



INTERNATIONAL SEMINAR ON

Modernization Vision & Plan of Indian Army: Indian Industry Preparedness & Future Commitments

June 04 - 05, 2015, New Delhi

Key Highlights



Knowledge Partner





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June 04 - 05, 2015, FICCI, Federation House, Tansen Marg, New Delhi

It is probably first time in the recent past that all the Directorates of Fighting Arms, the first responders, under the Deputy Chief of Army Staff (P&S) and Director General of Perspective Planning DG (PP) have organized International Seminar on "Modernization Vision & Plan of Indian Army - Indian Industry Preparedness and Future Commitments" in association with FICCI. The participants from the Government, Defence Production sector, DRDO and Private sector Indian companies, besides the Foreign OEMs participated and shared their perspectives.

The salient outcome are summarized below:

During the Inaugural session, the deliberations focused on emerging challenges to national security and its role in India's aspirations of bringing security, prosperity and progress to all. The concerns on indigenous capability gaps in the given geo political scenario due to continuing dependence on defence imports were discussed at length. Over dependence of foreign technologies and defence equipment means a certain vulnerability due to the technology denial regimes and a variety of coercions that could render the imported hardware unserviceable.



Lt. Gen. Philip Campose, PVSM, AVSM**, VSM, ADC, Vice Chief of Army Staff, Indian Army; addressing the august gathering. On Dias: (L to R) -**Mr. Rahul Chaudhry**, Co-Chairman, FICCI Defence Committee & CEO, Tata Power SED; **Lt. Gen. C A Krishnan**, PVSM, UYSM, AVSM, Deputy Chief of the Army Staff (P&S), Indian Army; **Dr. Jyotsna Suri**, President, FICCI; **Shri Vivek Rae**, Member, 7th Central Pay Commission & Former Director General (Acquisition), Ministry of Defence, Government of India)

The esteemed panel felt for a need to ramp up industrial capabilities in the defence sector in order to meet the new security challenges and to enhance operational preparedness, strategic autonomy and self-reliance. There was a unanimous view to keep the Indian Army equipped and operationally prepared to achieve deterrence and also win the nation's wars, when required. This will help to safeguard our strategic, economic and diplomatic national interests.

The above mentioned concerns highlights the need for modernization of the Army. This can be achieved only by acquiring new equipment, where possible and technological upgrading of old equipment. Modernization is a complex and dynamic process impacted by operational imperatives, emerging technologies and budgetary support. The dependence on imported weapons and platforms come at a price the rising cost of defence technology, long procurement cycles and difficulties involved in obtaining state of the art weapon systems have adversely affected the modernization needs of the Indian Army. The objective of the quest for self-reliance in defence preparedness is a source of strategic and economic edge.

The Vision of 'Make in India' is to achieve self-reliance through building indigenous capabilities for manufacturing and maintenance of defence equipment in a cost effective manner. Industries are Partners of the Armed Forces, Stakeholders in Meeting India's Security threats. The industry, being a vital stakeholder as well as a key enabler in this national security paradigm needs to play a greater role in capacity building for meeting the challenges to our security. Hence, there is a need for indigenously developed and reliably produced weapons, ammunition and equipment 'Cost effective, innovative solutions' is the need of the hour.

The first session on "Speedier Acquisition in the Changing Policy Milieu" deliberated on relevance and contradictions of DPP provisions need to synchronize procurement and acquisition to be in tune with technology and cost effectiveness. As India is in the process of transforming itself from a regional to a global power, the defence sector is increasingly occupying more and more space in the government's long-term strategic planning. The recent proactive stance and proposed changes in the policy framework of the Government, coupled with enormous business potentials, the private sector will have plenty to contribute in this strategic projects. The defence Industry and the defence procurement have to increasingly collaborate with the private sector joining in to enhance the capabilities and core competencies in the emerging military technology sectors.

