

The Challenges of Contract/ Project Implementation

*Subhash Chandra Pandey**

To prevent diffusion of responsibility, dedicated teams should be in place for the entire duration of a project, especially for non-R&D projects. The team should be mandated to stick to sanctioned time and cost but sufficiently empowered to make minor alterations in the scope. The team may be asked to sign a performance and integrity related MoU and assured of necessary support. This should include assured funding support because old projects may sometimes gasp for funding as new priorities take over with change of key decision makers.

Introduction

It is widely accepted that building a climate of trust, transparency, and tolerance is the key to success of any endeavour. Zero tolerance for defects and deviations does not work in an imperfect world. There is no dearth of talent and resources for securing desired outcomes but appropriate systems and procedures need to be put in place. This paper examines the 'problem areas' in managing projects and contracts by MoD in particular and government in general and reinforces this view.

The terms 'Plans', 'Programmes', 'Projects' and 'Contracts' refer to aggregates of inter-related activities that are taken by an organization to achieve certain intended 'Outcomes'. These differ in terms of the available alternatives, management structures, the number of agencies involved, time span and the range & depth of detailing at the time of approval. In an earlier Paper¹, we had examined the imperatives and feasibility of introducing the Outcome Budgeting in Defence, where we argued that it requires the introduction of Capability-Based long term Defence Planning and linked programme budgeting. This paper carries forward the thinking to connect the requirements of implementing capability based plans/budgets through

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appropriate management structures for projects and contracts, the constituents of Programmes and Plans. As we go down the organised cluster of activities from Plans to Programmes, Projects and Contracts, the cluster is more sharply defined in terms of the scope of work, costs and time frames but uncertainties still persist to a varying degree of complexity. That leads to the problems which are the subject matter of this paper.

The Ministry of Defence has been facing problems in expediting the capital acquisition process despite several reviews of Defence Procurement Procedures. An important objective of this seminar is to look into systemic deficiencies resulting in persistent under-utilization of MoD's budgetary allocations especially on modernization of the Forces. During the last decade (1999- 00 to 2008-09), the defence capital acquisition budget has grown by nearly four-fold to little less than Rs.37,500 crores, thus indicating the nation's collective effort and commitment to modernize its armed forces. The increase in defence capital budget notwithstanding, acquisition of capabilities required by the defence forces within a stipulated time and at an optimal cost poses a major challenge before the defence establishment. Despite several reviews of Defence Procurement Procedure (Capital Procurement), undertaken in quick succession in recent past by the MoD, it is yet to fully ensure expeditious procurement within allocated budgetary resources. Nearly 15 per cent of previous year's capital budget remained under-utilised at the stage of revised estimate. An upward moving trend in surrender of funds points to inadequacies in the capital acquisition system, which needs to be addressed to ensure that the Armed Forces are fully prepared. The Defence Capital expenditure other than that controlled by the Acquisition Wing of MoD (Land, Buildings and other Civil Works; Plant and Machinery of Ordnance Factories, R&D etc) is also a significant chunk, almost one third of the 'capital acquisition' budget, which also has significant problems concerning project/contract implementation.

The Comptroller and Auditor General of India in a 2007 report noticed a number of deficiencies plaguing our capital acquisition structure/procedure. It observed inter alia deficiencies in acquisition planning and formulation of GSQRs (general staff qualitative requirements); inadequacies in vendor identification; lack of objectivity and fair play in technical evaluation; weaknesses in trial evaluation; lack of effective cost computation mechanism; and multiple agencies with dispersed centres of accountability. To overcome these inadequacies, the CAG has recommended a number of measures, which deserves serious consideration. One of the recommendations of the CAG is to set up an integrated acquisition body encompassing "all the functional elements and specialization involved under one head". The Kelkar Committee Report of 2005 (Part-I) has also recommended in similar fashion and even gone to the extent of saying that a "body like DGA [France] seems suitable in the Indian set up." A DGA-like body in India, however, requires a major restructuring of the present set up. [Selective import of practices and

institutions nurtured in foreign soils without accompanying climate change and competency build can actually exacerbate the problems such moves seek to address.]

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There is one word that epitomises the most common of all the problems in project/contract implementation: "UNCERTAINTY". The uncertainty may be either intrinsic to the subject matter or simply a reflection of ignorance and lack of due diligence on the part of the party paying for the project/contract. The problems arise both in 'first of its kind' type projects/contracts as well as apparent replications. UNCERTAINTY affects the projects/contracts in several ways: Uncertainty of budget availability leads to unnecessary

fragmentation and sub-optimal costs, changes in priorities lead to brakes and accelerators on different projects, changes in Site of construction and continuous changes in scope of work lead to time and cost over run, uncertainty about continuity of engagement in the project team leads to loss of motivation and so on.

