

SENATE OF PAKISTAN



REPORT NO. 01 OF 2021

EIGHTEENTH PARLIAMENTARY YEAR 2020-2021

**SPECIAL REPORT OF THE SENATE STANDING COMMITTEE ON DEFENCE
PRODUCTION REGARDING DEVELOPING A MECHANISM ON HOW TO MAKE
DEFENCE PRODUCTION UNITS FINANCIALLY SELF-SUSTAINING AS
REPORTED BY THE SUB-COMMITTEE OF THE STANDING COMMITTEE ON
DEFENCE PRODUCTION**

PRESENTED BY

**SENATOR LT. GEN. ABDUL QAYYUM, HI (M) RETD.
Chairman COMMITTEE**

SENATE SECRETARIAT

SPECIAL REPORT OF THE STANDING COMMITTEE ON DEFENCE PRODUCTION REGARDING DEVELOPING A MECHANISM ON HOW TO MAKE DEFENCE PRODUCTION UNITS FINANCIALLY SELF-SUSTAINING

I, Senator Lt. Gen. Abdul Qayyum, NI (M) (Retd) Chairman Standing Committee on Defence Production have the honor to present Special Report of the Committee regarding developing a mechanism on how to make Defence Production units financially self-sustaining as reported by the Sub-Committee of the Standing Committee on Defence Production and adopted by the Standing Committee in its in-House meeting held on 12th February, 2021.

2. The composition of the Standing Committee on Defence Production is as follows:-

1.	Senator Lt. Gen. Abdul Qayyum HI (M) Retd.	Chairman
2.	Senator Pervaiz Rashid	Member
3.	Senator Mushahid Hussain Sayed	Member
4.	Senator Nauman Wazir Khattak	Member
5.	Senator Sarfaraz Ahmed Bugti	Member
6.	Senator Nuzhat Sadiq	Member
7.	Senator Syed Muhammad Ali Shah Jamot	Member
8.	Senator Muhammad Akram	Member
9.	Senator Molana Abdul Ghafoor Haideri	Member
10.	Senator Taj Muhammad Afridi	Member
11.	Senator Anwar Lal Dean	Member
12.	Senator Gul Bashra	Member
13.	Senator Zeeshan Khanzada	Member

3. In pursuance of sub-rule (1) of Rule 183 of the Rules of Procedure and Conduct of Business in the Senate 2012, the Standing Committee on Defence Production in its meeting held on 13th October, 2020 constituted a Sub-Committee with the following Composition and terms of reference:

COMPOSITION:

1.	Senator Nauman Wazir Khattak	Convener
2.	Senator Mushahid Hussain Sayed	Member
3.	Senator Nuzhat Sadiq	Member

TERMS OF REFERENCE:

“To develop a mechanism on how to make Defence Production Units financially self-sustaining”

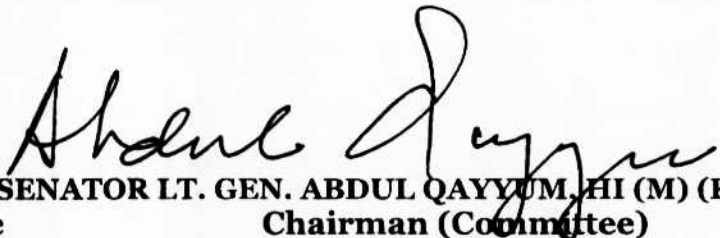
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4. The Sub-Committee after detailed discussion, deliberation and consultation with the stakeholders presented its report to the main Committee on 12th February, 2021. The Standing Committee on Defence Production adopted the report of the Sub-Committee and recommended that the report may be laid in the House.

5. The report of the Sub-Committee adopted by the main Committee is placed at **Annexure-A.**



(INAM ULLAH JAN
Acting Secretary Committee



(SENATOR LT. GEN. ABDUL QAYYUM HI (M) (RETD)
Chairman (Committee)

SENATE SECRETARIAT

REPORT OF THE SUB-COMMITTEE OF THE SENATE STANDING COMMITTEE ON DEFENCE PRODUCTION

I, **Senator Nauman Wazir Khattak** Convener of the Sub-Committee of Senate Standing Committee on Defence Production, have the honor to present, on behalf of the Sub-Committee this report to the main Committee.

2. In pursuance of sub-rule (1) of Rule 183 of the Rules of Procedure and Conduct of Business in the Senate 2012, the Standing Committee on Defence Production in its meeting held on 13th October, 2020 constituted a Sub-Committee with the following composition and terms of reference:

COMPOSITION:

- | | | |
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| 1. | Senator Nauman Wazir Khattak | Convener |
| 2. | Senator Mushahid Hussain Sayed | Member |
| 3. | Senator Nuzhat Sadiq | Member |

TERMS OF REFERENCE:

"To develop a mechanism on how to make Defence Production Units financially self-sustaining"

3. The Sub-Committee in its meetings held on 1st & 8th February, 2021 discussed the following agenda items:-

AGENDA FOR MEETING ON 01-02-2021

1. **Restructuring of Ministry of Defence Production to provide an umbrella organization for commercialization activities of its Public Sector Industry with regard to:-**
 - i. **Formation of a Professional Steering Committee/Board of Governors, conversant with business and marketing, to oversee their transition to commercial corporate structure yet maintaining their state-hood enterprise narrative.**
 - ii. **Provide Policy and Regulatory Direction, Monitor and Audit and Compliances of Variances in their transition to self-sustaining economic entities.**
2. **Vision for Defence Production Public Sector Industries towards "commercialization":**
 - i. **From Acquisition to Indigenization to Commercialization**
(since on-set) (in-hand) (in the future)
 - ii. **Sustain Activities and Growth**



- iii. Funds for R&D, Reverse Engg., Technology Transfer with Equipment Acquisition; in line with the NEEDS of the Armed Forces of Pakistan for their role and task in the defence of our homeland
3. Develop a CORPORATE INFRASTRUCTURE suitable for the sustainment of commercial activities at these Units
4. Develop a Costing Mechanism of Supplies & Services for the Armed Forces that is a step higher than "book-adjustment/Record-keeping" studded with budgetary planning and limits/constraints.
5. Any other item with permission of the Chair

AGENDA FOR MEETING ON 08-02-2021

Presentation by PAC Kamra: (Dy. Chairman & Member Technical, as applicable) on:-

1. Long Term Financial Sustainability: Vision – 2030
2. Financial Status of PAC Kamra covering July 2017- June 2020
 - i. Yearly grants received from the Government of Pakistan (GoP)
 - ii. Financial Data on Gross & Net Profits from approved Balance Sheets vis-à-vis commercial activities or Services for GoP/Others
3. Current Commercial Activities– Local Industry or Customers (not for PAF/ GoP/Other Govts)
4. Data for Commercial Activities (format provided last time) i.e.:-
 - i. Spare/Excess Capacity – Machine and Manhours
 - ii. Special Capability – Processes & Facilities
 - iii. Current "Product" Line and/or "Services"
5. Licensing and Approvals:
 - i. List of all Licenses and Approvals from OEMs/EASA/FAA/PCAA/ISO/ Others
 - ii. Define Current "New Aviation Product Certification & Qualification Process", if any – for Products &/or Repairs including Third Party's where applicable.

