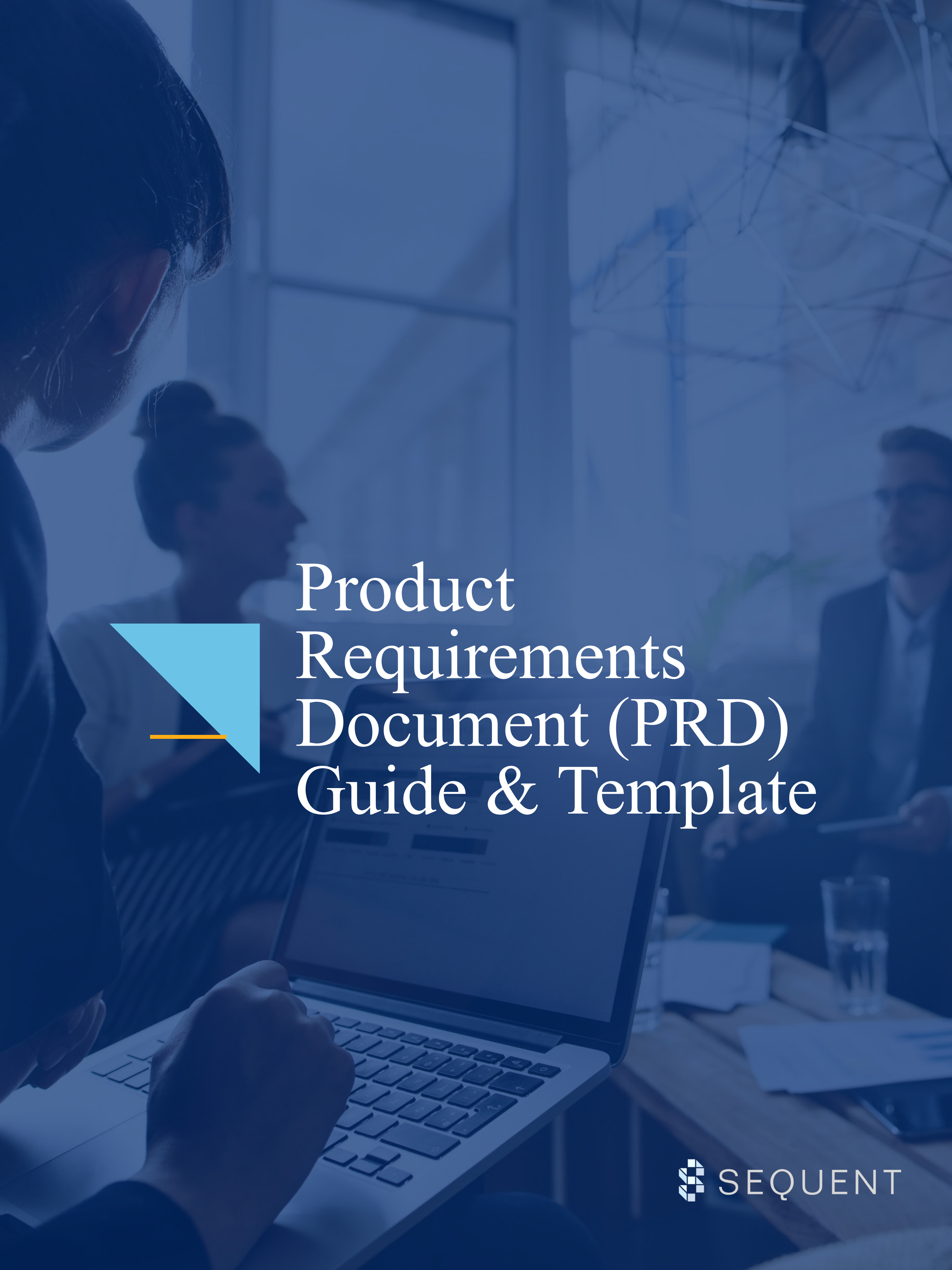

Product Requirements Document (PRD) Guide & Template

SEQUENT

The Product Requirements Document (PRD) is a reflection of business, market, and customer needs. It is used to describe the functional and nonfunctional characteristics of a product.

