

Planning for Quality

9.3.9.1 Quality Management Plan. A key output of an organization's quality planning process is the Quality Management Plan (QMP). The QMP, which is in turn a component of the overall Program Management Plan (PMP), describes how the program management team will implement the performing organization's *quality policy*. The Quality Management Plan must address how the program intends to implement *quality control*, *quality assurance*, and *continuous process improvement*. The other outputs of the quality planning process are: Quality Metrics; a Quality Checklist(s); a Process Improvement Plan; a Quality Baseline, and updates to the Program Management Plan.

9.3.9.2 Quality Metrics. A *quality metric* is a *definition* that describes, in very specific terms, what something is and how the quality control/quality assurance process will measure it. A *measurement* is an actual *value* for that metric in any given instance. For example, it is not enough to assume that meeting planned schedule dates is a sufficient measure the quality of a program's management. The management team must also indicate whether every scheduled activity must start on time or only *finish* on time, and whether individual activities will be measured or only certain deliverables (and if so, which ones).

9.3.9.3 Quality Checklists. A checklist is a structured tool – usually in graph or table form, and component-specific, -- used to verify that a set of required steps has been performed. Checklists range from simple or quite complex.

9.3.9.4 Process Improvement Plan. The Process Improvement Plan (PIP) details the steps to be employed in analyzing program processes, with a view toward identifying wasteful, non-value-added activities and increasing the value received by the performing organization per dollar spent. Some examples of PIP artifacts (outputs) are:

- **Process Boundaries.** A clear statement of the purpose, starting (prerequisite) conditions, and ending condition for each process, their inputs and outputs, the data required, and the owner and stakeholders of each process.
- **Process Configuration.** A chart showing the process flow from start to end – created primarily to facilitate analysis of the interfaces identified.
- **Process Metrics.** The criteria used to maintain control over, and evaluate the status of, process activity.
- **Targets for Improved Performance.** A list of key program activities (processes) that could benefit from improvement actions.

9.3.9.5 Quality Baseline. The Quality Baseline records the program's established quality objectives and quality metrics. A program measures and records its quality performance with reference to the Quality Baseline.

9.3.9.6 Assuring Quality of the Architectural Description. Architectural descriptions are used to guide, inform, and reflect decision-making that occurs as part of various DoD enterprise processes, such as JCIDS, PPBE, DAS, and PFM. Architectural descriptions, by their nature, are developed to meet the needs of their intended customers in supporting these processes. To determine whether a description is sufficient to meet a need, the following quality criteria are provided as guidance to architecture planners, developers, users, and reviewers. These criteria may also be used in preparing a given architectural descriptions, and/or in comparing it with another one.

A high-quality architectural description is:

- **Scoped.** The purpose, functional areas, and level of detail to be addressed in the architectural description are well-defined.
- **Scaled.** The description contains all information that is consistent with the purpose and scope defined for the architecture, and ONLY that information.
- **Authoritative.** The architectural description provides guidance and is prescriptive to a degree appropriate to its scope and tier.
- **Responsive and Timely.** The architectural description contains information that addresses the needs of its sponsor(s). The description development and update cycle is synchronized to sponsors' decision cycles.
- **Aligned and in Context.** The relationship between the architectural description and relevant others (both vertically and horizontally, internal and external to the organization) is documented. The relationship of an architectural description to internal and external drivers -- legislation, executive orders and directives, strategic plans, policies, and the like -- is documented.
- **Accurate and Current.** The information contained in the description is correct and sufficiently up-to-date. The information is validated by appropriate authority [e.g., the Joint Capability Areas (JCAs)].
- **Compliant.** The information contained in the description aligns to the DoDAF Meta-model and, for architectural data exchange, complies with the DoDAF Met-model Physical Exchange Specification.
- **Consistent.** Information elements are used in the same manner, and mean the same things, throughout the description. Organizational and Community of Interest (COI) norms for terminology are adhered to.
- **Understandable and Usable.** The information contained within the architectural description is easy to discover and access; related information elements can be easily, directly compared, and information is provided in a form appropriate to sponsor's need.
- **Maintainable.** The architectural description is managed as a collection of data. Relationships among the data are stored, and a strict versioning (CM) regime is maintained.

Critical deficiencies in an architectural description will impact the users of that description. For example, a given description may be immature (e.g., the architecture effort not yet far advanced), or DoD policy may have recently changed and not yet have been reflected in the description. Critical deficiencies resulting from such circumstances should be documented and mitigated by employing risk management (RM) techniques such as those documented elsewhere in this Journal.