Part I Contract management

Expectations from a 'person of ordinary prudence' : *JAGO GRAHAK, JAGO*

The standards of financial propriety mandate that officers incurring or authorizing expenditure from public moneys should be guided by high standards of financial propriety. They are expected to exercise the same vigilance in respect of expenditure incurred from public moneys as a person of ordinary prudence would exercise in respect of expenditure of his own money (vide Rule 21, GFRs 2005). Admittedly, it is easier said than done. Most customers think – from their personal experience – that the word 'business ethics' is an oxymoron. Unless they are diligent and shamelessly go into the 'petty' details, they are likely to be cheated by the seller/contractor. Where market regulation for customer protection is weak or the seller is otherwise in a dominant position, no amount of professionalism and due diligence is going to help the hapless customer, be it an individual or a government. A 'person of ordinary prudence' is often outsmarted, whether doing shopping for home or for office! We need to raise the bar.

Procurement and Works Contracts: DEVIL LIES IN DETAIL

There are officers and officers. Some operate only at strategy level and delegate 'petty details' to subordinates while others trust only their superior intellect to micro-manage the pettiest details lest we goof up somewhere. Even the same

officer is required to wield telescopes and microscopes at different times. A bad timing of choosing telescope or microscope can lead to project/contract implementation problems. You think that the rear window wiper is an integral part of the car and hence don't raise an alarm if the list of accessories does not include it and get a car without the wiper!

Acquisitions / Procurement of Military hardware/software : Should it be akin to elusive search for perfect bride / groom?

As someone who has never been directly involved with the MoD's capital acquisition system, my comments and suggestions on its perceived inadequacies have to be necessarily tempered. Simultaneously, this allows me the benefit of a distant observer's vision. These may appear to be oversimplistic or even outlandish and I therefore seek the readers' indulgence to bear with me. In my assessment, the problems areas in defence acquisitions are as follows.

At present, there is an elaborate system for acquisition of Defence systems where every proposed acquisition goes through a formal appraisal process of 'Acceptance of Necessity', 'Quantity Vetting' and 'Categorization' whether to 'Buy' or 'Make' or 'Buy and Make' etc. The proposals are part of Annual Acquisition Plans which are supposed to be linked to 5 year Plans and longer term perspective plans. As detailed in an earlier Paper¹, these plans are not based on – or at least seem to be so based – on any capability based planning [where acquisition of particular capabilities can be an outcome for defence budget]. Further, the short-term plans and longer term plans have rather tenuous documented link. AAP often include projects without AON clearance. A formal system of determining capacity voids and how best to fill them urgently needs to be put in place. Current emphasis is on Service-wise procurement of equipments and Jointness of Defence objectives do not seem to receive adequate attention.

Service HQs usually obtain inputs for QR formulation by issuing request for information (RFI), generally from foreign OEMs which are difficult to evaluate merely based on paper claims in sales brochures. Further customization of these unverified claims leads to further delays in acquisition process. The RFPs net no or lukewarm response and have to be re-floated. Time overruns with projects involving customization/development is also not unusual for foreign OEM led projects. Actually expensive military hardware is not produced and stocked like cars or refrigerators. The OEMs actually commence production after getting the orders and advance, often requiring restart/refurbishing of factories because of lack of sustained orders.

'Buy' and 'Buy and Make' decisions outnumber the 'Make' decisions because the 'Make' procedure is much more rigorous and restrictive. This essentially

reflects lack of confidence in indigenous capability and calls for serious introspection by all concerned without finger pointing. When critical capabilities/weapons are ex-import, there is a clear risk of delay/denial and non-availability of essential spares in time. In an increasingly technology-centric warfare, there are unacceptable risks in being import-dependent. Self reliance is ultimate insurance against denial but it requires enormous investment and patience to build and nurture the technological base, industrial capability and workforce to achieve that. This has been found wanting in many areas rely reflecting systemic inertia.

