

Identifying overlooked project risks and schedule killers

Learn how to predict software success and stop guessing using AI-powered risk assessment



Content

01. AI Risk Assessment

How artificial intelligence transforms software risk prediction and decision making processes.

02. Data-Driven Foundation

World's largest benchmarking study with machine learning models and quantification methods.

03. Critical Success Factors

Identify true contributors to success and failure while avoiding wasteful practices.

04. Target Audience Benefits

Course enrollment details, agenda highlights, and practical application across different roles.



Unrivaled Foresight: How AI Changes Risk

Core Value Proposition

Learn to predict success or failure and pinpoint true risk contributors before coding begins. Understand which factors are underutilized versus overkilled, and identify the most sensitive factors for reducing defects, schedule overruns, and costs.



Early Detection

Predict project outcomes before development starts, enabling proactive risk mitigation and resource allocation decisions.



Optimal Resource Allocation

Identify underutilized factors and avoid overkilling practices, ensuring efficient use of development resources and budget.



Data-Driven Risk Assessment Foundation

World's Largest Study of It's Kind

Built from the world's largest software defect benchmarking study since 1993, measuring almost 700 development factors across nearly 100 projects for unprecedented accuracy.

Machine Learning Model

- Leverage AI to predict risk levels
- Works with incomplete project information
- Continuous learning and improvement capabilities

Risk Quantification

- Seven percentile rank clusters identification
- Range from Distressed to World Class
- Precise project risk profile assessment

Proven Results

30 years of continuous data collection

700 Factors

Comprehensive development factor analysis

100+ Projects

Extensive real-world project validation

Software Project Outcome Statistics

The Cold Hard Truth About Reliable Software Edition 7 reveals critical performance metrics across seven percentile clusters, showing clear patterns between successful, mediocre, and distressed programs.

Percentile	3%	10%	25%	50%	75%	90%	97%
Outcome Category	Successful	Successful	Successful	Mediocre	Mediocre	Distressed	Distressed
Defect Density	0.030	0.084	0.14	0.28	0.67	1.16	2.13
Late Delivery Probability	10%	18%	21%	46%	72%	67%	83%
Schedule Margin Error	11%	20%	19%	34%	65%	50%	75%
Customer Satisfaction	3.00	2.67	2.41	2.00	2.00	1.33	1.00



Type of factor	Number /% of characteristics in this category	Examples of characteristics in this category
Product	50 – (10%)	Size, complexity, whether the design is object-oriented, whether the requirements are consistent, code that is old and fragile, etc.
Product risks	12 – (2%)	Risks imposed by end users, government regulations, customers, product maturity, etc.
People	38 – (7%)	Turnover, geographical location, amount of noise in work area, number of years of experience in the applicable industry, number of software people, ratio of software developers to testers, etc.
Process	121 – (23%)	Procedures, compliance, exit criteria, standards, etc.
Technique	302 – (58%)	The specific methods, approaches and tools that are used to develop the software such as MBSE.
Factors that don't correlate	166	See our benchmarking study for a list of these

Static analysis tools measure these

These are often overlooked

SEI CMMi and ASPICE assess this

These are often overlooked

These steal resources from factors that matter

Factors that have been mathematically proven to affect risk

USAF Rome Laboratories developed the first prediction model in 1987.

We used their lessons learned as a starting point in 1993.

Facts don't lie.

These factors can predict the defect density and program success.



