

Acquisition Measurement ICM Table

	Information Categories	Questions Addressed	Measurable Concepts	Measures	Notes
Enterprise	Schedule & Progress	Are the projects within this enterprise on track?	Milestone Completion	Milestone Progress Interim Progress Trend	Milestones mean major milestones such as major reviews and delivery dates. For the enterprise, want some early indication of whether major milestones will be met.
		What is the degree of risk associated with each project? Which projects are most at risk?	Risk Status	Risk Likelihood and Impact	At the highest level. Likelihood and Consequence for the top 10 risks on each project.
		What is the enterprise work backlog? What should be scheduled next?	Work Backlog	Open Defects Enhancements Needs	Measure/categorize open defects, enhancements, and needs by priority level
	Resources & Cost	Does the enterprise budget and funding process support the financial needs of the projects?	Financial Adequacy	Obligation Rates Disbursement Rates Funding Availability	Is funding available for each project as needed? Consider: - spread of money across the year for multiple projects - color of money and plus-ups for government projects - funding blocks, pull-backs - studies, management reserve, as well as development and maintenance projects
		Within the enterprise, are there sufficient qualified resources (people)?	Personnel Effort	Effort Experience Level Staff Turnover Workforce Age Profiles Education/Training Profiles	Consider: - turnover rate - military rotations - training, education - motivation - etc.
	Product Size & Stability	How many systems are in development? How big are they? How many systems are being maintained? How big are they? What are the trends over time?	Physical Size and Stability Functional Size and Stability	Interfaces Interface Complexity Lines of Code Requirements	
		Are requirements (needs) and architecture elements stable?	Functional Size and Stability	Requirements Volatility Architecture Elements Volatility	
	Product Quality	Are the projects delivering quality products that meet performance requirements?	Functional Correctness Dependability-Reliability	Needs Tested Successfully Defect Density Defect Escapes Components Accepted	At the aggregate level. Does the project meet: - user expectations (needs, not specifications) - TPMs - delivery criteria - permissible levels of delivered defects?
		Are known problems being resolved?	Functional Correctness	Defects Resolved	During warranty or against backlog of issues
	Process Performance	Are the processes sufficient to operate efficiently in support of the acquisition activities	Process Effectiveness	Process Capability Process Adherence	E.g. Capability (and not level) with respect to CMMI-ACQ process areas. Getting projects on contract in a timely manner with a sufficient level of quality
		What are enterprise norms for completing acquisition activities (schedule, cost, productivity)?	Process Efficiency	Cycle Time Effort Productivity	E.g. get a RFP package out, review proposals, review CDRLs, etc. (assuming sufficient level of quality)
		What are enterprise norms for completing development activities (schedule, cost, productivity)?	Process Efficiency	Cycle Time Effort Productivity	
	Technology Effectiveness	Does the enterprise have sufficient technology insertion plans and implementations?	Technology Adoption	Needs Met by Technology Insertion Technology Refresh Rate	
	Customer Satisfaction	Are user needs / concerns being met? Is the enterprise delivering the products that are needed with sufficient functionality and performance for the mission?	Customer Feedback Customer Support	Satisfaction Ratings Requests for Support	

Project Acquisition	Schedule & Progress	Are acquisition activities and commitments completed as scheduled?	Milestone Completion Work Unit Progress	Milestone Dates Test Cases Attempted and Passed Requirements Documented and Reviewed Requirements Traced and Tested Reviews Completed Action Items Closed	Milestones mean acquisition milestones Work Unit Progress - measure slippage Milestones could include developing the RFP, bidding and source selection, awards, contract modifications, reviewing CDRLs, test progress, developing SAMP, SEMP, TEMP, contract monitoring and review, funding milestones
		What is the degree of risk associated the project? What are the highest risks?	Risk Status	Risk Status	Detailed risks
	Schedule & Progress Resources & Cost	Has the acquisition office established realistic cost and schedule parameters for the system and for acquisition activities? Have the system proposals been evaluated for realistic cost and schedule projections?	Schedule Feasibility Cost Feasibility	Schedule Probability Cost Probability	Evaluate for both acquisition activities and for development activities. Include updates as schedules and funding changes. Note: need to make sure that there is a separate, realistic schedule acquisition office activities, including realistic review and approval times. Is the RFP development schedule realistic? Is the transition to support schedule realistic? Have critical paths been identified? Have we identified and planned for budgetary milestones?
		Is the development schedule and cost realistic?	Schedule Feasibility Cost Feasibility	Schedule Probability Cost Probability	Consider any changes made prior to award/initiation.
	Resources & Cost	Does the project have sufficient money to conduct acquisition activities on this project?	Financial Performance	Cost BCWS, BCWP, ACWP	Requires good EV on acquisition activities.
		Does the project have sufficient qualified resources to conduct acquisition activities on this project?	Personnel Effort	Effort Experience Level Staff Turnover	
		Does the project have sufficient resources / infrastructure to conduct acquisition activities on this project?	Environmental and Support Resources	Quantity Needed and Available Time Available and Used	Facilities, material, test labs and equipment, SCIFs, software tools, simulation tools, etc.
	Product Size & Stability	Are the user needs / top-level requirements and architectures stable? What is the impact of changes?	Functional Size and Stability	Needs Volatility Architecture Volatility	Addressing those user needs / top-level requirements managed by the acquirer. Might be documented in operational capability documents, operational scenarios, top-level performance specifications. Want to measure # of architecture-level changes over time, driven by changes in user needs and/or requirements, which can tell us if we have a robust, flexible architecture.
		How many external interfaces exist in a program? Are all external interfaces clearly identified? Are the interfaces stable? Are external interfaces developed and tested as planned?	Functional Size and Stability	External Interface Volatility	External interfaces to other systems or program offices.
	Product Quality	Is the project delivering quality products that meet performance requirements?	Functional Correctness Dependability-Reliability	Needs Tested Successfully Defect Density Defect Escapes TPMs Components Accepted Mean Time to Failure	Does the project meet: - user expectations (needs, not specifications) - TPMs - specifications (i.e. specified requirements that are traced to needs) - delivery criteria - permissible levels of delivered defects?
		How many defects are found in the acquisition work products? How much rework is required?	Functional Correctness Process Effectiveness	Defects Rework Effort Rework Components	Components are acquisition work products.
		How difficult is the product to maintain? How much will it cost? How many people are required for a certain level of support?	Maintainability Financial Performance Personnel Effort	Cost Staff Level	
		Have you adequately budgeted, planned, and executed requirements for safety? What is the residual safety risk of the system?	Safety	Safety Risk Incidents Incurred Cost per Incident	
		Have you adequately budgeted, planned, and executed requirements for security?	Security	IT Security Cost Physical Security Cost	
	Process Performance	How effective & efficient is the acquisition office in identifying defects in system products?	Process Effectiveness	Defect Escapes	Evaluate defects identified by the acquisition organization against those identified by the supplier against those identified in the delivered product.
		How much time & effort is spent on various acquisition office activities?	Process Efficiency	Productivity	
	Technology Effectiveness	Does the project have sufficient technology insertion plans and implementations?	Technology Adoption	Needs Met by Technology Insertion Technology Refresh Rate	

	Customer Satisfaction	Is the end user satisfied with the acquisition office activities and interactions? Is there sufficient user involvement? Are user action items recorded and completed?	Customer Feedback Customer Support	Satisfaction Ratings Action Items Opened and Completed	
--	-----------------------	--	---------------------------------------	---	--