6. Any other item with permission of the Chair.

4. The Sub-Committee highlighted importance of Defence Production Industry globally and its contribution in the respective national economies, besides fulfilling their defence needs. There were 90% corporate structure and set ups, working under independent and empowered boards, well-organized, target oriented, motivated marketing and sale professional team and earning billions of dollars as foreign exchange. Our DAEs have well established infrastructure, potential, resources and machinery which could be used for commercial activities and earning of foreign exchange. He also apprised the Committee about the informal meetings via zoom with Officers of the Ministry of Defence Production and the high ranking officers in the PAC, HIT, OPF & NRTC to



have an overview of their present capacities, budget, productivity, targets, export, self-sustainability, issues and way forward for exploring the commercial potential.

5. The Secretary Ministry of Defence Production Lt.Gen. (R) Sadiq Ali, NI (M) endorsed the vision and efforts of the Sub-Committee and expressed that patronage in this regard will further augment their drive for achieving the desired results. He presented before the Sub-Committee detailed presentation on the agenda items, covering the role assigned and present status of DPEs, their commercial potentials and onward expansion within the legal provisions to utilize surplus potential, commercial endeavours through investment, Joint Ventures, collaborations and establishment of commercial companies. He apprised the Sub-Committee that POF, HIT and PAC, were statutory autonomous bodies, established through Act of Parliament and funded from the defence budget with specific mandate of exclusively meeting defence needs of respective services, requirements of LEAs and Civil Armed Forces and. KS & EW and NRTC were Corporations, registered with SECP under the Companies Act and self-sustained entities. The Sub-Committee was further briefed about carrying out the commercial activities through commercial windows of POF subsidiaries i.e. Wah Industries Ltd. (WIL) and Wah Noble Group, at PAC under the umbrella of Kamra Aviation Industry Ltd. (KAIL) and at POF as Margalla Heavy Industry Ltd. Company (HIL) which was recently launched. M/o Defence Production being supra body, constantly monitoring the productivity and commercial activities of these entities and had encouraged hiring of professionals from corporate market. Regarding costing and accounting mechanism in the DPEs, the Sub-Committee was briefed about the conventional budgeting and accounting system through which the cash and book value/adjustment was not compatible, as products are provided on cost to cost basis and to determine the indirect savings, thus giving the impression of some DPEs running into deficit. Moreover certain government's financial regulatory regimes halt potential of full commercialization of the 3 DPEs and could not be run on the pattern of commercial companies or subsidiaries to have independent boards and their own CFOs. He further briefed the sub-Committee about the recently changes by the government wherein the role of Financial Advisors have been assigned and replaced with Chief Finance & Accounts Officers in each Ministry which will contribute in easing doing business.

6. The Deputy Chairman PAC Board and Member Commercial PAC presented detailed presentation about their domain, role and functions, Maintenance, Repair and Overhauling and Production activities, long term financial sustainability, Contribution towards defence production in financial terms, financial status of PAC during the last 3 years and ongoing and future commercial activities. The Sub-Committee was also apprised of saving/profit made through



indigenous overhauling of Aircrafts, Engines, Radars, other components, Avionics & weapon integration and Aircrafts production i.e. JF -17 & Mushshak, modification/up-gradation and the export figures and future sale to various friendly countries.

7. The Committee was briefed about the financial allocation to PAC, financial gains and net profit/savings during the last 3 years. Details of engaging local industry and private sector, licensing approval by local and international certification organization, commercial activities through KAIL and establishing commercial MRO at Islamabad International Airport and the steps taken towards self-sustenance by PAC.

8. The Committee after going through the above details observed that PAC is doing well within its mandate and besides meeting operation requirement of PAF, earning millions of dollars through saving in the shape of local production, maintenance, repair and overhauling of aircraft and other establishments, which needs to be given due projection and lime-lighted. The Sub-Committee emphasized for establishment of corporate set up with empowered independent boards, improvement in accounting mechanism, cost accounting, cost production and cash and book entry, well-organized, target oriented, motivated marketing and sale professional team which were the benchmark of corporate sectors. The Committee further observed that in view of fast emerging scenario in the defence production industry, PAC should revisit their vision statement,

9. Secretary Ministry of Defence Production informed the Committee that they held a session with PAC, POF and HIT to instrumental their commercial windows and gave a roadmap in this regard for which they were to be empowered through gradual reformation. However he also expressed that complete reformation was not possible at the pattern of private corporate structure and the concept of western defence industry which will also be required huge additional financial allocation which was not possible due to financial constraints. He suggested that efforts could be made to bring reforms in the existing model and more subsidiaries of these 3 DPEs be established at the patron of WIL, KAIL & HIL, liberalize and empower their boards, which will serve the purpose. Deputy Chairman PAC Board Kamra also expressed similar view points and suggested that instead of dismantling the present structure of PAC for business avenues, other opportunities for commercial activities like focusing on establishment of Aviation City, which has the business potential of approximately 100 Billion Dollar, should be focused. He also suggested earmarking of some percentage out of the profit for respective DPEs to boost their research & development in the respective fields.



- b) Any member should, in any case, not be any high ranking Service officer or a bureaucrat - unless is so qualified and experienced.
 - c) Chairman of the BoD shall be elected by the BoD Members for tenure as defined. A Deputy Chairman shall be appointed by the concerned Service Chief who must essentially be an engineer by profession. The secretary of the Board shall be a professional with corporate experience and would be a permanent employee of the company.
 - d) Tenure of the Chairman of the BoD should be three years and should mandatory complete his tenure. In case of his premature departure, due to natural causes or superannuation or health reasons, the Board should elect a Chairman from within those members who had completed at least one year tenure as PAC Board member and the elected incumbent shall remain Chairman for at least three years. No Chairman is allowed to hold the office for more than ONE tenure.
 - e) Three Consecutive absences from a Board meeting would entail the replacement of the Board member.
2. Business Model: In line with the WAH Nobel Model joint venture would be encouraged between National and International Companies through setting up of upstream and downstream supporting industries, out-sourcing excess and non-strategic capability and capacity and exporting products for revenue generation. A maximum of 26% share in the department could be offered to the investor and the balance 74% would remain with the government of Pakistan. As per SECP rules with 26 % share, the management can be handed over to investors. The investors should preferably make an upfront investment in CAPEX to be so positioned. Three persons (out of 9-15) of the joint venture partners will sit on the BoD of the new company which would be constituted.
3. Financial Discipline: The financial Autonomy will rest with the Board and will not require ratification or approval from any government organization or ministry. The Board will include members from Government of Pakistan Ministries/ Departments. However, the following set of rules shall apply:
- a) The FAs would be replaced with CFOs who would be well experienced Chartered Accountant. There will be a financial and accounting Audit by a nationally reputed independent firm once every year and a report of the audit will be submitted to SECP as per SECP rules.
 - b) Financial grants from the Government of Pakistan shall systematically reduce until diminishing in the next four years to becoming ZERO in 2025. R&D grants for any national or Armed Forces Services' driven Projects shall remain to be funded by the GoP or in a JV to be arranged through the Service concerned/GoP.
 - c) All business transactions be with defense forces/LEA or any other entity would be priced at market value to be determined by the board



