Top 50 Dispatcher Success Stories: Summary of Equipment Upgrade/Repair Logistics Tasks

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1. Dispatchers applied a range of technologies offering relief to stressed DoD divisions, tracking equipment components throughout supply route service areas to get a good handle on upgrade/repair operations, but enthusiasm is tempered by limited funds, limited time for training at installations & no time to assess the relative advantages of the various technologies for individual operations. The tendency is to grasp at low-cost options and then discover that they do not relate to other devices already in place or to postpone implementation because of limited time for retraining at installations. Trash cans collect last year's great expectations & command may decide to plod on with traditional overstretched systems, making the case that new technology cannot possibly be cost effective.

2. Dispatchers detailed changing best practices for supply route service scheduling resulting in increasing requirements for utilising advances in technology. As long as supply routes were limited to specific work order calendar types augmented by notes on a yellow legal pad, conditions were sufficient to develop schedules in which every lane in the supply route service area must be considered. Since it took hours to build the schedule, any last-minute changes could disrupt strategic plans & raise stress levels in DoD processes.

3. Dispatchers report command at DoD has expressed tempered interest in various types of technology, since most equipment upgrade/replace operations & supply route service reservation scheduling is currently done manually by isolated personnel using existing systems to serve as information deposit for upgrade/repair invoice information. A manual intended to serve as a guide to busy DoD units has been created to enable selection of smart technologies designed to increase efficiency in supply service route reservation agreements.

4. Dispatchers determined instances in which command at DoD is often sitting idle waiting for someone else to evaluate supply service route systems first, shake out all the bugs, and provide a tight, verifiable evaluation that estimates probabilities for equipment upgrade/repair success. Given limitations in the availability of resources to provide incentives for experimentation, success stories are difficult, if not impossible, to find at the current time. Consequently, this report has compiled what information is available, simulated equipment upgrade/repair

scenarios to derive preliminary cost models, offering a framework that can guide all installations in decision making when it comes to sustainment activities.

5. Dispatchers administrated dynamic scheduling to involve real-time source alerts based on up to date information, permitting supply service route insertions constant adjustment of schedules. An associated supply service route application feature has been designed to select the most efficient upgrade/repair pattern for each equipment component & produces updates to accommodate inserted service route reservation insertion. As to logistics, responsive equipment component dispatch by DoD units is dependent upon both location information & on real-time scheduling.

6. Dispatchers noticed timely equipment component replacement is important because supply service routes become less efficient operationally as equipment condition indices deteriorate, serving to increase costs of future operational tempos, as well as upgrade repair scenarios. In top-performing DoD units, selection & procurement deliberations incorporate proper accounting of operating costs of equipment procurement all the way to sustainment requirements. Availability & standardisation of equipment parts influence accurate procurement rates for capital costs, & optimal return on investments in performance.

7. Dispatchers determined that areas of low productivity & efficiency of equipment upgrade/repair work orders can be identified & remediation strategies put in place. DoD needs to have the tools & processes for accurately tracking costs & flexibility to use obtained information it obtains to make good procurement decisions by restructuring administration of supply route service, outsourcing some specialty work, and conducting sustainment studies would put into place opportunities to achieve the lowest possible operating costs.

8. Dispatchers facilitate supply route service systems with extensive reporting requirements. The type & quality of information required to fill in system is major factor in selecting technology to carry out the mission. A timely, smart decision can shortcut hours of report preparation, while a bad decision can result in operations overwhelmed with mountains of information that DoD command does not know how to use. Several installations reported they never took the new equipment upgrade/repair scheduling programme out of its box because no one knew how to use it & no training programme was associated with package. Cumbersome & unresponsive systems not built to handle inserted material changes to schedules lumbered on.

9. Dispatchers increased demand for supply route service identification on the fly bringing increased demands on equipment utilised at over-worked installations. These challenges often blunt enthusiasm for increased supply service route opportunities since dedicated DoD personnel cannot be replaced in a pinch. Command, focused on maintaining multiple sources of operating funds, has no time to test innovative techniques designed to uncover supply route service options. At high operational tempos, breakdowns in equipment condition indices wreak havoc with equipment upgrade/repair schedules. Thoughts of stranded equipment components in remote locations raise general alarm levels among command.

