to define mapping rules for incoming data fields to the systems standard data model so that data from disparate sources is normalized and consistent for analysis.		
BV: 200	CP: 8	
Acceptance criteria: For each data source, a mapping interface shows external field names and allows linking to internal fields via a dropdown. Simple transformations can be defined.		

User story No: 07	Tasks: Ingest and process geospatial data (shapefiles) for regions.	Priority: Medium
Value statement: As a GIS Specialist, I want to upload regional boundary files so that cases data can be accurately on maps by administrative region.		
BV: 200	CP: 05	
Acceptance criteria: System accepts common geospatial file formats. Upload process validates the file and links the geographical data to a region name. The new boundaries appear on the map visualization screen.		

User story No: 08	Tasks: View an interactive map of disease cases.	Priority: High
Value statement: As a Epidemiologist, I want to see all reported cases plotted on an interactive map so that I can quickly identify emerging geographical hotspots.		
BV: 500	CP: 13	
Acceptance criteria: A map is the central view of the dashboard. Cases are shown as clustered points or heatmaps. Clicking on a cluster/point reveals basic case details. Map can be panned and zoomed.		

User story No: 09	Tasks: Filter map and charts by data range.	Priority: High
Value statement: As a Public Health Analyst, I want to select a custom date range using a slider or calendar so that I can analyze trends for a specific period, like the last week or a particular season.		
BV: 500	CP: 08	
Acceptance criteria: A date range selector is present on the dashboard. All visualizations (map, charts, graphs) update dynamically upon date change		

User story No: 10	Tasks: View a time-series chart of case counts.	Priority: High
Value statement: As a Data Analyst, I want to see a line chart showing the number of new cases over time. so that I can identify trends, peaks, and the rate of disease spread.		
BV: 500	CP: 5	
Acceptance criteria: A line chart is displayed on the dashboard. Hovering over a data point shows the exact count for the data.		
User story No: 11	Tasks: Filter data by disease type.	Priority: High
Value statement: As a Clinician, I want to filter the entire dashboard to show only data for a specific disease so that I can focus on the relevant public health intelligence for my practice.		
BV: 500	CP: 08	
Acceptance criteria: A multiselect dropdown list of disease is available. Selecting a disease updates all dashboard components to reflect only the data.		

User story No: 12	Tasks: View demographic breakdown charts (age, gender)	Priority: Medium
Value statement: As a Policy Maker, I want to see pie charts or bar graphs showing the distribution of cases by age group and gender. so that I can understand which demographics are most affected and tailor interventions accordingly.		
BV: 100	CP: 03	
Acceptance criteria: Demographic charts are present on the dashboard. Charts are linked to filters (e.g. if a date range is selected, charts update).		

User story No: 13	Tasks: Compare trends between two regions.	Priority: Medium
Value statement: As a Regional Director, I want to select two different regions and compare their case trend lines on a single chart. so that I can evaluate the effectiveness of public health measures in one region versus another.		
BV: 100	CP: 03	
Acceptance criteria: A “Compare” mode exists where a user can select two regions. A chart displays two trend lines with different colors and a legend. Data tables for both regions are shown below the chart.		

User story No: 14	Tasks: Export any chart or data table to PDF/PNG/CSV	Priority: Medium
Value statement: As a Analyst, I want to export any visualization or data table to common formats (PDF/PNG/CSV) so that I can include them in reports and presentations for stakeholders.		
BV: 200	CP: 08	
Acceptance criteria: An “Export” button is available on all charts and tables. Clicking it provides a choice of format. The downloaded file is correctly formatted and contains the currently filtered data.		

User story No: 15	Tasks: Define alert rule based on thresholds.	Priority: High
Value statement: As a Epidemiologist, I want to Create an alert rule the triggers if the case count for a disease in a region exceeds a defined threshold within a 24-hour period. so that we can respond to outbreaks immediately.		
BV: 500	CP: 13	
Acceptance criteria: A form exits to create a rule: select disease, region, threshold, time window. Rule is saved and becomes active. When the threshold is met, the system creates an alert.		