10. Senator Mushahid Hussain Sayed augmented the view point of Secretary MoDP point and opined that the 3 DPEs were totally different non-profit organizations and have not to be treated at par with the private commercial organization. Their primary object was to fulfill the defence needs of armed forces, doing well and have achieved the primary objectives. The commercial potential should be exploited through surplus productivity.

11. After due discussion and deliberation, the sub-Committee finalized the following recommendations:-

A. Based on the observation at informal interaction and meetings with NRTC authorities, their performance and achievements were outstanding and comparable to the best in any government or private organization. The Sub-Committee is of the considerate view that the *raison d'être* was its functioning as a true autonomous body under Companies Ordinance 2017 and SECP rules, with a uniform Officer as its MD. The other defences Production Industries have to follow the same model (**Appended as Annexures**) which may be done in phases, wherein in the first phase, all Defence Production Industry to constitute a company under Companies Ordinance 2017 for marketing/sales and supply chain. The Companies to have all professional and only the Chairman to be a serving Officer from the associated defence industry.

B. In the second phase, following are the Sub-Committee recommendations:-

1. Commercial Structure – BoD Governed: All industries to work under the Companies Act 2017 Section (16) and to be governed by SECP Laws. They should be governed by a fully independent Board comprising "competent private sector" professionals –with a majority of private sector individuals with varied experience in Finance & Accounting, Industrial Engineering, and Human Resource Management, Marketing and Sales and Corporate legal affairs. Additionally, the following shall apply in this regard:

a) A 9-15 Member Board of Directors (BoD) shall be appointed by Ministry of Defence Production in consultation with Chairman Joint Chief's of Staff Committee and the Service Chief concerned after due diligence on their professional and educational qualifications and experience.



or cost of sales whichever is higher on the recommendation of the CFO of the company.

d) All sub-industries to regularly submit the profit and loss (P and L) statement to the Board, which would be the major criteria for evaluation of the Human Resource.

4. Workforce: 99% of the human resource should be permanent employees of the organization whether in uniform or civilians – preferably with Service technical back ground/ know-how. The balance of 1 % can be uniformed Service personnel for a 5-year secondment/posting to the said defense industry.

12. As required under sub-rule (2) of Rule 183 of the Rules of Procedure and Conduct of Business in the Senate, 2012, the Report of the Sub-Committee is presented to the Standing Committee on Defence Production with the recommendation that a special report in this regard may be presented in the Houser under rule 193 of the ibid rules.



(INAM ULLAH JAN)

Acting Secretary (Sub-Committee)



(SENATOR NAUMAN WAZIR KHATTAK)

Convener

Dated: 12-02-2021

AEROSPACE INDUSTRY VISION 2030
(NACO & PAC KAMRA)

- Key Performance Indicators for Aviation (Aerospace & Airline) Industry in the world are:

- **Amount contributed to the national economy:**

- eg (2019) **\$1.7 trillion** in U.S. economic activity

- **Number of jobs:**

- eg (2019) More than **10 million U.S.** jobs (direct and indirect)

- **Number of people/Amount of cargo:**

- eg (2019) Commercial air intercity transportation in **the United States** accounted for more than **2.4 million passengers** & more than **58,000 tons of cargo**

These KPI's are nearly non-existent in Pakistani Aviation or are insignificant. However, IATA had projected a 9% increase in air travel domestically for Pakistan in a pre-Covid estimation while our foreign travel statistics are registering a steady growth at 6.3% annually. In order to meet the challenges of the coming timeframe, Aerospace element of the equation must use this Covid-created breathing time opportunity to determine for itself a long term vision in line with these projections and to be ready for the newer technologies on the horizon. The contribution of manufacturing, maintenance, sales & service sectors in the aerospace industry need also to align with the projected growth of the airline sector to meet these challenges.

- In Pakistan, an aerospace industry grown out of the existing infrastructure, is estimated at generating an annual revenue of a billion US dollar beside employing more than 125,000 skilled workers. PAC Kamra, a public sector key player of the support industry has to take on that leadership role in the future. This role is well recognised by the National Aviation Policy 2019 Document of the Government of Pakistan (NAP).
- Being at the forefront of technology and a projected major contributor to the economy, the Aerospace industry is the harbinger of technology driven industrialisation in Pakistan for the downstream or ancillary industry, as well. The Government of Pakistan should, therefore, identify the aerospace industry as a **strategic industry**.
- Pakistan's aerospace industry must transform from its Military connotation to a Coöperate leader – yet, serving the Armed Forces and the Economy. Accordingly,

the Government should charter a plan to transform Pakistan's aerospace industry into a dynamic regional and international aerospace player by 2030 adopting the proposed Aerospace Industry Vision 2030.

PAKISTAN'S PROPOSED "AEROSPACE INDUSTRY VISION 2030"

- The blueprint for Pakistan's strategic Aerospace Industry visualises **Pakistan to be, as an integral part of the global aviation market, the no. 1 aerospace technology nation in ME/SE Asia by the year 2030....** with an annual targeted revenue of USD 1.0 billion sustaining 200,000 job opportunities in the domestic market alone.
- To support the development of the strategic aerospace industry, a **National Aerospace Coordinating Office (NACO)** should be established as a "Wing" under the Ministry of Defence Production (MoDP) – bringing all the industrial stake holders and linking the academia to this national effort.
- The primary objective of NACO is:
 - First, to develop a blueprint for 2030 within 6 months – defining main strategies and associated initiatives;
 - Secondly, to coordinate with local and foreign aviation industries to source such initiatives and,
 - Thirdly, to oversee the implementation of these strategies and initiatives provided in the Blueprint.
- NACO will serve as the focal point in linking the aerospace industry players, relevant Government ministries and agencies, and academia to collectively work together in strengthening the capability and capacity of Pakistan's existing & new aerospace industrial units in public and private sectors.
- The role and task of NACO shall be amended by relevant instructions issued by Ministry of DP in consultation with the Stake-holders, as required. Aviation Oversight Committee at the Aviation Division of the Ministry shall be amongst its stake-holder.
- To ensure the successful development of a Blueprint, a number of strategies and several key initiatives for each, will be produced after consultation with all the stakeholders in the Industry; in order to achieve the target set in the Blueprint a recommendation for a proposed "**Matrix of 10-Strategies**" is included here-in below as an initial policy guideline:

