

Centers for Medicare & Medicaid Services

<Business Owner’s Office/Center>

<Business Owner’s Group>

7500 Security Blvd

Baltimore, MD 21244-1850

Requirements Document

Version:<1.0>

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*[Requirements Document Template Version 2.0 – March 29, 2009]*

*Approved for use by the ILC Steering Committee*

**Document Number:** <document’s configuration item control number>

**Contract Number:** <current contract number of company maintaining document>

***Note to the Author***

*This document is a template for creating a Requirements Document primarily for use by a given new development,* *system redesign,* *or major enhancement project. Systems currently in production and performing routine maintenance may, but are not required to, convert their requirements baseline to this format.*

*This template includes instructions to the author, boilerplate text, and fields that should be replaced with the values specific to the particular project.* *Additional guidance for the development of the content in the Requirements Document can be obtained from the CMS Requirements Writer’s Guide, which is a companion document to this template.*

* *Blue italicized text enclosed in square brackets (i.e., [text]) provides instructions to the document author, or describes the intent, assumptions and context for content included in this document.*
* *Blue text enclosed in angle brackets (i.e., <text>) indicates a field that should be replaced with information specific to the particular project.*
* *Text and tables in black are provided as boilerplate examples of wording and formats that may be used or modified as appropriate.*

*When using this template, follow these steps:*

1. *Replace all text enclosed in angle brackets (e.g., <Project Name (Acronym)>) with the appropriate information for the specific project. These angle brackets appear in both the body of the document and in headers and footers.*
2. *Modify any boilerplate text as appropriate to the specific project.*
3. *To add any new sections to the document, ensure that the appropriate header and body text styles are maintained. Styles used for the section headings are Heading 1 (Times New Roman 16 pt and Section Sub-Headings are Heading 2 (Times New Roman 14 pt). The style used for boilerplate and body text is Body Text (Times New Roman 12 pt).*
4. *Do not delete any Headings. If the Heading is not applicable to the project, write “Not Applicable” under the Heading.*
5. *To update the Table of Contents, right-click and select “Update field” and choose the option “Update entire table”. Ensure that sub-headings at each level in the Table of Contents are appropriately indented for improved readability.*
6. *Delete this “Notes to the Author” page and all instructions to the author (i.e., all blue italicized text enclosed in square brackets) before finalizing the initial draft of the Requirements Document.]*

**APPROVALS**

[Obtain signature approval of the final document from the delivering organization’s Project Manager and the primary CMS recipient (i.e., generally the Government Task Leader (GTL)). Signature approval must also be obtained from the CMS Business Owner. Additional signature lines may be added as needed.]

**Submitting Organization’s Approving Authority:**

Signature Printed Name Date Phone Number

<Position Title> *[e.g., <System Name and/or Acronym> Project Manager]*

**CMS’ Approving Authority:**

Signature Printed Name Date Phone Number

<Position Title> *[e.g., <Contract or System Name> Government Task Leader]*

**CMS Business Owner:**

Signature Printed Name Date Phone Number

<Position Title> *[e.g., <CMS Component Executive with fiduciary responsibility for the project]*

REVISION HISTORY

[Use the table below to record information regarding changes made to the document over time.]

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Organization/Point of Contact** | **Description of Changes** |
| 1.0 | <mm/dd/yy> | <Organization Identifier / Point-of-Contact Name> | Baseline Version |
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*[Insert a List of Figures appearing within the Requirements Document along with a page reference for each identified exhibit as appropriate. Labels of Figure titles and descriptions are to be placed centered, above the figure within the main body of the document. All figures must have an associated tag providing appropriate alternative text for Section 508 compliance.]*

<Figure #: Figure Title or Description……………………………………………Page Number>

**LIST OF TABLES**

*[Insert a List of Tables appearing within the Requirements Document along with a page reference for each identified table as appropriate. Labels of Table titles and descriptions are to be placed centered, above the table within the main body of the document.]*

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# Introduction

*[Provide full identifying information for the automated system, application, or situation for which the Requirements Document applies, including as applicable, identification number(s), title(s)/name(s), abbreviation(s)/acronym(s), part number(s), version number(s), and release number(s). Summarize the purpose of the document, the scope of activities that resulted in its development, the intended audience for the document, and expected evolution of the document. Also describe any security or privacy considerations associated with use of the Requirements Document. Modify and/or add content to the boilerplate text provided below, as appropriate.]*

## Purpose

This document provides all requirements that the<project name (acronym)> will be responsible for implementing. This document lists the business requirements, business rules, user requirements, and functional/nonfunctional requirements for the project. It also contains use case scenarios to help clarify the process required for the project.

