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‘Atma-Nirbharta’ (Self Reliance) in the Defence Sector

Webinar Summary Report

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Acknowledgements:

The Webinar “Atma-Nirbharta (Self Reliance) in the Defence Sector” held on 4 October 2020 at 1700 hours IST, was organised by The Current and Strategic Affairs Forum (CASA). The organisers would like to thank our keynote speakers for sharing their comprehensive analysis, past experiences and candidly expressing their views:

- Shri Sanjay Mitra, IAS (Retd), Former Defence Secretary of India & Professor of Practice, IIT Delhi
- Vice Adm Raman Puri, PVSM, AVSM, VSM, (Retd), Former Chief of Integrated Defence Staff
- Shri J.D. Patil, Director & Senior Executive Vice President (Defence & Smart Tech), Larsen & Toubro

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- Lt Gen Gautam Moorthy, PVSM, AVSM, VSM (Retd), Former Director General Ordnance Services & Former Administrative Member, Armed Forces Tribunal, Kolkata Bench
- Lt Gen Subrata Saha, PVSM, UYSM, YSM, VSM** (Retd), Former Deputy Chief of Army Staff & Member, National Security Advisory Board
- Lt Gen PR Shankar, PVSM, AVSM, VSM (Retd), Former Director General Artillery & Professor of Practice, IIT Chennai

A special note of thanks to Air Chief Marshal Arup Raha, PVSM, AVSM, VM, former Chief of Air Staff, Lt Gen PR Kumar, PVSM, VSM, VSM (Retd), former DGMO, Lt Gen Ranbir Singh, PVSM, AVSM & Bar, YSM, SM, (Retd) former GOC-in-C Northern Command and former DGMO and Lt Gen K. Surendranath, PVSM, AVSM**, SM, VSM (Retd) for their inputs during the session. We would also like to thank the many other distinguished attendees including many senior retired veterans, business leaders, professors, think tank contributors, analysts and others who shared their inputs and views with relevant questions through the interactive Q&A and chat sessions.

We would like to thank Lt Gen Gautam Moorthy, PVSM, AVSM, VSM, ADC (Retd) as founder of CASA for his energetic and motivational role in guiding the CASA Core Committee to facilitate the webinar, bringing

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together the distinguished speakers and contributors. We would also like to thank Mr. Manoj Mohanka, our anchor moderator of the CASA webinars for moderating the webinar professionally, Maj Gen Deepinder Singh for organising the webinar and Mr Mahadevan Shankar, core committee member of CASA based in Australia, for contributing with his vast experience, well informed views and global business expertise of past 25 years.

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Presentation:

Mr. Mohanka commenced the discussions by sharing his views about the ongoing situation between India and China at the LAC which necessitated the fast tracking of Defence procurement imports of critical Capital and Revenue purchases from various overseas suppliers. This situation has arisen primarily from past policy inadequacies and inability of various governments during past many decades to implement many of the recommendations of various committees to enhance domestic capabilities for Defence procurement. What we are witnessing, he stated, is the acute shortages in quality and quantity of operationally critical Capital and Revenue equipment and items which we are unable to procure domestically either through Defence PSUs, Ordnance Factory Board (now being corporatised) or from private industry.

Views of Lt Gen Gautam Moorthy, PVSM, AVSM, VSM (Retd), Former Director General Ordnance Services & Former Administrative Member, Armed Forces Tribunal, Kolkata Bench:

- a. It is important to bring about a civil and military fusion on policy issues, financing, public & private sector including MSMEs, and startups. Corporatisation of the OFB should be taken to its logical conclusion.



b. Lack of understanding within India on strategic issues, eg approaching the UN on J&K 1948, inability to interpret Chinese intentions in 1959, giving up Hajipir pass 1965 and the signing of the Simla Accord in 1972 by which 92,000 PoWs were returned without negotiating the return of PoK occupied lands to India has had a deleterious effect on our mindset.

c. Procurement related scandals including Bofors guns, HDW submarines and the guns versus butter debate have affected our defence preparedness.

d. India is saddled with socialist era behemoth organisations that needed transformation like the Ordnance factories we inherited from British Raj then converted into Soviet style factories, all of which created emergency procurement situations during the wars of 1971 and 1999.