User story No: 16	Tasks: Receive alert notifications via email.	Priority: High
Value statement: As a Response Team Member, I want to receive an immediate email notification when an alert is triggered. so that I can initiate a response protocol without delay.		
BV: 500	CP: 08	
Acceptance criteria: User profile has a field for email notification preferences. An email is sent to subscribed users when an alert is triggered. The email contains a link to the alert details in the system.		

User story No: 17	Tasks: View a dashboard of all active alerts.	Priority: High
Value statement: As a Team lead, I want to see a centralized dashboard listing all active and past alerts. so that I can monitor the overall situation and prioritize Reponses.		
BV: 500	CP: 13	
Acceptance criteria: An alerts tab shows a list with columns for disease, region, trigger date, and status. Alerts can be stored and filtered. Clicking an alert navigates to a detail page with a map and relevant data.		

User story No: 18	Tasks: Manually acknowledge and resolve alerts.	Priority: Medium
Value statement: As a manager, I want to manually acknowledge and mark an alert as “Under Investigation” and later “Resolved” so that the team has a clear record of the response lifecycle.		
BV: 200	CP: 05	
Acceptance criteria: Button for Acknowledge investigate, resolve is on the alert details page. The alert status changes accordingly in the list Status change is recorded in the audit log.		

User story No: 19	Tasks: Generate a weekly situation report.	Priority: High
Value statement: As a Communication Officer, I want to automatically generate a standardized PDF report with key metrics, maps, and charts for the past week so that I can quickly distribute it to government stakeholder and the public.		
BV: 500	CP: 08	
Acceptance criteria: A generate report button exists. User can select a template (e.g. Weekly summary) The system generates a well formatted PDF containing snapshots of the dashboard for the selected period.		

User story No: 20	Tasks: Calculate and display key statistics (,RO, growth rate).	Priority: High
Value statement: As a Data Scientist, I want the system to automatically calculate and display epidemiological statistics like the effective reproduction number and weekly growth rate so that I can assess the potential trajectory of an outbreak.		
BV: 500	CP: 08	
Acceptance criteria: A dedicated advanced analytics panel exists. Statics are calculated for selected diseases/region and update with filters A confidence interval is displayed for estimates like RO		

User story No: 21	Tasks: Perform cohort analysis on case data.	Priority: Low
Value statement: As a Researcher, I want to define a cohort of cases based on specific criteria (e.g., all cases under 18 vaccinated with X vaccine) so that I can study outcomes and effectiveness for specific population segments.		
BV: 50	CP: 03	
Acceptance criteria: A query builder tool allows adding multiple filters to define a cohort. The system displays the size of the cohort and allows exporting the member list (anonymized). Basic statistics (e.g., hospitalization rate) for the cohort are calculated.		

User story No: 22	Tasks: Log new cases offline in a mobile app.	Priority: High
Value statement: As a Field officer, I want to record details of a new case using a mobile form, even without an internet connection, so that I can collect data in remote areas and sync it when connectivity is restored.		
BV: 500	CP: 05	
Acceptance criteria: The mobile app has a "New Case" form. Data is saved locally on the device. A sync button appears when online, uploading all pending records. Conflicts are handled gracefully.		

User story No: 23	Tasks: View assigned tasks and investigations. .	Priority: Medium
Value statement: As a Field Investigator, I want to see a list of tasks assigned to me, such as following up on specific cases so that I can efficiently manage my workload in the field.		
BV: 100	CP: 08	
Acceptance criteria: A "Tasks" tab in the mobile app shows a list. Tasks have a status (New, In Progress, Complete). Tapping a task shows full details and location.		

User story No: 24	Tasks: Capture the GPS location of a case.	Priority: Medium
Value statement: As a Field Officer, I want to automatically capture the GPS coordinates when I submit a new case form so that I can the case is plotted accurately on the map without manual entry errors.		
BV: 200	CP: 05	
Acceptance criteria: The app request's location permissions. A "Capture Location" button on the form populates latitude and longitude fields automatically. The user can manually override the location if needed.		
User story No: 25	Tasks: View a simplified, read-only version of the outbreak map.	Priority: Medium
Value statement: As a Public Member, I want to see a map showing general outbreak areas (without identifying individual cases) so that I can make informed decisions about my travel and activities		
BV: 200	CP: 03	
Acceptance criteria: A public URL provides a simplified dashboard. Data is aggregated to a regional level (not pin-point). No login is required. A disclaimer about data latency is displayed.		