It is expected that the guiding considerations behind categorization of a military acquisition [as 'Make', 'Buy' etc] as also the formulation/ approval/change of Services' requirements are either based on professionally-documented studies or on documented strategic considerations- even though these documents may not be available in public domain. As an institutionalized system, separate legal norms/procedures may be evolved for their disclosure to Judiciary, Parliamentary Committees, Audit, CVC etc so that unnecessary concerns on unauthorized disclosure do not lead to undocumented reasons. Military acquisitions may not always be based purely on techno-commercial considerations and there is always scope for decisions based on strategic considerations-diplomatic, political, economic, technological or military benefits deriving from a particular procurement.

There is little material in public domain on the process of developing or changing Qualitative Requirements (QRs) by the Services. The QRs must be formulated and changed in individual cases by a high powered expert body away from the glare of publicity for properly documented reasons. It is expected that the military officers, historians, technologists and quantitative analysts should formally come together for effective defence planning. Such a multi-disciplinary body should take an integrated view of future threats, and challenges and recommending the needs-and-numbers in an optimum mix of level of different forces, force multipliers and appropriate technology that would best serve the purpose. It should be based on in- depth analysis of threat scenario, battlefield scenarios and evaluation of options and alternatives. It needs to be an integrated plan covering also R&D and Defence production to meet the defence needs. An array of forecasts, evaluation of strategic options and force mixes, analysis of potential technical and industrial

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capabilities. The whole process of requirement setting needs a formal revamp.

A usual constraint in fast defence system development/acquisition is the tendency to expect the best features drawn from a variety of different contexts. This may often result in a QR that is impossible to achieve according to laws of physics or business. Cynics are quick to draw analogy of the elusive search for a perfect bride / groom in a system where monogamy is the accepted norm! There are noticeable trade offs between weight, speed, dimensions, maneuverability, agility, endurance, maintainability, cost and one-to-one replacement of aging fleet of weapon systems is simply unaffordable. Use of Commercially Off The Shelf (COTS) technologies in defence systems offers another trade off with costs, time schedules for induction, performance under extreme conditions and maintainability considerations.

Plugging the voids in defence capability requires that the acquisition process of issuing RFPs, contract negotiations, approvals and finally fielding the capability on ground after due trials and customization is speeded up at every stage through a system of incentives and disincentives with in-built institutionalized flexibility for mid-course correction. It is imperative that the rules of game are not changed while the game is on but the game itself can be cancelled if the circumstances so demand.

The criterion and procedure acceptance test and evaluation of defence systems – whether imported or indigenously developed – must be common and documented in advance.

Best is the enemy of good. Hence, an idealistic approach to acquisitions – in terms of what to acquire and how to acquire – will always lead to under-performance. The market for military hardware is a Sellers' market and a finicky customer is hard put to bargain in such a market. The combination is not conducive to rising sales.

Due to a series of episodes of allegations of corruption in defence acquisitions in the past, there is an overbearing concern to deal with corruption. As a systemic response, the number of persons involved in acquisition-related decisions has been increased over time. This has lengthened the decision making chain with consequent impact on time schedules. Unfortunately, this has led to a situation of compliance with processes becoming more important than the achievement of outcomes. The only credible answer to the problem of corruption is deterrence and no one understands 'deterrence' better than MoD. Elaborate security checks for 'prevention' are effective only upto a point. So long as the adversary knows that he can get in and get out in a diffused environment, he will be tempted to strike. What can possibly deter him is the realization that we have a sound system of surveillance, detection and punishment. We have to up the stakes for the miscreants. Corruption by public

officials is a crime and our jurisprudence treats everyone as innocent unless proved guilty beyond any shade of doubt. The standard of proof required for conviction and clogging of judicial system under huge caseload ensures that conviction is a long drawn process. Putting more people in the decision making chain to deal with corruption or other forms of excessive controls will only slow down the system. These can never be a substitute for a system where corruption invites swift and exemplary punitive action, including expropriation of ill-gotten wealth. There is a delicate balance to be struck between the rights of honest officers being harassed and the need to plug the escape routes of the dishonest. These are larger issues beyond the domain of MoD, but, considering the deleterious impact of corruption-related concerns in defence acquisitions, MoD should seek creation of dedicated fast track courts or special tribunals and special legal provisions to expeditiously deal with all litigation adversely impacting on Force modernization including corruption cases. It is felt that the normal legal and judicial system may not be appropriately be equipped to handle defence related cases in view of the need to maintain due secrecy in a large domain of defence. There are legitimate concerns about compromise of secrecy in the normal process of investigation and prosecution.

