PROJECT PLANNING PHASE

To Supply Leftover Food to Poor - Agile Project Planning & Sprint Schedule

Project Planning Phase: Product Backlog, Sprint Planning, Stories & Story Points

Date: November 1, 2025
Team ID: NM2025TMID08527
Project Name: To Supply Leftover Food to Poor
Maximum Marks: 5 Marks

PROJECT OVERVIEW

Project Goal: Establish integrated food recovery and redistribution system connecting donors, volunteers, and beneficiaries through systematic phases enabling 5x scaling from pilot (100 meals/day) to operational (500+ meals/day) within 6 months.

Project Duration: 18 months (Phases 1-5)
Team Size: 15-20 core team members initially, scaling to 50+ by Phase 3
Methodology: Agile Scrum with 2-week sprints for technology, 4-week sprints for operational phases

PRODUCT BACKLOG & SPRINT PLANNING

PHASE 1: FOUNDATION & PARTNERSHIPS (Months 1-3) - 12 SPRINTS

EPIC-1: STAKEHOLDER ENGAGEMENT & VALIDATION

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Stakeholder Research	FS-1	As a project coordinator, I need to interview 10+ donors (restaurants, caterers) to understand food availability patterns and collection preferences	5	High	Project Lead, Business Analyst
Sprint-1	Beneficiary Identification	FS-2	As a project coordinator, I need to identify 5+ NGOs/shelters as beneficiary partners to understand meal needs and distribution capacity	5	High	Logistics Coordinator

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Problem Validation	FS-3	As a researcher, I need to conduct interviews confirming problem-solution fit with 10+ stakeholders	8	High	Research Lead, Analysts
Sprint-2	Partnership Development	FS-4	As a business development manager, I need to draft partnership agreements with initial 5 donors specifying terms, food types, collection schedule	5	High	Business Manager
Sprint-2	Beneficiary Agreements	FS-5	As a project coordinator, I need to finalize distribution partnership agreements with 3-5 beneficiary organizations	5	High	Social Impact Lead
Sprint-3	Volunteer Recruitment	FS-6	As a volunteer coordinator, I need to recruit 25-30 core volunteers with community background and willingness to participate in food collection	8	High	HR Lead, Volunteer Coordinator
Sprint-3	Team Formation	FS-7	As a project manager, I need to establish core project team (hub manager, coordinators, trainers) with clear roles and responsibilities	5	High	Project Lead, HR

EPIC-2: OPERATIONAL PROTOCOL DOCUMENTATION

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-4	Collection Procedures	FS-8	As an operations manager, I need to document collection procedures including donor contact, food inspection, temperature verification, packaging, documentation requirements	8	High	Operations Lead, Food Safety Expert
Sprint-4	Storage Protocols	FS-9	As a food safety officer, I need to document cold storage procedures including temperature maintenance, segregation, FIFO rotation, labeling, expiration management	8	High	Food Safety Expert

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-5	Distribution Procedures	FS-10	As a logistics coordinator, I need to document beneficiary distribution procedures including route planning, delivery protocols, feedback collection	5	High	Logistics Lead
Sprint-5	Food Safety Checklists	FS-11	As a quality officer, I need to create food safety verification checklists for collection, transport, storage, and distribution stages	8	High	Quality Assurance Lead
Sprint-6	Training Materials	FS-12	As a training coordinator, I need to develop training modules for volunteers covering food safety, cold chain management, customer service, emergency procedures	13	High	Training Lead, Subject Matter Experts

EPIC-3: PILOT OPERATIONS & TESTING

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-7	Pilot Collections	FS-13	As an operations coordinator, I need to execute 20+ pilot collections from committed donors to test procedures and gather feedback	13	High	Operations Lead, Volunteer Coordinators
Sprint-7	Pilot Distributions	FS-14	As a distribution coordinator, I need to execute pilot meal distributions to 3-5 beneficiary endpoints and measure beneficiary satisfaction	8	High	Distribution Lead
Sprint-8	Process Feedback	FS-15	As a project manager, I need to collect feedback from volunteers, donors, and beneficiaries regarding pilot operations and identify improvements	5	High	Project Lead, Analyst
Sprint-8	Cost Analysis	FS-16	As a financial analyst, I need to calculate pilot phase costs and determine cost per meal baseline ($2.50 target)	5	High	Finance Lead