User story No: 26	Tasks: Access official health advisories and guidance.	Priority: Medium
Value statement: As a find Concerned Citizen, I want to find official health guidance and advisories related to active outbreaks. so that I can I know how to protect myself and my family.		
BV: 200	CP: 08	
Acceptance criteria: A "Health Advisories" section is clearly visible on the public portal. Advisories are dated and written in clear language. They are linked to specific diseases on the map.		

User story No: 27	Tasks: Subscribe to email updates for a specific region.	Priority: Low
Value statement: As a School Administrator I want to subscribe to receive email updates when the alert level changes in my specific county so that I can make timely decisions about school closures. .		
BV: 50	CP: 03	
Acceptance criteria: A subscription form on the public portal allows entering an email and selecting a region. A confirmation email is sent to verify the subscription. Subscribers receive non-emergency summary emails and urgent alerts.		

User story No: 28	Tasks: Anonymize Personally Identifiable Information (PII).	Priority: High
Value statement: As a Data Privacy Officer, I want to all case data to be automatically anonymized (e.g., names replaced with codes) after a mandatory retention period so that I can we minimize privacy risks while retaining data for analysis		
BV: 500	CP: 08	
Acceptance criteria: A system job runs daily to find records older than the retention period (e.g., 30 days). PII fields in those records are pseudonymized. The original data is irreversibly removed from the production database.		

User story No: 29	Tasks: Role-based access to sensitive data fields.	Priority: High
Value statement: As a System Architect, I want to ensure that only users with the "Clinician" role can view patient names and contact information so that I can we comply with HIPAA/GDPR regulations.		
BV: 500	CP: 13	
Acceptance criteria: PII fields are not visible in the UI for users without the correct permission. API endpoints returning case data strip PII based on the user's role.		

User story No: 30	Tasks: Encrypt data at rest and in transit.	Priority: High
Value statement: As a Security Engineer, I want to all database storage to be encrypted and all data transmissions to use so that I can sensitive health information is protected from breaches.		
BV: 500	CP: 08	
Acceptance criteria: Database files are encrypted. The application forces HTTPS connections. A security scan confirms no data is transmitted over unencrypted channels.		

User story No: 31	Tasks: Manage the list of notifiable diseases.	Priority: Medium
Value statement: As a Administrator I want to add, edit, or deactivate diseases in the system’s master list so that I can the system remains up-to-date with national notifiable disease guidelines.		
BV: 100	CP: 03	
Acceptance criteria: A "Disease Management" page exists in the admin panel. New diseases can be added with a name and ICD-10 code. Existing diseases can be marked as active/inactive.		

User story No: 32	Tasks: Configure organizational hierarchy (Nation > State > County).	Priority: Medium
Value statement: As a System Administrator, I want to define the geographical hierarchy of the health system So that data can be aggregated and permissions can be assigned at the correct level		
BV: 200	CP: 03	
Acceptance criteria: An interface allows building the hierarchy with parent-child relationships. Users can be assigned to a specific node in the hierarchy. Data aggregation on maps and charts respects this hierarchy.		

User story No: 33	Tasks: Monitor system health and performance.	Priority: Low
Value statement: As a DevOps Engineer, I want to view a dashboard showing system uptime, API response times, and database load. so that I can proactively identify and resolve performance issues before they affect users.		
BV: 50	CP: 03	
Acceptance criteria: A system health dashboard is available to admins. Key metrics are displayed graphically over time. Alerts can be configured for critical metrics (e.g., downtime).		

User story No: 34	Tasks: Run a simple forecasting model on case data.	Priority: Low
Value statement: As a Epidemiologist, I want to select a region and disease and run a forecast to predict case counts for the next 14 days so that I can we can anticipate healthcare resource needs		
BV: 50	CP: 03	
Acceptance criteria: A "Generate Forecast" button is available on the analytics page. The system displays a forecast line on the time-series chart with a confidence interval. The forecast is based on historical data and simple statistical models.		