A legally enforceable Contract is the result of a meeting of minds. It must have clarity and must be based on fairness to avoid chances of failure. Owing to various legacy issues, our Contract templates are designed as if we are operating in a buyers' market. There was a time when the governments were the main buyer and industry had no option to abide by whatever demands were made by the governments. While this still holds good to a large extent, the result of cumulative economic growth has been a diversification of market. Governments are fighting it difficult to have their say with industry. This is particularly so with foreign vendors. While government still retains big leverage in big acquisition contracts, for petty requirements, it has little choice but to follow the market logic. If the supplier is insisting on 100% advance or cash and carry system of delivery, government may find it difficult of costlier to procure on deferred payment basis. Vendors add all sorts of risk premium. Often, it finds it difficult to include a one-sided LD clause. Vendors seek counter LD for payment delays etc. They are unwilling to provide a host of guarantee/warranties without seeking matching commitments. If government is unwilling to commit certain purchases of spares, vendors are wary of promising life cycle support by keeping their production lines functional. Many stipulations in government rules/regulations are seen by vendors as being unilateral as if only government interests are sacred, and even Courts frown upon such one-sided Standard Form contracts unfair, unreasonable and unacceptable. Pre-contract integrity pact is yet another instrument resented by genuine vendors as it treats them as potential miscreants / defaulter in upholding probity standards. While many such grievances of suppliers' may be exaggerated, the fact remains that there is a limit to which government can enforce its rules on its suppliers. Curbing misuse and abuse of administrative

discretion is a desirable objective but without empowerment to relax in individual cases, the system would degenerate into mechanical compliance for process with disregard for outcomes. [Rule says Pets not allowed on board public transport bus. Should the conductor have the discretion to relax the rule for an old lady trying to board an empty bus on its last trip of the day?]. All Rules have provisions for relaxations by competent authority because rules can never foresee all possible situations that may arise. We should encourage officers to ensure that rules and procedures are not mechanically applied. These are means and ends by themselves.

There have been instances where misuse of operational works procedure or other fast track mechanisms have been objected by Audit. A trust-and-empowerment based system can only work where breach of trust invites swift and exemplary punishment.

Once these issues of facilitation and empowerment are addressed, there is no dearth of talent and resources to fast track military capability build-up.

Part II Project Management

In the context of Defence, the Projects are either in the area of Works [residential or office building or specialized technical facilities for production/storage/maintenance of weapon systems and R&D [indigenous development of weapon systems].

Usual problems encountered in Works are the problems of Site selection, land acquisition and user-driven changes in scope of work. Frequent change in PLAN/SCOPE is perhaps the most common cause of delay and cost over-run. Due to lack of user commitment on the scope of project or inherent uncertainties, it is often difficult to enter into Works contracts on a turnkey basis and Item Rate contracts are order of the day. Most of Works contracts are executed by small or medium size contractors as the size of individual contracts is generally low. 'Sub-contracting' is also known to have contributed to problems in several cases. Contractor's default and litigation due to Standard Form contracts is a major cause of hold ups.

Government's civil engineering projects are generally managed by architects and engineers themselves. Use of systemic project management tools and techniques or engaging Certified Project Managers in a big way is yet to catch up.

Inter-agency coordination, when there is no common command and control structure in place, is also a major problem area. Multiple agencies working at cross purposes have delayed important projects.

Many R&D Projects have suffered serious time over-runs though fewer have faced serious cost over-runs due to ambitious goals or unrealistic user expectations, export control restrictions by foreign governments, lack of local industrial capacity and disruption in technology development cycles due to timely & adequate investment in physical and human infrastructure. Lack of professional project management and continuity of project teams due to slippages in time schedules, manpower attrition are added HR related factors. Differential norms for testing and evaluating imported and indigenously developed products have delayed induction.

Project management is the discipline of planning, organizing and managing resources to bring about the successful completion of specific project goals and objectives. A project is a temporary endeavor, having a defined beginning and end (usually constrained by date, but can be by funding or deliverables, undertaken to meet particular goals and objectives. The temporary nature of projects stands in contrast to business as usual (or operations) , which are repetitive, permanent or semi-permanent functional work to produce products or services. In practice, the management of these two systems is often found to be quite different, and as such requires the development of distinct technical skills and the adoption of separate management. The primary challenge of project management is to achieve all of the project goals and objectives while honoring the preconceived project constraints.