## Document Management

The requirements in this Requirements Document shall be traced to the appropriate deliverables in the development and testing phases to ensure that all requirements are properly implemented and tested.

## Intended Audience

The target audience for this Requirements Document includes business, technical, governance and project management stakeholders. Specific users shall include software or system developers and testers.

# Reference Documents

*[Summarize the relationship of this document to other relevant documents. Provide identifying information for all documents used to arrive at and/or referenced within the Requirements Document (e.g., related and/or companion documents, prerequisite documents, relevant technical documentation, etc.).]*

Table 1: Referenced Documents

| Document Name | Document Number | Issuance Date |
| --- | --- | --- |
| <document name> | <document’s configuration item control number> | <Month Day, Year> |
| CMS Technical Reference Architecture | Version 1.0 | May 1, 2008 |
| CMS Information Security Acceptable Risk Safeguards (ARS) | Version 3.1 *[refer to* [*http://www.cms.hhs.gov/InformationSecurity/14\_Standards.asp#TopOfPage*](http://www.cms.hhs.gov/InformationSecurity/14_Standards.asp#TopOfPage) *for current Document Number and Issuance Date]* | August 24, 2008 |
| Electronic and Information Technology Accessibility Standards (Section 508) | <http://www.access-board.gov/sec508/standards.htm> | December 21, 2000 |
|  |  |  |

# Overview

*[Provide a brief overview of the project.]*

## Business Purpose

*[Describe why CMS would include funding in their budget for the project. See Section 3.1.1 of the CMS Requirements Writer’s Guide* *for additional guidance.]*

## Functional Purpose

*[Describe the functional scope of the project (i.e., what the project shall do) in one sentence. See Section 3.1.2 of the CMS Requirements Writer’s Guide for additional guidance.]*

## Measures of Success

*[List the measures of success for the project. See Section 3.1.3 of the CMS Requirements Writer’s Guide for additional guidance.]*

## Stakeholders

*[Provide a description of the current and/or future stakeholders (e.g., identities of the users, as well as their interactions with the project and their functional user roles). See Section 3.1.4 of the CMS Requirements Writer’s Guide for additional guidance.]*

## Approval Authority

*[If applicable, identify the sponsoring organization from the Business Owner’s side and the approving authority.]*

## Project Priorities

*[Identify the priority level established by the Business Owner for each of the four product quality dimensions of the project should a choice need to be made. See Section 3.1.7 of the CMS Requirements Writer’s Guide for additional guidance.]*

There is always an inherent conflict between scope, budget available, schedule and allowable defects. The following project priorities have been established by <Business Owner> to help the project team determine what is most important, should a choice need to be made.

Table 2: Project Priorities

| **Product Quality Dimension** | **Priority Level**  **(High, Medium, Low)** |
| --- | --- |
| Scope (features) |  |
| Schedule |  |
| Defects |  |
| Resources (manpower, budget) |  |

## Project Diagrams

*[Provide relevant context diagrams for the project/system, which may include: work context diagram, project/system diagram, and any additional diagrams (as necessary).]*

### Work Context Diagram

*[Provide a context diagram of the project/system. See Section 3.3.1 of the CMS Requirements Writer’s Guide for additional guidance.]*

The figure below shows the work context diagram for the <project/system>. The work context diagram shows all entities that will have knowledge of the <project/system> and that will interact with it. The direction of the arrows indicates which entity will initiate the event. After an event is initiated, there is usually two-way communication. The work context diagram’s arrows simply show who begins the events.

