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# The Accidental Project Manager: QA to the Rescue

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[www.harborlightmanagement.com](http://www.harborlightmanagement.com)

*The Accidental Project Manager:*

Surviving the Transition from Techie to Manager

[www.wiley.com/compbooks/ensworth](http://www.wiley.com/compbooks/ensworth)





# A QA Success Story

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- Moody's Investors Service
  - Global credit rating agency
  - \$1B company, 4000 employees
  - Ratings on debts worldwide
  - Real-time electronic publishing
  - High staff turnover
  - "Forensic" project management



# Project Management

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- Project Management Body of Knowledge (PMBOK)
  - Standards and practices
  - Collaborative revisions
- Project Management Institute (PMI)
  - Founded 1969
  - Headquarters in Pennsylvania, USA
  - Chapters in 125 countries
  - 100,000+ members
- Project Management Professional (PMP)
  - Certification exam
  - 50,000 worldwide



# Project Management: Definitions

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- Project
  - Temporary
  - Ad-hoc
  - Specific goal



# Project Management: Definitions

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- Project team
  - Project manager
  - Sponsor
  - Client
  - Stakeholders
  - Functional managers
  - Subject matter experts
  - Workers



# Project Management: Definitions

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- Project lifecycle
  - Initiating
  - Planning
  - Executing
  - Closing
  - Controlling



# Project Management: Definitions

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- Project manager knowledge areas
  - Integration
  - Scope
  - Time
  - Cost
  - Quality
  - Human Resources
  - Communications
  - Risk
  - Procurement





# Project Management: Practices

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- Initiating Phase
  - Project Charter
    - Goal
    - Sponsor
    - Project Manager



# Project Management: Practices

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- Planning phase - analysis
  - Scope document
  - Requirements document
  - Responsibility matrix
  - Task list
  - Work Breakdown Structure (WBS)
  - Network diagram (PERT chart)
  - Estimates

# WIDGETWeb

## Scope Document

- Goal
- Critical Success Factors
- Critical Success Measures
- Deliverables
- Constraints
- Assumptions
- Risks
- Exclusions
- Schedule
- Budget

ID	WBS	
65	<b>1.4</b>	<b>Execution phase</b>
66	<b>1.4.1</b>	<b>Product activities</b>
67	<b>1.4.1.1</b>	<b>Manage design</b>
68	1.4.1.1.1	Develop use cases
69	1.4.1.1.2	Create data architecture
70	1.4.1.1.3	Create hardware architecture
71	1.4.1.1.4	Perform impact analysis
72	1.4.1.1.5	Develop migration strategy
73	<b>1.4.1.1.6</b>	<b>Design product</b>
82	1.4.1.1.7	Product design approved
83	<b>1.4.1.1.8</b>	<b>Design tests</b>
84	<b>1.4.1.1.8.1</b>	<b>Design manual tests</b>
85	1.4.1.1.8.1.1	Design UI tests
86	1.4.1.1.8.1.2	Design object tests
87	1.4.1.1.8.1.3	Design workflow tests
88	1.4.1.1.8.1.4	Design rules tests
89	1.4.1.1.8.1.5	Design middle tier tests
90	1.4.1.1.8.1.6	Design database tests
91	1.4.1.1.8.1.7	Design connectivity tests
92	1.4.1.1.8.1.8	Design permissions tests
93	<b>1.4.1.1.8.2</b>	<b>Design automated tests</b>
94	1.4.1.1.8.2.1	Design automated tests for functionality
95	1.4.1.1.8.2.2	Design automated tests for performance
96	1.4.1.1.8.3	Design beta test
97	1.4.1.1.8.4	Design user acceptance test
98	1.4.1.1.9	Test design approved
99	1.4.1.1.10	Create design documentation
100	<b>1.4.1.2</b>	<b>Manage development</b>
141	<b>1.4.1.3</b>	<b>Manage deployment</b>

## Project Plan – testing tasks

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## **Design tests**

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### **Design manual tests**

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Design UI tests

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Design object tests

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Design workflow tests

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Design rules tests

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Design middle tier tests

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Design database tests

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Design connectivity tests

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Design permissions tests

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### **Design automated tests**

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Design automated tests for functionality

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Design automated tests for performance

