

**TECHNOLOGY** 

Your Partner in Agile Excellence

# Epic Dependency Mapping Template

Visualize, Plan, and Execute Complex Story

Dependencies

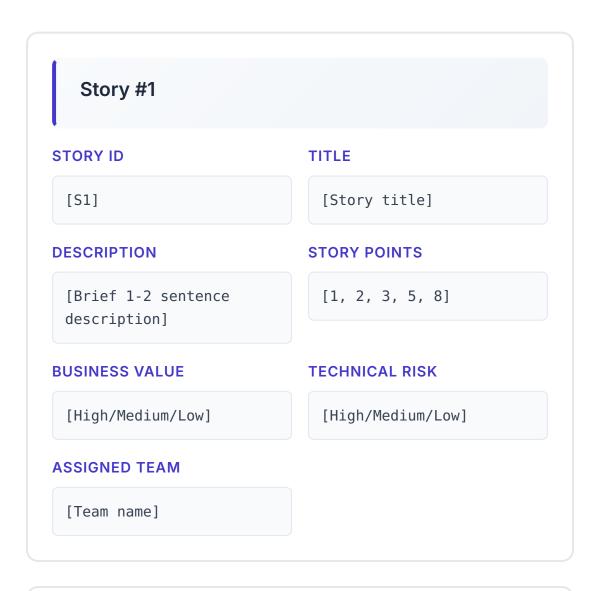
From Radiant Agility Technology

# How to Use This Template

- 1 Fill out the Story Inventory with your epic's stories
- 2 Complete the Dependency Matrix to identify relationships
- 3 Use the Sprint Planning Guide to sequence your work
- 4 Apply Risk Mitigation strategies for high-risk dependencies
- 5 Track with the Progress Dashboard throughout execution

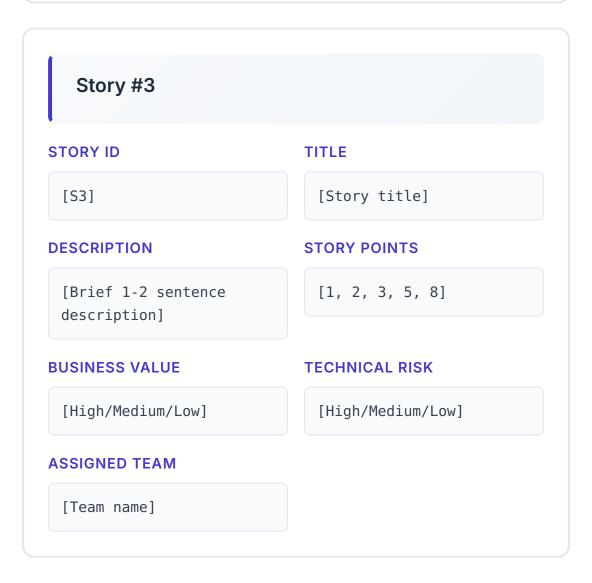
# Story Inventory Worksheet

Fill this out for each story in your epic:





# DESCRIPTION [Brief 1-2 sentence description] BUSINESS VALUE [High/Medium/Low] ASSIGNED TEAM [Team name]



Continue for all stories in your epic...

# **Proposition** Dependency Matrix Template

Mark the relationship between stories using this matrix:

#### Legend:



**Must Complete First** - Story A must be 100% done before Story B can start



**Partial Dependency** - Story A needs to be partially complete (specific criteria met)



**Soft Dependency** - Story A should ideally be done first, but Story B can start in parallel



**No Dependency** - Stories can be worked completely independently

Dependency Matrix	S1	S2	S3	<b>S4</b>	<b>S</b> 5	<b>S</b> 6
<b>S</b> 1	-					
S2		-				
<b>S</b> 3			-			
<b>S4</b>				-		
<b>S</b> 5					-	

Dependency Matrix	S1	S2	<b>S</b> 3	<b>S4</b>	<b>S</b> 5	S6
S6						-
<b>S7</b>						
\$8						

#### **Dependency Details**

For each dependency marked above, provide details:

#### $S[X] \rightarrow S[Y]$ Dependency:

#### **TYPE**

[Must Complete First/
Partial/Soft]

#### IMPACT IF BLOCKED

[What happens if S[X] is delayed?]

#### SPECIFIC REQUIREMENT

[What exactly must be
delivered?]