As a discipline, Project Management developed from different fields of application including construction, engineering and defense. In the United States, the two forefathers of project management are Henry Gantt, called the father of planning and control techniques, who is famously known for his use of the Gantt chart as a project management tool, and Henri Fayol for his creation of the 5 management functions, which form the basis for the body of knowledge associated with project and program management. Both Gantt and Fayol were known as being students of Frederick Winslow Taylor's theories of scientific management. His work is the forerunner to modern project management tools including work breakdown structure (WBS) and resource allocation. The 1950s marked the beginning of the modern Project Management era. Project management was formally recognized as a distinct discipline arising from the management discipline. Again, in the United States, prior to the 1950s, projects were managed on an ad hoc basis using mostly Gantt Charts, and informal techniques and tools. At that time, two mathematical project scheduling models were developed. The "Critical Path Method" (CPM) developed in a joint venture by both DuPont Corporation and Remington Rand Corporation for managing plant maintenance projects. And the "Program Evaluation and Review Technique" or PERT, developed by Booz-Allen & Hamilton as part of the United States Navy's (in conjunction with the Lockheed Corporation) Polaris missile submarine program. These mathematical techniques quickly spread into many private enterprises.

The Project Management Institute (PMI®) is an international professional body engaged in training and standard-setting for the project management professionals. PMI® global standards are widely recognized and consistently applied in the practice of project management. These are documents established by a consensus-based process that provides guidelines, rules and characteristics for the topic it is covering. PMI's library of standards can be grouped into five categories: projects, programs, people, organizations and professions.

The Project Management Framework embodies a project life cycle and five major project management process groups (encompassing a total of 42 processes). Mapped to these five process groups (Initiating, Planning, Executing, Monitoring and Controlling, and Closing) are nine areas of project management knowledge: Project Integration Management, Project Scope Management, Project Time Management, Project Cost Management, Project Quality Management, Project Human Resource Management, Project Communications Management, Project Risk Management and Project Procurement Management. The nine knowledge areas share common inputs, tools and techniques and outputs, and make facilitates PMP professionals in developing and practicing specialization in one or more of the areas.

There are five credentials offered by PMI: 1. CAPM Certified Associate in Project Management 2. PMP Project Management Professional 3. PgMP Program Management Professional 4. PMI RMP PMI Risk Management Professional 5. PMI SP PMI Scheduling Professional.

A Guide to the Project Management Body of Knowledge (PMBOK® Guide) is a comprehensive document covering different aspects of professional project management. It is regarded as one of the profession's most essential resources — a global standard for the industry. The PMBOK® Guide has been recognized by including the American National Standards Institute, the Institute of Electrical and Electronics Engineers and the International Organization for Standardization Technical Report. Our own Ministry of Programme Implementation is in the process of formulating a scheme for encouraging more public officials to acquire formal certification as project management professional as also engaging such professional in mega projects of government and public sector undertakings. Another document 'Construction Extension to the PMBOK® Guide' supplements the basic PMBOK® Guide for construction projects. Yet another supplement to PMBOK® Guide is the 'Government Extension to the PMBOK® Guide' specifically dealing with the guiding principles for government projects and provides a framework to ensure efficiency, effectiveness and accountability. Some other reference material is as follows[For further details, please see PMI's website www.pmi.org]:-

- *Practice Standard for Project Risk Management* (It provides a

benchmark for the project management profession and guides about good practices to mitigate Risks in Project Management.)

- *Practice Standard for Earned Value Management* ('Earned Value' is a quantitative measure of project performance to help the project manager. To manage anything complex well, we need to 'measure' it well rather than depending on intuitive/subjective assessments.)
- *Practice Standard for Project Configuration Management* (Project configuration management addresses the composition of a project, the documentation defining it and other data supporting it. It is a baseline- and requirements-management process that provides managed control to all phases of a project life cycle.)
- *Practice Standard for Work Breakdown Structures* (It helps the project team create implementable Work Breakdown Structures.)
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- *Practice Standard for Scheduling* Effective project scheduling and time management are critical factors in the success or failure of a project. The document provides an actionable and objective measurement process and the tools they need to efficiently and effectively schedule projects according to Critical Path Methodology (CPM) project scheduling.)

The art of project management is a mixture of administration, planning, experience, analysis, people-skills, leadership and a little bit of luck. A successful Project Manager must simultaneously manage the four basic elements of a project: RESOURCES (people, equipment, material), TIME (Task durations, dependencies, critical path), MONEY (costs, contingencies, profit), and most importantly, SCOPE (project size, goals, requirements). All these elements are interrelated. All must be managed together if the project, and the project manager, is to be a success.