e. We missed other opportunities like collapse of the Soviet Union to buy out or take ownership of their well established Defence Industry or the 1993 liberalisation or 1998 nuclear explosions when the world imposed sanctions on India, to open up Defence production leveraging the strengths in our domestic manufacturing.

f. Why now? We have a rising economic & geopolitical profile, belligerent neighbours constantly provoking India with irredentism



driving their policies. We need to seek strategic independence as imports are draining the exchequer while leveraging the strengths of the private sector and the very efficient DRDO.

g. Few major reforms undertaken include: -

- i. increase of FDI from 49% to 74% in the Defence sector.
 - ii. promulgation of Defence Acquisition Procedure 2020 (DAP-2020) which has been implemented after consulting all important stakeholders – users, industry associations, think tanks, Department of Military Affairs (DMA), DRDO, DGQA & MoD Finance.
 - iii. Corporatisation of OFB is on track to improve overall functioning aligned with the Make in India and Atmanirbharta initiatives.
 - iv. Leasing of equipment, dual use technologies and the comprehensive 101 Defence equipment list of banned imports.
 - v. Also, the announcement of the Defence Production and Export Policy 2020 (DPEP2020) has opened significant export opportunities besides the domestic Indian market for such private sector engagement in the Indian Defence industry.
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h. All of the above have created opportunities for manufacturers to design and develop equipment for Indian Defence forces through



startups or foreign vendors setting up operations in India supported by a huge financial outlay in next 5 to 7 years of approximately US \$60 bn dollars.

- i. Trade Unions of OFB have raised issues on definition of Vendors and impact on their jobs from corporatisation of the OFB. Some of these issues have valid points but most have political overtones which will be overcome from the DAP-2020 implementation. The negative list of 101 banned imports linked with DAP-2020 will facilitate taking the process to its logical conclusion and addressing the HR issues raised by the Trade Unions.

- j. General Moorthy summed up his talk by tweaking the Deng Xiaoping quote – *“It does not matter whether the cat is black or white, **as long as it is Indian and catches mice**”*.

2. Views of Lt Gen Subrata Saha, PVSM, UYSM, YSM, VSM (Retd), Former Deputy Chief of Army Staff & Member, National Security Advisory Board:**

- a. In 1947, India had 18 Ordnance factories, one Defence sector PSU and a small R&D setup. The Sino Indian conflict of 1962 became a wakeup call, but India became heavily import oriented and public sector dependent. Through the 80s and 90s, this expanded to 41 Ordnance factories and 9 Defence PSU with not much in the private sector.



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- b. The transition from Sovereign Democratic Republic in 1947 to later including the word 'Socialist' in the Indian Constitution, disallowed contemporary changes, wherein lies the answers to why the Indian Defence sector is in its current situation. The high dependence on Soviet imports of Defence equipment could be explained in the Mitrokhin archives - https://en.wikipedia.org/wiki/Mitrokhin_Archive
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- c. From a user point of view, the Services & the Army left it to the system to decide how they would help the Forces while the latter simply fought with what they had on hand. That process has changed significantly where the end user is now extensively being involved in the procurement processes and final decision making.
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- d. Consequently, the Army Design Bureau came into being on 31 August 2016 after comprehensive reviews of the various ordnance factories and based on user inputs. Four compendiums of 'Problem Statements' have been published with very useful & positive outcomes.
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- e. The contemporary situation is besides the 101 negative import banned list, the DRDO put out an additional 108 items list which will be passed on to Indian industry for design, development and manufacture aligned with the DAP 2020 and the DPEPP.
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- f. The import ban list has two important concerns – first being no crucial gaps in Indian defence and secondly, India must not miss the technology cycles as experienced in the past, leading to emergency purchases in a security crisis. These concerns are driven by the triad - Research & Development, Production, and Procurement – that impacted the ability of DRDO and DPSUs on critical factor of delivery, maintaining cost, quality and timeliness. Emphasis on process instead of product output should change.
- g. To the above triad, one needs to add the fourth dimension of strategic direction and budgetary support.
- h. PM Modi announced during DEFEXPO-2020 the Long-Term Integrated Perspective Plan (LTIPP) having a 15 year tenure. This LTIPP needs to be read in conjunction with the 101 banned list and the additional 108 list put out by DRDO, as stated earlier. This LTIPP must have concurrence of the Finance Ministry to make it successful as the 15% year on year budgetary increase assumption included in the LTIPP is a fundamental flaw which needs to be corrected. The past financial statistics indicate otherwise on the financial allocations and expenditures. This LTIPP should be made equivalent of the Defence Planning document setting out the broad framework for the private sector to participate irrespective of the FDI increase or JV partnerships with overseas entities.
- i. All the initiatives being announced should lead to procurement domestically and unless we have inducted the products into the



Indian forces effectively using such equipment, export should not be a focus area.