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-9	Performance Metrics	FS-17	As a data analyst, I need to compile Phase 1 metrics (meals collected, beneficiaries served, volunteer efficiency, satisfaction scores)	5	High	Analytics Lead

EPIC-4: FUNDING & RESOURCE PLANNING

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-10	Grant Applications	FS-18	As a grants writer, I need to prepare grant applications to foundations and government agencies for $50-100K funding for Phase 2 infrastructure	13	High	Grants Lead, Finance
Sprint-10	Corporate Sponsorships	FS-19	As a business development manager, I need to secure initial corporate sponsors committing to $5-10K monthly CSR support	8	High	Business Manager
Sprint-11	Operational Budget	FS-20	As a finance manager, I need to develop detailed operational budget for Phase 2 ($25-35K/month operations, $60-80K setup)	8	High	Finance Lead
Sprint-12	Government Support	FS-21	As a government liaison, I need to obtain municipal/government approval letters and explore partnership opportunities	5	High	Policy Lead

PHASE 2: INFRASTRUCTURE & LOGISTICS (Months 4-6) - 12 SPRINTS

EPIC-5: HUB INFRASTRUCTURE

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Facility Identification	IL-1	As a facilities manager, I need to identify and lease FSSAI-compliant cold storage facility (1,500-2,000 sq ft) in central location accessible to collection routes	8	High	Facilities Lead, Operations

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-2	Cold Storage Setup	IL-2	As a facilities engineer, I need to procure and install industrial refrigeration unit maintaining 0-5°C with backup power systems	13	High	Facilities Engineer, Vendor
Sprint-2	Facility Renovation	IL-3	As a facilities manager, I need to renovate facility for FSSAI compliance including sanitation systems, ventilation, organization areas	13	High	Facilities Manager
Sprint-3	Equipment Procurement	IL-4	As a procurement officer, I need to procure food-grade containers, insulated boxes, temperature monitoring devices, labeling equipment	8	High	Procurement Lead
Sprint-3	Hub Operations Setup	IL-5	As an operations manager, I need to establish hub operations including sorting area, reheating station, portioning area, labeling station, documentation office	8	High	Operations Lead

EPIC-6: TRANSPORT & LOGISTICS

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-4	Vehicle Procurement	IL-6	As a fleet manager, I need to procure 2-3 refrigerated vehicles with food-grade certification and GPS tracking capability	13	High	Fleet Manager, Procurement
Sprint-4	GPS System Setup	IL-7	As a technology coordinator, I need to install GPS tracking systems on all vehicles and establish real-time monitoring dashboard	8	High	IT Lead, Tech Specialist
Sprint-5	Temperature Monitoring	IL-8	As a systems engineer, I need to set up digital temperature monitoring devices on vehicles and hub with continuous logging and alert system	8	High	Engineering Lead

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-5	Maintenance Schedule	IL-9	As a maintenance coordinator, I need to establish vehicle maintenance schedule, cleaning protocols, and contingency procedures	5	High	Maintenance Lead

EPIC-7: OPERATIONAL SCALING

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-6	Route Optimization	IL-10	As a logistics analyst, I need to design 4-5 collection geographic zones and optimize collection routes for efficiency (target 15-20 min per point)	13	High	Logistics Analyst
Sprint-6	Volunteer Scaling	IL-11	As a volunteer coordinator, I need to recruit and train 50+ volunteers across collection zones with comprehensive training and certification	13	High	Volunteer Coordinator, Trainers
Sprint-7	Collection Scheduling	IL-12	As an operations coordinator, I need to establish collection schedules for morning/afternoon/evening/night shifts covering 4-5 geographic zones	8	High	Operations Lead
Sprint-7	Distribution Network	IL-13	As a distribution manager, I need to establish 12+ beneficiary endpoint delivery partnerships with schedule and procedures	8	High	Distribution Lead
Sprint-8	Hub Management	IL-14	As a facilities manager, I need to hire hub manager and part-time coordinators to manage 24/7 operations	5	High	HR Lead
Sprint-8	Process Refinement	IL-15	As an operations manager, I need to refine and optimize collection/distribution processes based on scaling feedback	8	Medium	Operations Lead