- (i) Apply policies that will impact the future landscape of the industry; both financial and organisational
- (ii) Enhance the commercialisation of Industrial Units that are/or will be engaged in Aerospace activity.
- (iii) Enhance the effectiveness of Pakistani "Institutions" & "Regulators" that have direct influence on the growth, modernisation and standardisation of the industry.
- (iv) Harmonize civil and military regulations and promote BEST PRACTICES acceptable to international customers/industry and regulators.
- (v) Invest in R&D, Indigenous development (self-reliant) and Reverse Engineering capability and tooling to develop a common infrastructure for high technology products, induct new capabilities and enhance industry capacities amid improving competitiveness.
- (vi) Develop product lines and supply chains as first & second tier Suppliers to western aerospace industry. Develop and Sustain their capabilities to meet global OEMs' stringent demands in addition to FAA/EASA Regulatory and Certification or Qualification requirements
- (vii) Promote aerospace investments through incentives and crowd-funding.
- (viii) Attract and prepare the workforce of tomorrow for Pakistan and the ME/SE Asian region.
- (ix) Capture new markets in the West, the ME while strengthening the local industry.
- (x) Automate Supply chain from procurement to delivery of products.

- Further, to cover the formulation of "Initiatives" by NACO and to define the stakeholders that NACO shall coordinate between, the aerospace industry in Pakistan can be classified into FIVE sub-sectors namely;

Sub-Sectors

Aero-Manufacturing

Products/ Services

Airframe Parts & Structures, Landing gears, Avionics systems & components, Engines & Associated equipment, Airframe systems and components (Equipment)

Systems Integration

Ground Systems (Radars and Comm.-Nav.), Simulators, Spacecraft, UAV, Aircraft Avionics, Weapons, Missiles and Rockets

AMO/MRO

Aircraft servicing – Military Fixed and Rotary Wing and Comm.-Nav. Radars etc.
Aircraft servicing – Civil airliners & executive jets; from ramp to major on-equipment checks including limited Component MRO capability.

Ancillary Equipment

Ground Testing and Servicing Systems,
Flying and Virtual Training Simulators,
Ground Servicing & Handling Equipment

Engineering & Design
(Reverse Engg./3-D Printing)

Detailed Structural and Systems' Design,
Manufacturing Processes, Publications
/Documentation & In-Service Support,
Certification, Integration, Standardisation
and First Article Qualification Ability,
Airworthiness & Safety Data Integration and
Management.

PAKISTAN'S STAKEHOLDERS – AEROSPACE

• Major Foreign Companies

1. Northrop Grumman
2. Dassault Aviation, France
3. ITT Corp – Elbit Systems, USA
4. P&W, USA
5. Safran, France
6. CATIC, China
7. Saab Safari, Sweden
8. Lockheed Martin, USA
9. General Dynamics, USA
10. Leonardo Helicopters, Italy
11. Pratt & Whitney, Canada
12. General Electric, USA
13. CASA & Airbus Military Spain with IPTN (Indonesian Aerospace)
14. Airbus, France
15. Boeing, USA
16. Rolls Royce, UK

17. Agusta-Westland, UK (Leanardo)

• **Major Local Companies**

1. PAC Kamra with its FOUR Units
2. PIAC Maintenance Organisations/ Isfahani Hangar, PIA Karachi
3. Precision Engineering – PIA Karachi
4. Air Weapons Complex – National Engineering and Scientific Commission (NESCOM)
5. Integrated Dynamics, Korangi Creek, Karachi – Pvt UAV (Aerial/Marine/Robotics)
6. Space and Upper Atmosphere Research Commission (SUPARCO), Pakistan
7. PAF & Pak Army Maintenance Centres like 502 Workshop at Dhamiyal, RWP
8. Defence Science and Technology Organisation (DESTO), Pakistan Heavy
9. Industries (HIT)Taxila
10. Institute of Optronics, Rawalpindi
11. Pakistan Ordnance Factories, Wah
12. National Radio & Telecon Corporation, Haripur
- 13.

• **Local Academia**

1. CAE – NUST
2. Air University, Islamabad
3. Innoversity, Islamabad
4. PAF – Schools of Aeronautics and Electronics, Korangi Creek, Karachi
5. TEVTA – Aviation Technology Centre, Akora Khattak, KPK
6. PIAC – Training Centre, Karachi
7. PAF KIET, Karachi

VISION - 2030 FOR PAC KAMRA

To become the No 1 centre of aerospace technology in design, development, manufacturing and integration of associated systems and after sales support for global aerospace civil and military industry.

(NAP)

http://en.ce.cn/main/latest/202001/03/t20200103_34040797.shtml

Under the China Economic Net, an Air Navigation Plan was approved by Prime Minister Imran Khan, as the Air Navigation Plan 2025.... Mode S Radars

IATA (International Air Transport Association) forecasts that Pakistan domestic air travel will grow at least 9.5 percent per year, more than two times faster than the world annual growth rate of 4.1 percent over the next 20 years.

CPEC projects the Gwadar Port project and operation of Gwadar international airport AirSial Limited is a privately-owned Pakistani startup airline. The start-up is owned by the Sialkot Chamber of Commerce and Industries and will operate out of Sialkot and will result in significant increase in passengers, cargo activities and flights

Vision of the National Aviation Policy – 2019

“Safe, secure, efficient, profitable, sustainable and facilitating Aviation Sector in Pakistan at par with best international aviation practices, contributing to national development based upon the organic market growth”

Key Objective: To ensure safe, secure, efficient and a commercially viable Aviation Sector including aircraft design/manufacturing and to develop state-of-the-art infrastructure, which contributes positively towards the national economy.

1.4.1 Aviation Oversight Committee In order to address the suggestions/grievances of stakeholders, Aviation Oversight Committee will be formed and shall consist of members, to be notified by Aviation Division, comprising of all the relevant stakeholders, who will meet quarterly under the chairmanship of Secretary Aviation. Aviation Oversight Committee shall have advisory responsibility of oversight of Pakistan's Aviation Sector in both domestic and international markets.

3.4 Development of Aircraft Maintenance Organizations (AMOs) & Maintenance Repair & Overhaul (MROs) Aircraft and engines require periodic maintenance and overhaul according to certain maintenance schedule. Not all types of aircraft can be maintained in Pakistan. These aircraft are sent abroad for maintenance and major overhauls, involving huge expenses and outflow of foreign exchange. Development of AMOs/MROs requires huge investment; therefore, certified AMOs/MROs shall be incentivized to establish such facilities in Pakistan. This will accrue foreign exchange, create local jobs, bring in technology, and save aircraft down-time for the local operators. The validity of organization's approval once issued shall be perpetual; however, each organization must be completely reviewed for compliance with applicable regulations at period not exceeding 24 months.

