# 5. Requirement Management Plan

Requirements Management Plan is a necessary tool for establishing how requirements will be collected, analyzed, documented, and managed throughout the lifecycle of a project

## Project:

BrightStar

## Requirements Management Approach

The approach we will use for requirements management for the BrightStar project will be broken down into four areas: requirements identification, requirements analysis, requirements documentation, and ongoing requirements management.

Requirements Identification: The BrightStar project team will facilitate various methods to collect requirements which may include: interviews, focus groups, facilitated workshops, group creativity techniques, questionnaires and surveys, or product prototypes. These will be conducted among the project stakeholders to ensure all requirements are captured.

Requirements Analysis: The BrightStar project team will analyze requirements to determine if they fall into project or product categories. Additionally, this analysis will determine where in the WBS the requirements will fall or what work activities correspond to particular requirements. Accountability and priority for each requirement will also be determined as part of the analysis. Finally, metrics and acceptance criteria must be determined for all requirements in order to provide a baseline for understanding when a requirement has been fulfilled to an acceptable level.

Requirements Documentation: Once requirements have been identified and analyzed, they will be documented and assigned to accountable personnel. These requirements will be added to the BrightStar project plan and the project team will determine what methodology the accountable personnel will use to track and report on the status of each requirement. All requirements will also be added to the project requirements checklist which must be completed before formal project closure is accepted by the project sponsor.

Ongoing Requirements Management: Throughout the project lifecycle, the project manager will ensure all team members are reporting requirement status and raising any issues or concerns with their assigned requirements as appropriate. As the project matures there may be situations in which requirements must change or be altered in some way. The project team must follow the established change control process in order to propose any changes to requirements and receive approval from the change control board. Ongoing requirements management also includes receiving approval of all requirements by all vested parties as part of project closure.

## Configuration Management

For the BrightStar Project, the Requirements Management Plan will utilize the configuration management activities outlined in the Configuration Management Plan. Key items include documentation/version control and change control:

Documentation and Version Control: All project documentation will be loaded into the Configuration Management Database (CMDB) as the central repository for the BrightStar Project. Appropriate permissions will be granted to the project team for editing and revising documentation. Any proposed changes to project requirements must be reviewed by the Configuration Control Board (CCB) and have written approval by the project sponsor before any documentation changes are made. Once these proposed changes are approved and the documentation is edited, the project manager will be responsible for communicating the change to all project stakeholders.

## Change Control:

Any proposed changes in project requirements must be carefully considered before approval and implementation. Such changes are likely to impact project scope, time, and/or cost, perhaps significantly. Any proposed changes to project requirements will be reviewed by the CCB. The role of the CCB is to determine the impact of the proposed change on the project, seek clarification on proposed change, and ensure any approved changes are added to the CMDB. The project sponsor, who also sits on the CCB, is responsible for approving any changes in project scope, time, or cost and is an integral part of the change review and approval process.

## Requirements Prioritization Process

The BrightStar project manager will facilitate stakeholder meetings in order to establish priorities for all project requirements. This project will use a three-level scale in order to prioritize requirements. The chart below illustrates these levels and defines how requirements will be grouped:

## Priority Level: Definition

High: These requirements are mission critical. They are required for project/product success or for progression to the next project phase.

Medium: These requirements support product/process operations but can be completed under the next product release.

Low: These requirements are quality and/or functional process enhancements and are disirable if time and resources permit.

OR

MoSCoW Prioritization

## Product Metrics

Product metrics for the BrightStar project will be based on cost, quality, and performance requirements as outlined in the project charter. In order to achieve project success, the BrightStar product must meet or exceed all established metrics.

Cost:

BrightStar cable product must cost less then $6,000 per linear kilometer for fiber counts of 12-72 fibers; less than $8,000 per linear kilometer for fiber counts of 84-180 fibers; less than $10,000 per linear kilometer for fiber counts of 192-288 fibers.

Quality:

BrightStar cable product must achieve less than 10% attenuation in temperature cycle testing

BrightStar cable product must achieve a minimum bending radius of less than 10 feet

BrightStar cable product must weigh less than 1.0 lb per linear foot for fiber counts of 12-180 fibers and less than 2.0 lbs for fiber counts greater than 180

Performance:

BrightStar cable must achieve an average attenuation of less than 0.1% per linear kilometer at 1550nm

BrightStar cable must achieve an average attenuation of less than 0.5% per linear kilometer at 1610nm

BrightStar cable must have a diameter of less than 1.0” for 12-72 fiber cables; less than 1.5” for 84-180 fiber cables; and less than 2.0” for 192-288 fiber cables

## Requirements Traceability Matrix

Below is the requirements traceability matrix for the BrightStar project. The purpose of the requirements traceability matrix is to ensure all product requirements are completed in accordance with the project charter. This matrix provides a thread from all product requirements through design, testing, and user acceptance. Design document and charter references are contained in the BrightStar Project Configuration Management Plan. Any approved changes in project scope or requirements will result in changes to the traceability matrix below. Based on impacts of the approved changes, the Project Manager will make the necessary changes to the matrix and communicate those changes to all project stakeholders.

| Project Name | | Bright Star Fiber Optic Cable | | **Business Area** | Research and Development | |
| --- | --- | --- | --- | --- | --- | --- |
| Project Manager | | J. Doe | | **Business Analyst Lead** | B. White | |
| QA Lead | | F. Black | | **Target Implementation Date** | 06/01/20xx | |
| **Req. #** | **Requirement Description** | **Design Document Reference** | **Charter Reference** | **Test Case Reference** | **User Acceptance Validation** | **Comments** |
| 1 | Reduce cable building cost per linear foot by 15% | DD001 | 3.2.4 | TS001 |  |  |
| 2 | Improve attenuation in temperature testing by 10% | DD002 | 2.1.1 | TS002 |  |  |
| 3 | Improve fiber cable bending radius by 10% | DD003 | 1.4.3 | TS003 |  |  |
| 4 | Reduce fiber cable weight by 10% | DD004 | 2.5.4 | TS004 |  |  |
| 5 | Improve performance (attenuation) by 10% | DD005 | 1.6.5 | TS005 |  |  |
| 6 | Reduce cable diameter by 5% | DD006 | 1.3.2 | TS006 |  |  |