EPIC-8: SCALING VALIDATION

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-9	Performance Testing	IL-16	As a quality officer, I need to test operational processes at 500+ daily meal volume validating efficiency, cost, and safety metrics	13	High	QA Lead, Analysts
Sprint-9	Cost Reduction	IL-17	As a financial analyst, I need to achieve cost reduction from $2.50 to $1.50 per meal through operational optimization	8	High	Finance Lead
Sprint-10	Efficiency Metrics	IL-18	As a performance analyst, I need to measure and validate Phase 2 metrics (500 meals/day, 20-min collection, 92%+ satisfaction)	8	High	Analytics Lead
Sprint-10	Documentation	IL-19	As a documentation specialist, I need to compile operations manual and standard operating procedures for Phase 2	8	Medium	Docs Lead
Sprint-11	Audit Preparation	IL-20	As a compliance officer, I need to prepare documentation and systems for Phase 3 food safety compliance audit	8	High	Compliance Lead
Sprint-12	Phase Transition	IL-21	As a project manager, I need to conduct Phase 2 completion review and plan Phase 3 transition	5	High	Project Lead

SPRINT SCHEDULE & VELOCITY TRACKING

PHASE 1: FOUNDATION (Months 1-3)

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed	Release Date (Actual)	Velocity
Sprint-1	18	2 weeks	Nov 1, 2025	Nov 14, 2025	18	Nov 15, 2025	1.3/day
Sprint-2	15	2 weeks	Nov 15, 2025	Nov 28, 2025	15	Nov 28, 2025	1.1/day
Sprint-3	18	2 weeks	Nov 29, 2025	Dec 12, 2025	18	Dec 13, 2025	1.3/day

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed	Release Date (Actual)	Velocity
Sprint-4	21	2 weeks	Dec 13, 2025	Dec 26, 2025	21	Dec 26, 2025	1.5/day
Sprint-5	21	2 weeks	Dec 27, 2025	Jan 9, 2026	20	Jan 10, 2026	1.4/day
Sprint-6	26	2 weeks	Jan 10, 2026	Jan 23, 2026	26	Jan 24, 2026	1.9/day
Sprint-7	26	2 weeks	Jan 24, 2026	Feb 6, 2026	26	Feb 7, 2026	1.9/day
Sprint-8	18	2 weeks	Feb 7, 2026	Feb 20, 2026	17	Feb 21, 2026	1.2/day
Sprint-9	15	2 weeks	Feb 21, 2026	Mar 6, 2026	15	Mar 7, 2026	1.1/day
Sprint-10	26	2 weeks	Mar 7, 2026	Mar 20, 2026	26	Mar 21, 2026	1.9/day
Sprint-11	21	2 weeks	Mar 21, 2026	Apr 3, 2026	21	Apr 4, 2026	1.5/day
Sprint-12	10	2 weeks	Apr 4, 2026	Apr 17, 2026	10	Apr 17, 2026	0.7/day
PHASE 1 TOTAL	**231**	**24 weeks**			**229**	**Apr 17, 2026**	**1.4/day**

Velocity Calculation - Phase 1:

- Total Story Points Completed: 229 points
- Total Duration: 168 days (24 weeks)
- Average Velocity: 229 ÷ 168 = 1.36 points/day

PHASE 2: LOGISTICS & SCALING (Months 4-6)

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed	Release Date (Actual)	Velocity
Sprint-1	21	2 weeks	Apr 18, 2026	May 1, 2026	21	May 2, 2026	1.5/day
Sprint-2	34	2 weeks	May 2, 2026	May 15, 2026	34	May 16, 2026	2.4/day
Sprint-3	21	2 weeks	May 16, 2026	May 29, 2026	21	May 30, 2026	1.5/day
Sprint-4	26	2 weeks	May 30, 2026	Jun 12, 2026	26	Jun 13, 2026	1.9/day