3.4.1 Incentives for AMOs/MROs The multi-million dollar AMO/MRO market has been untapped in Pakistan where it is operating at less than 0.05% business. Therefore, following incentives shall be offered to investors in AMO/MRO business:

- a. Tax incentives to be offered by FBR.
- b. Discounted PCAA charges for the piece of land leased or licence for AMOs/MROs.

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c. Up to 100% Foreign Direct Investment (FDI) shall be permitted. However, JV with a local business entity shall be preferred.

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3.5 Development of Aircraft Manufacturing Industry

The global commercial aircraft manufacturing industry market has enrolled a new step of growth over the past five years. During the global economic downturn, growing unemployment, declining per capita disposable income and overall economic uncertainty negatively affected leisure travel and weakened downstream demand from commercial air carriers. However, fast economic growth and increased air travel in rising markets, combined with the need to replace aging aircraft with new, more fuel-efficient ones in developed markets, has greatly increased demand for industry products. Aircraft manufacturing industry contains space vehicles, engines of different aircraft, propulsion units etc. The aircraft manufacturing industry manufactures all of the above and correlated aircraft structures. Aircraft design and manufacturing is a high technology and cost intensive industry that takes decades to mature. World over establishment and growth of this industry is dependent on support and patronage of the Government. However, once matured it is known to make sizeable contribution to the national GDP through earnings/savings in foreign exchange. The Pakistan Aeronautical Complex is a Pakistani aerospace, defence, aviation contractor and Military Corporation producing aerial systems and undertaking aerospace designing for both military and civilian usage. Keeping in view the huge gap of aircraft manufacturing industry in the country investment including Foreign Direct Investment in aircraft manufacturing shall be encouraged and Civil Aviation Authority through Aviation Division shall prescribe conditions to setup, regulate and control the manufacturing, sale, import and export of aircraft. The Federal Government will negotiate with global Original Equipment Manufacturer (OEM) to facilitate establishment of a complete aircraft assembly plant in Pakistan along with its ancillary industries. Aircraft manufacturing/design Industry once approved by PCAA, the approved organization for aircraft design/manufacturing should not require annual renewals; the validity of organization's approval once issued shall be perpetual, however, each organization must be completely reviewed for compliance with applicable regulations at period not exceeding 24 months. Nonconformances and observations pointed out during the audit are to be rectified within specified time. Failure to address the observations within the specified time may entail financial/administrative penalties in accordance with relevant regulations. Investment including Foreign Direct Investment in aircraft manufacturing shall be encouraged to setup, manufacture, sale, import and export of aircraft and its spare parts including engine and related equipment in adherence to best industry practices and procedures. Incentives shall be offered to investors by FBR in setting up aircraft manufacturing/design-related equipment as per Annex-B

See Page 98 for Annex - B

(mostly tax exemptions on manufacturing equipment and items related to Aircraft engine or parts manufacture)

WET LEASE - AK

4.7 Policy Guidelines for Dry and Wet Lease of Aircraft

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Dry lease will be encouraged over wet lease arrangements. There shall be no permanent addition to capacity by inducting foreign registered aircraft on wet lease. In case the required aircraft are available with local Charter & other operators, the airlines will be encouraged to first explore the possibility of leasing local aircraft.

4.7.1 Wet Lease Special Conditions Temporary induction of foreign-registered aircraft on wet lease may be permitted under the following conditions:

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- a. Extra ordinary/special circumstances (such as aircraft accident or Hajj, Umra, Ziarat operations or temporary expansion, etc.).
- b. Permissible up to maximum of 90 days extendable to 180 days in one year starting from induction of aircraft on wet-lease; not extendable further.
- c. Aircraft age shall be in line with paragraph 4.2 (aircraft registration).
- d. Wet-leased aircraft capacity (ASKs) shall never exceed total dry-leased/purchased aircraft capacity (ASKs) at any point in time.

Commercial Vision for PAC KAMRA – Restructuring Defence Production Industrial Units

Brief of Recorded Minutes of Meeting

Medium: Zoom

Date: 19th October, 2020

A. Participants:

Senate Sub-Committee:

1. Senator Nauman Wazir Khattak
2. Senator Nuzhat Sadiq

Ministry of Defence Production:

3. Lt. Gen Sadiq Ali – Secretary MoDP
4. AVM Sarfraz – DGDP Air

PAC Kamra:

5. AVM Aamer Maken

CAE-Professionals' Society

6. Engr. Wing Commander Salman Masum, President of the Society
7. Engr. Dr. Javed Khan (HOD Aerospace Engg. At Tuskegee Univ.. Alabama USA)
8. Engr. M. Khalid Khan – Manager Maintenance & Publication Services, Mitsubishi Heavy Industry's Regional Jet (Previously Bombardier commercial jet), Ontario, Canada
9. Engr. Azmat Hayat Khan – Consultant IT & Telecom (ex-Rogers & Fido), Visiting Professor Community Colleges, Toronto, Canada
10. Engr. Qamar Ahsan – President, AeroTrain Corp, Michigan, USA
11. Engr. Nazir Haider – Engg Sales, Collins Aerospace Landing Gears, Canada
12. Engr. Fahim Ahmed – Quality Control Engineer, Cyclone Manufacturing., Canada
13. Engr. Faran Hafeez – Project Manager, Engine Control Systems, Development & Certifications, Pratt & Whitney Canada, (Raytheon Technologies)
14. Engr. Asad Baig – VP Engineering Cascade Aerospace, Vancouver, Canada – an operating unit of IMP Aerospace & Defence

B. Talking Points

A. Engr. Wing Commander Salman Masum (Retd): Hosting the Meeting

1. Welcome note
2. Recitation of Holy Quran
3. Elaborated the Main Agenda items
 - #4 Support of Expat Experts to PAC Kamra in Commercialisation Efforts*
 - #5 A Brief Presentation by PAC Kamra*
 - #6 Summary of Parleys thus far & the Roadmap Ahead*
4. It was made abundantly clear that the CAE-P Society's involvement in the process of PAC Kamra's efforts to commercialise is being undertaken on Free of Cost basis, without any conflict of interest, there are no hidden costs and that personal gains/interest of any member or their organisations is non-existent.
5. The Task of the Senate Sub-Committee and therefore for this Group.

