**Logistic Automation**

**Document 1 - Definition of Done (DoD) for Logistic Automation**

**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 | Team feedback is implemented | Porduction 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 | Traning 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 is met | Security testing is complete | Release communication are 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:** | **Logistic Automation** |
| **Venue:** | **Pune** |  |  |
| **Date:** | **Start time:** | **End time:** | **Duration:** |
| **Client:** | **Vertex Logistics Solutions** |  |  |
| **Stakeholder list:** | **Michael Anderson** (Logistics Manager) |  |  |
|  | **Sophia Patel** (Supply Chain Director) |  |  |
|  | **David Thompson** (IT Solutions Lead) |  |  |
| **Scrum Team** | | | |
| **Scrum Master:** | Rohan Mehta |  |  |
| **Product owner:** | Priya Sharma |  |  |
| **Scrum Developer 1:** | Aarav Gupta |  |  |
| **Scrum Developer 2:** | Kavya Iyer |  |  |
| **Scrum Developer 3:** | Neha Reddy |  |  |
| **Scrum Developer 4:** | Aditya Verma |  |  |
| **Scrum Developer 5:** | Ishaan Khanna |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Vision:**  Our vision is to build a **supply chain platform** that enhances visibility, optimizes inventory, and improves decision-making. By leveraging real-time data, businesses can reduce delays, cut costs, and respond efficiently to market changes. This solution aims to create a **resilient and adaptive supply chain** for improved operational success. | | | |
| **Target group** | **Needs** | **Product** | **Value** |
| **Market Segment:**  Logistics, manufacturing, retail, and e-commerce market segments | **Problem:**  Lack of Real-Time Visibility, Inaccurate Demand Forecasting, Inventory Mismanagement, Supply Chain Disruptions and Communication Gaps | **Product**  A cloud-based **Supply Chain Management Platform** designed to enhance visibility, improve demand forecasting, and streamline inventory and logistics operations for improved efficiency and cost savings. | **Benefit**  The product will benefit the company by improving **operational efficiency, reducing costs**, and enhancing **customer satisfaction** through streamlined supply chain processes and data-driven decision-making. |
| **Target Users:**  **Supply Chain Managers,** Warehouse Supervisors, Logistics Coordinators, Procurement Specialists and Inventory Controllers | **Benefit:**  Enhanced Visibility, Improved Forecasting, Increased Efficiency, Cost Reduction, Better Collaboration and Risk Mitigation | **Desirability:**  The product's uniqueness lies in its **AI-driven insights, real-time tracking,** and **automated processes,** enabling businesses to optimize operations, reduce costs, and manage disruptions proactively. | **Business Goals**   * Increase Operational Efficiency: Streamline supply chain processes to reduce delays, minimize errors, and improve productivity. * Enhance Customer Satisfaction: Ensure timely deliveries, accurate order fulfillment, and improved service quality. * Maximize Cost Savings: Optimize inventory levels, reduce waste, and improve resource utilization to lower operational costs. |
| **Target Customers:**  **Manufacturing Companies,** Retail & E-commerce Businesses, **Logistics & Distribution Firms,** Wholesale & Trading Companies and Third-Party Logistics (3PL) Providers |  | **Feasibility:**  Yes, with the right team, tools, and agile development approach. | **Business Model:**  Subscription-based SaaS (Software as a Service) model for recurring revenue. |