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User-driven changes in scope of project are the most important source of time and cost over-run, the site selection/acquisition being the first. The piling up of small changes that by themselves appear inexpensive and manageable often develops into an avalanche like situation with damaging effect on project costs and schedules. The 'scope creep' must be resisted and allowed only when it is deliberated and proved to have no impact on time

and cost. Without this basic discipline, the process of continuous improvement

ensures perpetual delays. Once again, best becoming the enemy of good.

If there is no uncertainty about land, technology development and deniable imports, it should be possible to complete almost any acquisition or any project within at most 5 years and it should be feasible to entrust its accomplishment to a dedicated team of officials and non-government experts on a fixed tenure basis. In situ promotions may be given to the officials in the team. This will lead to clear ownership of project goals and motivation for achievement. The team should be mandated to stick to sanctioned time and cost but sufficiently empowered to make minor alterations in the scope. Security of tenure and unstinted support to chief executives has contributed to success in a number of public sector projects. The team may be asked to sign a performance and integrity related MoU and assured of necessary support.

We should invest in computer net works and communication / video-conferencing networks and other IT enabled contract /project management tools to facilitate speedy flow of information and opinions amongst all stakeholders.

Peer Reviews involving external experts should be made mandatory for all major projects. This should be in addition to the layered project management structure.

Needed: An IT-enabled Decision Support System for Site Selection and Public Land Management

Growing pressures of urbanization and demands of civil society require that the Defence Forces rethink their land holding norms and minimize further accretions. We should plan and build new constructions on available public land, which should be optimally utilized. Sparsely scattered single or double storey accommodation must be replaced with compact, multi-storey blocks. Poor construction density is a key defining feature of defence estates management.

There should be in place a formal, institutional mechanism and IT-enabled Decision Support System for approving Site Selection. Each acre of existing Government owned land should be scanned in the process of selecting site for a new project and reasons must be placed on record as to why it cannot be used for it. Even demolition and rebuilding would be more cost effective than going in for fresh acquisitions. Modern technology makes it possible to have a detailed visual map of entire landholding. Satellite based imagery is finding increasing use in mapping the land-use pattern and estates management by government departments and municipal authorities.

Imposing a general ban on fresh land acquisitions with a high powered body to approve exemptions based only on such a Decision Support System is needed. A system of imposing bans with provision for discretionary relaxations in individual cases will only lead to delays and ad hocism. The exemptions have to be given based on very objective, verifiable determination that no suitable piece is available in the inventory of owned lands. Encroachments and vicinity considerations should not be allowed to unduly influence the Site selection. We need to think in a much bigger time frame of decades to plan for geographical dispersal and creation of new cantonments, townships and facilities away from existing urban conglomerations. This will also lead to quicker realisation of plans, creation of jobs, expansion of road connectivity, regional development and overall economic growth. Even as part of deals for land acquisition, MoD is often incurring expenditure for relief, relocation and welfare of local communities. Bringing broader national considerations in MoD's construction planning is a win-win situation for both the Armed Forces as well as the civil society.

Conclusion

For efficient procurements and development of infrastructure and defence systems, the following is needed.

- We need a more elaborate, inclusive and well-documented process for formulation of Qualitative Requirements, Specifications and Project Goals.
- Decisions are always to be taken based on available information in an imperfect environment. The Executive has a duty and responsibility to act and decide keeping all critics - past, present and future - in mind. We need to build a climate of trust, tolerance and transparency so that the officers are empowered / facilitated to take decisions and approve changes from standard rules and procedures for good reasons to be placed on record rather than being unduly obsessed with process compliance and neglect of outcomes. We have to create awareness about the best being the enemy of good.
- There should be swift and exemplary punishment for breach of trust and corruption and specialized legal framework that addresses the concerns about corruption and at the same time ensures that it does not impede decision making.
- IT enabled modern professional project management tools should be used for all projects.
- To prevent diffusion of responsibility, dedicated teams should be in

place for the entire duration of a project, especially for non-R&D projects. The team should be mandated to stick to sanctioned time and cost but sufficiently empowered to make minor alterations in the scope. The team may be asked to sign a performance and integrity related MoU and assured of necessary support. This should include assured funding support because old projects may sometimes gasp for funding as new priorities take over with change of key decision makers.

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Notes:

1. The Paper "Assessing the scope of outcome budgeting in defence" was presented by the author in the seminar organised by IDSA on November 20, 2008 and later published in the Journal of Defence Studies in its April 2009 Issue (Vol.3 No.2)