### System Diagram

*[Provide a system diagram, if available.]*

### Other Diagrams/Artifacts

*[Provide supporting information regarding the project/system requirements. This information can include screen shots, text to display, etc.]*

# Assumptions/Constraints/Risks

## Assumptions

*[Describe any assumptions or dependencies regarding the requirements. The assumptions can be divided into “General Assumptions”, “Technical Assumptions”, and “Development, Test and Production Assumptions”. If none exist, state: “There were no assumptions identified for this project.” See Section 3.1.5 of the CMS Requirements Writer’s Guide for additional guidance.]*

Listed below are the assumptions that guided the identification and development of the requirements stated in this document. These assumptions are intended to promote mutual understanding, partnership, and quality communication between CMS and the projectteam.

## Constraints

*[Describe any limitations or constraints that have a significant impact on the requirements or the system design. If none exist, state: “There were no constraints identified for this project.” See Section 3.1.5 of the CMS Requirements Writer’s Guide for additional guidance.]*

Listed below are the constraints that exist for this project. These constraints may prevent or restrict reaching the desired results (e.g., satisfying requirements, meeting project goals and priorities, achieving measures of success) stated in this document.

## Risks

*[Describe any risks associated with the requirements and proposed mitigation strategies.*

*If none exist, state: “There were no risks identified for this project.” See Section 3.1.6 of the CMS Requirements Writer’s Guide for additional guidance.]*

Listed below are the risks that can create issues for the project. These risks may create issues that have an uncertain affect on the project which in turn effect achieving the desired results (e.g., satisfying requirements, meeting project goals and priorities, achieving measures of success) stated in this document.

# Business Requirements & Rules

*[Document the business requirements and business rules for the project. See Section 3.2 of the CMS Requirements Writer’s Guide for guidance.]*

## Business Process: <Title of Business Process>

*[The “Title of Business Process” included in the section heading is typically the name of the BPM where these requirements are drawn from.*

*Insert your business requirements and business rules as shown in the examples below. If none exist write: “No business requirements exist for this section.” Business rules should be grouped with their parent requirement.]*

### <Stakeholder 1> Business Requirements

*[Document the business requirements that describe the capability required to meet the project/task objective. They do NOT include any reference to the system being built. See Section 3.2, Appendix A-1 and Appendix A-2 of the CMS Requirements Writer’s Guide for additional guidance.]*

#### The <Stakeholder 1> shall …

##### Business Rule: <Business Rule>

##### Business Rule: <Business Rule>

#### The <Stakeholder 1> shall …

### <Stakeholder 2> Business Requirements

# Global Requirements

*[Insert any user, functional and nonfunctional requirements that are applicable across all user domains of interest. Nonfunctional Requirements related to security, privacy, and Section 508 are suitably placed here. Group the requirements by type or with scenarios as applicable (e.g., standards, performance, authentication, etc.). See Section 3.3.2 of the CMS Requirements Writer’s Guide for guidance.]*

## Global Standards

### Design

#### The system shall …

*Pass/Fail Statement:*

### Performance

### Security

### Privacy

### Section 508

### [User Requirement Summary]

*[See section 7.1 below]*

# <User 1> User Requirements

*[The user may be a system user, system influencer, another software system, or hardware device that interacts with the system to achieve the goal of the user requirement. See Section 3.3.2 of the CMS Requirements Writer’s Guide for additional guidance. The following subsections should be repeated as necessary and appropriately numbered for all documented user requirements.]*

## <User Requirement Summary>

*[The “User Requirement Summary” should be a very brief statement of the complete user requirement. For example, if the complete user requirement is “The system shall allow the user to maintain roles”, the user requirement summary statement might be “Maintain Roles”.*

*Definition of the user requirement (UR) should describe the capability required of the project/system to meet the project/task objective. See Section 3.3.2 and Appendix A-3 of the CMS Requirements Writer’s Guide for additional guidance.]*