The growing domestic market offers opportunities both to foreign and Indian players with a shift from Buyer-Seller relationship to one of partnership to jointly develop a product. The impact of the new initiatives, prioritisation of acquisition categories and the production policy will enable Indian industries to acquire technology, foster joint venture and collaboration with foreign OEMs and manufacture the product in India. Such an initiatives can indeed create economic value, by adoption of a proper approach and selecting partners with right capabilities.

The deliberation on means and measures taken so far and further needed to resolve common challenges to make the best use and upgrade the indigenous capabilities with focus on the future requirements. It was overwhelmingly stressed that the Capital acquisition process need to be total congruence with the 'Make in India' campaign.

Technical sessions:-

- Artillery Modernization: Indian Industry Preparedness and Challenges
- Modernization Programs of Future Armoured Vehicles
- Securing Skies through Industry Partnership with Indian Defence Industry
- Modernization of Infantry: Technology Induction and Absorption for Future Tactical Supremacy
- Combat Engineers: Modernization of Combat Engineers: Role of Indian Defense Industry

The technical sessions provided the glimpse of the army's combat arms inventory and highlighted certain technological ground realities. The sessions highlighted that the weapon platforms of the future will be increasingly technology intensive, with technology itself outpacing the development cycle. Therefore, the foremost challenge of technology transformation through Research and Development will be the synchronized development and procurement with the technology cycle. A consortium of DRDO, public and private sector players and the user is an imperative to create a sound defence technological and industrial base in our country.

The deliberations on the modernisation vision by the respective arms, development of systems and munitions, and industry's capability to meet future challenges, provided a full spectrum for the respective segments of industry. The realisation that the future platforms will be increasingly technology intensive, with technology outpacing the development cycle, hence the foremost challenge to design and production to synchronize development and procurement with the technology cycle.

Take Away from the Seminar

The immediate concern for India's armaments strategy is to strike a balance in the holding and the problem of replacement of obsolescent major weapon systems. India is in the midst of a defence modernization drive, replacing and acquiring weapons / platforms for its armed forces to meet the myriad security challenges facing the country. The MOD plans to increase indigenization of defence products by developing domestic defence capabilities. However, building a self-reliant defence ecosystem with export capabilities has been facing hurdles such as lack of indigenous technology and swift pace of change in technological complexities due to

fast-evolving combat strategies, a lack of private sector participation in defence R&D, constraints of resources allocation defence, IPR issues, and preferential taxes and duties structure etc. Consequently, dependence on foreign OEMs for technology partnership JV with Indian defence industrial base. While quality assurance remains a cause of concern for many of our indigenously developed products, sustenance and availability of spares pose a major challenge in case of imported equipment.

The defence industry in India is poised at an inflection point in its expansion cycle driven by the modernisation plans, the increased focus on security, and India's growing attractiveness as a 'home market' defence sourcing hub. The common ground emerged on deliberations were:-

Sharing the Modernisation Vision & Plan

The Modernization Vision & Plan of defence equipment need to shared with the Industry stakeholders, to provide them a macro vision building capability is a team work. To this end consultation with the Industry on LTIPP/ AAP would go long way, besides regular and mutually beneficial brainstorming sessions with the industry by MOD and Services HQ must be a norm.

Adopt multi-year procurements for mature programme from the sources with demonstrated capability. Maintain stable program requirements and funding.

Industrial Participation by Private Sector

The government is seriously focusing to build indigenous capabilities in defence production through slew of policy interventions in supply side changes like deregulation and liberalisation. In the draft Arm Act of it is proposed that Small Arms and Ammunition production, a huge opportunity, till now forte of OFB, will also be opened to private sector players, subject to approvals.

Long- Term Relationship Between MoD & the Industries

Changes in acquisition process are taking place, focus on the need to make it speedy & conclusive. Lessons learnt from some of the unpleasant experiences of the past as mentioned below should be adequately addressed:-

- No retraction of EOI/RFI
- Irrational Trial Directives
- Price negotiation unrealistic
- No mechanism to compensate inflation. Protection from Exchange rate variation.
- Timeline be clearly defined with accountability and strict adherence from all stakeholders.

