Data Management
Capability Maturity Model Assessment:
A Brief White Paper

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**Synopsis/Problem Statement:** There is no clear, validated, and repeatable method and/or assessment strategy that can be used by projects, programs, communities of interest (COI) that span projects or programs that would determine whether a data management effort within a project, program, or COI conforms to well recognized data management goals, nor whether it exhibits data management strengths or weaknesses.

This process takes the extensive body of knowledge about Capability Maturity Models, Data Management environments, work products, methodologies and metrics, and combines and applies these to both measure data management quality and identify pathways to achieve greater level of quality within data management. This process employs a data management capability maturity model assessment instrument to assess their data management state and specifies pathway actions that need to be taken to both ensure that their data products conform to data management goals, and also exhibit, to the maximum degree practical, data management strengths.

This process is important and relevant as it clear needs a mechanism that can evaluate different projects, programs, and divisions for their compliance with data management goals. Currently, there is no available method for performing rigorous analyses to test this compliance. Further, if weaknesses or problem areas are found, there is no clear path to take in order to improve their data management practices and come into more complete compliance with data management goals.

Typically, the result of an organization's inability to measure itself and provide for improvement steps leads to difficulty in management and evolution. The relevant question is: "If you can't measure it, how can you manage it?" The symptoms of this situation are that an organization has difficulty replicating past success, it may have existing (unpublished) standards that aren't followed, or that there is a problem with regard to accurate budgeting of costs.

In the data context, this results in a situation where projects run over-budget, take longer to implement than expected, and often provide less than 100% expected functionality. This process can produce a high rate of return because an undetected and/or faulty data management infrastructure can immediately cause a program to be halted and be suspended for several years at the cost of hundreds of millions while corrective data management actions are taken.

Fortunately, there is a data management capability maturity model assessment mechanism based on Carnegie Mellon University's Capability Maturity Model. This instrument provides a complete view of data management maturity.

The Data Management Capability Maturity Model (DM/CMM) instrument uses a 5-step assessment scale that is ideal for adaptation to organization- and area-specific assessment mechanisms, such as the present situation. The overall goal of the assessment is to determine whether an organization's data management efforts are at the (1) initial (ad hoc) level, (2) have repeatable expertise, (3) contain defined and documented processes and procedures, (4) provide