INTRODUCTION

The Product Requirements Document (PRD) is a reflection of business, market, and customer needs. It is used to describe the functional and nonfunctional characteristics of a product. The PRD is owned by a product manager and may be written or documented by a business analyst, systems engineer, or a technically proficient product manager. Ownership in some organizations may vary and be dependent on the complexity of the product.

It should be noted that market dynamics and customer needs will continually evolve. Product managers and their teams should ensure that the PRD is "baselined" or frozen at various points as products evolve. This allows for the document to be placed under a "change control" routine that will minimize scope changes. Once baselined, the PRD may need to be parsed to accommodate the development environment that is utilized by a firm. However, product managers should ensure that the final product definition be encapsulated in this market driven, technically achievable PRD.

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INTRODUCTION, CONTINUED

Product developers (engineers, technologists, etc.) will depend on the completeness and consistency of this document so they can produce the proper Product Specifications Document (PSD) and/or a Product Design Document. They will also use this data to determine level of effort, cost, complexity, points of integration, interfaces, source code development, data volumes, materials, and other variables that will impact the development of the product and the delivery schedule.

Product marketers and others who serve in business functions should be able to interpret the PRD such that product capabilities and benefits can be ascertained and included in marketing materials, data sheets, and other similar materials. PRDs should be consistently used, regardless of development environment or techniques deployed in any organization. While product managers may wish to parse these documents to support various rapid development techniques, the master PRD should not be decomposed.

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PRODUCT REQUIREMENTS DOCUMENT TEMPLATE

The following sections are used in a PRD. As may be noted, these sections can (or should) be easily referenced in the strategic plan for the product line and/or the Business Case that justified the investment.

VERSION & HISTORY

Version Number	Date	Revision Owner	Reason for Revision

PRD APPROVERS

Approver Name	Role	Signature	Date

INTRODUCTORY INFORMATION

1. Purpose and Strategic Context: An introductory series of statements that provide adequate perspective for a reader to understand the reason for the PRD. Further, it should assert any key statements of strategic intent so that all stakeholders understand some of the main motivations for the project or projects that will stem from this PRD.

2. Market Environment: This section contains a contextual description of the marketplace. The main areas focus on the industry or domain and its overall evolution, the competitive landscape, and the market segments and associated customer targets. Also included in this section are the main market driven motivations or drivers for the creation or upgrade of the product.

3. Product Description and Life Cycle State: If the PRD is for an entirely new product, the PRD must contain the vision and strategy for the product. IF the PRD is for an enhancement or upgrade, the essential descriptors should be summarized or amended as needed. Furthermore, readers will want to understand whether the product is in the growth, maturity, or even the decline phase of its life cycle. As may be surmised, work undertaken to extend the life of a growth-phase or mature-phase product may impact the level of effort, cost, and schedule.

CUSTOMER TARGET CONSTRUCTS

The PRD will require significant detail to enable clear focus on the current or future customers or users of a product. For example, with consumer products, different users may include various family members.

For B2B products, a customer may be a person who frequently encounters or experiences a problem, a person's manager, or other people who benefit from work done by someone who works in a given environment.

Therefore, customer types must be clearly identified so that the people who must interpret the PRD can understand more about the problems presented.

The PRD can begin as a story, a scenario, or an abstraction of a series of events that involve one or more customer types. Many people classify these customers or users with a generalized "persona" that may represent a "day in the life" scenario or a usage situation that will help form an image or visualization that can be shared with stakeholders. The PRD stories, representations, and visualizations should provide the right level of specificity so that the key problems or issues faced by the target customers are clear to all stakeholders.

PRD FOUNDATIONAL ELEMENTS

1. **Naming Conventions:** The PRD will be used by different people or stakeholders in the organization. In order to have a high degree of understanding, all definitions should be clearly spelled out in advance. In some cases, where a lot of data may be used in a software or software/hardware system, a data dictionary may be needed, either at the start of the PRD, or as an appendix.

2. **Numbering:** Each requirement should have a number. Each number may have an associated hierarchy that serve as points of clarification. A requirements number may only be used once.

3. **Rationale:** Any individual requirement or group of requirements should have a clearly understood rationale or purpose, tied to the overarching goal of the document, linked to the purpose and/or strategy for the product.

4. **Dependencies:** There may be a number of dependencies between requirements. These should be called out in any requirement.

5. **Conflicts:** All requirements must be evaluated and reviewed to ensure that they are not in conflict with one another.