- j. Budgetary support should continue to be the Central Government's core responsibility and not be included in non-lapsable allocations for States from tax collections as it becomes mixed up with other Planning Commission recommendations & priorities that are NOT core to the defence of the country. Hence its crucial for the Defence Planning Committee chaired by NSA including the CDS, three Service Chiefs, Defence & Finance Secretaries is the right forum to ensure seamless integration between National Security strategy to ensure confidentiality, capability development and budgetary support.
- k. The core of Atma Nirbharta should be R&D where DRDO has been at the heart, especially in the development of missiles and equipment although there is continued need in areas of small arms and related technologies.
- l. DRDO has convened a meeting of all 52 labs to assess the capabilities towards future warfare requirements & battlefield scenarios involving AI, ASAT, directed energy weapons, hypersonic weapons, and other next generation advanced technologies. DRDO has been providing ToT for Defence industry use and commercial use. Many of these tend to have dual commercial use capabilities where private sector could play a crucial role.



m. The total R&D budget for Indian Defence Forces has historically been around 0.1% of GDP but mostly hovered around 0.09% of GDP. There is potential for creation of a CAPEX Fund to attract startups & MSMEs from private sector by way of long-term loans for capital expansion and capacity enhancement. Integrated Project Management Teams (IPMTs) could work with these entities on the 101 negative list and the further DRDO 108 items list to keep them relevant to the core needs of the Forces.

3. Views of Shri Jayant D. Patil, Director and Senior. Executive Vice President (Defence & Smart Tech), Larsen & Toubro:

a. Traditionally R&D by private sector has been discouraged by the Gol. All the R&D budget allocation is invested singularly into State owned DRDO. Regarding the earlier quote of General Moorthy about the cat being white or black as long as it catches the mice, it has been noted that when the cat is white, she comes in, does the job and goes away. She doesn't keep giving you the ability to truly keep doing it on our own and keeping the next generation far better & superior.

b. Tax breaks were available for private sector to invest their own funds into R&D whereby part of these costs could be recovered over five years. These tax breaks have been completely taken away by the current Gol.



- c. The ideology of GoI creating opportunities for development which will create opportunities for developmental money & investments to flow into the private sector. But these opportunities have not come in for real.
- d. Besides the valid points on budgetary matters relating to the triad and the fourth dimension mentioned by General Saha earlier, one more dimension on the budget issue is the lack of recognition of Customs duties and GST which tends to increase domestic production costs and puts inflationary pressures impacting the price competitiveness and incorrectly gets factored into the percentage of GDP allocations for R&D into Defence sector. This increases dependence on imports rather than supporting domestic private sector production initiatives.
- e. The Offset Policy for encouraging exports has not truly helped as these exports have predominantly been at subsystems levels and not completed product levels. The first beneficiaries of such Offset policy were the large mature companies like L&T, the Tata Group and DPSUs but foreign companies understood the system and chose to do JVs with SMEs who already knew how to manufacture these subsystems. This created a “build to print” production concept being adopted by the overseas suppliers in the Indian market without sharing any further technologies besides these printed designs or any tangible benefits to domestic Defence industry from the GoI’s Offset Policy.



- f. DAP 2020 has identified above issues and reduced the multiplier offset clause of 1.5x on components and subsystems being exported by SMEs to foreign buyers in component parts and such offset only being made available for complete systems being exported. The reliance on Offsets towards funding domestic production needs to change and recognition of full industry status to enable funding requirements for increased R&D with production of high quality products for our forces.
- g. The experiences with the MIG program in past 12 years indicates nothing right has been achieved.
- h. We need to build our own ecosystem in a structured manner for Atma Nirbhar to become a reality or it could only remain a pipe dream.
- i. The previous socialist model of governance has created monolith PSUs that tried to do everything within themselves with minimal engagement of the private sector. The only exception is the Government shipyards who needed private sector participation due to geographical area limitations and spread needed for warship with related equipment. This in turn facilitated indigenisation at system levels which get incorporated onto the platforms in the large PSU shipyards.