"To *develop a viable commercial stream* for Public Sector Industries in Ministry of Defence Production" (by):

- **Utilizing** *their Excess Capacities, Special Capabilities & Service Expertise*
- **Organisational Reforms:** *Orientation towards Sales & Marketing*
- **Develop Financial & Infrastructural Models** *in-line with International Standards and Best Practices – "for Sustainability"*

And

- **"to Propose a Comprehensive Plan of Action for Phased Implementation over a Defined period of time"**

B. Senator Nauman Wazir Khattak:

1. Note of thanks to fellow Senators, Secretary MoDP and all the prestigious participants of the meeting.
2. Visit Report to HIT, future prospects and vision, a way forward towards a profitable and sustainable organization along with meeting defense requirements.
3. Visit Report to PAC Kamra, fruitful discussions, has a bright future.
4. Reference to requirement of PKR 98 billion for subsidy at senate's defence production committee.

5. Revenue stats: Generated: PKR 4000 billion; 1300 billion lost on state enterprises, 1289 billion on defence (2.8% of GDP spent on defence as of 2020), only 750 billion on infrastructure development. Indicated the need for the state enterprises to stand financially viable in their activities and progressively stop dependence on GoP grants.
6. 5 industries in Defence Production Ministry: PAC Kamra, HIT Taxila, POF Wah, NRTC and Karachi Shipyard. The latter two are running in profit, but former three are in loss.
7. Aim: Strategy for making these organizations profitable alongwith meeting their national defence requirements.
8. Majority of HR available with PAC in the form of retired PAF officers – untrained in Commercial aspects.
9. Future vision of the aviation industry in respect of PAC Kamra.
10. Lack of marketing and sales at PAC. Issues with cost accounting. Policy required using the manpower and machinery after meeting defence requirements to make PAC more profitable. No interaction with the private sector.
11. Steps for efficient use of machinery and equipment. Use each other's instead of new procurements. Promotion of reverse engineering instead of R&D to reduce cost of production. Independent balance sheets.
12. International Certification and its importance.

C. Senator Nuzhat Sadiq:

1. Pointed out the importance of developing linkages for commercial activities, efficient utilization of machinery.
2. Will to change, sufficient capacity and resources are present to be utilized for commercial customers.
3. Road forward is commercialization.

D. Secretary MoDP: Lt. Gen. Sadiq Ali

1. Commercialization possible by using surplus hours of machinery and manpower.
2. Basic focus of MoDP is indigenization, followed by commercialization and export.
3. Component development facilities is the most difficult of the domains being pursued by utilizing the PAC, HIT and POF excess capacity.
4. Indigenous development to cover import of items thus reducing FE burden of Costs
5. R&D can improve by sharing knowledge with partners.

6. Reorganizing and restructuring of boards – including professionals and businessmen to make the organizations more vibrant.
7. Machinery and equipment can only be modernized through commercialization.
8. HIT, PAC and POF now interconnected to utilize expertise of sister organizations.
9. Need of strategic reorientation required for the organization in a slow and steady manner, not abrupt.
10. Transfer of technology and its importance.
11. Ease of doing business: MoDP restructured and reorganized. Emphasis on indigenization.

E. Engr. Dr Air Cdr. Javed Khan (Retd): (See Appendix – A to this Brief)

1. Impact of JF17 production, not just assembly, in Pakistan on our economy is phenomenal: importance of ToT.
2. Improve marketing of excess capacity.
3. Parts manufacturing approval of international agencies is compulsory for entering component manufacturing market.
4. Assured of full support for PAC.
5. Answered a query regarding the "capacity of PAC Kamra to manufacture a certified hydraulic actuator or a pneumatic actuator or aircrafts, the long term vision of PAC" by saying that there is a need to develop such capacities.

F. Engr. Wg. Cdr. Khalid Khan (Retd): (See Appendix – B to this Brief)

1. Sections of airplane manufacturers: Airframe, component manufacturing, MROs and CROs.
2. Suggested strategic plan for PAC would be to go into MROs and heavy maintenance of aircrafts as it is a relatively less competitive and more profitable market compared to airframe and component manufacturing.
3. Certification by FAA etc would be required for that.
4. Suggested collaboration with a major international stakeholder.
5. Answered a query regarding "executive jets" by saying that smaller business jets are something that could be looked into, along with MRO facility for business jets.

G. Engr Qamar Ahsan:

1. PAC Kamra to replicate training modules and devices designed and Built in the Western World
2. Endorsing the designing and manufacturing of the components is within the scope of PAC Kamra

3. Runnable Engine, Engine Gear Trainers, Landing Gear Trainers are designed by our company
4. Turbo Jet, Turbo Shaft, Reciprocating Engine - training devices designed to produce a learning environment
5. Not complicated, Not so difficult to make - Just need to be marketed in a proper manner
6. The competition is really low / Not many companies in west are making these training modules
7. Can help in identifying what can be made and how to price or market it.
8. Query: Can you identify training equipment manufacturers who can collaborate with Kamra?
 Answer: Training Devices are already possessed by the aircraft manufacturers like US and UK and won't be easily collaborating due to trust deficit. However we can create generic training devices which have a bigger and wider market.
9. Training is an ongoing process - has a bigger market for training devices
10. Rather than finding a partner, easier quicker and cheaper option is to create your own devices based on your assessment
11. Can give ideas, details, contacts - identify markets
12. Small Capital required - larger expansion chances
13. SOA & SOE will be the first customers if PAC starts commercializing this idea- there's no risk.
14. His Company is ready to market PAC Kamra's creation - branding etc.

H. Engr. Air Cdre Mr. Amin (Retd):

1. Procured some trainer devices For An Aviation Training Centre at Akora Khattak.
2. PAC can visit and think about reverse engineering based in

J. Engr. Azmat Hayat:

1. Try to target local market first
2. Two organizations out of 5 are making money out of this - NRTC & Karachi Shipyard; So PAC should Observe their commercial procedures etc to learn how to improve own systems.
3. Incentives must be offered to the people and stakeholder OR Community builders who are contributing in setting this mechanism for PAC Kamra.

J1. Secretary, MoDP Lt. Gen. Sadiq Ali: informed that

- NRTC is doing business with Armed Forces rather than the other organizations

- Keeping a profit margin is important rather than cost to cost basis
- The financial Models must be revised and sustainable models must be encouraged allowing them to make money
- Having potential and being commercially viable is what it requires.
- Right Pricing model is important - (rather than Book Entries)

K. Engr. Nazir Haider:

- Spelled out licensing and Certification requirements for international aviation markets including an in-house First Article Approval Procedure.
- Recommended PAC to become fast moving and high-end items' tier 2 supplier like in Landing gear systems.

L. Engr. Fahim Ahmed: (See Appendix – C to this Brief)

- Based upon his Quality Control management emphasised the need to build linkages and connections abroad for manufacture of structural parts.
- His Comparative study of the variances between his organisation and PAC show the extent of non-commercial nature of the later.

M. Engr. Faran Hafeez: (See Appendix – D to this Brief)

- As Control Systems' development manager for P&WC, he emphasised many engineering tips and processes for R&D and certification in-house.
- Piece-meal commercialisation may be considered; step by step
- Training and educating employees is a must
- Aggressive marketing approach is necessary for the competitive market

N. Engr. Asad Baig:

The video message from Engr Asad emphasised:

- the need to optimise processes through continuous system improvement tools and
- tier 2 supplier requirements be met in order to seek foreign markets.