6. **Diagrams:** Where needed, drawings and diagrams should be used to help communicate and clarify intent.

7. **Traceability:** Individual requirements may refer to other documents or other requirements. Requirements numbers should have appropriate references to allow for adequate cross-references or associated documents.

FUNCTIONAL REQUIREMENTS

Functional requirements reflect the basic intent of the product, or "what it's supposed to do." Functional requirements are often articulated using the word *shall* or *should*. Some example of functional requirements are shown below:

Numbers	Functional Requirement Statement
FR 01-001	The cash machine shall dispense cash to a verified bank customer.
FR 01-002	01-002 The cash machine shall accept cash deposits from a verified bank customer.

NON-FUNCTIONAL REQUIREMENTS

Nonfunctional requirements describe characteristics, properties, or qualities that the product "should" or "must" exhibit. These are sometimes called *behaviors* of the product, usually related to the product's desired characteristics, usability, or maintainability (and sometimes, performance). The word "must" is typically associated with high priority requirements and the word "should" is often associated with lower priority requirements. If needed, a third category that can be called "nice to have" would refer to requirements that are not needed but could add some value, time permitting. Some examples of non-functional requirements are shown below:

Numbers	Functional Requirement Statement
NFR 02-001	The cash machine must have a numerical keypad with numbers 0-9.
NFR 02-002	The cash machine keypad must have 2mm raised numbers to provide tactical verification.

NON-FUNCTIONAL REQUIREMENTS

There are many categories of non-functional requirements. These categories and sub-categories are listed below.

1. **Areas associated with customer use or usability:**
    - Efficiency or speed
    - Turn-around time for a transaction (stimulus/response sequence)
    - Learnability and ease of recall in how a product is used (so that users don't forget how to
    - use the product)
    - Acceptable errors or mistakes that a user can make
    - Feedback (as in a sound or acknowledgement that an action results in an outcome – like the 'click' of a key on a keyboard)
2. **Areas associated with physical characteristics:**
    - Size
    - Appearance
    - Weight
    - Colors
    - Styles
    - Design

NON-FUNCTIONAL REQUIREMENTS

3. **Areas associated with product performance and overall quality:**
   - Speed (of a transaction or interaction)
   - Online response times
   - Precision or accuracy
   - Number of users
   - Reliability
   - Capacity
   - Extreme environments or stresses
   - Scalability
   - Durability
   - Longevity
4. **Areas associated with operational support or integration:**
   - The physical environment
   - Interfaces with, or compatibility with other products or systems
   - Hardware requirements
   - Software requirements
   - Releases or launch plans
5. **Areas associated with maintenance or support over the life of the product:**
   - Documentation required
   - Maintenance or maintainability
   - Adaptation or migration from a current environment
   - Auditing or monitoring the performance of the product or system
   - Access – physical or remote

NON-FUNCTIONAL REQUIREMENTS

6. **Areas associated with data:**
    - Data elements
    - Fields (size, alpha, numeric, alpha-numeric)
    - Ranges
    - Constraints
7. **Areas associated with safety and security:**
    - System or product access
    - Verification
    - Privacy
    - Safeguards
8. **Areas associated with laws and regulations**:
    - Local or country specific
    - Time frames required
    - Standards body compliance
9. **Global or international (refer to each of the areas mentioned)**
    - Local packaging or design
    - Local performance

REVIEWS & INSPECTIONS

PRDs may be authored and owned by product managers. However, like a manuscript for a book must be reviewed and edited prior to publication, so must the PRD. The reason this is so important is because product managers have different writing styles, and therefore, what is meant may not be properly interpreted by the audience of readers. Further, product managers have varying levels of experience and understanding of the product. Lastly, different cultural norms and perspectives may have authors use words that do not have the same meaning. To overcome this challenge and to ensure that the requirements are consistently written and presented, a group of peers and others may wish to conduct PRD review sessions and inspections before an agreement is reached on the final, or baselined PRD.

THE APPENDIX

Appendix 1: Definitions, acronyms, and abbreviations.

Appendix 2: References to other documents or information.

Appendix 3: Traceability matrix that can be used to relate a given requirement to another requirement or system, either in this document, or in another document.

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For more information or further guidance, contact Sequent Learning Networks at contact@sequentlearning.com or 212.647.9100.