- Proven equipment's need not be subjected to extensive trials
- Capability enhancement will need adequate resource allocation.
- Revenue always falls short & capital is always underutilized and hence long- term contract under capital acquisition is needed with LCC.
- Progressive Milestone Payments through Letter of Credit.
- Create System Integrators on line of RUR and Tierisation of Industry. Indian System Integrator be considered at par with OEM.
- Support to SME/MSMEs through Technology Development Fund
- Indexation for Inflation for Projects "having a long delivery period" for Indian Vendors.
- Include Lifecycle Cost concept in Acquisition Process and build performance-based Logistics.

Streamline the Acquisition process and structure

The policy and procedures should have futuristic outlook with commensurate resource allocation. Defence procurement be fully insulated from competitive pressures, by removing the inevitable distortion of competition by nomination. Department of Defence Production could have a Nodal Officer to share the private sector perspective. There is need to bring structural changes in MoD and a Chief Development Executive (CDE) needs to be appointed, who would look after the capability development irrespective of public/ private sectors. As well MoD may consider to create formal forums to address and review industry concerns on regular basis through an Additional Secretary.

National Champions

There is a need to select 2 or 3 capable Indian industries as National Champions in each sector of defence manufacturing, which in turn will be overall integrators with similar facilities as DPSU in the lines of Kelkar Committee recommendations. These champions will be dedicated developmental partners in defence products design & production. They will also develop of own supply chain to produce spares and maintenance.

FDI: Raising the Limit

The provision to approve higher investment depending on the nature of technology to be transferred has never been approved for Private sector. There is unwillingness of FOEMs to share key technologies with Indian Partners due to our FDI policy. Access to desired technology is the biggest challenge and it seriously impacts our vision of indigenous defence manufacturing

based on value addition. One way of circumventing this difficulty would be to open up the sector for foreign investment. FDI has been increased from 26% to 49%, however, there is a debate, whether it should be 49% or 51%. With 26% FDI in defence till Budget 2014, the inflow has been abysmally low to the point of irrelevance. With 49 %, it is unlikely to be tangibly different given that the disincentives associated with 26 % cap on FDI remain largely unaltered.

Besides technology-linked FDI, the government must strive for scale economies, encouraging domestic players - public and private- to invest in capacities with an eye not just on India's defence forces as clients but also those of foreign countries. Defence equipment production is capital intensive and tying down suppliers to a single customer's whims may not really attract adequate investment.

Restructuring the Department of Defence Production and Acquisition

For capability development the public sector and private sector need to be at par and the business on nomination should be stop in defence procurement. The Offsets are responsibility of DDP, which is more concerned with production in Govt. sector and not for creating capability. Restructuring of Department of Defence Production may be considered wherein a nodal Officer (Chief Development Executive) be appointed to look after the capability development irrespective of Public/ Private sector. The lead role in the whole process of defence production & acquisition needs to be earmarked preferably the DG Acquisition.

Incentivise Indigenous manufacturing base

The aim of achieving "substantive self-reliance in the design, development and production of (equipment) by creating "an ecosystem that is conducive for the private industry to take an active role, particularly for small and medium enterprises (SMEs). From SME perspective, the single biggest impediment has been absence of an empowered interface to deal with host of administrative, technical and policy issues whether with the Ministry of Defence or DRDO or any other relevant defence department. Evident from other developed countries, facilitating SMEs for Market access or access to high-end technology and technological spinoffs through defence research has been the single biggest source of path breaking innovations and technological spinoffs.

There is urgent need "to build up a robust indigenous defence industrial base by proactively encouraging larger involvement of the Indian private sector, and innovative startups. There is a need for Indian Defence Industrial base to gear up and meet the vision and plan of Indian defence forces. There is also a need to incentivize the growth of a domestic defence industry. Some of the areas which could be start point:

- Creation of technology fund to assist Private sector in Defence R&D.
- Create a talent pool for skilled manpower. Ex service personnel who have first-hand experience of product operations and maintenance would be assets.
- Mandatory ToT in select areas as offsets
- Exports for business viability
- Encourage adaption of Dual Use Technologies
- Facilitate Indigenous Product Development
- Provide Test Environment/ Trial Ranges / Ammunition
- Single Vendor Procurements from Indian Industry be permitted with due checks and balances.
- Implement Gol /notification No. 18-0712010 dated 5th October, 2012 issued by Department of Telecommunication which stipulates, electronic products that have security implications for the country, indigenously produced equipment must be preferred, for Defence. Tax incentives be provided as for Electronic sector.

