

**System Management Maturity Model** 3/12/2021

| Systems Purpose and Structure   | Goal Directedness Through Measures and Feedback   | Management of Intervening Variables and Risk   | Alignment, Evaluation, and Improvement  |
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| 0 – The system is named and has a known purpose, but no structure. Specific system actions, events, and activities respond to outside influences and may be based on political agendas or individual judgments, without regard to analysis or past learning experience. | 0 – The system has no clearly defined outcomes and no expectations for its performance. Its hoped-for outcomes are ambiguous.   | 0 – Intervening variables and risk have not been identified or are unknown.  | 0 – There are no systematic efforts to learn and improve. The resources and personnel that constitute the system do not recognize its existence.  |
| 1 – The system has some documentation but is not mapped. There is some recognition of the system cycle with some of the <b>principal activity groups</b> <sup>1</sup> recognized or documented and mapped.  | 1 – The existence and use of currently defined systems can be linked to some objective and positive organizational performance.   | 1 – The principal <b>intervening variables</b> <sup>2</sup> in the system cycle have been identified, and response scenarios are known.  | 1 – Some documented history of systems evaluation and change. Resources and personnel who contribute are informed of the system and its purpose.  |
| 2 – The system is defined and documented at the high level and mapped. The system map includes all principal activity groups and some of their specific contributing tasks and activities. Output requirements exist for the system as a whole.                         | 2 – There is some structured feedback on system performance that is based on documented system output requirements and to its defined purpose. Much of the feedback may be subjective or milestone related. Output requirements can be shown to be linked to the requirements of system stakeholders and customers. There are no output requirements specific to each principal activity group. | 2 – Intervening variables have been identified for all principal activity groups, and response scenarios documented. The organization conducts at least an annual risk analysis and has documented responses to principal risks. | 2 – System leadership is connected to the resources and personnel, and they are aware of its approach, structure (map), and their role in the delivery of contributing tasks and activities. Accountability and responsibility <sup>3</sup> for actions within each principal activity group is known. The system of deployment is linked to management activity. |

<sup>1</sup> **Principal Activity Groups** are coherent groups of business activity that produce a definable value-add output. They could also be described as milestones or check gates.

<sup>2</sup> **Intervening Variables** are the categorical variables in system cycles that require adjustments to the known and expected pattern of performance—they are akin to common cause variation in processes.

<sup>3</sup> As in project management, the principal activity groups of a system will benefit from using a RACI (responsible, accountable, consulted, informed) model that ensures the progressive completion of successive dependent tasks.

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| <p>3 – The system has a defined approach and a planned deployment. There are a pattern and purpose specific to each principal activity group. The map has been in place for at least one year and is used for management analysis and planning. Tasks, activities, and contributing factors have been developed for some but not all the principal activity groups. Requirements exist for the system as a whole and several subcomponents. Leadership has some evidence that the system operates as designed, using indicators and other performance measures.</p> | <p>3 – Executive managers regularly receive and review performance feedback, including subjective feedback and objective performance measures. This performance feedback is specific to the system as a whole, and to many of its principal activity groups.<sup>4</sup> There is some definition of subordinate process interface, with defined requirements for system inputs and process outputs. There are defined requirements for these system inputs and outputs, and feedback systems exist to capture relative performance in these areas. Performance feedback, taken as a whole, shows a satisfactory level of performance in all areas and some improvement in key areas.</p> | <p>3 – Contingency plans for principal intervening system variables have been documented and deployed, at least in some instances. An annual system risk identification review is conducted, and results are documented. Root cause analysis is performed to analyze risks. Other possible tools include FMEA, SWOT, business environmental analysis, technical, hazard, and failure assessment. Risk is analyzed in terms of likelihood, consequence, and timeframe.</p> | <p>3 – The designated system undergoes structured annual evaluation, improvement, and change management, and all its contributing and participating personnel are at least informed and consulted. Specific responsibilities and accountabilities<sup>5</sup> for each principal activity group has been defined. Organizational learning through operations of the system is showing successive refinements and change in performance feedback and risk identification and management.</p> |
| <p>4 – Leadership has mapped and documented the system, covering all tasks, accountabilities, and contributing factors. Major intervening variables and system risks have been identified. There is a comprehensive system map that shows all activity groups and demonstrates order, pattern, and purpose. Milestones are known and tracked for the identified system delivery cycle. Deployment is specific to the means used to manage the system and to ensure</p>  | <p>4 – Objective and measurable feedback/results are linked to this organizational system, covering all tasks, accountabilities, and contributing factors, and to system inputs from subordinate processes and to process outputs from the system. There are demonstrated positive levels of performance in many or most measured areas.</p>  | <p>4 – Both risk analysis and risk management planning are used, and there is documented evidence of implementation of risk management. Root cause analysis and other tools are used to design risk management plans, and to identify and manage risks.</p>   | <p>4 – There is an annual analysis of system effectiveness and the development of lessons learned. Update and change are considered annually, both in systems operations and in the risk management plan. Responsibilities, accountability, consultation, and informing roles have been identified for each primary activity group, and dependent tasks and activities.</p>   |

<sup>4</sup> Performance feedback includes indicators regarding timely completion of milestones and quality of delivery of defined requirements.

<sup>5</sup> The responsibilities and accountabilities for each principal activity group consist of linkage to organizational positions or groups. They ensure personnel know roles and accountability during the value creation cycle of each system step.

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| <p>its continuing operations according to design. Leadership has indicators and other performance measures in place for all principal activity groups. There is evidence of the use of this system management structure for two or more years.</p>  |  |  |  |
| <p>5 – In addition to the requirements outlined above, there is documented evidence of an ordered system that delivers uniform and predictable quality outputs over multiple operational cycles. The system map links to process maps as necessary, to accomplish organizational goals, and requirements statements for process inputs or outputs are built into systems requirements. Operational deployment is supported by responsibilities and accountability for each contributing resource group and using indicators and performance measures for all principal activity groups. There is evidence of the use of this system management structure for three or more years.</p> | <p>5 – Performance feedback and objective measures are linked to this system and all of its defined activity groups. Positive levels and trends exist for the entire system and all its principal activities. Several indicators and measures are available for each defined activity group. There is evidence that the performance of this defined system has improved and contributed to improving organizational outcomes over three or more years.</p> | <p>5 – Risks are actively managed by the risk manager and the risk owner, and progress is reported to management regularly. System design and structure has been modified to lessen the impact or occurrence of intervening variables and risks. There is documented evidence of the use of analysis to lessen risk and system impacts. There is documented evidence of systems learning and improvement. There is evidence of systematic risk identification, tracking, analysis, and controls or mitigations in place.</p> | <p>5 – There is evidence of continuous systematic annual improvement, participated in by all defined systems personnel. There are measurable, positive results on outcomes and in each activity group, with demonstrated positive relationship to all dependent processes.</p> |