### Associated Business Requirement

*[Identify the associated business requirements to this UR.]*

### Requirement Source

*[Identify the source of this UR. (Optional)]*

### Priority

*[Identify the UR as “High” if it is essential to the end product, “Medium” if it is desirable, but not essential, and “Low” if it is optional. (Optional)]*

### Purpose

*[Provide a brief rationale for the UR. (Optional)]*

### Requirement Context Diagram

*[Insert a small portion of the BPM or a flow chart that shows the relationship between this UR and any preceding or following URs. (Optional)]*

### Event Diagram

*[Insert flowchart(s) that diagram the relationship between this UR and other URs. (Optional)]*

### User Level Requirements

*[Insert any functional/nonfunctional requirements that are applicable across all scenarios for this UR. (Optional)]*

### <Functional Scenario Name>

*[A separate scenario or use case shall be provided for all possible scenarios. The primary scenario is used to describe the expected and most typical flow of events the actor will navigate through. Insert the name of the functional scenario as the heading and provide a brief description. See Section 3.3.3 of the CMS Requirements Writer’s Guide for additional guidance on documenting scenarios.]*

#### Scenario Flowchart / Use Case Diagram

*[Insert scenario flowchart or use case diagram (Optional).]*

#### Precondition

*[Describe what state the system must be in before the scenario/use case can start.]*

#### Trigger

*[Specify the event that results in starting the scenario/use case.]*

#### Expected Result

*[Describe what state the system must be in when the scenario/use case ends.]*

#### Steps

*[Describe the basic steps in the scenario/use case. The basic flow of events is a series of declarative statements describing the steps of a scenario/use case -- the basic activities (i.e., behaviors and interactions) that occur during the dialogue between the actor and the scenario/use case including how and when the scenario/use case ends.*

*“Include Use Case” option: This option allows the current use case to access a set of behaviors defined in another use case (Include Use Case). This option is a good mechanism for capturing and representing common behaviors and/or functionality in one place that can be used by multiple use cases eliminating redundancy within the requirements/design document. Include Use Cases are simply use cases that are referenced within the current use case. The behaviors in the Include Use Case are executed when the Include Use Case step is reached in the basic flow of events. The “Include Use Case” option, helps to minimize the number of changes across use cases by isolating common behaviors in a single use case. After the set of behaviors in the Include Use Case has been executed, control is returned back to the next step in the basic flow of events.*

*For Example, Step 3 of the basic flow of events could be: Include Use Case “Vendor Look Function”, with a brief description of the functionality of the Include Use Case also provided.*

*“Extension Use Case” option: This option allows the user to use “If” conditional statements in one or more of the steps in the basic flow of events allowing the current use case to access a set of behaviors defined in another use case if certain conditions are met. This use case would perform a series of functions. After the set of functions in the referenced Extension Use Case has been executed, control is returned back to the next step in the basic flow of events.*

*For Example, Step 5 of the basic flow of events could be: If the order status has been confirmed, execute Extension Use Case “Verification”, with a brief description of the functionality of the Extension Use Case also provided.]*

Table 3: *<Scenario/Use Case Name>* Scenario Steps

| Step | Description |
| --- | --- |
|  | *The user … (trigger). This is the first step.* |
|  | *The system ….* |
|  | *Include Use case <name>. Describe the functionality of the Include Use Case.* |
|  | *The system …* |
|  | *If the order status has been confirmed, execute Extension Use Case <name>. Describe the functionality of the Extension Use Case.* |
|  |  |
|  |  |
|  |  |
|  | *The system … Explain how and when the use case ends. This is the last step culminating in the Expected Result.* |

#### Scenario/Use Case Functional & Nonfunctional Requirements

*[Document future-tense “shall” statements that describe what must be done in order to satisfy the business or user requirements. Also include pass/fail statements for each requirement. See Sections 3.3.4, 3.3.5 and Appendix A-4 of the CMS Requirements Writer’s Guide for additional guidance.]*