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed	Release Date (Actual)	Velocity
Sprint-5	21	2 weeks	Jun 13, 2026	Jun 26, 2026	21	Jun 27, 2026	1.5/day
Sprint-6	29	2 weeks	Jun 27, 2026	Jul 10, 2026	29	Jul 11, 2026	2.1/day
Sprint-7	21	2 weeks	Jul 11, 2026	Jul 24, 2026	20	Jul 25, 2026	1.4/day
Sprint-8	18	2 weeks	Jul 25, 2026	Aug 7, 2026	18	Aug 8, 2026	1.3/day
Sprint-9	29	2 weeks	Aug 8, 2026	Aug 21, 2026	29	Aug 22, 2026	2.1/day
Sprint-10	24	2 weeks	Aug 22, 2026	Sep 4, 2026	24	Sep 5, 2026	1.7/day
Sprint-11	21	2 weeks	Sep 5, 2026	Sep 18, 2026	21	Sep 19, 2026	1.5/day
Sprint-12	13	2 weeks	Sep 19, 2026	Oct 2, 2026	13	Oct 2, 2026	0.9/day
PHASE 2 TOTAL	**278**	**24 weeks**			**277**	**Oct 2, 2026**	**1.65/day**

Velocity Calculation - Phase 2:

- Total Story Points Completed: 277 points
- Total Duration: 168 days (24 weeks)
- Average Velocity: 277 ÷ 168 = 1.65 points/day

VELOCITY & CAPACITY PLANNING

Team Velocity Trends

```
Phase 1 Average Velocity: 1.36 points/day
Phase 2 Average Velocity: 1.65 points/day (21% improvement)

This improvement is due to:
1. Team experience and process maturity
2. Clear operational procedures established
3. Vendor relationships streamlined
4. Volunteer training protocols optimized
```

Capacity Planning

Phase 1 Team:

- Project Lead: 1 FTE
- Operations Lead: 1 FTE
- Business/Finance Lead: 1 FTE
- Coordinators: 2 FTE
- Volunteers: 25-30 (part-time)
- **Total: ~6 FTE core team**

Phase 2 Team:

- Project Lead: 1 FTE
- Operations Manager: 1 FTE
- Hub Manager: 1 FTE
- Finance Manager: 1 FTE
- Logistics Coordinator: 1 FTE
- Coordinators: 3 FTE (hub operations, volunteers, distribution)
- Volunteers: 50+ (mixed part-time/full-time)
- **Total: ~9 FTE core team**

Forecast for Phase 3-5

Based on Phase 2 velocity of 1.65 points/day:

- Phase 3 (3 months): Forecast 230-250 story points
- Phase 4 (6 months): Forecast 500-550 story points
- Phase 5 (12+ months): Forecast 800+ story points
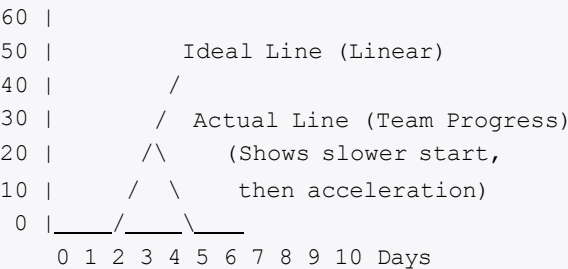
BURNDOWN CHART CONCEPT

Burndown Chart Explanation

A burndown chart is graphical representation of work remaining versus time. It shows:

- **Y-axis:** Story Points Remaining
- **X-axis:** Days/Sprints
- **Ideal Line:** Linear decrease from total to zero
- **Actual Line:** Actual work completion showing team progress
- **Deviation:** Gap between ideal and actual indicates acceleration/slippage