User story No: 35	Tasks: Analyze correlation between outbreak data and environmental factors (e.g., weather).	Priority: Low
Value statement: As a Researcher, I want to overlay weather data (e.g., rainfall, temperature) on top of disease outbreak charts so that I can visually explore potential correlations for vector-borne diseases.		
BV: 50	CP: 03	
Acceptance criteria: An option to "Add Data Layer" is available in the chart view. User can select from pre-integrated environmental data sources. A second Y-axis is added to the chart to plot the environmental factor.		

User story No: 36	Tasks: Import contact tracing data from a national API.	Priority: Medium
Value statement: As a Public Health Official, I want to ingest contact tracing data from the national exposure notification system so that I can correlate positive cases with tracing alerts to measure effectiveness.		
BV: 200	CP: 05	
Acceptance criteria: System can connect to the defined national API (if available). Tracing data is stored and linked to relevant cases. A visualization shows cases with and without associated tracing data.		

User story No: 37	Tasks: Visualize transmission chains	Priority: Low
Value statement: As a Analyst I want to visualize a network graph showing suspected transmission chains between cases so that I can identify super-spreader events and patterns of transmission		
BV: 50	CP: 05	
Acceptance criteria: A "Transmission Network" view is available for diseases where contact data exists. Cases are nodes and links represent probable transmission. The graph is interactive and can be manipulated.		

User story No: 38	Tasks: Track availability of hospital beds and ICU units.	Priority: Medium
Value statement: As a Hospital Administrator, I want to input the current number of available beds and ICU units so that I can public health officials can see healthcare capacity alongside disease spread		
BV: 200	CP: 05	
Acceptance criteria: A form exists for authorized hospital users to submit daily capacity numbers. This data is displayed on a separate map layer or dashboard panel. Data can be viewed aggregated by region.		

User story No: 39	Tasks: Map testing and vaccination sites.	Priority: Low
Value statement: As a Member of the Public, I want to see a map layer showing the locations of testing and vaccination sites so that I can easily find where to get help.		
BV: 50	CP: 03	
Acceptance criteria: Administrators can upload/manage a list of sites with addresses and types. The public portal has a toggle to show these sites on the map. Clicking a site shows its address and operating hours.		

User story No: 40	Tasks: Monitor inventory of critical supplies (vaccines, tests, PPE).	Priority: High
Value statement: As a Logistic Coordinator,		

I want to see a dashboard showing inventory levels of key supplies across different warehouses so that I can identify and address potential shortages before they occur.	
BV: 500	CP: 13
Acceptance criteria: A "Logistics" dashboard exists for users with the correct role. Data is presented in tables and charts, showing trends over time. Low inventory alerts can be configured.	

Document 4 - Agile PO Experience

The Product Owner has a vision of the product keeping the domain/industry experience and the market need.

❖ Following are the responsibilities of PO in a project:

- **Market Analysis**

- Conducted extensive research on global and regional disease surveillance trends, competitor products, and emerging technologies to identify gaps and opportunities.
- Analyzed user needs of public health authorities, hospitals, and labs to align product offerings with market demand and regulatory requirements.

- **Enterprise Analysis**

- Collaborated with government health agencies, NGOs, and healthcare enterprises to understand operational workflows and compliance constraints.
- Identified integration needs with existing health information systems (HIS) and reporting frameworks for seamless data exchange.

- **Product Vision and Roadmap**

- Defined a clear product vision to enable real-time disease tracking, predictive analytics, and outbreak intelligence.
- Developed a phased product roadmap balancing quick wins (MVP) and long-term capabilities like AI-driven predictive modeling and automated alerts.

- **Managing Product Features**
    - Prioritized features such as case reporting, geospatial mapping, and dashboard analytics based on stakeholder feedback and urgency of public health needs.
    - Ensured feature designs met usability, scalability, and security standards for sensitive health data.
    - Prioritized epics and user stories, such as:
        - **Epic 1:** Disease surveillance and outbreak Management
        - **Epic 2:** Data visualization and intelligent Reporting
        - **Epic 3:** Stakeholder communication and information sharing

- **Managing Product Backlog**

- Created and refined the product backlog with clearly defined user stories.
- Conducted backlog grooming sessions with the development team to ensure proper understanding.
- Prioritized backlog items based on market demand, business needs, and technical complexity.
- Regularly re-evaluated and adjusted priorities based on stakeholder feedback.

