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September 18, 2017

6 minute read

[Stephen Watts](#)

Software Requirements Specifications, also known as SRS, is the term used to describe an in-depth description of a software product to be developed. It's considered one of the initial stages of development. Think of it like the map that points you to your finished product.

The Internet provides many great examples of SRS for those developers who are open to learning. The caveat is that, like a map, SRS has to be followed exactly in order for you to arrive at the right destination.

To write clear, concise, and easy to follow SRS, you must understand your project. But you must also understand SRS guidelines.

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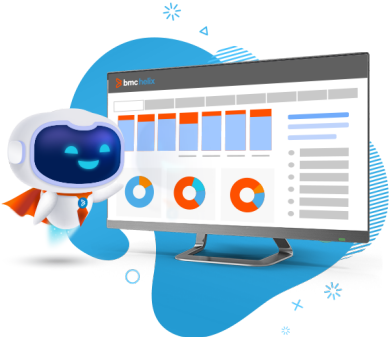
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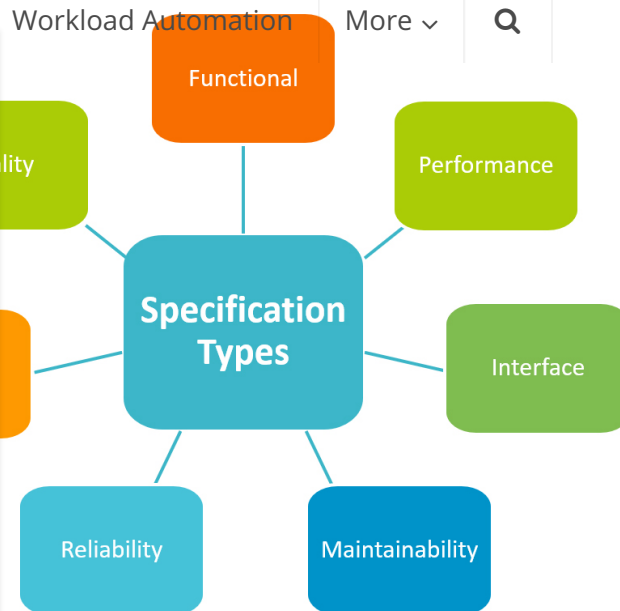
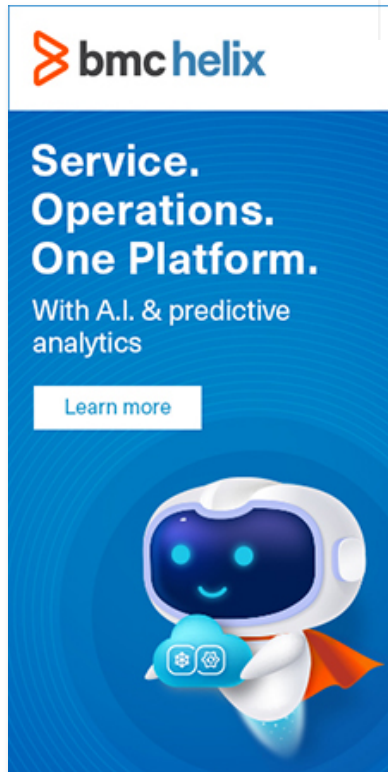
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How do you know when your SRS is ready for development? What makes it exceptional? That’s what we are going to cover in this article.



Characteristics of Exceptional SRS

There are certain things developers should strive to achieve in their SRS document to make it primed for a smooth development project. These can be broken up into three categories: meaningful qualities, characteristics that meet goals, and identifiable requirement smells.

Meaningful Qualities

The meaningful qualities of SRS are those that are purposeful in helping the developer understand the full scope of the project.

Breaks Down the Problem

A good SRS will break down the problem into chunks that can be solved more readily. This also helps to increase understanding of issues and makes them easier to tackle.

Offers Design Input

Your SRS should contain design details to assist with implementation and deployment.

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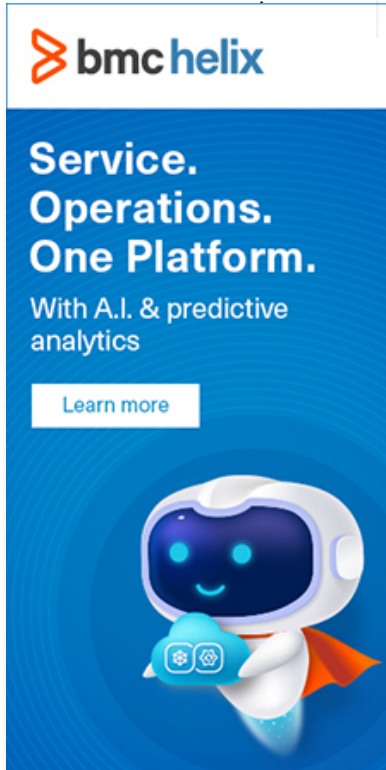
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A meaningful quality to users of the finished software is the

Workload Automation, More  provide feedback. This should be a consideration when writing SRS.



Verification Strategies

Tests should be implemented to ensure requirements are verified and function the way they are intended to.