Facilitate Partnership with Foreign OEMs

The growing domestic market offers opportunities both to foreign and Indian players with a shift from Buyer-Seller relationship to one of partnership and long term association. Indian Partner need to bridge the capability gap in the technology and equipment development. The private industry comprising of both the large and established players and the SMEs are set to have a larger share of the pie either through JVs or otherwise. With A&D sector is becoming more global, the advantages in seeking collaborative ventures with defence firms abroad in which local skills can make useful contribution in terms of cost reduction to the foreign manufacturer of main equipment. This will also enable Indian industry to participate in international supply chain with export focus.

Spiral Development

As a low hanging fruits the immediate opportunity for industry being in upgradation of existing platforms and a large number of products and technologies that need to be indigenized. The quality assurance remains a cause of concern for many of our indigenously developed products, sustenance and availability of spares pose a major challenge in case of imported equipment.

We need to adopt spiral development model as has been done by most of the developed industry in the past. This will also be in line with creating capacity for upgrading, modifying and modernising existing armaments and weapons systems, in the absence of local capabilities.



Private-Public Partnership (Existing Areas)

DPSUs and OFB have infrastructure and skilled manpower may need supplementary engineering capability, which may be shared by Private sector. Defence manufacturing is a conduit for development, contributing to GDP and enhancing employment. The Defence Production Policy be adopted by wide spectrum. Recent experience have been very encouraging.

Focused Entry in Selected Segment

Acknowledged our industry capabilities have not reached such a stage to aim attempting to develop all our defence requirements in the country. Indian industry need to follow the best practices in the competitive market such as;

- Generate innovative, affordable solutions.
- Reduce costs with targeted R&D investments and streamlined production processes.
- Meet Customer expectations on cost, schedule and performance.
- Retain competitive supply chain. Recruit and retain a skilled and diverse technical workforce
- Leverage state-of-the-art commercial technologies
- Enter global marketplace.

To commemorate the first International Seminar on "*Modernization Vision & Plan of Indian Army - Indian Industry Preparedness and Future Commitments*" FICCI issued a Compendium on "**INDIAN DEFENCE LAND SYSTEMS**" compiled in Association with its knowledge partner Q-Tech Synergy to all the participants. The compendium provides profiles of Land platforms currently in inventory, likely projections on requirements, highlighting the indigenous development and production infrastructure, besides the market size. The compendium was released by the chief guest Lt. Gen. Philip Campose, PVSM, AVSM**, VSM, ADC, Vice Chief of Army Staff, Indian Army during the Inaugural session of the seminar.





Release of Compendium on Indian Defence Land Systems: (L to R) Mr. Rahul Chaudhry, Co-Chairman, FICCI Defence Committee & CEO, Tata Power SED; Lt. Gen. C A Krishnan, PVSM, UYSM, AVSM, Deputy Chief of the Army Staff (P&S), Indian Army; Maj. Gen. (Dr.) Bhupinder Yadav (Retd.); Lt. Gen. Philip Campose, PVSM, AVSM**, VSM, ADC, Vice Chief of Army Staff, Indian Army; Dr. Jyotsna Suri, President, FICCI; Shri Vivek Rae, Member, 7th Central Pay Commission & Former Director General (Acquisition), Ministry of Defence, Government of India

Summing Up

The Indian Army's vision to "ensure capability enhancement and operational effectiveness of the Army to meet all contemporary and emerging challenges" can be realized only through comprehensive support from the Indian defense industry. The Indian Army has prioritized its capability development requirements - it is now up to the industry to take up the challenge. Army is committed to make in India, industry must more than match the effort with increased involvement and investment in the Indian defense industry with the government's current thrust on 'Make in India'.