- **Managing Overall Iteration Progress**

- Reviewed sprint progress regularly to ensure the team was on track.
- Reprioritized sprint backlogs, when necessary, based on changing business needs.
- Conducted sprint retrospectives with the Business Analyst and Scrum Master to identify areas for improvement.

Key Learnings as a Product Owner:

1. **Handling Sprint Meetings**
    - **Sprint Planning Meeting:** Learned how to effectively plan sprints by breaking down epics into user stories and tasks, and assigning priorities.
    - **Daily Scrum Meeting:** Gained experience in facilitating daily stand-ups to track progress and identify blockers.

- **Sprint Review Meeting:** Conducted sprint reviews to demonstrate completed work to stakeholders and gather feedback.
- **Sprint Retrospective Meeting:** Facilitated retrospectives to reflect on what went well, what didn't, and how to improve in the next sprint.
- **Backlog Refinement Meeting:** Learned how to refine the backlog by breaking down user stories and ensuring they were ready for upcoming sprints.

2. **User Stories Creation**
    - Gained hands-on experience in creating user stories with clear acceptance criteria, business value (BV), and complexity points (CP).
    - Example of a user story:

User Story ID: HGG-107

Value Statement: Monitor inventory of critical supplies (vaccines, tests, PPE).

Tasks: Create a dashboard showing inventory levels of key supplies across different warehouses.

Priority: High

BV: 200

CP: 13

Acceptance Criteria:

A "Logistics" dashboard exists for users with the correct role.

Data is presented in tables and charts, showing trends over time.

3. **Stakeholder Communication**
    - Acted as the liaison between business stakeholders and the Scrum team.
    - Ensured that all stakeholders were informed about the project's progress and any changes in priorities.
    - Conducted regular meetings with stakeholders to gather feedback and ensure the product was aligned with business goals.
4. **Product Vision and Feature Definition**
    - Developed a clear vision for the product and communicated it effectively to the team.
    - Learned how to break down the vision into actionable features and user stories.

- Ensured that the product backlog reflected the product vision and roadmap.

Document 5: Product and sprint backlog and product and sprint burndown charts

Product backlog:

User Story ID	User Story	Tasks	Priority	BV	CP	Sprint
HG-101	As a Public Health Official (PHO), I want to see an interactive map dashboard displaying real-time outbreak clusters filtered by disease, region, and time	Integrate map API. Develop backend service to aggregate and geotag case data.	High	500	13	Sprint 1
HG-102	As a Clinician (CA), I want to quickly report a confirmed or suspected disease case through a simple web form, so that public health authorities are notified immediately.	Design and create a responsive case reporting form UI. Define database schema for case data (e.g., disease, symptoms, patient demographics (anonymized), location, date).	High	500	08	Sprint 2
HG-103	As a Field Epidemiologist (FE), I want to receive instant mobile push notifications when a new case is reported in my assigned geographical area, so that I can initiate contact tracing promptly	Research and select a push notification service (e.g., Firebase Cloud Messaging). Develop service to trigger notifications based on case location and user assignment.	Medium	200	05	Sprint 3
HG-104	As a Public User (PU), I want to view a simple, color-coded risk level (e.g., Low, Medium, High) for my current location or a searched location, so that I can	Develop an algorithm to calculate a risk level based on local case density and trends.	Medium	100	08	Sprint 4