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Design beta test

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ID	WBS	Task Name
65	1.4	Execution phase
66	1.4.1	Product activities
158	1.4.2	Project activities
159	1.4.2.1	Manage scope / cost / schedule
163	1.4.2.2	Manage communications
175	1.4.2.3	Manage quality
176	1.4.2.3.1	Manage quality assurance
177	1.4.2.3.1.1	Establish product standards and procedures
180	1.4.2.3.1.2	Establish project standards and procedures
192	1.4.2.3.1.3	Design technical infrastructure
193	1.4.2.3.1.3.1	Build requirements repository
196	1.4.2.3.1.3.2	Build change management repository
199	1.4.2.3.1.3.3	Build documentation repository
202	1.4.2.3.1.3.4	Implement configuration management database
203	1.4.2.3.1.3.5	Implement source code database
204	1.4.2.3.1.3.6	Implement version control database
205	1.4.2.3.1.4	Configure project environment
218	1.4.2.3.1.5	Select tools
221	1.4.2.3.2	Manage quality control
222	1.4.2.3.2.1	Monitor product quality
223	1.4.2.3.2.1.1	Analyze defects reported
224	1.4.2.3.2.1.2	Analyze change requests submitted
225	1.4.2.3.2.1.3	Analyze tests failed
226	1.4.2.3.2.1.4	Analyze requirements revised
227	1.4.2.3.2.1.5	Conduct SME focus groups
228	1.4.2.3.2.2	Monitor project quality
229	1.4.2.3.2.2.1	Perform audits
242	1.4.2.3.2.2.2	Perform maintenance
251	1.4.2.3.2.2.3	Implement process improvements

## Project Plan – QA tasks

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## **Manage quality**

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### **Manage quality assurance**

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**Establish product standards and procedures**

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**Establish project standards and procedures**

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**Design technical infrastructure**

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**Build requirements repository**

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**Build change management repository**

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**Build documentation repository**

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**Implement configuration management database**

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**Implement source code database**

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**Implement version control database**

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**Configure project environment**

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**Select tools**

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# Project Management: Practices

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- Planning phase – Project Plan
  - Work breakdown structure (WBS)
    - Schedule
    - Resource assignments
  - GANTT chart
  - Budget
  - Quality plan
  - HR plan
  - Communications plan
  - Risk plan
  - Procurement plan



# WIDGETWeb

## Quality Plan - outline

### I. Product Quality

#### A. Quality Assurance

1. Quality criteria definitions
2. Quality assessment methods

#### B. Quality Control

1. Testing
2. Defect tracking
3. Test results analysis
4. Requirements revisions
5. Focus groups

### II. Project Quality

#### A. Quality Assurance

##### 1. Standards and procedures

- *Requirements*
- *Change management*
- *Documentation*
- *Configuration management*
- *Source code control*
- *Version control*
- *Peer review*
- *Coding*
- *Code commentary*
- *Builds*
- *Releases*

##### 2. Environment

- *Development environment*
- *Test environment*
  - *Unit test environment*
  - *System test environment*
  - *Integration test environment*
  - *Automated test environment*
  - *Performance test environment*
  - *International test environment*
  - *Beta test environment*
  - *UAT test environment*
- *Staging environment*
- *Production environment*

##### 3. Tools

- *Development tools*
- *Testing tools*

#### B. Quality Control

1. Auditing practices
2. Maintenance activities



# Quality Plan - Product

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- Quality Assurance
  - Quality criteria definitions
  - Quality assessment methods
- Quality Control
  - Testing
  - Defect tracking
  - Test results analysis
  - Requirements revisions
  - Focus groups



# Quality Plan - Project

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## ■ Standards

- Requirements
- Change management
- Documentation
- Configuration management
- Source code control
- Version control
- Peer review
- Coding
- Builds
- Releases

## ■ Environment

- Development environment
- Test environment
- Production environment

## ■ Tools

- Development tools
- Testing tools

## ■ Control

- Auditing practices
- Maintenance activities



# Project Management: Practices

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- Executing phase
  - Change control
    - Communication with team
    - Renegotiation of project plan
  - Measurement
  - Tracking estimates vs. actuals
  - Quality champion



# Project Management: Practices

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- Closing phase
  - Results
  - Documentation
  - Lessons learned
  - Performance evaluations



# From Doctrine to Advice

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- Flexible, contextual approach
- Collaboration with PM
- Ombudsperson
- Senior management support
- Time-saving customization



# A Repeatable Process

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- Creation of Project Office
- Development of QA templates
- Verification of project data
- Mentoring



# Conclusion

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- 3-step process
  - Education
  - Improvisation and customization
  - Standardization
- Opportunities for implementation
- Promotion of QA agenda
- Professional advancement





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