India with own huge domestic requirements, availability of skilled work force, opportunities to export, the confidence that is evident in the Indian industry and an environment where the industry leaders appear eager to collaborate. The challenge is to create an eco-system conducive to strengthening the indigenous capabilities in design and development, manufacture and the subsequent maintenance of the equipment. While the report and government acceptance of on renewal of policy framework to facilitate Make in India in defence sector is eagerly awaited. The expectations from the Industry segment are to simplify/rationalise the procurement procedures and remove the bottlenecks for long term association.





Thursday, June 04, 2015		1000 - 1730 hrs
0900 - 1000 hrs	Registration	
Inaugural Session (1000 - 1100 hrs)		
1000 - 1005 hrs	Presentation of Green Certificate to Dignitaries	
1005 - 1010 hrs	Welcome Address by Dr. Jyotsna Suri, President, FICCI	
1010 - 1030 hrs	Address by Shri Vivek Rae, Member, 7th Central Pay Commission & Former Director General (Acquisition), Ministry of Defence, Government of India	
1030 - 1050 hrs	Inaugural Address by Lt. Gen. Philip Campose, PVSM, AVSM**, VSM, ADC, Vice Chief of Army Staff, Indian Army	
1050 - 1055 hrs	Release of FICCI - Q-Tech Compendium on 'Indian Defence - Land System Platforms' by the chief guest	
1055 - 1100 hrs	Vote of Thanks by Mr. Rahul Chaudhry, Co-Chairman, FICCI Defence Committee & CEO, Tata Power SED	
1100 - 1130 hrs	Tea / Coffee	
Session 1: Speedier Acquisition in the Changing Policy Milieu (1130 - 1300 hrs)		
	Session Moderator: Lt. Gen. Anil Chait, PVSM, AVSM, VSM, (Retd), Former Chief of Integrated Defence Staff to the Chairman, Chiefs of Staff Committee (CISC), HQIDS	
1130 - 1135 hrs	Opening Remarks by Session Moderator	
1135 - 1150 hrs	Special Address by Lt. Gen. C A Krishnan, PVSM, UYSM, AVSM, Deputy Chief of the Army Staff (P&S), Indian Army	
1150 - 1205 hrs	Long Term Business Association with Indian Industry to Facilitate Uninterrupted Supply of Military Hardware - Brigadier S Harimohan Iyer, Deputy Director General, Artillery Directorate, Indian Army	
1205 - 1235 hrs	Relevance and Contradictions of DPP provisions - Mr. Jayant Patil, Executive Vice President - Defence & Aerospace and Member of the Board L&T Heavy Engineering, Larsen & Toubro Ltd. - Cmde. Sujeet Samaddar, Director & CEO, ShinMayawa Industries India Pvt. Ltd.	
1235 - 1255 hrs	Question & Answer session	
1255 - 1300 hrs	Concluding Remarks by Session Moderator	
1300 - 1415 hrs	Networking Lunch	

Session 2: Artillery Modernization: Indian Industry preparedness and challenges

(1415 - 1545 hrs)

	Session Moderator: Lt. Gen. Arvinder Singh Lamba, PVSM, AVSM, Ph.D, (Retd), Former Vice Chief of Army Staff
1415 - 1420 hrs	Opening Remarks by Session Moderator
1420 - 1435 hrs	Modernisation Vision of Indian Artillery, Role & Expectations from the Indian Defence Industry - Lt. Gen. PR Shankar, VSM, Director General of Artillery, Indian Army
1435 - 1450 hrs	Challenges and Prospects for Development of Future UAVs for Indian Requirements - Mr. Abhishek Jain, VP Strategic Partnerships, Zeus Numerix Pvt. Ltd.
1450 - 1505 hrs	Indigenisation of Gun Manufacture in India; Opportunities, Challenges and Capabilities of Indian Industry - Col. Rajinder Bhatia (Retd), Executive Vice President & CEO, Bharat Forge Limited
1505 - 1540 hrs	Question & Answer session
1540 - 1545 hrs	Concluding Remarks by Session Moderator
1545 - 1600 hrs	Tea / Coffee