Requirements are Ranked by Importance

Ranking requirements by importance clearly tells both developers and stakeholders where the priorities lie. If the project is coming up on something like the end of a sprint, having a ranking system allows you to shift priorities easily.

Simple, and Modifiable

The finished product should offer a total picture of the development project as concisely as possible to promote understanding. It should be easily modifiable to account for feedback and changes.

Characteristics that Meet Goals

Each development project should have a pre-established set of goals. These characteristics are used to ensure goals are met and the project stays on the right track.

Descriptive Scope of Work

Having a clear scope of work is one of the most important goals. The scope guides developers through the project. It creates an understanding of what the finished project should be by defining how to get there.

Defines Features for the End User

Customer requirements include certain features for the end user that have to be defined in the SRS.

Provides Opportunity for Review with Stakeholders

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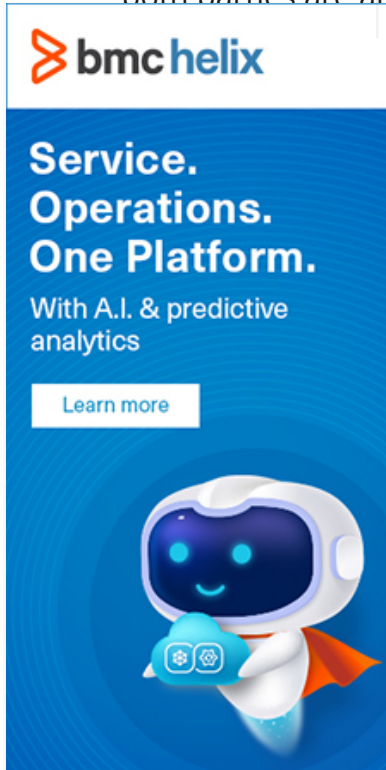
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managers and stakeholders. Make my review of the SRS better.

both parties are an important benchmark to overall success.



document structure with navigation is an important
developers.

ng

opment project is to have a [framework for testing](#).
deration is how you will refine the framework once
The SRS should address both.

S should be able to estimate costs of development
s well as operational costs.

Identifiable Requirement Smells

Similar to code smells, requirements smells are indicators that a requirement could be problematic. Developers should pay attention to these characteristics and make changes as necessary.

Resolving them is handled on a case-by-case basis since they don't typically lead to fatal errors in the requirement artifact. That's why they are included among characteristics of exceptional SRS. Developing a fine-tuned nose for these smells will make your work better.

Examples of requirement smells include:

Ambiguous Adverbs and Adjectives

Subjective Language

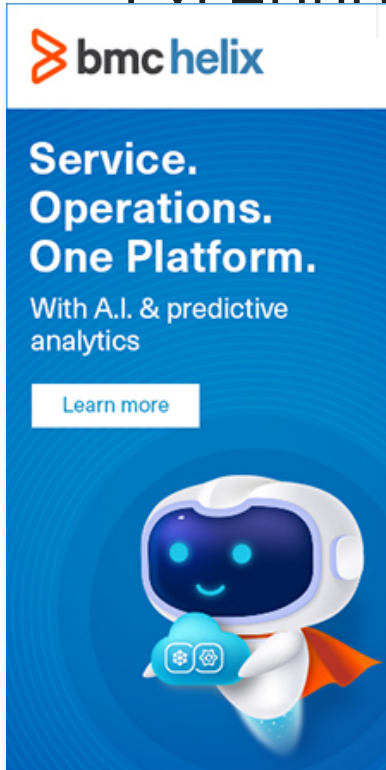
Superlatives

Negative Statements

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SRS can vary from project to project. Even so, each should be as different, should follow a prescribed set of guidelines are easy to remember, since their acronym is easy to remember.

Requirements – The function of the SRS is separate from the project itself. The functional requirements of the system should provide a framework for implementation should be provided in the document.

Analysis Model – The analysis model allows you to drill down into the details of the requirements. An example is if the requirement is "The Cart," a command that doesn't account for other factors like quantity. These can be fleshed out with the Analysis

Model since it connects functional requirements with the design.

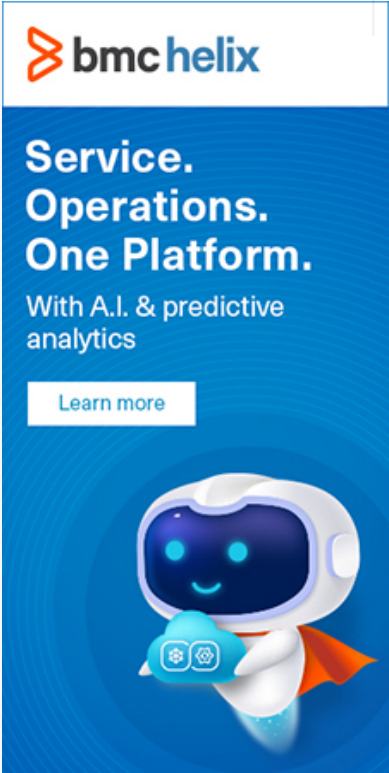
Cognitive Model – This is the model of development that helps developers understand how a system is going to be perceived by others, typically end users.

