System/Project:

Architect/Team:

Domain/Quantum:

Date Modified:

Next Review Date:

**Top 3 Driving Characteristics Implicit Characteristics**

Feasibility (cost/time)

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Security

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Maintainability

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Observability

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**Others Considered**

**Instructions**

* Identify no more than 7 driving characteristics. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Pick the top 3 characteristics (in any order).
* Implicit characteristics can become driving \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

characteristics if they are critical concerns.

* Add additional characteristics identified that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

weren’t deemed as important as the list of 7 to the

Others Considered list. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Definitions are on the following pages

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**­**

**Common Architectural Characteristics**

**Performance**

The amount of time it takes for the system to process a business request

**Responsiveness**

The amount of time it takes to get a response to the user

**Availability**

The amount of uptime of a system; usually measured in 9's (e.g., 99.9%)

**Fault Tolerance**

When fatal errors occur, other parts of the system continue to function

**Scalability**

A function of system capacity and growth over time; as the number of users or requests increase in the system, responsiveness, performance, and error rates remain constant

**Elasticity**

The system can expand and respond quickly to unexpected or anticipated extreme loads (e.g., going from 20 to 250,000 users instantly)

**Data Integrity**

The data across the system is correct and there is no data loss in the system

**Data Consistency**

The data across the system is in sync and consistent across databases and tables

**Adaptability**

The ease in which a system can adapt to changes in environment and functionality

**Concurrency**

The ability of the system to process simultaneous requests, in most cases in the same order in which they were received; implied when scalability and elasticity are supported

**Interoperability**

The ability of the system to interface and interact with other systems to complete a business request

**Extensibility**

The ease in which a system can be extended with additional features and functionality

**Deployability**

The amount of ceremony involved with releasing the software, the frequency in which releases occur, and the overall risk of deployment

**Testability**

The ease of and completeness of testing

**Abstraction**

The level at which parts of the system are isolated from other parts of the system (both internal and external system interactions)

**Workflow**

The ability of the system to manage complex workflows that require multiple parts (services) of the system to complete a business request

**Configurability**

The ability of the system to support multiple configurations, as well as support custom on-demand configurations and configuration updates

**Recoverability**

The ability of the system to start where it left off in the event of a system crash

**Feasibility (implicit)**

Considering timeframes, budgets, and developer skills when making architectural choices; tight timeframes and budgets make this a driving architectural characteristic

**Security (implicit)**

The ability of the system to restrict access to sensitive information or functionality

**Maintainability (implicit)**

The level of effort required to locate and apply changes to the system

**Observability (implicit)**

The ability of a system or a service to make available and stream metrics such as overall health, uptime, response times, performance, etc.