Session 3: Modernization Programs of Future Armoured Vehicles

(1600 - 1730 hrs)

	Session Moderator: Lt. Gen. JP Singh, PVSM, AVSM, (Retd), Chief Consultant, DRDO & Former Deputy Chief of the Army Staff (P&S)
1600 - 1605 hrs	Opening Remarks by Session Moderator
1605 - 1615 hrs	Design, Development and Production of Future Ready Combat Vehicle, Future Infantry Combat Vehicle and Role of Indian Defence Industry - Brigadier Ashis Bhattacharyya, Deputy Director General, Mechanised Forces Directorate, Indian Army
1615 - 1625 hrs	Digital support incorporating PLM to develop and sustain Combat Vehicles - Brig. Prakash Tolani (Retd.), Senior Director - Aerospace & Defense, Siemens Industry Software (India) Pvt. Ltd. - Mr. R Muralidharan, Chief Technology Officer, Tata Power SED
1625 - 1635 hrs	Leveraging the Future Infantry Combat Vehicle Project to Procure Critical Technologies in the Country: Users Need versus Feasibility - Mr. A T Ramchandani, Vice President and Head - Product & Technology Development Centre, Larsen & Toubro Ltd.

1635 - 1645 hrs	Role of OFB in Sustenance and Upgradation of 'A' vehicles - Shri. Bharat Singh, General Manager, Ordnance Factory, Medak
1645 - 1655 hrs	Role of Private Sector in Sustenance and Upgradation of 'A' vehicles - Col. H.S Shankar (Retd), CMD, Alpha Design Technologies Pvt. Ltd.
1655 - 1705 hrs	Make In India - A Reality in Land Systems - Mr. V SNoronha, Head Defence Business, Tata Motors Ltd.
1705 - 1725 hrs	Question & Answer session
1725 - 1730 hrs	Concluding Remarks by Session Moderator
1730 hrs	Break
1930 hrs	Networking Cocktails and Dinner (By Invitation only)

Friday, June 05, 2015

0930 - 1600 hrs

Session 4: Securing Skies through Industry Partnership with Indian Defence Industry

(0930 - 1115 hrs)

	Session Moderator: Lt. Gen. Naresh Chand, PVSM, (Retd), Group Editor, SP Guide Publications and Former Director General, Army Air Defence, Indian Army
0930 - 0935 hrs	Opening Remarks by Session Moderator
0935 - 0950 hrs	Latest trends in Air and Missile Defence, Modernisation Roadmap of Army Air Defence and Participation of the Indian Defence Industry - Brigadier MKK Iyer, Deputy Director General (Equipment), Army Air Defence Directorate, Indian Army
0950 - 1010 hrs	Indigenous Production Cum Partnership in Surface to Air Missile Systems and Surveillance and Target Acquisition Systems - Dr. A N Gupta, CMD, Premier Explosives Ltd. - Shri. G Chandramouli, OS & Project Director Akash, DRDO
1010 - 1025 hrs	Capability for Manufacturing and Absorption of Technology for Modern Air Defense Gun Systems and Ammunition - Lt. Col. V K Bhatnagar (Retd), Program Director, Tata Power SED
1025 - 1040 hrs	Development of Laser / High Energy Weapons for Futuristic Air Defence - Dr. RK Tyagi, Scientist 'G', Director, Laser Science & Technology Centre (LASTEC)
1040 - 1110 hrs	Question & Answer session
1110 - 1115 hrs	Concluding Remarks by Session Moderator
1115 - 1145 hrs	Tea / Coffee

Session 5: Modernization of Infantry: Technology Induction and Absorption for Future Tactical Supremacy

(1145 - 1315 hrs)