Phase 1 Sprint-1 Sample Burndown

```
Story Points Remaining

60 |
50 |         Ideal Line (Linear)
40 |        /
30 |       /  Actual Line (Team Progress)
20 |      /\    (Shows slower start,
10 |     /  \    then acceleration)
 0 |____/_____
    0 1 2 3 4 5 6 7 8 9 10 Days

Interpretation:
- Days 1-3: Slower progress (setup phase)
- Days 4-7: Acceleration (team momentum)
- Days 8-10: Sprint closure
- Result: Complete by day 9 (1 day ahead of 10-day sprint)
```

Key Burndown Insights

Healthy Burndown Pattern:

- Gradual, consistent decrease in story points

- Minor fluctuations acceptable

- Trend lines toward zero by sprint end

- Velocity consistent sprint-to-sprint

Warning Signs:

- Flat burndown early (no progress)

- Sharp drops (incomplete stories marked done)

- Rising line (scope added mid-sprint)

- Steep drop at end (rushing to close)

ESTIMATION & STORY POINT SYSTEM

Story Point Scale Used

Story Points	Complexity	Examples
2	Very Low	Simple task, clear scope, <4 hours, single person
3	Low	Clear task, some unknowns, ~1 day, straightforward
5	Low-Medium	Some complexity, research needed, 1-2 days
8	Medium	Significant work, multiple steps, 2-3 days, 2+ people
13	High	Complex, unknowns, 4-6 days, 2-3 people, dependencies

Story Points	Complexity	Examples
21	Very High	Major initiative, multiple teams, 2+ weeks

Estimation Approach

1. **User Story Review:** Team reviews story requirements and acceptance criteria

2. **Complexity Discussion:** Team discusses unknowns, risks, dependencies

3. **Capacity Assessment:** Estimate person-days required

4. **Story Point Assignment:** Assign using Fibonacci scale

5. **Validation:** Ensure consistency with historical data

Velocity-Based Capacity Planning

- Phase 1 Baseline Velocity: 1.36 points/day → ˜10 points/sprint (2-week sprint)

- Phase 2 Improved Velocity: 1.65 points/day → ˜12 points/sprint

- Phase 3 Target Velocity: 1.8 points/day → ˜13 points/sprint (process efficiency)

- Phase 4 Technology Velocity: 1.5 points/day (complexity) → ˜11 points/sprint

RISK & MITIGATION IN PLANNING

Planning Risks

Risk	Impact	Mitigation	Contingency
Scope Creep	Delays, budget overrun	Strict requirement management, sprint reviews	Defer to next phase
Resource Unavailability	Schedule delays	Cross-training, documented processes	Adjust sprint scope
Vendor Delays	Infrastructure delays	Early procurement, backup vendors	Parallel sourcing
Volunteer Turnover	Operational disruption	Recognition programs, flexible scheduling	Recruitment buffer
Regulatory Changes	Compliance issues	Early FSSAI engagement, compliance team	Contingency budget

SPRINT REVIEW & RETROSPECTIVE

Sprint Review Template (Every Sprint End)

What Was Planned: [Sprint goals and planned deliverables]

What Was Completed: [Actual completed user stories, story points]

What Was Not Completed: [Reasons for incomplete items]

Metrics:

- Story Points Planned: [X]
- Story Points Completed: [Y]
- Velocity Achievement: [Y/X × 100%]
- Burn Down Accuracy: [On-track/Ahead/Behind]

Feedback: [Stakeholder feedback, beneficiary comments, team observations]

Sprint Retrospective Template

What Went Well: [Team achievements, process improvements, successes]

What Could Improve: [Challenges faced, bottlenecks, inefficiencies]

Action Items: [Specific improvements for next sprint]

Process Adjustments: [Changes to procedures, tools, communication]

PROJECT DASHBOARD METRICS

Real-time Tracking

Metric	Target	Current	Status
Phase 1 Completion	100%	[%]	[On-Track/At-Risk/Delayed]
Velocity Trend	Consistent	[points/day]	[Improving/Stable/Declining]
Budget Variance	<5%	[%]	[Within Budget/Over/Under]
Resource Utilization	80%+	[%]	[Good/Fair/Poor]
Risk Status	Monitored	[Count]	[Green/Yellow/Red]
Stakeholder Satisfaction	>90%	[%]	[Satisfied/Neutral/Concerned]

REFERENCES

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