#### **WORKAROUND AVAILABLE**

[Yes/No - describe if
yes]

# Critical Path Analysis

#### **Critical Path Identification**

List the longest chain of dependent stories (this determines your minimum timeline):

#### **Critical Path:**

$$S_{-}$$
  $\rightarrow$   $S_{-}$   $\rightarrow$   $S_{-}$   $\rightarrow$   $S_{-}$ 

#### TOTAL STORY POINTS

[Sum of critical path stories]

#### **BUFFER NEEDED**

[Recommended 20-30% buffer]

#### **ESTIMATED DURATION**

[Based on team velocity]

#### **Parallel Work Streams**

Identify stories that can be worked simultaneously:

#### STREAM A (CRITICAL PATH)

$$S_{-} \rightarrow S_{-} \rightarrow S_{-}$$

#### STREAM B (PARALLEL)

#### STREAM C (INDEPENDENT)

S\_\_\_

#### **Bottleneck Analysis**

Identify potential bottlenecks:

#### Story S\_\_ is a bottleneck because:

#### **REQUIRED BY STORIES**

[List dependent stories]

#### RESOURCE CONSTRAINTS

[Specialized skills
needed]

#### TECHNICAL COMPLEXITY

[High/Medium/Low]

#### **MITIGATION STRATEGY**

[Your approach to address this bottleneck]

### Sprint Planning Framework

# **Sprint 1 Plan** Goal: [Sprint goal focused on early value delivery] **Stories to Include:** S\_ (\_ points) - [Brief description and rationale] ☐ S\_ (\_ points) - [Brief description and rationale] S\_ (\_ points) - [Brief description and rationale] **TOTAL POINTS** TEAM CAPACITY [Your team's average velocity] **RISK LEVEL** [Low/Medium/High] **Success Criteria:** [Specific deliverable 1] [Specific deliverable 2]

☐ [Key milestone achieved]

#### **Sprint 2 Plan**

Goal: [Next sprint goal building on Sprint 1]

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JUI	163	LU I		uu	C.

- S\_ (\_ points) [Brief description and dependencies]
- S\_ (\_ points) [Brief description and dependencies]

#### **Dependencies to Verify:**

- [Specific dependency from Sprint 1]
- [Integration point confirmed]
- [Required output available]

#### **Risk Mitigation:**

- ☐ [Backup plan if dependencies delayed]
- [Alternative approach identified]

#### **Sprint 3 Plan**

Goal: [Final sprint goal to complete epic]

#### **Stories to Include:**

- S\_ (\_ points) [Brief description]
- S\_ (\_ points) [Brief description]

Integration Points:	
[Cross-story integration testing]	
[End-to-end validation]	
☐ [Epic completion verification]	

# A Risk Assessment & Mitigation

#### **High-Risk Dependencies**

#### Risk #1: [Describe the dependency risk]

RISK LEVEL

High/ Medium/Low IMPACT

[What happens if this dependency

fails]

PROBABILITY

[Likelihood of the risk occurring]

**Mitigation Strategy:** 

- [Specific action 1]
- [Specific action 2]
- ☐ [Backup plan]
- [Escalation path]

#### Risk #2: [Another dependency risk]

RISK LEVEL

High/ Medium/Low IMPACT

[Impact description]

PROBABILITY

[Likelihood assessment]

**Mitigation Strategy:** 

[Mitigation action 1]

[Mitigation action 2]	

#### **Dependency Workarounds**

If S[X] is Delayed:
Option A: [Alternative approach]
Option B: [Workaround solution]
Option C: [Scope adjustment]

#### If S[Y] is Blocked:

- □ Option A: [Parallel work option]
- Option B: [Mock/stub solution]
- Option C: [Priority resequencing]

# **TOTAL STATE OF THE PROPERTY O**

#### **Current Status Overview**

Story	Status	Dependencies	Blocker	Risk Level	ЕТА
S1	[Status]	[Dependencies]	[Current blocker]	[Risk]	[Date]
S2	[Status]	[Dependencies]	[Current blocker]	[Risk]	[Date]
S3	[Status]	[Dependencies]	[Current blocker]	[Risk]	[Date]
S4	[Status]	[Dependencies]	[Current blocker]	[Risk]	[Date]
S5	[Status]	[Dependencies]	[Current blocker]	[Risk]	[Date]

#### **Dependency Health Indicators**

#### • Green (Healthy):

- All dependencies on track
- No blocking issues identified
- Timeline achievable with current progress

#### Yellow (Watch Closely):

- Minor delays possible but manageable
- Workarounds available if needed

• May impact sprint goal but not epic completion

#### • Red (Action Required):

- Major blocker identified requiring immediate attention
- Timeline at significant risk
- Escalation and intervention needed

#### **CURRENT OVERALL STATUS**



#### **REASON**

[Brief explanation of current situation]

# 

#### **Monday Check-in Questions:**

- 1. Are all dependencies marked as complete actually done and verified?
- 2. Have any new dependencies been discovered since last week?
- 3. Are there any stories at risk of becoming blockers?
- 4. What support do teams need to meet their commitments?