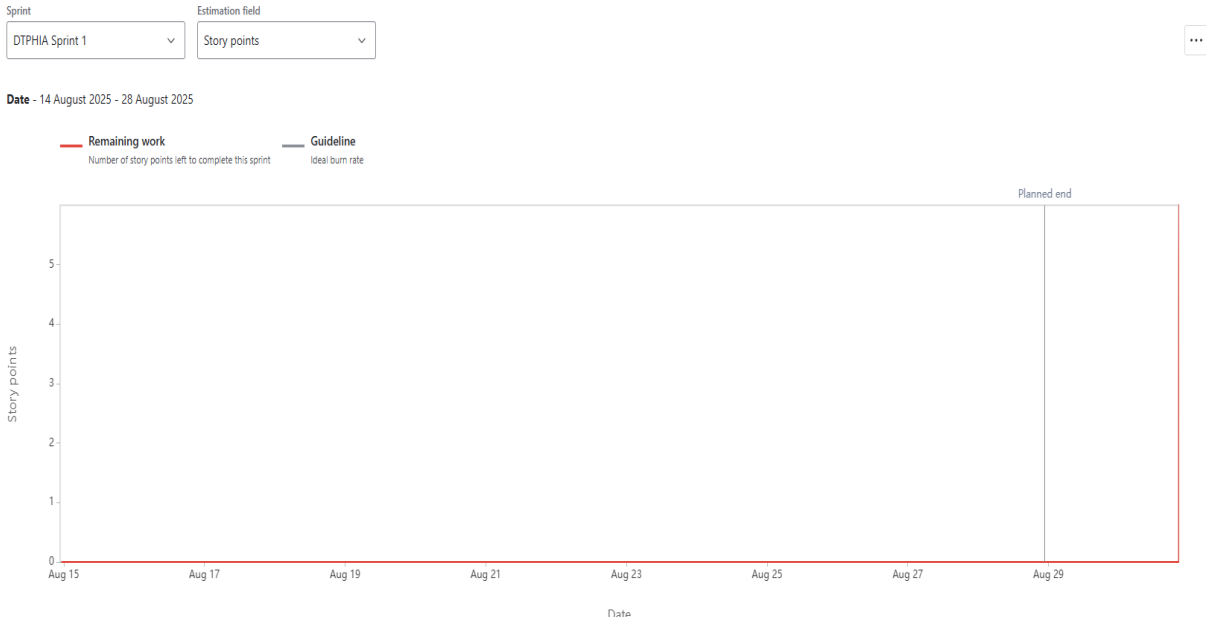
User Story ID	User Story	Tasks	Priority	BV	CP	Sprint
	make informed decisions about my activities.	Create a simple UI to display the risk level (e.g., a large colored indicator). Implement geolocation API for automatic location detection.				
HG-105	As a Public Health Official (PHO), I want to generate and export trend analysis charts (line graphs) of disease incidence over time, so that I can report on outbreak progression and effectiveness of interventions.	Integrate a charting library Develop backend API to serve time-series data for selected diseases and regions. Build a UI for selecting chart parameters and initiating export	High	500	13	Sprint 5
HG-106	As a Field Epidemiologist (FE), I want to access and update a contact tracing list linked to a specific case, including adding contacts and their status, so that I can manage the tracing process efficiently from the field.	Design database schema to link cases to contacts. Develop a secure API to access and modify contact tracing data.	Medium	200	05	Sprint 6
HG-107	As a System Administrator, I want to manage user roles and permissions (e.g., Assign PHO, FE, CA roles), so that data access and editing capabilities are secure and appropriate	Design a role-based access control (RBAC) model. Build a user management UI (for admins only). Implement backend authorization checks on all API endpoints.	Medium	100	03	Sprint 7
HG-108	As a Public User (PU), I want to opt-in to receive proactive health alerts for my saved locations, so that I am warned about emerging public health risks.	Create a user settings page for managing alert subscriptions and locations. Develop a backend service to match new case data against user preferences.	High	500	13	Sprint 8

User Story ID	User Story	Tasks	Priority	BV	CP	Sprint
		Implement an email/SMS alert system.				
HG-109	As a Clinician (CA), I want to see a data visualization of the most commonly reported symptoms in my area over the last 48 hours, so I can be aware of potential atypical presentations of ongoing outbreaks.	Develop backend API to aggregate symptom data. Create a UI widget (e.g., a bar chart or word cloud) to visualize symptom frequency. Ensure all data is anonymized and aggregated for privacy.	Medium	200	08	Sprint 9
HG-110	As a Public Health Official (PHO), I want to see a system-generated report that predicts potential outbreak spread for the next 7 days using modeling, so that I can plan preventative measures.	Research and prototype a simple predictive model (e.g., based on historical spread rates). Develop a backend service to run the model and generate prediction data. Create a dedicated UI page to display the predictive report.	Medium	100	05	Sprint 10

