Top 10 Instructions for Equipment Upgrade/Repair Work Orders Driving Sustainment Operations

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This guide is written with emphasis on advanced application of Equipment Upgrade/Repair Work Orders during in-service phases of equipment sustainment to begin with concept design & continue until equipment completes each service deployment. Guides for better Mission-effective equipment status from operational & cost standpoint must be improved by establishing upgrade/repair work order programme during early sourcing phases design & subsequent deployment efforts to complete missions.

Using equipment upgrade/repair work orders as part of design process allows early identification of equipment reset modes based on condition/perform-based assessment actions. Equipment must require design improvements benefiting from introduction of design features such as easy access, new technology, easy inspection or interchanged part types, or technological advances. Upgrade/Repair work order activity must be reviewed based on Sourcing Programme Phases.

Guides to better support new Design/Assess of equipment with reduced Logistics Footprint must provide templates to use in define/assess programme activities to meet mission requirements during equipment system sustainment. Emphasis is placed on reliable design for increased reliable & reduced Logistics Footprint to provide for effective product support.

This Guide stresses the use of equipment upgrade/repair work orders to realise system-based approaches to determine equipment reset consequences & must identify most applicable/effective sustainment tasks. Appropriate use of condition/perform-based assessment technologies must be established by modern diagnostic/prognostic tools to integrate on/off-board monitoring, testing, & information collection capabilities to enhance overall system support.

These practices must include modern equipment condition/perform-based trend reviews, point-of upgrade/repair work order reviews, risk mitigation, serial parts type item clarification, automatic identification technology & information-driven, interactive training at installations.

Ultimately, these practises must increase operational availability & readiness of equipment at reduced costs covering everything from initial sourcing phase schedules to sustainment operations. Here we present guidance for appropriate equipment upgrade/repair work order activities prior/during/after multiple equipment sourcing phase Milestones.

Equipment Evaluation During Concept & Technology Sourcing Phase

1. Equipment Upgrade/Repair work orders must be identified as integrated functions of sustainment Planning & Support with new processes in place for constant status reviews &

advanced Design Interface Activities.

2. Functional equipment reset modes & effective review methods must be established to identify likely upgrade/repair work order scenarios requiring design activities to complete mission requirements.

3. Initial upgrade/repair work order approaches must identify strategies for equipment condition-based assessments & perform reviews to establish lessons learned from review of current/updated systems.

4. Upgrade/repair work order reviews at functional level must identify likely condition/perform-based assessment strategies & equipment reset processes to be incorporated into design requirements.

5. Potential technologies to improves equipment condition/perform-based assessments & reset strategies must be identified when requirements for mission success depend on consistent update of sustainment activities.

6. Potential review tools, including required equipment upgrade/repair work order functions for sustainment operation & sourcing phase schedule interfaces must be identified for evaluation/selection of process updates.

7. Equipment upgrade/repair work order concepts must be integral & influential in condition/perform-based assessments for advances in sustainment process concepts under continuous review.

8. Organisational responsibilities must be clearly established for sourcing phases conduct/assessment of upgrade/repair work order efforts to include required avenues for integration across installations.

9. Equipment sourcing phase schedule requirements must be identified for upgrade/repair work order efforts to include technology maturation for new initiatives to be detailed in subsequent sustainment operations.

10. Equipment Design trade-off reviews must evaluate effects on condition/perform-based assessments & reset strategies must be evaluated based on utilising upgrade/repair work order concepts for mission success.

Equipment Evaluation During System Demonstration Sourcing Phase

1. Baseline Comparison Studies of equipment condition/perform-based assessments using like/similar equipment must be accomplished to identify opportunities for creating improved processes & establish sustainment support.

2. Equipment upgrade/repair work order Use Case Studies must be undertaken to clarify issues/constraints related to requirements for carrying out condition/perform-based assessments

at multiple installations.

3. Initial equipment upgrade/repair work order plans must ensure determination of reset status uncovered by condition/perform-based assessments conducted consistent with design/tech advances to allow design influence for optimised sourcing phase schedule action.

4. Equipment Upgrade/repair work order plans must clearly identify selection criteria of excellent installation candidate selection, schedule/resource requirements, support design constraint, ground rules for design evaluation & trade-off process determination.

5. Upgrade/repair work order plans must establish programme framework for equipment sustainment. Identification of condition/perform-based assessment requirements for design & establish feedback mechanisms for testing results or early prototype fielding efforts.

6. Equipment reset approaches must consider tech advances in upgrade/repair work order routing principles to reduce reliance on physical inspections & schedule jobs, facilitating opportunities for mission success.