#### **Wednesday Status Update:**

- 1. Update the dependency health dashboard
- 2. Communicate any status changes to affected teams
- 3. Adjust sprint plans if necessary based on new information
- 4. Identify any escalations needed for Friday's planning

#### **Friday Planning Review:**

- 1. Review next week's planned work against current dependencies
- 2. Confirm all prerequisite work will be completed on time
- 3. Adjust priorities if dependencies have shifted
- 4. Plan mitigation actions for any identified risks

# © Dependency Types Reference Guide

#### **Technical Dependencies**

#### **API Dependencies:**

- Story A must expose API before Story B can consume it
- Planning tip: Define API contract early, build with mocks first

#### **Database Dependencies:**

- Story A must create/migrate schema before Story B can use it
- Planning tip: Separate schema changes from business logic

#### **Infrastructure Dependencies:**

- Story A must set up environment before Story B can deploy
- Planning tip: Infrastructure as Code, parallel environment setup

#### **Business Dependencies**

#### **User Experience Flow:**

- Users must complete Step A before Step B makes sense
- Planning tip: Can we provide value at each step independently?

#### **Content Dependencies:**

- Story A must define content structure before Story B can display it
- Planning tip: Create content templates/wireframes early

#### **Compliance Dependencies:**

- Story A must implement security before Story B can handle sensitive data
- Planning tip: Security reviews early in development

#### **Resource Dependencies**

#### **Shared Team Members:**

- Both stories need the same specialist
- Planning tip: Time-box specialist involvement, cross-train team

#### **External Dependencies:**

- Stories need third-party approvals or integrations
- Planning tip: Start external processes early, have fallback plans

# Success Metrics for Dependency Management

# Leading Indicators (Track Weekly):

Dependency
identified
prediction
vs
accuracy
discovered

Dependency time resolution to

time resolution

Blocked % story currently percentage blocked

Cross-teaiscussions

communicationeek
Target Benchmarks:

# Lagging Indicators (Track Monthly):

Sprint goal % goals achievement elivered

Epic Vs
completion actual
predictability dates

Rework due Amount to of dependenciesework

Team Process satisfactionrating

#### **©** Excellent:

>90% dependency prediction, <1 day resolution time, <10% blocked stories



80-90% prediction, 1-3 day resolution, 10-20% blocked stories



70-80% prediction, 3-7 day resolution, 20-30% blocked stories



#### **Critical:**

<70% prediction, >7 day resolution, >30% blocked stories

# **X** Tool Integration Guide

#### For Jira Teams:

#### **Custom Fields to Add:**

- "Depends On" (Issue Link)
- "Dependency Type" (Must Complete/Partial/Soft)
- "Blocker Impact" (High/Medium/Low)
- "Workaround Available" (Yes/No)

#### **Useful JQL Queries:**

# All blocked stories status != Done AND "Depends
On" is not empty AND "Depends On" not in (Done) #
High-risk blocked stories status != Done AND
"Blocker Impact" = High AND "Depends On" not in
(Done) # Stories ready to start status = "To Do"
AND ("Depends On" is empty OR "Depends On" in
(Done))

#### For Azure DevOps Teams:

#### **Work Item Types to Utilize:**

- Use "Predecessor" and "Successor" link types
- Create custom work item rules for dependency validation
- Set up automated notifications for dependency status changes

#### For Notion/Linear Teams:

#### **Database Properties:**

- Relation properties to link dependent stories
- Formula properties to calculate dependency health
- Automation rules to update status based on dependencies

#### **Need Help with Complex Dependencies?**

If your epic has particularly complex or risky dependencies:

- Dependency Mapping Workshops (facilitated sessions to map complex relationships)
- Cross-Team Coordination Planning (align multiple teams around shared dependencies)
- Risk Mitigation Strategy Development (create comprehensive backup plans)
- Tool Setup and Integration (configure your tools for optimal dependency tracking)

Contact: hello@radiantagility.tech



#### **Related Templates:**

- Epic Splitting Al Prompts Library
- Sprint Planning Checklist
- Risk Assessment Framework
- Cross-Team Communication Charter

#### **Recommended Reading:**

- "Managing Dependencies in Agile Projects" (Agile Alliance)
- "Scaled Agile Framework: Dependency Management" (SAFe Guide)
- "Team Topologies" by Matthew Skelton and Manuel Pais

#### **Training Opportunities:**

- SAFe Product Owner Certification
- Advanced Scrum Master Workshop
- Cross-Team Collaboration Masterclass

This Dependency Mapping Template is part of the Epic Splitting Toolkit by Radiant Agility Technology.

Download the complete toolkit at radiantagility.tech/epic-toolkit

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