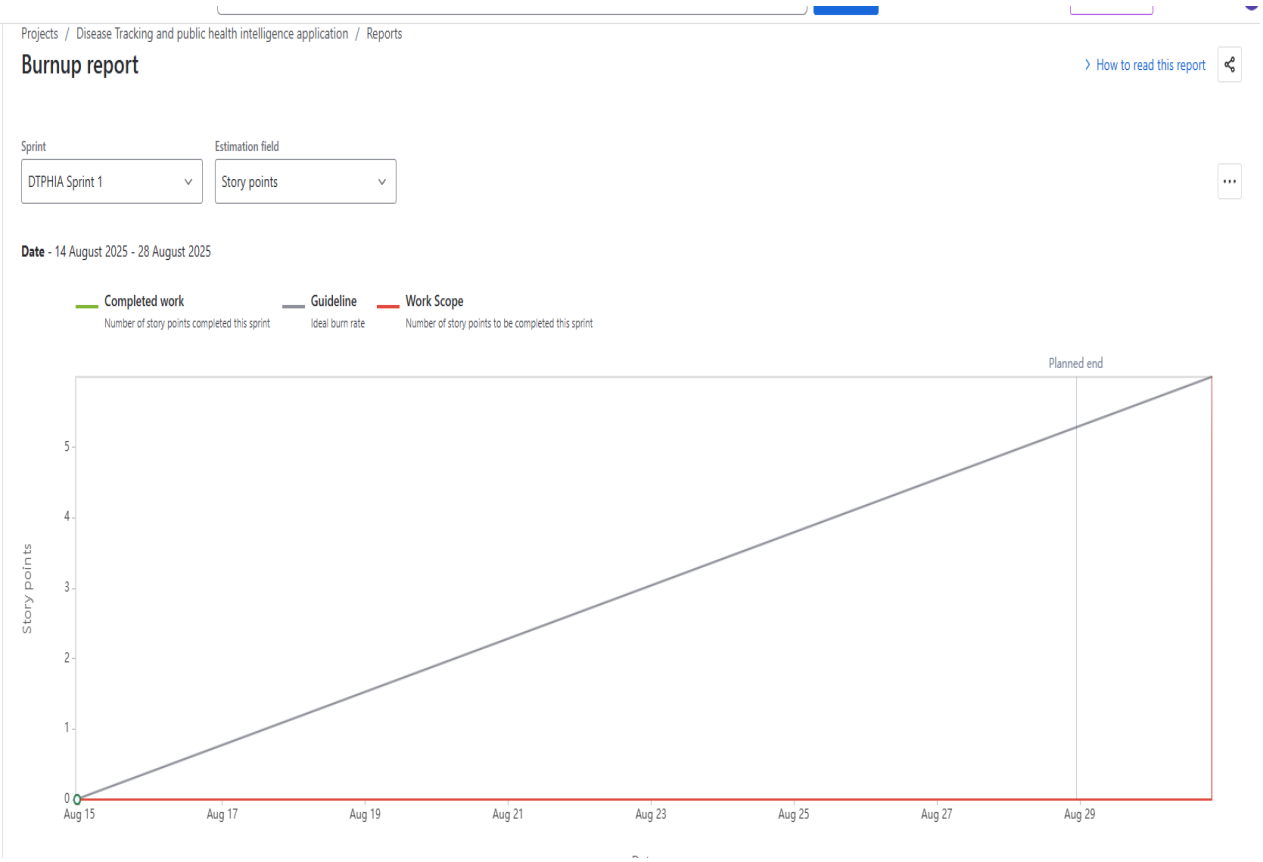
Sprint Backlog:

User Story ID	User Story	Tasks	Owner	Status	Estimated Effort (hours)
US-01	As a admin, I want to register new health workers so that they can report cases.	Design registration from-Build API for user creation-integrated with database.	Developer 1	In Progress	12
US-02	As a health worker, I want to log suspected disease cases via mobile app to notify authorities.	Create mobile from UI-Build API to submit cases-Store data in database-Test on Android/iOS	Developer 2	Not Started	18
US-03	As a public health officer, I want automated alerts for disease a spike so I can respond quickly	Set spike detection logic-Build Notification Services-Integrate SMS/Email API-Unit Testing	Developer 3	In Progress	20
US-04	As a user, I want to export case data in CSV for offline analysis.	Implement logic page- Add JWT authentication- Role mapping- Security Testing	Developer 4	Not Started	16
US-05	As a data analyst, I want a dashboard to view reported cases by location to identify hotspots.	Design dashboard UI-connect with database-Create heatmap integration-Test filters and accuracy	Developer 5	Not Started	14
US-06	As an admin, I want to manage system settings to update parameters without coding.	Create setting page – Update backend APIs Add validations – Perform QA Testing.	Developer 6	Not Started	10