7. Equipment Design tradeoff plans & processes must be in place to ensure new equipment upgrade/repair work order technologies are evaluated for cost- effective sustainment activities at installations.

8. Tech advances for equipment upgrade/repair work order routing must be evaluated for anticipated risks requiring process mitigation until design requirement maturity can be evaluated in field of operation.

9. Lessons learned from fielded equipment programs incorporating tech advances in upgrade/repair work order review must be incorporated into support design requirements for condition/perform-based assessments.

10. Consensus between installation must be in place to establish new approaches for use of equipment sourcing phase information routing & must utilise reliable support reviews, establishing requirements for condition/perform-based assessments.

Equipment Evaluation during System Build/Deploy Sourcing Phase

1. Baseline Comparison reviews of equipment condition/perform-based assessments must be updated as design changes state to identify areas for improvement & update support requirements.

2. Equipment Use reviews must be updated to identify issues/constraints related to condition/perform-based assessments at selected installations as design changes & operational basing/deploy & training plans are created.

3. Equipment upgrade/repair work order reviews on design changes must be used optimise condition/perform-based assessments & promote creation of new equipment reset strategies.

Opportunities for tech/reliable improvements must be identified & funded through appropriate channels.

4. Equipment upgrade/repair work order Plans must be updated consistent with design sourcing phase. Iterative review efforts must be responsive to design modifications to ensure equipment reset strategies are based on current configuration & goals consistent with advanced product grade.

5. Equipment upgrade/repair work orders must identify sourcing phase schedule identification, support design constraints/requirements, ground rules & assumptions, design evaluation methods & tools to establish equipment sustainment frameworks. Installations must be solicited early in review process.

6. Equipment reset approaches must continue to evaluate information routing tech advances to reduce reliance on physical inspections & rigid sourcing phase schedules to facilitate opportunities for mission success.

7. Trade-off processes must be reviewed to ensure new technologies are evaluated for all cost effective sourcing phases. Technological advances with inherent risk must be mitigated and monitored until the maturity can be adequately established.

8. Agreement/approach for early Equipment upgrade/repair work orders must establish lessons learned from utilisation of System Reliability/Support review requirements detailing feedback from early fielding programmes resulting from adjustments to equipment reset updates.

9. Equipment upgrade/replace work order results must be incorporated into technical publications to put in place provisions to ensure condition/perform-based assessments requirements are not changed without support from updated reviews.

10. Sourcing phase schedule plans must identified for sustainment operations & reset programmes for in-service equipment. Condition/perform-based assessments must monitor & adjust upgrade/repair work order requirements. Periodic reviews must be identified based on fielding timelines.

Equipment Evaluation During Operations/Support Sourcing Phase*

1. Baseline Comparison Studies of Opportunities for new equipment condition/perform-based assessments requirements must updated as modifications occur to identify areas to establish sustainment support for design requirements/modifications.

2. Updates to upgrade/replace work orders must be identified & sourced for each modification to phase & schedule. Design trade-off reviews must be enacted as design/tech changes for possible introduction of new processes for equipment reset goals.

3. Equipment upgrade/replace work orders must be adaptable as programmes progress. Efforts must be responsive to design modification timelines to ensure condition/perform-based

assessments reflective of current configurations.

4. Equipment upgrade/replace work orders Plans must continue to identify, schedule & support design constraints, requirements & sustainment activities for all equipment sourcing phases. Each installation must enact new review & information collection processes.

5. Equipment reset approaches must continue to consider tech advances & put mechanisms in place to identify & consider cost/benefit of incorporation of new technologies for insertion into design processes.

6. Equipment upgrade/repair work orders must identify lessons learned from review of similar fielded programmes & must be periodically reviewed for application to improve condition/perform-based assessments & consideration of reset strategies.

7. Effective approach for equipment reset programme progression, use & update of upgrade/repair work order modifications based on in-service sustainment reviews must be in place based on up-to-date information.

8. Equipment upgrade/repair work order results must be incorporated into technical publications detailing sustainment operations & provisions must be in place to ensure condition/perform-based assessment requirements are not changed without review.

9. Equipment sourcing phase schedule plans must be reviewed/updated for establishing upgrade/repair work orders & reset programmes for in-service equipment. Condition/perform-based assessments must continue periodically to be responsive to advances in process inputs.

10. Equipment upgrade/repair work order programmes must continue to be integral to the overall sustainment approach, including incorporation into tech documentation as appropriate. Review results must update condition/perform-based assessments requirements based on cost/schedule factors.