- j. The strategic weapons have been indigenously developed with great examples like ISRO. The funding and activities are focused internally within ISRO and related PSUs without much private sector involvement. The multiple eras of sanctions fast tracked some of these indigenous developments.
- k. The bulk of 108 DRDO list suggests they are being opened only at parts and component levels design & production and none of them suggests full product development by private sector. The 101 negative import list is a very positive development which will enable domestic R&D towards production in next 5 to 7 years. The increase from 49% to 74% FDI in the Defence Sector will help.
- l. It is a known fact that L&T has been involved in past 6 decades towards supporting such Atma Nirbharta initiatives in Strategic sector products developed domestically by the PSUs. Hypersonic tunnel and space capabilities for ISRO was created since 2004 by L&T whereby trust with one enabler was a game changer for L&T.
- m. Over time, the alleged transfer of technologies by overseas partners was actually only transfer of production methodologies – not the ‘why & how’ of making changes in the technology with what would be the possible outcomes from such technological & differentiated changes in a product.



- n. GoI concept of having multiple players in the same domain space for same product would be detrimental in emergency scenarios where any product failures will need all such players to be involved in rectification rather than simply one or two private companies engaged in that core product systems.

- o. L&T has grown since 1973 from an INR 1,500 crore company to currently INR 1,50,000 crore company that is capable of taking on foreign competition and beating them at their own game through effective cost structures, technology development and innovation.

- p. Lastly, its important to create a level playing field rather than current lopsided situation where foreign suppliers come in with zero taxes & import duties making them cheapest option for user, PSUs have taxes but benefit from customs duties exemptions and thereby creating a fundamental gap for domestic private sector within India having to bear the burden of such higher finance costs versus its other competitors – foreign & PSUs in the market.



4. Views of Shri Sanjay Mitra, IAS (Retd), Former Defence Secretary of India & Professor of Practice, IIT Delhi:

- a. We need to dispassionately address the negative list of 101 imports banned by Gol wherein most of the items are related to the Navy and Air Force.
- b. The LCA, LCH & warship programs would cost approximately INR 2,00,000 crores while the Army items can be construed as 'small change' in this import ban list. The submarines, LCM and transport aircraft form a big component of the Navy items in the import list.
- c. This landmark announcement of the negative list is most welcome and is sending a positive signal to the industry. Similar signal was given by the Gol to foreign suppliers in space and atomic energy related technology in the past as they refused to sell to India.
- d. In the past, 40% of procurement under DPP has been G2G. It has been strategic buying and such strategic buying will continue to ensure defence preparedness.
- e. Procurement should be professionalised and shifted to DMA under the CDS. Or else this dichotomy will continue for next 5 years with procurement inefficiencies. This necessitates the end user to be part of the buying process and make them also accountable for the buying decisions.



- f. It is up to the DMA to reconcile the gaps between defence preparedness and Atmanirbharta (self-reliance). Hence it is important to pass on this responsibility of procurement to the Armed Forces.
- g. The ongoing debate and dissatisfaction with quality of products supplied by OFB and DRDO is not understood. DRDO has also successfully completed the nuclear submarines, missiles and ASAT weapons which indicates they are better at high end technology weapon systems & platforms rather than low end products.
- h. Exports of these indigenous products is unlikely as overseas buyers will want to know if Indian Forces themselves buy these weapons and platforms.
- i. When it comes to offshore patrol vessels, frigates, and maritime patrol & reconnaissance craft, we have a good track record as the Indian Navy and Coast Guard are buying it and creating an export demand from overseas buyers.
- j. The concept of non-lapsable funding arose as Defence Ministry in the past was unable to fully use the allocated budgetary funds which resulted in these funds getting lapsed. However, in past few years, the Defence Ministry is spending the full allocations and in



some cases over spending. So, this should not be a major issue going forward.

- k. Defence expenditure as a percentage of GDP should not be a criterion since GDP is a notional figure whereas Central Government spending is a fact and actual physical spending of money. Although Defence expenses may only be 2% of GDP, the actual Defence CAPEX expenditure is one third of total Government CAPEX. The guns versus butter debate may continue but when there is very little butter, the guns may not be affordable at all.