10. Dispatchers found room for improvement in tracking equipment upgrade/repair work orders & costs for supply route service, assessments indicating ability of DoD to make informed procurement, utilisation & operational decisions is at risk. Simply by consolidating asset tracking systems and administrative oversight, new tools will begin to accurately assess and make ongoing decisions to increase efficiency in supply route service.

11. Dispatcher recommendations for improving supply route service efficiency for DoD equipment upgrade/repair operations are initially dependent upon building consistent & accurate basis for evaluating decisions across the entire system & flexibility to procure part components on the basis of total cost. Requirements include having a more consolidated organisational structure allowing for sharing of resources across installations.

12. Dispatchers identified contributing factors to higher change order rates for DoD projects including timing of equipment upgrade/replace funding receipt of project, contract procurement processes & quality controls on work orders. These factors cause process delays & create a requirement for additional resources to extend the project life. Recommendations for improving change order process include shortening time between receipt of funding and contract award & improve supply route design to minimise additional work order corrections.

13. Dispatchers recommend DoD undertake processes based on balanced scorecards for supply service route operations & functional equipment upgrade/repair areas, create objective condition indices metrics to monitor critical performance indicators & clearly define decision- making criteria for supply route delivery of part components based on available resources to provide operational value.

14. Dispatcher creation of work orders is consistent with the amount of effort required to produce supply route services in a productive, efficient, and effective manner to provide for DoD requirements. Work orders detailing productivity should be used to document all equipment upgrade/repair operations. Procedures to monitor progress & expedite condition indices assessments must detail techniques used to calculating supply route service rates in order to determine comparisons of cost effectiveness of performance measures & capture all relevant information on work order processes by maintaining a complete record of costs on a timely basis.

15. Dispatchers moved toward consolidation & centralisation of DoD activities critical to supply service route administration traced back to the increasing cost & complexity of operational tempos with simultaneous increase in emphasis on unit efficiency in the face of competition for contracts as well as assessment of risk for mobile operations provided by information systems. Complex relationships between supply service routes produces significant economies, often captured only through collective effort.

16. Dispatchers achieve flexible tactical execution of supply service routes, characterised by an organisational structure better able to set equipment procurement, specifications & upgrade/repair standards bringing uniformity & technology standardisation to DoD processes, all to ensure individual installation unit retention of critical authority, incorporate fiscal constraints, as well as consolidate & disseminate new requirements of operational tempos.

17. Dispatchers configured supply service route rates as outcome for proper, accurate & consistent input/track of DoD costs assigned to equipment work orders, usually through upgrade/repair system interval. Work orders must document all upgrade/repair rates provided to include all direct/indirect costs, calculated for up-fitting& administration of in-house work backlogs, avoiding costly investments & still achieving critical degree of flexibility in provision of services.

18. Dispatchers observed that all supply service routes for critical equipment require upgrade/repair during their life. Since the primary mission is to maximise availability & performance, DoD must focus on administration of best practices that minimise unscheduled incidents of upgrade/repair so equipment with deficits in condition indices can return back to action in as little time as possible in order to meets the schedules/requirements of future operational tempos.

19. Dispatchers documented necessity of operating equipment on basis of good accounting practices to ensure DoD has the ability to make sensible & cost

effective decisions in selecting, charging for supply route services & reaching requirements for deploy of equipment components. Identification & accumulation of total equipment components costs is imperative, including depreciation of capital assets & calculate the cost of support services, allocating overhead costs by programme to meet changing operational tempos.

20. Dispatchers see the need for selecting the right equipment at the right time as the critical foundation of best practice in meeting future operational tempos. Top-performing DoD units do not simply choose the cheapest or easiest supply service route, instead factoring in wide varieties of considerations determined by condition indices assessments that ultimately determine the useful life of equipment components. The ability for a procurement administration to make sound decisions is enhanced when accurate information is accessed in control systems for each supply route provision of parts to upgrade/repair operations.

21. Dispatchers propose some equipment upgrade/repair situations exist by which supply service route replacement practices are dictated by availability of replacement funds creating tension between DoD objectives such as minimising sustainment costs. Inadequate replacement procurement not only increases operating costs, but results in accumulation of replacement requirements which, if left unattended, can become so large that significant operational downsizing is unavoidable, affecting reliability & performance.

22. Dispatchers created a real-time information system to automatically schedule supply service route reservations for equipment components with full knowledge of their actual location. The issue for operations at small installations are the costs involved in selecting the right technologies & benefits associated with important choices to be made by DoD. Critics often address the question of whether realised benefits in increased effectiveness justify the investment in technology in the context of the limited utilisation of dynamic scheduling systems at installations.