Critical Factors and Decision Making



Pinpoint Contributors

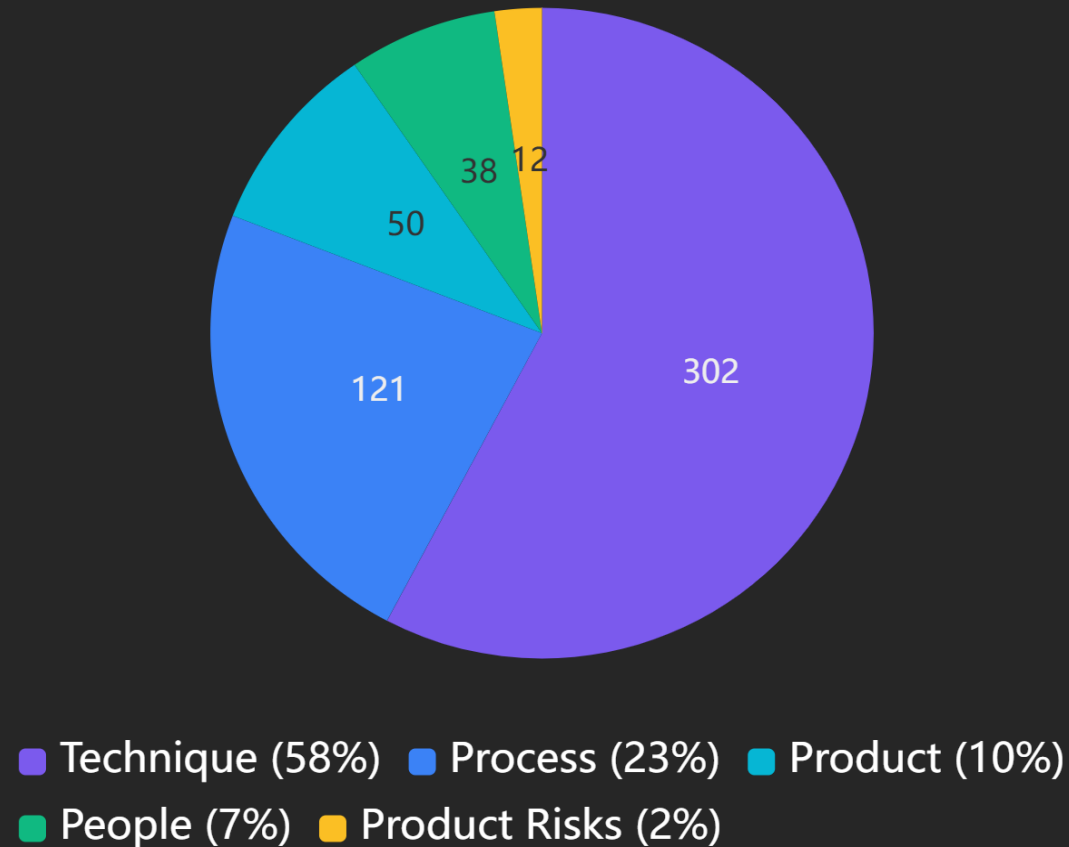
Learn the true contributors to program success and failure. Identify both overlooked development practices that could significantly improve outcomes and overkill wasteful practices that drain resources without adding value.

Factor Sensitivity Analysis

Understand the sensitivity of each development factor and learn how to objectively measure them for accurate input. Predict probability of late delivery, estimated lateness, and technical debt accumulation.

Development Factor Categories Breakdown

Factor Distribution



Technique Factors (58%)

302 specific methods, approaches and tools used to develop software such as MBSE.



Who Should Enroll and Why It Matters

Software project risk management plan

The following table identifies software project risks, their causes, their effects, their probability, impact, priority, and action plan.

Risk	Probability	Impact	Priority	Action Plan
Managers will shift operations offshore which will need software projects to go global	Medium	High	High	Michael will collect requirements more accurately and carefully
Bella will be terminated from project due to failure to fix software bug	High	Medium	High	If Bella is terminated, she will give her 20% time in project review with Quincy
Reports of failed tasks will be required	Low	Low	Medium	For this risk, Michael will work with Sophia for re-estimation of software tasks
Expected delay in project due to late software installation	High	Medium	High	➤ Negotiate with vendor for delayed installation ➤ Add test here
Time, budget and scope misalignment if software project requirements are not finalized during implementation	Low	Low	Medium	Ensure requirements and its details are evaluated by stakeholders

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Software Management

- Quickly identify programs about to go off rails.
- Gain quantitative evidence to justify critical changes.
- Make data-driven decisions for project success.



Software Test QA

- Identify and predict risks early in development.
- Understand sensitivity of various test methods.
- Optimize fault injection and testing strategies.



RAM Site Reliability

- Understand how high-risk translates to low availability.
- Enable first step in availability predictions.
- Improve overall system reliability and safety.

Course Agenda Highlights

Benchmarking Study Review

Detailed review of the world's largest software benchmarking study with 30 years of data.

Resource Optimization

Learn which factors can be easily overkilled and how to avoid wasteful practices.



Critical Factor Analysis

Learn which factors matter most and which matter least for software project success.

Confidence Improvement

Learn how to improve the confidence of your risk assessment with proven methodologies.



Ready to Transform Your Software Risk Management?

Flexible Delivery Options

Choose the learning format that works best for your schedule and learning style preferences.

- Virtual self-guided training for independent learners who prefer flexible pacing.
- Virtual instructor-guided sessions for interactive learning with expert guidance.
- Comprehensive resources including Cold Hard Truth About Software Defects book.

Get Started Today

Contact our team to discuss your specific needs and schedule your training session.

- Schedule a personalized consultation call to discuss your requirements and objectives.
- Email us at sales@missionreadysoftware.com for immediate assistance and enrollment.
- Join hundreds of professionals who have transformed their risk assessment capabilities.



**Contact sales@missionreadysoftware.com today to schedule your consultation
and start optimizing your software development trade-offs.**

