CONCLUSIONS

7.1 This is the age of ICT. Thanks to ICT, the era of e-governance has emerged. e-Governance is the application of ICT to the governmental processes, to bring about SMART governance. The scope of e-Governance is larger than e-Government. It allows the direct participation of constituent units in governmental activities. E-Governance is considered as a remedy for the present maladies in governance. In fact, there is an imperative need for upgrading the quality of public services through transformation of governance structures and processes, using the potential of ICT as the enabler. Apart from providing faster delivery public services to the citizens and business, e-Governance is expected to improve internal efficiencies of Government.

7.2 Basically, e-Governance is constituted by G2C, G2B, G2E, and G2G. The implementation of e-Governance predominantly comprises change management and process re-engineering, and not technological aspects. It is far beyond the mere computerization of back office operations. E-Governance connotes fundamental modifications in governmental operations, and in the process delivering new responsibilities for the executive, legislature and citizenry. With its SMART governance, there would be greater transparency, speed, accuracy, efficiency, accountability, effectiveness, and better coordination in governance. There would be greater empowerment of citizens.

7.3 The study presented a framework for E-procurement projects in the Government sector and particularly for ICAR. E-procurement, in the context of ICAR is the commerce transactions between Government and businesses or business-to-government (B2G)

which involves a business entity and government. G2B or B2G applications operate through the Internet as well as other information and networking systems, such as Electronic Data Interchange and Enterprise Resource Planning. Typically, e-procurement Web sites allow qualified and registered users to look for buyers or sellers of goods and services. Depending on the approach, buyers or sellers may specify costs or invite bids. Transactions can be initiated and completed. Ongoing purchases may qualify customers for volume discounts or special offers. E-procurement software may make it possible to automate some buying and selling. Companies participating expect to be able to control parts inventories more effectively, reduce purchasing agent overhead, and improve manufacturing cycles. Ideally, E-procurement systems are expected to be integrated with the computerized supply chain management systems. E-procurement software application includes features for supplier management and complex auctions.

7.4   The secondary data collected through various case studies and the primary data collected from ICAR institutes through their directors administrative officer and finance officers brought out that Government-Private-Academia Participation, adequate infrastructure facilities, public awareness, change of attitude and mindset, and proper training and orientation of implementing officials are the critical factors in the successful implementation of e- procurement in ICAR. But most of these factors are currently operating as constraints. Adequate availability of efficient and economical telecommunication links is a handicap in the implementation of e-procurement in ICAR. Similarly, ICT spending and its diffusion, and limited spread of Internet among local supplies/vendors are other constraints. The other major issues holding back the implementation of e- procurement in ICAR include

the non-availability of e- procurement software, lack of public awareness regarding the potential and progress of ICT, manpower issues, viz., their inadequate availability/skill base, the traditional bureaucratic mindset declining to accommodate any sort of change in the administration, limitations in ensuring proper security cover to the data/information, and lack of enlightened leadership and coordination.

7.5 Though all the issues mentioned above are not within the purview of ICAR and its institutes yet issues like PC density, ICT spending and its diffusion, proper training and orientation of implementing officials, change of employees attitude and mindset, are some important issues on which proper attention needs to be given for proper implementation of e-procurement in ICAR.

Recommendations

i) For the promotion of e-Governance/procurement, the infrastructure base has to be strengthened. A fast, efficient and economical telecommunication sector should be brought in, with a National Internet Backbone comprised of optic fibre network having adequate bandwidth. ICAR institutions should get connectivity to the proposed Next Generation Knowledge Network (NGN) being launched by the Government.

ii) The PC density should be increased further, both within the government/ICAR and with the general public. Simultaneously, the computer culture should be spread so that PCs are effectively utilized. Providing low-priced computers like Simputers may also be explored. The IT spending of ICAR should be on priority projects like e-procurement, e-Office to improve the internal efficiencies urgently by judiciously spending full 3 percent of budget, allocated to IT.

iii)   Adequate availability of trained and skilled manpower is essential for e- procurement in ICAR, to deliver optimal results. For this, ICAR officials & Staff at all levels should be oriented through periodic training, seminars, workshops, study of best practices and lessons learnt Collaborating the resources with private interests may also be explored. These steps will go long way to improve computer literacy across the various levels of staff.

iv).   In the implementation of e- procurement in ICAR, the BPR approach for re-designing purchase processes should be followed, viz., Government Process Re-engineering (GPR). New ways of working should replace the old styles. The required project management methods should be developed. Keeping in view the probable resistance to change, a concurrent-re-engineering approach is more advisable. This should begin from the front office applications to back-office and not the other way. An exposure to the experience of other countries and international agencies like UNO would also be helpful.

v).   The ICAR should give strong leadership for e-procurement. It should increasingly strengthen in-house capabilities for crucial ICT applications, like e-procurement. ICAR institutes should share among themselves their available e-procurement software resources. Also, ICAR headquarter should press for a uniform policy-approach towards e-procurement, by all the institutes.

vi).   As regards finance, the ICAR should attempt transition to the new era in a phased manner. "Think big, start small, and scale fast" should be the approach.

vii) E-procurement is an eminent candidate for PPP. Creative models of ICAR-private sector-NGO partnership are to be evolved.

viii) The change of mindset including that for top-level officials can be engineered through focused organization development interventions and training programmes. In the implementation of e-procurement, managerial issues are more vital than technology.

ix) Change management is also of priority to address the changes that e-procurement would induce in day to day official operations. Substantive administrative reforms should precede the initiatives for e- procurement. ICAR officials at all levels are to be oriented to the new set-up. An information awareness campaign is advisable.

x) The requirement of security and privacy of data/information are crucial for e-procurement to progress. Both technical and administrative policies are warranted for this. The available options such as encryption, decryption, firewall, etc. should be utilized, to safeguard security and privacy.

xi) There has to be a mass campaign to create ICT awareness among the ICAR staff & local public/vendors. Staff & local public should become fully educated of the Citizen's Charter. ICAR should think of setting up District Information Centre or Information Gallery in each Institute.

xii) While initiating the process of computerization, appropriate hardware platform and software applications have to be chosen for cost-effective delivery. Appropriate design formats have to be devised, to ensure the interoperation and collaboration of various ICAR institutes down the line. Further, in India's multilingual set-up, the technologies for transliteration have to be improved.