23. Dispatcher investments in technology involves problematic assumption of risk for installations operating at the margin, with limited prospects for increased or even steady-state levels of resource allocation at DoD. It is even more challenging for small installations where command is already over-extended with current operations and challenged by limited time to consider options or alternatives for surge contingency scenarios.

24. Dispatchers established ambitious goals for improvements in DoD scheduling techniques in real time to provide options for many installations with no fixed

supply route service & long reservation times. Even so, an increasing number of installations are now moving toward dynamic scheduling, allowing centralised dispatchers to insert supply service route reservation agreements when requested, increasing efficient/effective equipment upgrade/repair operations. Rises in interest from installations also parallels the changes in scheduling programmes themselves which have become increasingly simple to operate.

25. Dispatchers described focused shifts to smaller installations with demand-responsive properties. Assumptions exist that these systems are not just simply smaller versions of the large installations, instead housing distinctive forms of supply route service agreements with disparate equipment upgrade/repair requirements & operating parameters. The central question for DoD command is to decide whether or not smart technologies that relate to systems operation are viable in these installation settings. In this context, viability is determined not so much in terms of technical feasibility but in terms of overall costs & benefits.

26. Dispatchers explore potential for possible combinations of dynamic equipment upgrade/repair scheduling in the context of smaller installations with the possibility of securing the benefits of technologies at reduced costs through coordination among several smaller operations and supply service route reservations in real-world contingency scenarios. However, the intention is not to provide recommendations uniquely suited to smaller installation systems, but instead to use as prototype of system with expanding supply service routes and limited operational size. Commitment from command at DoD is lacking & budget numbers have not kept up with increases in demand.

27. Dispatchers challenged DoD to make fully informed procurement decisions on the basis of true equipment component costs since little continuity exists throughout upgrade/replace contracts on how costs are tracked and how information systems are utilised. Sometimes Upgrade/repair rates are not based on real service costs-- in many cases, the productivity rate of equipment components is not reflective of all work orders being reported so there is a gap between procurement & that issued to mobile units. Since DoD utilises different depreciation schedules & different methods at each installation, how DoD calculates the depreciation of equipment components & connected supply route services must be standardised to best reflect sustainment requirements.

28. Dispatchers administer installation only requirements to monitor equipment components systems & supply route service reservation agreements. DoD is likely to be content with information that is stored during operations and downloaded at a

later date, it can probably manage with a simple equipment upgrade/repair information system with on-board monitor of supply service route performance & condition indices. Although system alerts are not real time in this case, areas for concern are marked & stand out when information is compiled, alerting command about equipment components to require attention.

29. Dispatchers have demonstrated typically high demands for real-time information. Fixed supply service route require real-time information primarily to monitor progress of equipment upgrade/repair operations designed to determine whether corrective action is needed to compensate for slips in the schedules. Information about current status of equipment components greatly enhance opportunities to schedule on the fly by inserting new supply service route reservations. Upgrade/repair schedules can be rebuilt at central stations & transit to appropriate installations.

30. Dispatchers detail requirements for frequency of reporting back to the central station-- another issue that distinguishes system effectiveness. Most installation systems are now moving toward exception reporting, whereby an equipment component only reports into the central station when it is outside pre-established on-time performance & condition indices parameters, with monitor information collected at an interval established according to operational tempos. Times for individual supply route pick-up could be pre-established & serve as the time points for exception reporting. It is essential that systems employed at installations have key internal controls to find out where and when a supply service route insertion is required.

31. Dispatchers summarise the position that equipment upgrade/repair scheduling programmes greatly enhance function of the service route reservation monitor. Levels of automation in scheduling ranges from minimal to fully automated-- from DoD entry-assisted scheduling involves building schedules for equipment components moved manually according to service route reservation cancellation/additions where required. The next level of automation, dynamic scheduling, involves information system capability to modify schedules & service routes in real time. Schedules can be built virtually automatically from rule-based technology solutions, with last-minute supply service route reservation agreements inserted in near real-time with upgrade/repair schedules adjusted as required according to key contingency scenarios.