The Content & Structure of the Specification – This is also known as a data dictionary. It should include all the data surrounding each entity in addition to organizational flow charts.

Specification – Guidelines for the specification itself must be robust enough to tell a story of the development project, and flexible enough to allow changes in scope and scale.

The Structure of Exceptional SRS

There's no one way to structure your SRS, although there are several models to serve as examples. If you've followed the characteristics and guidelines thus far, you're off to a good start.



Communication Interfaces

Memory Constraints

Design constraints

Operations

Site Adaptation Requirements

Product functions

User characteristics

Constraints, assumptions and dependencies

Specific requirements

External interface requirements

Functional requirements

Performance requirements

Logical database requirement

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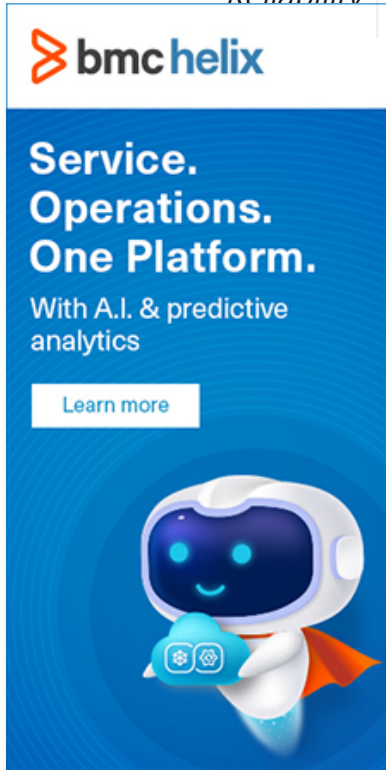
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Specific Requirements

e is adapted from [IEEE Guide to Software](#)

ifications (Std 830-1993). The IEEE is an organization

try standards for SRS requirements. It is the most

standards when creating an SRS and can be adapted

h agency.

Defining the Structure

A few key components of the above example are as follows:

Purpose/Introduction

The purpose section should summarize the entire SRS document. It's similar to the executive summary of business documents, and it sets the tone for the project.

Typically, key components of this section include definitions, systems overview, and references. These help to establish important themes in the development project.

Overall Description

The overall description gives an overview of the requirements and other subsections. The requirements will be described in greater detail in the specific requirements section. The function of the overall description is to consider determining factors that impact the requirements.



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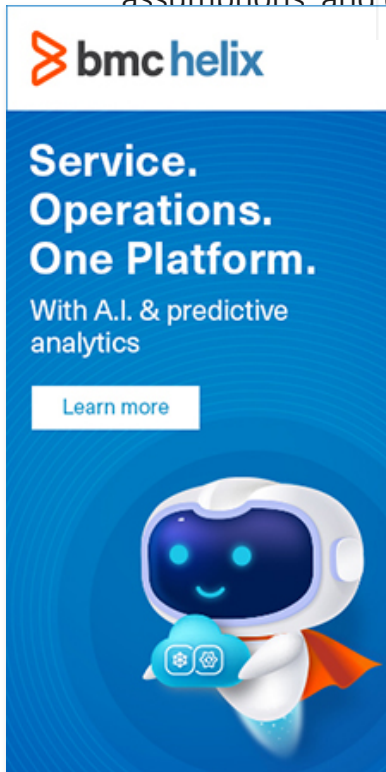
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assumptions and dependencies. These all have to do with anticipating challenges that stand in the way of completing the

for example, includes everything from software compliance to hardware constraints.

Requirements

A specific requirements section is to detail all the necessary for development. This section provides a signers to create the product in accordance with

Requirements section is where you'll find external interface requirements, functional requirements, performance requirements, logical database requirements, and software system attributes. Each of these subsections details a set of requirements necessary for the overall functioning of the program.

Creating an Exceptional SRS

Now you know how to create an exceptional SRS document. A [quick search](#) will reveal a number of templates you can apply this new knowledge to if you still aren't 100% confident in your newly learned ability.

It's important to get it right the first time because the SRS is the basis for your entire development project. Ultimately, remember the goal of this document is to assist in a smooth implementation of program development rather than having perfect SRS.

Among the major components we discussed, your SRS should be flexible, modifiable, and scalable so that it can change with the demands of the project.

for this article provides a high-level summary of a complex process. The best way to approach your SRS research is similar to how you should break down your development projects to stakeholders—in small pieces of information.

As you move through each section of the document. For your next development project, you'll be thanking me for the time to learn more. As with all things, practice makes perfect. But these guidelines, characteristics, and recommendations are a good start.

Additional Resources

How to Write A Project Specification



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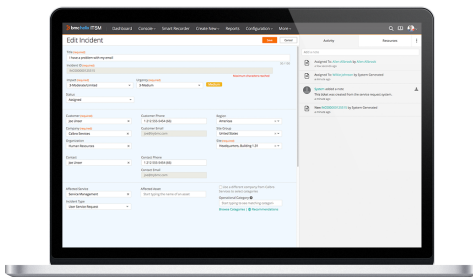
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times Called Software Requirements Specification (SRS)

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