

Agile Metrics

Key Performance Indicators

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1 Introduction

Agile metrics are essential tools for measuring and improving team performance, product delivery, and overall project success. These metrics help teams:

- Track progress and identify bottlenecks
- Make data-driven decisions
- Foster continuous improvement
- Enhance team collaboration
- Demonstrate value to stakeholders

While metrics are valuable, it's important to remember that they should support, not drive, the agile process. Teams should focus on metrics that provide actionable insights and avoid vanity metrics that don't contribute to meaningful improvements.

2 Sprint Metrics (Scrum)

- Velocity

- Measures team's delivery rate
- Story points completed per sprint
- Historical velocity trends
- Predictability indicators
- Sprint Burndown
 - Daily progress tracking with visual charts
 - Ideal vs. actual burndown comparison
 - Scope changes highlighted
 - Early warning indicators
- Team Capacity
 - Available working hours
 - Account for meetings and other activities
 - Skills distribution tracking
 - Cross-training opportunities

3 Kanban-specific Metrics

- Work in Progress (WIP)
 - Number of items in progress
 - WIP limits per column
- Flow Efficiency
 - Active work vs. wait time
- Cumulative Flow Diagram
 - Visualize work distribution
 - Identify bottlenecks

4 XP (Extreme Programming) Metrics

- Pair Programming
 - Pairing time percentage

- Pair rotation frequency
- Knowledge sharing index
- Test-First Metrics
 - Test coverage trends
 - Red-Green-Refactor cycles
 - Unit test count
- Continuous Integration
 - Build success rate
 - Time to fix broken builds
 - Integration frequency
- Code Quality
 - Code simplicity metrics
 - Refactoring frequency
 - Technical debt reduction rate
- Feature Usage Analytics
- Business Value Delivered

5 Team Health Metrics

- Sprint Success Rate
 - Completed vs. committed work
 - Sprint goal achievement rate
- Team Happiness Index
 - Team satisfaction surveys
 - Retention metrics
- Code Quality Metrics
 - Test coverage
 - Technical debt
 - Code review statistics

6 Product Metrics

- Lead Time
 - Time from idea to delivery
 - Customer request to deployment
- Cycle Time
 - Active development time
 - Start of work to completion
- Release Frequency
 - Deployment frequency
 - Time between releases
 - Release success rate

7 Value-based Metrics

- Customer Satisfaction Score (CSAT)
- Net Promoter Score (NPS)