	Session Moderator: Lt. Gen. Narendra Singh, PVSM, AVSM, SM, VSM, (Retd), Former Deputy Chief of the Army Staff (P&S), Indian Army
1145 - 1150 hrs	Opening Remarks by Session Moderator
1150 - 1205 hrs	Policy on Small Arms - Mr. Bhagwan Shankar, Joint Secretary (Internal Security - II), MHA
1205 - 1220 hrs	Infantry Soldier Modernisation, Unit and Subunit level Weapons and Equipment and Requirements from the Indian Defence Industry - Brigadier Rajwant Singh, SM, Deputy Director General (B), Infantry Directorate, Indian Army
1220 - 1235 hrs	Fusion Technology in Image Intensification and TI Night Vision Devices - Mr. C.R Patil, Member (SRS), Central Research Laboratory, Bharat Electronics Ltd.
1235 - 1250 hrs	Latest Trends in Personnel Protection System to include Liquid Body Armour, Light Weight Ballistic Helmet, Anti Mine Boots - Mr. Gaurav Jain, Sales Manager, Life Protection Solutions, South Asia, E.I. DuPont India Pvt. Ltd.
1250 - 1305 hrs	Computer and Communications for Future Infantry Soldier - Mr. Sunil Chomal, General Manager, Head - Software, Tata Power SED
1305 - 1310 hrs	Question & Answer session
1310 - 1315 hrs	Concluding Remarks by Session Moderator
1315 - 1400 hrs	Networking Lunch

Session 6: Combat Engineers: Modernization of Combat Engineers: Role of Indian Defense Industry

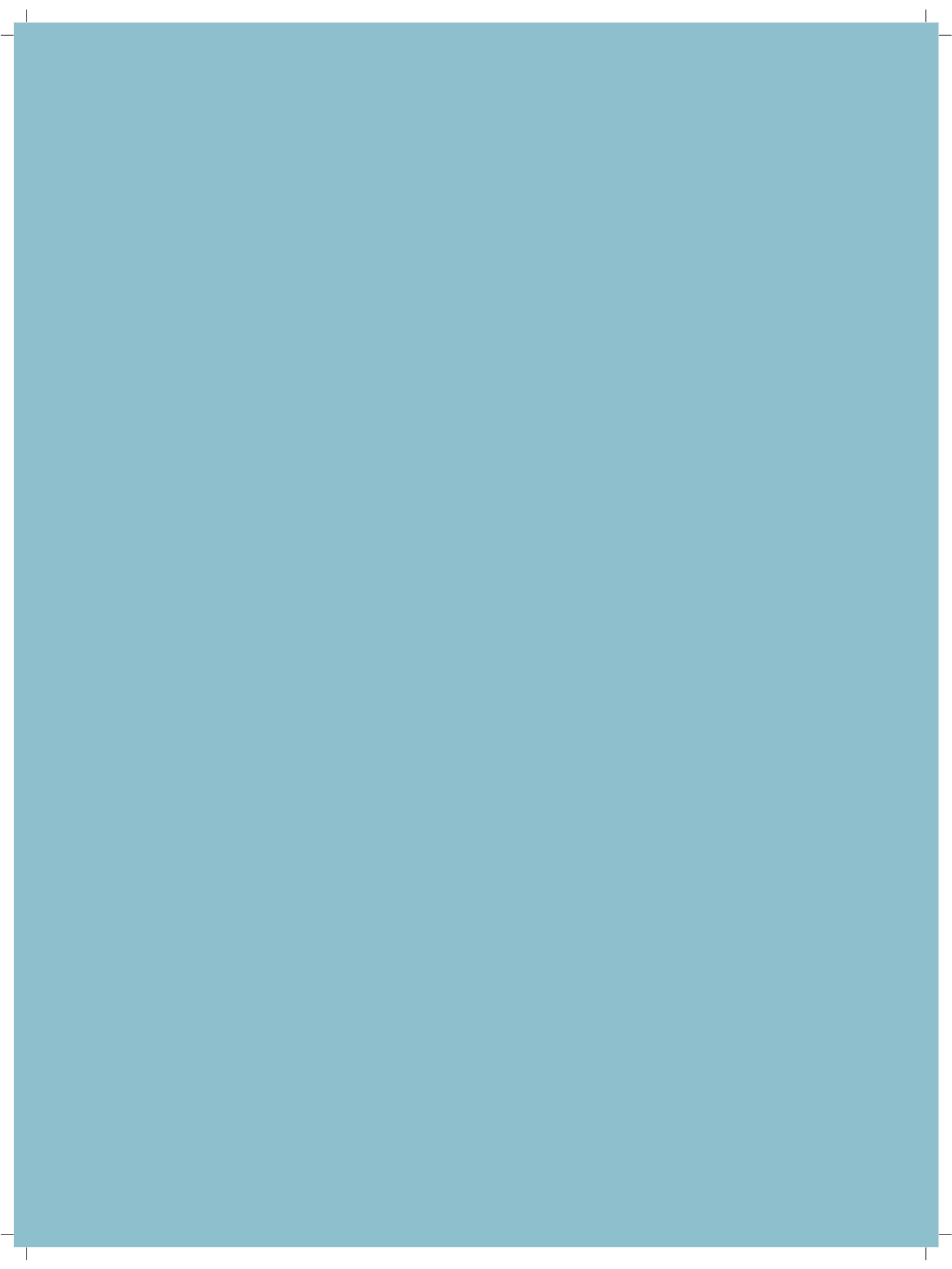
(1400 - 1530 hrs)