32. Dispatchers assess Resource Costing for supply route services with considerable different properties-- it is critical for installations to assess priorities

in the light of realistic expectations regarding the value/benefits to be derived from different technologies. Most equipment upgrade/repair scheduling & service route reservation agreement tracking programmes will not alone address the full range of requirements identified by demand-responsive surge operations. Scheduling programmes cannot let DoD base schedule revisions on expected locations of equipment components given past experience. Status of equipment components can now be updated by spatially coding the locations of installations calling back to the central station after transit pick-up.

33. Dispatchers report that DoD command becomes inundated with useless information, choosing to not utilise emerging useful aspects of technology solutions can offer information to achieve considerable time & cost savings. Report generation becomes a time-consuming task for DoD of sifting through piles of unsorted information to find relevant measures for supply service route reservation agreements. With over-stretched installations absorbed in day-to-day functioning of equipment upgrade/repair operations DoD is tempted to put off monitor/entry until reports are almost due or when upgrade/repair invoices must be sent out, compromising potential for operations to succeed under the increased demands of surge contingency scenarios.

34. Dispatchers charged with administration of DoD work order tasks advancing equipment upgrade/repair operations involve the once simple decisions made by forward installations to select the supply service route by which to meet upgrade/repair requirements according to a condition schedule monitor. This challenge has become increasingly more involved with the advent of modern information exchange systems that allocate cost according to basic economic principles. Forward installations continue to search for innovative techniques to have upgrade/repair requirements met along an efficient supply route to scale up to increased operational tempos.

35. Dispatchers assessed equipment upgrade/repair policy options evaluate potential for smaller, more reliable & more frequent deployments to forward installations. Future operational tempos will require integration of real-time control mechanisms, equipment valuation/track capabilities & quick response times to provide DoD with increased flexibility in building efficient supply route service based on equipment condition indices to increase how available equipment components are for operations at forward installations to include quality measures.

36. Dispatchers note processes driving equipment upgrade/repair along increasingly complex supply service routes has only recently begun to change due

to advances in assessing how scheduled condition monitor parameters are determined. Core systems where equipment component base is reduced, single sourcing of supply service route providers & assignment of operational control authority by DoD are just some of the ways in which changes in the procurement strategies for supply service route transit to forward installations for upgrade/repair operations continue to move forward at rapid pace b/c technology is advancing so fast.

37. Dispatchers determine important variables contributing to equipment upgrade/repair simulations including structure of installation communications links, levels & reliability profiles of changing equipment component volumes & degree of competitive demands of changes in operational tempos all influence supply service route cost structure. Factor integration can lead to increased efficiencies in procurement strategies, but most DoD installations still apply the same methodologies used to deploy different size/types of equipment components, leveraging volumes instead of treating each supply service route as unique & independent entity.

38. Dispatchers document problems with supply service route techniques currently employed by DoD installations to establish equipment upgrade/repair simulations according to the requirements of future operational tempos because some supply service route economies are mixed, since cost of establishing a single supply route is dependent on the service levels of all other supply routes contributing to operations. Interdependence of service routes exists because of costs incurred in making a connection between disparate equipment component cache transit to forward installations.

39. Dispatchers characterise Equipment upgrade/repair programme attributes as providing basic purpose & design to validate and store supply service route information such as size, procurement date, ratings & sustainment costs. Supply route-specific notes generate work orders when calendar-based upgrade/repair schedules are in effect. Time-based, repetitive supply service route failures can usually be addressed by DoD, but non-time related failures cannot be addressed by the same strategies, since they require different solutions.

40. Dispatchers assess potential to use changed equipment condition in determination of when an operational failure is likely to happen. For example, as component of operating life progresses, requirements for upgrade/repair are bound to occur. It becomes immaterial what the reasons are for performance deficits; fact is that equipment can no longer meet the original function for DoD requirements

and/or its level of performance falls. Detecting deficits in the condition of items serves as advanced warning that supply route service insertion will be requrired. If changes in performance level monitors can be detected in advance, ways & means to forecast future operational problems will have been realised.

41. Dispatchers describe impacts of urgent equipment upgrade/replace processes which can result in unpredictable performance at the expense of DoD objectives as evidenced by high downtime, supply route material costs, upgrade/repair time, deficits in operational tempo associated with the loss of function & equipment component replacement requirements. Operational Downtime affects productive/functional capability of equipment, resulting in a reduction of output, increasing operational expenses per unit performance indication episode.