O. PAC Team: AVM Aamir – Dy Chairman PAC

1. Long term vision for commercial activities is the setting up of an MRO at Islamabad International Airport – working on Commercial Aircraft MRO
2. Line station to be established in Karachi

3. Ready to have joint ventures for commercial manufacturing and MROs.
4. Component manufacturing requires R&D and we are not in a position to do that.
5. PAC is saving Pakistan 10-20 million dollars through indigenous MROs of JF17 and Mashaak aircraft.

C. Summary of Parleys & Road Map Ahead

Engr. Wing Commander Salman Masum (Retd):

SUSTAINABLE APPROACH FOR PAC COMMERCIALISATION: Introduction

Deliberation on the Task assigned by Senator Nauman and discussions held before this meeting and points and concepts proposed during this meeting are summarised here in below:

TWO MAIN STREAMS CAME TO THE FOREFRONT:

1. Commercialisation of Manufacturing/Repair Activities
2. Organisational Orientation and Structural Reforms

THEREFORE TWO CAE-PS Think-Tank GROUPS were created; one each for:

Organisational Reforms – covering ALL MoDP Units

And this one... for PAC Kamra Specific Activities

TWO AIMS for this Group were identified today and in discussions with PAC before:

1. This group will work with PAC.... to find their Resources to commercialize their products, Help Value ADD their products.... For aviation industrial Markets outside Pakistan
2. The aim of this forum is ALSO to utilise, on commercial basis, the Surplus Man and Machine Hours within PAC capability – Engaging Local Industry

C.1 As emphasised by the various Experts, The **Matrix** for SUSTAINABLE Approach for PAC is based upon:

KAMRA Activities – PRODUCTS:

Facilities

Capability
Capacity

Products

Military
Non-Military

Services

After Sales
Consultancy

KAMRA Likely – CUSTOMERS

International
Domestic

Aviation
ANY?

Systems
Out Sourcing

C.1.1 KAMRA CAPABILITY LIST FOR DOMESTIC CUSTOMERS OR TIER 1 FOREIGN SUPPLIERS:

Importance of PAC to show the customers their potential in the form of a well-documented catalogue:

- Manufacturing Capability List
- Repair Capability List
- Illustrated Product(s) Catalogue, containing:
 - New & Value Added Products List
 - Aviation Training Aids/Devices,
 - Avionics Test Equipment,
 - Ground Handling and Support Equipment

1. PUBLISH YEARLY
2. IDENTIFY Products by NSN & Barcoded PAC Part No.
3. Provide Lead Time, MOQ
4. Price (ex-works)
5. Broad outline of Warranties Applied
6. Compliance – Certifications and Approvals

Format of Data Requested is as follows:

S No	Manufacturing/Repair Capability (*)	Total Capacity (Machine hours) In 3- Shifts (optional)	Capacity (Machine hours) Available for Commercial Use	Types of Certifications Available for Every Process or Facility	Deficiency in Expertise etc
1					
2					
3					
4					

Table: PAC Capacity For Out Sourcing

(*): List all the Available Capacity – PROCESS & FACILITY WISE

C.1.2 LINE OF PRODUCTS: TARGET – FOREIGN COMMERCIAL SALES

1. **Major Equipment:** (Existing) Modified & Value Added; **Attractive** for Commercial End-users
2. **New Products:** (Tier 2 Manufacturer) Be Developed for Civilian Customers – Low Cost, High End, Structural Parts, Fast Moving Items etc
3. **Downstream Industrial Products:** Training Devices, (Avcs) Test Equipment, Ground Handling & Support Equipment
4. **Long Term Vision:** Military **MRO/CRO:** Aircraft, Engines & SystemsBRANDED, EASA Licensed
5. **Services:** After Sales

NB: CAE-PS ROLE For all the above, CAEPS members shall extend unconditional help and consultation Free of Cost.

C.1.3 SUGGESTIONS FOR CUSTOMERS TYPE:

MILITARY CUSTOMERS



Acquire through: Defence Attaché & GOP

Local

Friendly Forces

CIVILIAN CUSTOMERS

For **Local Commercial Sales (LCS): Out Source** Excess Capacity or Special Capability

CAE-PS can Help Bridge the Gap – See Appendix – E to this Brief – Kamra Visit Report by local industrial lists (Report by Engr Air Cdre M. AMIN)

For **Foreign Civilian Sales (FCS) - Airlines & OEMs**

☞ Needs & Gap Analysis by **CAE-PS**

☞ Target Products (– Line of Products as above) upon Advise from CAEPS Experts

C.2 INTERNATIONAL CERTIFICATIONS & APPROVALS:

All Supply Chain and Manufacturing Processes be ISO certified

PAC must **Develop:**

☞ **1st Article Inspection** processes for Approval and **System Integration** in-line with the ICAO/FAA Requirements

☞ Component Repair and Manufacturing **Licencing**,

☞ Product **Qualification** and **Certification** as per applicable International Standards (not only Military or OEM Based)

☞ International Regulatory Compliance – without Exception – like REACH (Banned Chemicals)

C.2.1 Commercial Team in PAC Set Up must include:

EASA Part 121 (Design & Manufacturing) Approvers

EASA Part 145 (Approved MRO Facilities)

EASA certified Approvers & Auditors

Last but not the least... the **Top Level Management Executives** must be Qualified (MBA's/MS'/PhDs) & Experienced in Corporate business entities

C.3 MRO – SET UP AS A LONG TERM AIM

- Civilian Aircraft MRO Need be re-established; Stick to Military MRO but develop Engine MRO/CRO and explore other options within Military MRO domain
- Duplication be avoided – with PIA at Karachi

- Brand name be associated for foreign customers, if Civilian MRO is required
- MROs/CROs must be undertaken by EASA and FAA standards – not OEMs

C.4 ORGANISATIONAL RESTRUCTURING AND COMMERCIAL ORIENTATION

Deliberations with MoDP and the second CAE-PS group 2 are summarised here below:

☞ Commercialisation of its Activities at PAC requires a NEW Mind-Set that breeds a Corporate & Business culture.