**Document 3: User stories**

|  |  |  |  |
| --- | --- | --- | --- |
| **User story No:** US001 | **Tasks:** Real-time Inventory Tracking | | **Priority:** High |
| **Value statement:**  As a warehouse manager,  I want to track live inventory  So that I can avoid stock outs and overstocking. | | | |
| **BV: 500** | | **CP: 5** | |
| **Acceptance criteria:**  Displays accurate stock levels  Updates automatically when inventory changes | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **User story No:** US002 | **Tasks:** Demand Forecasting using AI | | **Priority:** High |
| **Value statement:**  As a supply chain analyst,  I want AI-driven forecasting  So that I can predict future inventory needs. | | | |
| **BV: 500** | | **CP: 8** | |
| **Acceptance criteria:**  Forecast generated with 95% accuracy  Provides weekly and monthly trend analysis | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **User story No:** US003 | **Tasks:** Demand Forecasting using AI | | **Priority:** Medium |
| **Value statement:**  As a procurement officer,  I want to manage supplier data  So that I can track supplier performance. | | | |
| **BV: 200** | | **CP: 6** | |
| **Acceptance criteria:**  Enables supplier profile creation  Displays supplier ratings and contract details | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **User story No:** US004 | **Tasks:** Automated Order Processing | | **Priority:** High |
| **Value statement:**  As an operations manager,  I want automated order creation  So that I can reduce manual errors and save time. | | | |
| **BV: 500** | | **CP: 7** | |
| **Acceptance criteria:**  Orders auto-generated based on inventory levels  Notifications sent upon successful order creation | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **User story No:** US005 | **Tasks:** Shipment Tracking System | | **Priority:** High |
| **Value statement:**  As a logistics coordinator,  I want to track shipment status  So that I can ensure timely deliveries. | | | |
| **BV: 500** | | **CP: 5** | |
| **Acceptance criteria:**  Displays real-time shipment status  Alerts triggered for delays | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **User story No:** US006 | **Tasks:** Role-based Access Control | | **Priority:** Medium |
| **Value statement:**  As a system admin,  I want to assign user roles  So that I can control system access securely. | | | |
| **BV: 100** | | **CP: 4** | |
| **Acceptance criteria:**  Users can only access authorized sections  Admin can modify user roles | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **User story No:** US007 | **Tasks:** Alerts & Notifications | | **Priority:** Medium |
| **Value statement:**  As a warehouse supervisor  I want automated alerts for low stock  So that I can restock on time. | | | |
| **BV: 200** | | **CP: 4** | |
| **Acceptance criteria:**  Alerts triggered when inventory drops below the threshold | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **User story No:** US008 | **Tasks:** Data Analytics Dashboard | | **Priority:** High |
| **Value statement:**  As a business owner,  I want a dashboard with key insights  So that I can make informed decisions. | | | |
| **BV: 500** | | **CP: 6** | |
| **Acceptance criteria:**  Displays KPIs like stock levels, sales trends, and delivery timelines | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **User story No:** US009 | **Tasks:** Returns & Refund Management | | **Priority:** Medium |
| **Value statement:**  As a customer support agent,  I want a system to manage returns  So that I can handle refund requests efficiently. | | | |
| **BV: 200** | | **CP: 5** | |
| **Acceptance criteria:**  Tracks return requests and updates order status  Refund processing integrated with finance system | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **User story No:** US010 | **Tasks:** Integration with ERP System | | **Priority:** High |
| **Value statement:**  As an IT manager,  I want seamless integration with our ERP system  So that data flow between systems is automated. | | | |
| **BV: 500** | | **CP: 9** | |
| **Acceptance criteria:**  ERP syncs with inventory, orders, and supplier data  Data discrepancies are logged and flagged | | | |

**Document 4: Agile PO Experience**

As a product owner I started with collaboration with the Business Analyst and the stake holders. The vision of the product was to create a user-friendly, comprehensive platform that streamlines administrative tasks, enhances communication between parents, teacher and students. This would ultimately provide a seamless, data-driven experience to improve the overall learning environment and student outcomes, all while being adaptable to evolving school needs and readily accessible across devices.

Following are the responsibilities of PO in a project

* **Market Analysis**
  + Understanding Market Needs - Conducts research to identify customer pain points, industry trends, and emerging demands.
  + Evaluating Market Demand - Analyse the demand for the product and ensures features align with customer expectations.
  + Assessing Competitor Products - Studies existing solutions to identify gaps, unique selling points, and opportunities for innovation.
* **Enterprise Analysis**
  + Market Opportunity Assessment: Identifying customer needs, industry trends, and gaps in existing solutions.
  + Due Diligence: Evaluating product feasibility, profitability, and potential risks.
  + Competitive Analysis: Analysing competitors to identify unique value propositions and gain a competitive edge.
* **Product Vision and Roadmap**
  + Clear Product Vision: Define a compelling vision that addresses market needs, solves customer pain points, and aligns with business goals.
  + High-Level Features: Identify key features such as inventory tracking, AI-driven forecasting, and automated order processing to meet user demands.
  + Timeline & Milestones: Develop a roadmap outlining feature releases, sprint cycles, and key deliverables to ensure timely progress and value delivery.
* **Managing Product Features**
  + Stakeholder Expectation Management: Engage with stakeholders regularly to gather feedback, align on priorities, and ensure their needs are addressed.
  + Prioritization of Features: Use frameworks like MoSCoW, RICE, or Value vs Effort to prioritize epics, stories, and features based on business impact and user value.
  + Focus on ROI and Criticality: Emphasize delivering high-value and mission-critical features first to maximize return on investment and meet project objectives.
* **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 - How to handle sprint meetings**

* Sprint planning meeting: In this meeting I was responsible for presenting the highest priority items from the product backlog, clarifying the objectives and acceptance criteria for the selected user stories and ensuring the development team understands the sprint goal and overall product vision.
* Daily scrum meeting: In daily scrum meetings my primary role was to observe, support and provide clarification on product backlog items as needed, ensuring the development team is aligned with the product vision and priorities, while primarily allowing the team to drive the discussion and report their progress.
* Sprint review meeting: In these meetings my main role was to act like a facilitator, responsible for guiding the demonstration of the completed work, collecting feedback from the stakeholders and updating the product backlog depending upon the feedback received.
* Sprint retrospective meeting: In these meetings I was responsible for giving constructive feedback on the value the team delivered in the previous sprint by guiding them to see the areas they need to improve on while celebrating their wins.
* Backlog refinement meeting: In these meetings I prepared the meeting agenda, prioritising items, and communicating the product vision.