42. Dispatchers control administration of operational parameters to result in an extension of the equipment component life beyond expectations & arriving at a plan for DoD to deal with changes in operational tempo with goal to define strategies in terms of controlling fiscal factors resulting from expensive sustainment operations. The bottom line is to reduce number of equipment failures by monitoring condition indices to predict problems & enable remedial actions to be taken. Even while upgrade/repair operations are usually performed by DoD at component levels, a successful strategy must take a global approach to the entire system; addressing real-time systems integration & trend evaluation of supply route service.

43. Dispatchers evaluate many factors when selecting and prioritising conditions to monitor such as the frequency schedule, determination of equipment components to be selected & what actions must be taken by DoD. To make the process simple equipment condition monitor candidates are prioritised based criticality assessments aimed at identification of components to have the greatest effect on an operation if they were to fail. Decisions based on condition-based fault diagnosis & trends predicting problems become critical for planning & control of upgrade/repair operations, reducing capital investment required for supply route service.

44. Dispatchers create systematic & responsive approach to equipment upgrade/repair simulations designed to mitigate competing sets of operational risks. Accurate, up to date information about condition enable predictions to made & acted on by DoD. With information collected at the right time, schedules can be immediately updated to react to the latest trends. Real-time condition monitoring systems deliver big savings in sustainment costs, while still ensuring that supply

route services remain reliable & efficient. The dominant factor is often the organisational challenge of responding effectively to a changing situation, not technical ability to detect it in the first place.

45. Dispatchers determined that supply service routes for equipment upgrade/repair operations do not operate in isolation. Condition & performance depend on operational tempo & actions of the personnel systems that operate them. Monitoring systems that also collect/assess information in these additional areas take supply route service optimisation to another level. The operational information can be used to drive training programmes to promote more efficient use of equipment components, reducing wear & tear-- lowering costs for sustainment/operation budgets.

46. Dispatchers combine/integrate multiple approaches & principles to equipment upgrade/repair operations. DoD has demonstrated decent understanding of principles, techniques & policy in isolation, but true organisational change will only be realised when requirements for teamwork between divisions & capacity for creative assessments are implemented. Several common principles are found at the core of each monitor design. Processes must capture information to determine current state of equipment components, flagging early warnings of problems & updating results of monitoring into a central registered source of supply route verification. Decision support must allow for best course of action to be identified, based on the latest operational information, as well as implementation of strategy for inspection & sustainment.

47. Dispatchers observe condition/performance equipment components with conclusions drawn by the monitoring system, and all subsequent decisions made for supply route service must be based upon receipt of accurate information with the right properties measured from the outset. If systems are designed to collect/compare information describing operational tempos affecting performance & manner of its operation, DoD will have a much wider context within which to judge current and future condition. Monitoring system recommendations are only as strong as speed of information collection/transfer, critical properties essential to success.

48. Dispatchers noticed equipment upgrade/repair simulation factors contributing to a critical problem are not clear cut & defined within current DoD protocols responsible for supply route service insertion. It might be perfectly acceptable for different instances of the same equipment component type to perform within widely defined range provided it does so consistently. In these cases, absolute

models are usually too restrictive to add value. Assuming upgrade/repair simulations have been set up correctly from the outset, the key aim of monitor design solution is to detect, categorise and report changes in operational performance. No two equipment components are set up alike & monitor systems must ensure the right parameters are set up within allowable tolerances & remain stable, critical steps forward to take by DoD.

49. Dispatchers experience equipment upgrade/repair instances when monitoring systems detect a change in the state of equipment components to require immediate intervention. DoD must be certain information signals are communicated in the form of a system alert as soon as possible, to the right recipient, using the right medium. To ensure timeliness of supply route service response & minimise the chances of additional problems, systems must detect/report operational changes as close to the occurrence as possible. At minimum, the alert message should contain equipment component identity, date/time monitor picked up change occurred with clear description of events & confidence measurement of the diagnosis.

50. Dispatchers conclude equipment upgrade/repair monitoring systems are powerful tools for DoD to implement so operations can be protected to maximise availability, reliability & performance of the Force. In short, making equipment components work harder & smarter and allows for the delivery of greater value from supply service routes in combination with both existing & new technologies to produce an integrated repair/upgrade simulation. Effectiveness of any system is rooted in strong design & this is particularly true of equipment upgrade/repair simulations. A well-implemented system can impact every part of an organisation, increasing operational uptimes, reducing sustainment costs & enhancing reputation of the unit.