	Session Moderator: Maj. Gen. AK Chaturvedi, AVSM, VSM (Retd), Former Chief Engineer, Northern Command and Chief of Staff, Andaman & Nicobar Command
1400 - 1405 hrs	Opening Remarks by Session Moderator
1405 - 1420 hrs	Modernisation of Combat Engineers and Role of the Indian Defence Industry in Achieving the Desired Goals - Brigadier TPS Rawat, VSM**, Deputy Director General, Combat Engineers (B), Indian Army
1420 - 1435 hrs	Contemporary Advancement in Camouflage Fabric and Technology to include Counter Surveillance Equipment - Col. Sanjeev Dalal, Consultant
1435 - 1450 hrs	Tactical Military Bridging Systems - Mr. PR Naik, Director - Business Development, BEML Ltd.
1450 - 1505 hrs	Utilization of Mechanical Means in Mine Laying and Breaching Systems - Dr. S. Guruprasad, Director, Research & Development Establishment (Engineers)
1505 - 1525 hrs	Question & Answer session
1525 - 1530 hrs	Concluding Remarks by Session Moderator

Valedictory Session

(1530 - 1600 hrs)

1530 - 1535 hrs	Welcome Remarks by Mr. Jayant Patil, Executive Vice President - Defence & Aerospace and Member of the Board L&T Heavy Engineering, Larsen & Toubro Ltd.
1535 - 1545 hrs	Summing-up of Seminar and Takeaways by Maj. Gen.(Dr.) Bhupinder Yadav(Retd)
1545 - 1600 hrs	Special Address by Shri. Sanjay Garg, Joint Secretary (DIP), Ministry of Defence
1600 - 1610 hrs	Valedictory Address by Lt. Gen. G.S. Katoch, AVSM, VSM, Director General - Perspective Planning, Indian Army
1610 - 1615 hrs	Vote of Thanks by Mr. Ashok Kanodia, Chairman - FICCI Sub Committee on Defence SMEs & MD, Precision Electronics Ltd.





About FICCI

Established in 1927, FICCI is the largest and oldest apex business organisation in India. Its history is closely interwoven with India's struggle for independence, its industrialization, and its emergence as one of the most rapidly growing global economies.

A non-government, not-for-profit organisation, FICCI is the voice of India's business and industry. From influencing policy to encouraging debate, engaging with policy makers and civil society, FICCI articulates the views and concerns of industry. It serves its members from the Indian private and public corporate sectors and multinational companies, drawing its strength from diverse regional chambers of commerce and industry across states, reaching out to over 2,50,000 companies.

FICCI provides a platform for networking and consensus building within and across sectors and is the first port of call for Indian industry, policy makers and the international business community.

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