Risk Based Approach to Testing

All facets of the testing lifecycle should be approached using a risk-based approach. Testing should always be done with a view to identifying and reducing any risks the Project/Change may present, depending on the project objectives. The necessary testing will take into account any such risks that are discovered. In layman's terms, the test effort should start with the area where one component of a system is thought to have a potentially high-risk consequence if it fails.

The project's appointed test lead should decide on the appropriate level of quality risk reduction. The test effort and test sequencing will depend on the risk level. This approach allows test results to be presented in terms of both mitigated and unmitigated risks. A project's or change's testing scope should consider a number of criteria. Depending on the scale and scope of a particular project, a combination of those outlined below may be used:

1. Analyze the potential product risks and concentrate testing on the high-risk areas (also known as risk-based testing).
2. The most frequently used functions can be reviewed, and testing could be concentrated on evaluating these areas, especially if the system under test is already in place and a change is thereby being implemented.
3. Determine the effort of testing required based on the project criticality. Depending on how crucial the project is, different testing levels will be used.

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