- l. In reply to a question on whether the DGQA should not now be placed under the DMA, Mr Mitra replied in the affirmative and stated all that is required is a simple one line Govt Order transferring the DGQA from DDP to DMA.

5. Views of Vice Adm Raman Puri, PVSM, AVSM, VSM, (Retd), Former Chief of Integrated Defence Staff:

- a. At the policy level, two matters need to be addressed – first is how to do we set the requirement to our domestic R&D and industry including DRDO, ISRO and private sector and secondly, what are the challenges in meeting these requirements. Vivekananda International Foundation (VIF) has provided two reports



addressing both these issues. Once these issues are sorted out, it will enable a smoother flow into Atma Nirbharta.

- b. Regarding the first issue of setting out requirements, we need to firstly get rid of the idea of Make in India, which has been ongoing since independence through licensed production and other initiatives. We need to start at the designing stage itself and not come in only at the manufacturing stage.
- c. The challenges faced OFB is that ToT has not enhanced their capabilities where only production methodology was transferred and after 5 to 7 years when deep repairs are required. 88% of their production is ToT based. Capability does not exist due to lack of technical know-how, design data or a fall back organisation, both at DGQA and OFB levels. There are serious quality issues with OFB.
- d. Reverse engineering from scratch is not possible due to lack of credible data. Indigenous design would be most suitable especially in areas of ammunition production.
- e. DGQA under MoD as a central agency does not actually serve the purpose since it has full time officers without adequate qualifications and actual user experiences, which is possible by deputation of actual user officers from each service on short tenure basis to enhance quality of DGQA capabilities on regular basis. Alternately, it would be better for the Army and the Air Force to have their own dedicated DGQA for regular user



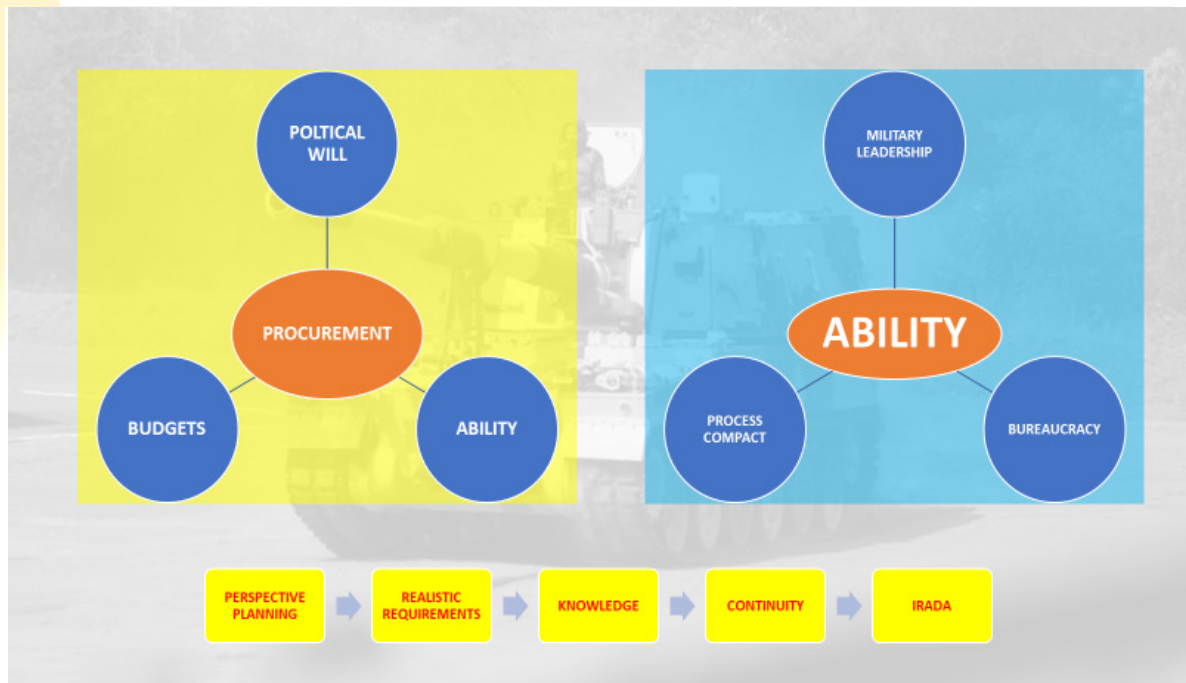
certification purposes, like the current Naval Armament inspection Division.

