

## Non-Functional Requirements

As Identified in BABOK® v3:

- **Availability:** degree to which the solution is operable and accessible when required for use, often expressed in terms of percent of time the solution is available.
- **Compatibility:** degree to which the solution operates effectively with other components in its environment, such as one process with another.
- **Functionality:** degree to which the solution functions meet user needs, including aspects of suitability, accuracy, and interoperability.
- **Maintainability:** ease with which a solution or component can be modified to correct faults, improve performance or other attributes, or adapt to a changed environment.
- **Performance Efficiency:** degree to which a solution or component performs its designated functions with minimum consumption of resources. Can be defined based on the context or period, such as high-peak, mid-peak, or off-peak usage.
- **Portability:** ease with which a solution or component can be transferred from one environment to another.
- **Reliability:** ability of a solution or component to perform its required functions under stated conditions for a specified period of time, such as mean time to failure of a device.
- **Scalability:** degree with which a solution is able to grow or evolve to handle increased amounts of work.
- **Security:** aspects of a solution that protect solution content or solution components from accidental or malicious access, use, modification, destruction, or disclosure.
- **Usability:** ease with which a user can learn to use the solution.
- **Certification:** constraints on the solution that are necessary to meet certain standards or industry conventions.
- **Compliance:** regulatory, financial, or legal constraints which can vary passed on the context or jurisdiction.
- **Localization:** requirements dealing with local languages, laws, currencies, cultures, spellings, and other characteristics of users, which require attention to the context.
- **Service Level Agreements:** constraints of the organization being served by the solution that are formally agreed to by both the provider and the user of the solution.
- **Extensibility:** the ability of a solution to incorporate new functionality.

Category	What Is Verified?	Example Requirement	Verified During
<b>Availability</b>	Is the system available for use as specified?	The training registration site shall be available 98% of the time.	System
<b>Compatibility</b>	Does the software operate effectively with other components in its environment?	The hand-held device must support connection to external speakers or headsets using Bluetooth v2.0 or higher.	Integration System
<b>Functionality</b>	To what degree does the solution meet user needs?	The selected software package must satisfy 100% of critical functional requirements without customization or scripting.	System
<b>Maintainability</b>	Is the software relatively easy to operate and repair?	Updates to the map data shall not require modifications to the user interface.	System
<b>Performance Efficiency</b>	Does the system perform as expected in terms of concurrent users, response times, and capacity?	The system shall be able to process 100 payment transactions per second.	System
<b>Portability</b>	How easily can the software be transferred to a different hardware or software environment?	Porting the application from iOS to Android shall not require modifying more than 0.5% of the lines of source code.	Post-Implementation
<b>Reliability</b>	Can the solution perform its functions under stated conditions for an acceptable period of time?	The camera must be able to survive a 2-foot drop with no loss of function.	System
<b>Scalability</b>	Will the solution grow or evolve to handle increased amounts of work?	The system must be scalable to accommodate up to 10 users in each of 100 branch offices.	Post-Implementation
<b>Security</b>	Does the solution guard against improper access or use?	The system shall require users to re-identify each time they attempt to access or modify their user profile.	System
<b>Usability</b>	How easily can the user learn to use the solution?	99% of users shall be able to successfully perform their assigned tasks after receiving no more than 2 hours of instruction.	System User Acceptance Testing

Category	What Is Verified?	Example Requirement	Verified During
<b>Certification</b>	Does the solution comply with industry standards or conventions?	All medical diagnostic codes must use International Statistical Classification of Disease and Health Related Problems ICD-9 format.	System
<b>Compliance</b>	Does the solution comply with regulatory, financial, or legal constraints?	When disposing of electronic media containing Personal Health Information, NISP SP 800-88 Guidelines for Media Sanitization must be followed.	System
<b>Localization</b>	Is the solution adapted for the localities in which it will be used?	The application shall use target country conventions for date formatting.	System
<b>Service Level Agreements</b>	Has the solution been designed to meet constraints agreed upon by the provider and the user of the solution?	90% of Level 1 defects will be researched, resolved, and fixed within 24 hours.	Post-Implementation
<b>Extensibility</b>	Will the solution be able to incorporate desired new functionality?	A new "Policy Type Code" must be able to be added to the system within 3 business days.	Post-Implementation