There were many requirements received from the stakeholders which were converted to user stories. Many features were to be prioritised as per their importance in the product. I conducted a meeting with the stakeholders where they added the Business value to the features so that development team could work on the most important feature. Then further, the development team was also asked to assign the complexity points to the product based on their criticality.

After the prioritisation of the user stories, these user stories were moved to the product backlog. Here, with the collaboration of the development team and the stakeholder reprioritisation was done after the sprint was started. The product backlog was moved to the sprint backlog. The sprints were further divided into smaller tasks and each task was taken up by a development member.

In Scrum, I served as the liaison between multiple areas of an organization. I communicated with business stakeholders and collaborated closely with Scrum teams to keep all areas of the business informed on a project's development. I developed a vision of a product's function and operation, which in turn allows this Scrum team member to define product features and break those features into product backlog items.

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

**Product Backlog**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **User Story ID** | **User Story** | **Tasks** | **Priority** | **BV** | **CP** | **Sprint** |
| US001 | As a warehouse manager, I want to track live inventory so that I can avoid stock outs and overstocking. | Real-time Inventory Tracking | High | 500 | 5 | Sprint 1 |
| US002 | As a supply chain analyst, I want AI-driven forecasting so that I can predict future inventory needs. | Demand Forecasting using AI | High | 500 | 8 | Sprint 2 |
| US003 | As a procurement officer, I want to manage supplier data so that I can track supplier performance. | Supplier Management Portal | Medium | 200 | 6 | Sprint 3 |
| US004 | As an operations manager, I want automated order creation so that I can reduce manual errors and save time. | Automated Order Processing | High | 500 | 7 | Sprint 4 |
| US005 | As a logistics coordinator, I want to track shipment status so that I can ensure timely deliveries. | Shipment Tracking System | High | 500 | 5 | Sprint 5 |
| US006 | As a system admin, I want to assign user roles so that I can control system access securely. | Role-based Access Control | Medium | 100 | 4 | Sprint 6 |
| US007 | As a warehouse supervisor, I want automated alerts for low stock so that I can restock on time. | Alerts & Notifications | Medium | 200 | 4 | Sprint 7 |
| US008 | As a business owner, I want a dashboard with key insights so that I can make informed decisions. | Data Analytics Dashboard | High | 500 | 6 | Sprint 8 |
| US009 | As a customer support agent, I want a system to manage returns so that I can handle refund requests efficiently | Returns & Refund Management | Medium | 200 | 5 | Sprint 9 |
| US010 | As an IT manager, I want seamless integration with our ERP system so that data flow between systems is automated. | Integration with ERP System | High | 500 | 9 | Sprint 10 |

**Sprint Backlog**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **User Story ID** | **User Story** | **Tasks** | **Owner** | **Status** | **Estimated Effort** |
| US001 | As a warehouse manager, I want to track live inventory so that I can avoid stock outs and overstocking. | Real-time Inventory Tracking | Developer 1 | In Progress | 20 |
| US002 | As a supply chain analyst, I want AI-driven forecasting so that I can predict future inventory needs. | Demand Forecasting using AI | Developer 2 | Not Started | 10 |
| US003 | As a procurement officer, I want to manage supplier data so that I can track supplier performance. | Supplier Management Portal | Developer 3 | In Progress | 30 |
| US004 | As an operations manager, I want automated order creation so that I can reduce manual errors and save time. | Automated Order Processing | Developer 4 | Not Started | 15 |
| US005 | As a logistics coordinator, I want to track shipment status so that I can ensure timely deliveries. | Shipment Tracking System | Developer 5 | Not Started | 25 |
| US006 | As a system admin, I want to assign user roles so that I can control system access securely. | Role-based Access Control | Developer 1 | Not Started | 15 |
| US007 | As a warehouse supervisor, I want automated alerts for low stock so that I can restock on time. | Alerts & Notifications | Developer 2 | Not Started | 20 |
| US008 | As a business owner, I want a dashboard with key insights so that I can make informed decisions. | Data Analytics Dashboard | Developer 3 | Not Started | 10 |
| US009 | As a customer support agent, I want a system to manage returns so that I can handle refund requests efficiently | Returns & Refund Management | Developer 4 | Not Started | 30 |
| US010 | As an IT manager, I want seamless integration with our ERP system so that data flow between systems is automated. | Integration with ERP System | Developer 5 | Not Started | 15 |

**Product Burndown Chart:**

**Sprint Burndown Chart:**