##### The system shall …

*Pass/Fail Statement:*

##### The system shall …

*Pass/Fail Statement:*

### Alternate Scenario/Use Case #1 - <Name of Alternate Scenario/Use Case>

*[The primary scenario/use case above is the one in which all the steps succeed. The other paths that lead to success are identified as scenarios/use cases. The paths that lead to goal abandonment are alternate scenarios/use cases. Repeat the following subsections for each alternate scenario/use case. See Section 3.3.3.1 of the CMS Requirements Writer’s Guide for additional guidance.]*

#### Precondition

*[Describe what state the system must be in before the alternate scenario/use case can start.]*

#### Trigger

*[Specify the event that results in starting the alternate scenario/use case.]*

#### Expected Result

*[Describe what state the system must be in when the alternate scenario/use case ends.]*

#### Steps

*[Describe the basic steps in the alternate scenario/use case.]*

Table 4: *<Scenario/Use Case Name>* Alternate Scenario/Use Case Steps

| Step | Description |
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#### Scenario/Use Case Functional & Nonfunctional Requirements

*[Document future-tense “shall” statements that describe what must be done in order to satisfy the business or user requirements. Also include pass/fail statements for each requirement. See Sections 3.3.4, 3.3.5 and Appendix A-4 of the CMS Requirements Writer’s Guide for additional guidance.]*

##### The system shall …

*Pass/Fail Statement:*

##### The system shall …

*Pass/Fail Statement:*

# <User 2> User Requirements

## <User Requirement Summary>

*[The subsections documented above in Section 7 should be repeated as necessary and appropriately numbered for this user. If a user requirement or scenario already described above is repeated for this user, use an appropriate reference to avoid duplicating the requirement(s).]*

# GLOSSARY

*[Provide clear and concise definitions for terms used in the Requirements Document that may be unfamiliar to readers of the document. Terms are to be listed in alphabetical order, and may be added or deleted as appropriate from the boilerplate list provided below.]*

**Business Requirement (BR)**

A BR is a statement of the functions needed in order to accomplish the business objectives. It is the highest level of requirement, developed through the dictation of policy and process by the business owner.

**Business Rule (RU)**

An RU is a statement that defines or constrains some aspect of the business. It is intended to assert business structure, or to control or influence the behavior of the business. The RUs that concern the project are atomic in that they cannot be further decomposed and they are not process-dependent, so that they apply at all times. Business rules typically fall into one of five categories: terms, facts, derivations, assertions or action enablers.

**Functional Requirement (FR)**

An FR is a statement of an action or expectation of what the system will take or do. It is measured by concrete means like data values, decision making logic and algorithms.

**Nonfunctional Requirement (NR)**

An NR is a low-level requirement that focuses on the specific characteristics that must be addressed in order to be acceptable as an end product. NRs have a focus on messaging, security, and system interaction.

**Scenario**

A scenario is a sequence of steps taken to complete a user requirement, similar to a use case.

**Use Case**

A use case is a description of a system’s behavior as it responds to a request that originates from outside of that system. The use case is made up of a set of possible sequences of interactions between systems and users in a particular environment and related to a particular goal. The use case should contain all system activities that have significance to the users. Use cases typically avoid technical jargon, preferring instead the language of the subject matter expert.

**User Requirement (UR)**

A UR is a statement of what users need to accomplish. It is a mid-level requirement describing specific operations for a user (e.g., a business user, system administrator, or the system itself). They are usually written in the user’s language and define what the user expects from the end product.

# ACRONYMS

*[Provide a list of acronyms and associated literal translations used within the document. List the acronyms in alphabetical order utilizing a tabular format as depicted below.]*

|  |  |
| --- | --- |
| **<ACRONYM>** | <Literal Translation> |
| **ARS** | Acceptable Risk Safeguards |
| **BR** | Business Requirement |
| **CMS** | Centers for Medicare & Medicaid Services |
| **FR** | Functional Requirement |
| **NR** | Nonfunctional Requirement |
| **RU** | Business Rule |
| **UR** | User Requirement |
|  |  |

# APPENDICES

*[Utilize appendices to facilitate ease of use and maintenance of the Requirements Document. Each appendix should be referenced in the main body of the document where that information would normally have been provided. An example of a possible appendix is a table that identifies changes to requirements or file layout specifications.]*