

Sri Vasantha, dr Valarmathi, dr Sharma sri Ramakrishna, faculty for the program, participants and dear friends.

Good Afternoon to you all

I am happy to note that a specialised structured training programme for electronics is being organised for middle level engineers of ISAC. ISAC is a continuously learning organisation and the lead Centre for satellite technology not only in ISRO but in the entire country. For the Centre to be successful, it is necessary that the technologists and scientists working in the core Groups are abreast with cutting edge technologies and also have system level knowledge.

ISAC is passing through the phase of joint requirement of R&D and production. The greatest strength of the Centre is its technical expertise. Exploiting this strength combined with the host of projects and technological challenges ahead pose opportunity for us to reach greater heights. Currently the organisation strategy is to focus both on development and hardware production in parallel. That too with equal importance.

This calls for changed perception of traditional way for realisations of subsystems, be it mechanical or avionics. We have made changes in the organization set-up with new roles definition and responsibilities to enhance organizational effectiveness and accountability. I expect more emphasis on identifying talent and harnessing them while at the same time providing opportunities for their growth. This should go hand in hand with development of the younger & next generation for future leadership roles.

In the recent past there have been few instances of problems and anomalies encountered during various phases of satellite system

realisation, integration, testing and in-orbit performance. Many of these observations were made at much matured stages of satellite fabrication. Results of in-orbit anomalies not precluded, at times the observations have also driven us to near point of no return. In this regard, a quick assessment exercise should be carried out from time to time to identify the areas of inadequacies in our processes of design, development, documentation, implementation and reviews for on board systems. **In short, the aim is to arrest the latent problems by doing root cause analysis and implanting corrective measures.**

Simultaneously, there have been rapid changes in the technology globally. It is essential to ensure that we keep a track on these developments and adapt suitable technologies for development and production leading towards meaningful outcome.

To address the multiple supplementing issues of the Centre, various measures are advocated and implemented as part of strategic planning for reaping the benefits in long run. As part of organisation interventions, reconsolidation of activities in the Centre has been done and organisation structure has been changed accordingly to suit both development and production scenario of the Centre.

For hardware designs, all the relevant information including interfaces is to be compiled, including finer details of optimizing processes also. Development of proto model/qualification model for all new designs/concepts is necessary. Any improvement/performance enhancement or any change in the existing design needs to be critically reviewed.

The subsystem designs are matured and well proven w.r.t. spacecraft heritage. These designs have evolved with the programmatic requirements. Designs of certain systems are standardized across programs and projects, while some designs are mission specific. Even the project specific designs have sizeable component of reproducible portions, which are amenable to reuse. Even though, system realization efforts have resulted in reasonable enhanced throughput, some of the recent reviews have brought out significant gaps in our design and configuration control mechanism. A 'zero-base' detailed design document for all subsystems capturing current design details and their current variants needs to be planned.

As a precursor to enhanced production plans, strict configuration control and implementation of comprehensive documentation by Projects has to be improved to the next level to meet the future challenges and has to be significantly supported by a 'project management information system'.

All these factors shall complement each other enabling the Centre increase the throughput to 6-8 per year as required to meeting the programmatic targets.

These kinds of specialised training programmes for middle level managers' aid in focusing on these specialised issues required for the Centre to excel. Hence it is essential to organise specialised training programme for strengthening the organisation knowledge base.

I wish you all a great learning experience and this programme a great success.

All the best.