Such a culture would require support from three factors that would help build and sustain the new mind set; namely:

☞ **Organisational Structure** that is

- ★ Customer Oriented (Lean & Efficient – Decision making)
- ★ Oriented by & Supportive of International Regulatory Compliance
- ★ EASA/FAA Approvals (Functional & Valid)

☞ **Procedures & Processes** Restructuring

- ★ Red-Tape and Bureaucratic procedures be replaced with more Internationally Acceptable Best Practices
- ★ Process improvement through optimisation
- ★ Transparent & Paperless
- ★ Standard and not driven by Leadership discretion
- ★ Change local procedures for entry, gate passes etc to facilitate civilian local industrialists and workers to utilize excess machine and man hours

☞ **Marketing and Sales**

- ★ Manned and Performed by CIVILIANS
- ★ Qualified Employees (MBA's, MS')
- ★ Branding Experts

NB: *CAE-PS will help develop & advise such an INFRASTRUCTURE Based Upon Similar Models Available in the Advance Economies*

C.4.1 PROPOSED MODEL STRUCTURE: (See Appendix – F to this Brief)

1. A **Limited Liability (unlisted) Public Company** under Independent Board of Governors and headed by CEO's is a suitable organisational structure that can be modified to keep the Security aspects of the particular Industry in mind.
2. Setting up of a **Steering Committee at the MoDP for each Unit with 3-4 members including the chair** comprising members appointed from MoDP, PAC Kamra & CAE-P Society under the empowerment provided by the Senate to restructure the factories in Kamra.
3. PAF to still provide the manpower to PAC; however, it be diverted early in their career paths through streams such as Base & Depot Level maintenance stream, an Academia career progression and those for the Industry; Each one being suitably Trained, Educated and Qualified during the course of their services.
4. Undertake process & system improvements ... continuous improvement... adding marketing/ commercial functions, and gradually limiting funds to Development of National Security Platforms... over a defined time-line
5. A period of five years be given to PAC to bring the external element of their funding to Zero – **Maximum FIVE Years**. A plan of Action be proposed by PAC Kamra to show implementation of the elements of commercialization (road map at C5 below) contained in the records of this meeting.
6. Last but not the least, in any commercialization reforms and activity, the importance of **supporting Pakistan Armed Forces shall not be compromised and therefore shall retain their original posture to be state owned enterprises**.... gradually minimize dependency on government grants to take care of their cost of sales and generate the revenue required to sustain activities.

C.5 ROADMAP TO SUSTAINABLE COMMERCIAL ACTIVITIES

- **Long term Vision** be reviewed every three years to keep abreast of the technology and qualification requirements:
 - Military MRO/CRO be expanded through collaborations with other friendly Air Forces, like Hellenic (Greek), German, Singapore and Turkish Aircraft Industries in addition to the Chinese through the Defence or Technical Attaches at Pakistani Embassies abroad.

- Start with fast moving items like overhauls of Landing Gear & Brakes, Canopy fragilisation, (Radar) Nose Radome painting and manufacturing of hardware and plumbing lines for hydraulic, oil and pneumatic systems.
- Venturing into Civilian Aircraft MRO must be in collaboration with and through the use of PIA facilities like PEC and those at Isphani Hangar in Karachi.
- Partner with executive jet manufacturers for manufacturing structural parts and/or after sales services through turnkey maintenance services.
- Develop UAV/Drone/Gyrocopter manufacturing capability for security, surveillance and even Emergency Medical services.

💡 **Develop and Establish a Corporate & Commercial Infrastructure:**

- Manned Professionally for Sustainability of Commercial activities as per the recommendations contained here-in before.
- Adopt Best Practices/International Standards for Commercial Orientation making decision making efficient, transparent and corporate oriented.
- Obtain Foreign Aviation & International Certifications & Licensing approvals to compete in the international market as Tier 2 Supplier/ Manufacturer. Obtain ISO's and PCAA Certifications, where necessary as well. Keep them valid and renewed.
- Develop in-house qualification and inspection regime for new products and systems' integration for customers.
- Out Sourcing Excess Capacity and Capability to Local Manufacturing Industry to utilize Excess Capacity.
- Develop Capability to manufacture Low cost supplies/Fast moving and High-End Structural parts (as identified for PAC by CAE-PS Experts from time to time) to market through CAE-PS E' Experts, where possible.
- Develop marketable value adds to existing products for Civilian and Military customers in accordance with recommendations from CAE-PS Experts.
- Develop Aviation Training Devices, Virtual Trainers, Avionics Test Equipment and Aircraft Support & Handling Equipment for Aviation markets abroad as identified by CAE-PS experts (AeroTrain Inc).

- KAMRA to Issue Manufacturing & Repair Capability Lists (MCL & RCL) & Illustrated Products Catalogue (IPrC) on yearly basis as per the recommended set of information.
- Proper branding of PAC Kamra be developed for marketing its products. E-brochures with product list, lead times, ex works prices and warranties etc. be published and updated.
- Establish marketing network abroad through local agencies on incentive/ partnership basis.
- Develop and expand After Sales Services Capability to secure continuous cash flows for Products/Systems sold. Export manpower and spares. Develop consultation for friendly Air forces and private aviation companies.

D. Conclusion:

A question and Answer session followed.

☞ Senator Nauman Wazir thanked all the participants, especially the ones from Canada and the USA.

☞ He directed that a brief of the minutes from this meeting be forwarded to the Senate Sub-Committee.

☞ He also announced that a follow-up meeting will be planned shortly and all required participants will be informed accordingly.

The Meeting ended after 4 hours 10 minutes.

Dated: 22nd October, 2020

Convenor of the Sub-Committee
of the Senate

List of Attachments to this Brief of Recorded Minutes of Meeting

Appendix-A: Submissions for Senate Sub Committee by Dr Javed Khan: Pge-4 Para E

Appendix-B: An overview of Aviation industry by Engr Khalid Khan: Pge-4 Para F

Appendix-C: Study of PAC & Cyclone Manufacturing by Engr. Fahim: Pge-6 Para L

Appendix-D: Restructuring DP Industries – Inputs by Engr Faran: Pge-6 Para M

Appendix-E: Visit report of PAC Kamra & HIT by Engr Amin: Pge-9 Para C.1.3

Appendix-F: Proposed Outline of Structure for MoDP Units: Pge-11 Para C.4.1

$\frac{1}{4}$

2 Organisational Structure

Organisational Structure	2008/2009 Financial Year Reported by the company in relation to the VAA in Quarterly and Financials reports									
	Board of Directors	Chairman	President	Managing Director	Deputy Managing Director	Chief Executive Officer	Chief Financial Officer	Chief Risk Officer	Chief Compliance Officer	Chief Information Officer
Corporate Structure	NAACU									
	Customer Oriented/Project Teams									
	Thomson/Parsons the entity in a Unit based Private Limited Liability Company under MRP									

$\frac{3}{4}$

Activity Description		Support Course Approval		Licensing		Qualification		Regulatory Compliance		Best Practices		Standardization		Material Removal Work		Others??		Airworthiness & Safety, Modifications Time Compliance & Alert Technical Support and In-Service Support Programmes		As Applicable	
		FAA, EASA, ISO, PCAA Approvals																			
6	International Certifications																				
	& Others as Applicable																				
	Engineering & Design Office																				
	OEM's & Customer Specific																				

4/4