Burndown Chart:



Burnup Chart:



Document 6: Sprint meetings

Meeting Type 1: Sprint Planning meeting

Date	05/02/2024
Time	2:00 PM
Location	Pune (Conference Room)
Prepared By	Product Owner
Attendees	Scrum Master, Development Team, Product Owner, Stakeholders

Agenda Topics

Topic	Presenter	Time allotted
Review Product Backlog	Product Owner	30 minutes
Define Sprint Goal	Scrum Master	20 minutes
Select User Stories for the Sprint	Development Team	45 minutes
Break Down User Stories into Tasks	Development Team	45 minutes

Other Information

Observers	None
Resources	JIRA, Whiteboard, Markers
Special Notes	Ensure all user stories are well-defined and estimated.

Meeting Type 2: Sprint review meeting

Date	15/02/2024
Time	10:00 AM
Location	Pune (Conference Room)
Prepared By	Scrum Master
Attendees	Development Team, Product Owner, Stakeholders

Sprint status	Things to demo	Quick updates	What's next
2 user stories completed (HG-101-HG-102).	Export functionality to PDF and Excel.	Low stock alerts are in development.	Start work on the loyalty program module (HG-101).
No major blockers reported.	Low stock alerts (work in progress).	Stakeholder feedback will be incorporated into the next sprint.	Prepare for Sprint 2 planning meeting.

Meeting Type 3: Sprint retrospective meeting

Date	15/03/2024
Time	3:00 PM
Location	Pune (Conference Room)
Prepared By	Scrum Master
Attendees	Development Team, Scrum Master

Agenda	What went well	What didn't go well	Questions	Reference
Reflect on the sprint and identify areas for improvement.	Team collaboration was excellent.	Some tasks took longer than estimated.	How can we improve task estimation?	Sprint 1 Burndown Chart

Discuss what worked and what didn't.	Daily stand-ups helped keep everyone aligned.	Communication with stakeholders could be improved.	What can we do to improve stakeholder communication?	Sprint 1 Retrospective Notes

Meeting Type 4: Daily Stand-up meeting

Question	Name/Role	Week "1" (from 17-02-2024 to 21-02-2024)						
		Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Sunday**
What did you do yesterday?	**Developer 1**	Complete the API integration from hospital data	Tested API responses for data accuracy	Implemented authentication for secure APIs.	Created predictive analytics data endpoint	Integrated analytics endpoint successfully,	-	-
	Developer 2	Finished the UI for the geospatial on dashboard	Integrated live data into the geospatial dashboard successfully	Load time improve by 30%	Completed design and integration of region/disease filters	Finished accessibility Enhancements on UI components.	-	-
	Developer 3	Prepare test scenarios for case notification Module.	Complete functional testing of reporting workflow.	Started regression testing, Identified two critical bugs in alert scheduling.	Retested bug fixes, one issue is still persisting	Debugged notification module issues with backend support.	-	-

What will you do today?	**Developer 1**	Start testing the API responses for accuracy	Work on authentication for secure data transfer.	Start building endpoints for analytics and data pull	Start integration testing with the analytics module	Deploy updated APIs for UAT	-	-
	Developer 2	Integration live data points into the map visualization	Optimize map rendering for faster load times	Begin designing user filters for region and disease specific search	Implement accessibility enhancements for visually impaired users	Conduct UI testing and hand over updates to QA	-	-
	Developer 3	Begin functional testing of the reporting workflow	Begin regression testing for notification triggers	Retesting after fixes are applied	Document finding and assist developers in debugging	Finalize regression testing and prepare UAT report.	-	-
What (if any) is blocking your progress?	**Developer 1**	No blockers	Waiting for encryption key setup from DevOps	No blockers.	No blockers.	No blockers.	-	-
	Developer 2	No blockers.			No blockers.	No blockers.	-	-
	Developer 3	No blockers.	No blockers.	No blockers.	No blockers.	No blockers.	-	-

			No blockers.					