- f. At the policy level, we need an Integrated Force Development Plan (IFDP) based on outcomes of a desired strategy and linked to resources, as brought out by General Saha in his presentation.
- g. Since the Defence budgets do not seem enough, we need to investigate our Strategy. India cannot afford three carriers with their air wings and fleet of related ships. We need to focus on anti-access area denial strategy, which is cheaper to execute, will require more submarines and denial weapons but less of the costlier platforms like carriers that is not possible within our given budgets.
- h. We need to focus on strategic goals which are defence of national integrity and becoming a regional power without looking at an expeditionary force with budgetary constraints.
- i. The planning process needs to identify the requirements of the Armed Forces as the priority in the design, development and production phases of Atma Nirbharta. It needs simulated models, system engineer exercise with private and public sector entities like L&T, DRDO, etc and then system requirements be worked out.



- j. Developing system requirement specifications needs more than floating RFIs to avoid obsolescence. This requires developing prototypes and integrating it as part of our larger programmes. India cannot afford to have too many system integrators and hence we need to focus on core strengths whereby the system integrator develops the ecosystem.

6. Views of Lt Gen PR Shankar, PVSM, AVSM, VSM (Retd), Former Director General Artillery & Professor of Practice, IIT Chennai:





General Shankar presented his views through very succinct self-explanatory two slides on the core areas for Atma Nirbharta to be successful, that revolved around Procurement - Political Will, Budgets and Ability. This together with surgical strikes on the current procurement machinery will make Atma Nirbharta a success.

SURGICAL STRIKES ON THE DEFENCE PROCUREMENT MACHINERY

THE FIRST STRIKE. OVERHAUL THE OVERWEIGHT MOD.

THE SECOND STRIKE. REPLICATE SUCCESSFUL MODELS. NAVY, AD AND ARTILLERY. EJECT TRIED, TESTED AND FAILED, SELF PROCLAIMED EXPERTS WHO DOMINATE THE DELHI TALK CIRCUIT.

THE THIRD STRIKE. REFORM OFB, DPSUS AND DRDO AND MAKE THEM PERFORM. WE HAVE INVESTED IN BUILDING THEIR CAPACITIES FOR SEVEN DECADES. MANAGEMENT MUST PERFORM OR BE CHANGED RUTHLESSLY.

THE FOURTH STRIKE. GET DOWN TO SERIOUS KNOWLEDGE BASED INDIGENISATION WHICH IS INCLUSIVE IN NATURE TO PUBLIC AND PRIVATE PLAYERS.

THE FIFTH STRIKE. INSTITUTE A DEFENCE PROCUREMENT ADVISORY BOARD. CREATE EMPOWERED COMMISSIONS TO GET SOME CRITICAL EQUIPMENT OFF THE ICU LIST.

THE SIXTH STRIKE. DISRUPTION IN MILITARY AFFAIRS IS HAPPENING. DISRUPTIVE TECHNOLOGIES ARE MAKING THE BRICK AND MORTAR DEFENSE INDUSTRY REDUNDANT.

THE SEVENTH STRIKE. THE DEFENCE BUDGET MUST SPECIALLY FUND OUTCOME BASED TIME CRITICAL PROJECTS (BEYOND NORMAL ALLOCATION).

THE EIGHTH STRIKE. DEVELOP A KNOWLEDGE PATH FOR DEFENCE TECHNOLOGY AND MANAGEMENT FROM GRASS ROOT LEVELS UPWARDS. OUR KNOWLEDGE BASE MUST BE DEEPER.



Summary:

The highly enlightening Webinar proceeded for an hour and forty-five minutes of searching questions & suggestions from the audience during the debate. The moderator Mr Manoj Mohanka highlighted few of the key roles and options for the Army & Navy and Procurement decision makers.

Our future Webinars will endeavour to cover the Procurement issues and will focus on the below areas highlighted by General Shankar in his presentation during this Webinar:

Future Webinars

- Policy Issues
- Finances
- Big Industry
 - Private
 - Govt
- MSMEs
- Corporatisation of OFB
- Start Ups



The Webinar closed at 1845 hours IST with a vote of thanks by Manoj Mohanka and Lt Gen Gautam Moorthy to the speakers and attendees for making this webinar a successful event.