

Info Memo

INVESTMENT PROJECT READY TO OFFER (IPRO) KERTAJATI AIRCRAFT MAINTENANCE CENTER (KAMC) – MAINTENANCE, REPAIR, OVERHAUL (MRO) FACILITY

Directorate of Infrastructure Planning 2024



Investment Project Ready To Offer (IPRO) Kertajati Aircraft Maintenance Center (KAMC) – Maintenance, Repair, Overhaul (MRO) Facility

Directorate of Infrastructure Planning 2024

Topic

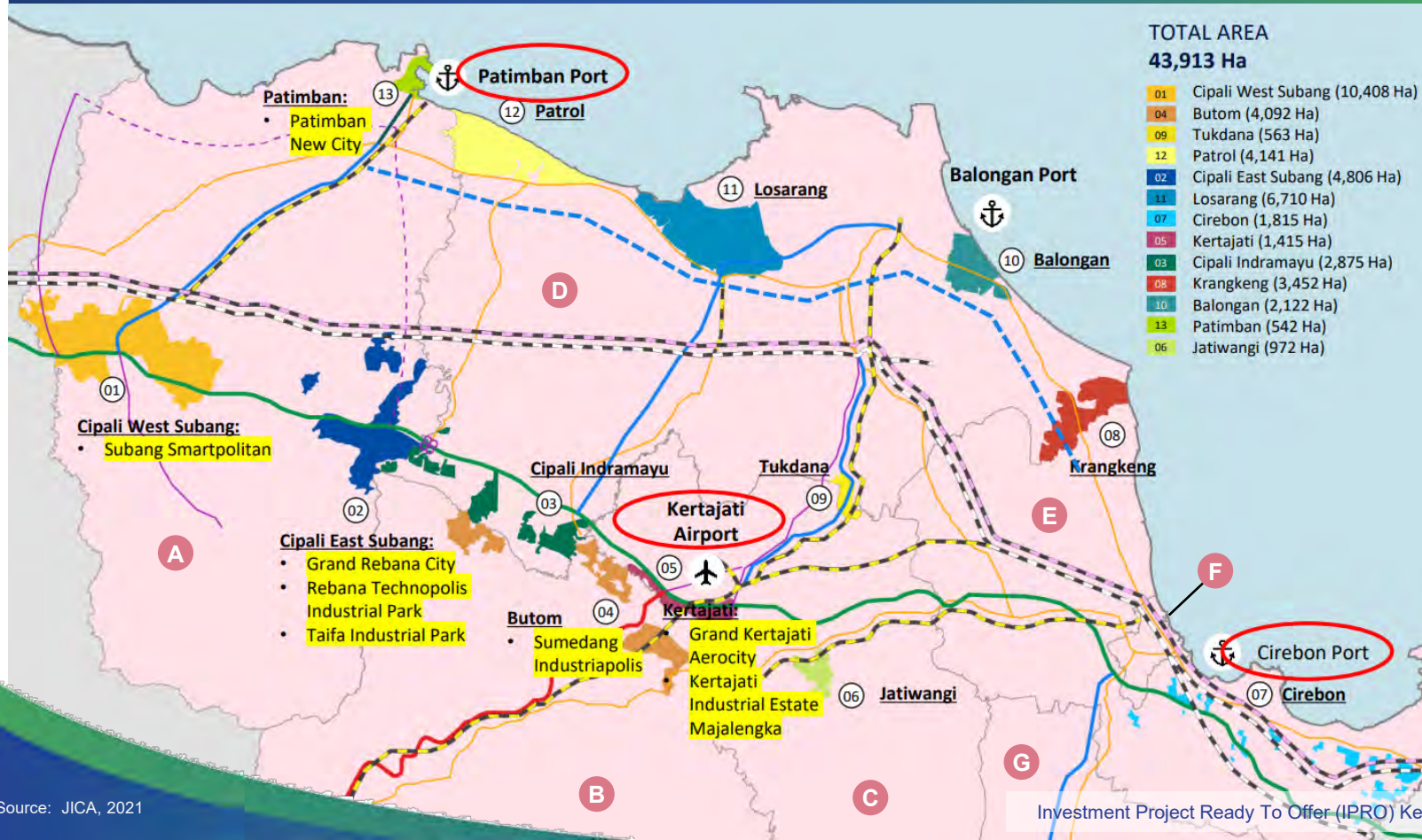
- 1 Strategic Overview of the Project Location
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- 5 KAMC Facility Project Feasibility



REBANA AREA

Bandara Internasional Jawa Barat Kertajati (BIJB)) is a key infrastructure supporting the development of the Rebana area, focusing on being an important transportation hub for the local community and the development of the Rebana region. Kertajati serves not only as an airport but also as an integral component in the vision and mission of sustainable and globally-oriented development of the Rebana area. The Rebana area has been designated as a National Strategic Program (PSN) through the Coordinating Minister for Economic Affairs Regulation No. 9 of 2022, as well as its accelerated development in conjunction with southern West Java through Presidential Regulation No. 87 of 2021.

Main Areas in Rebana



Rebana Area Development Strategy

Development Locations

- A Subang Regency (Patimban Port)
- B Sumedang Regency
- C Majalengka Regency (Kertajati Airport)
- D Indramayu Regency
- E Cirebon Regency
- F Cirebon City
- G Kuningan Regency

Development Stages

Stage I

Focus on 4 Industrial Areas through optimization of land, sea, and air transport connectivity (Located in 1. Subang Smartpolitan, 2. Patimban New City, 3. Grand Rebana City, 4. Grand Kertajati AeroCity)

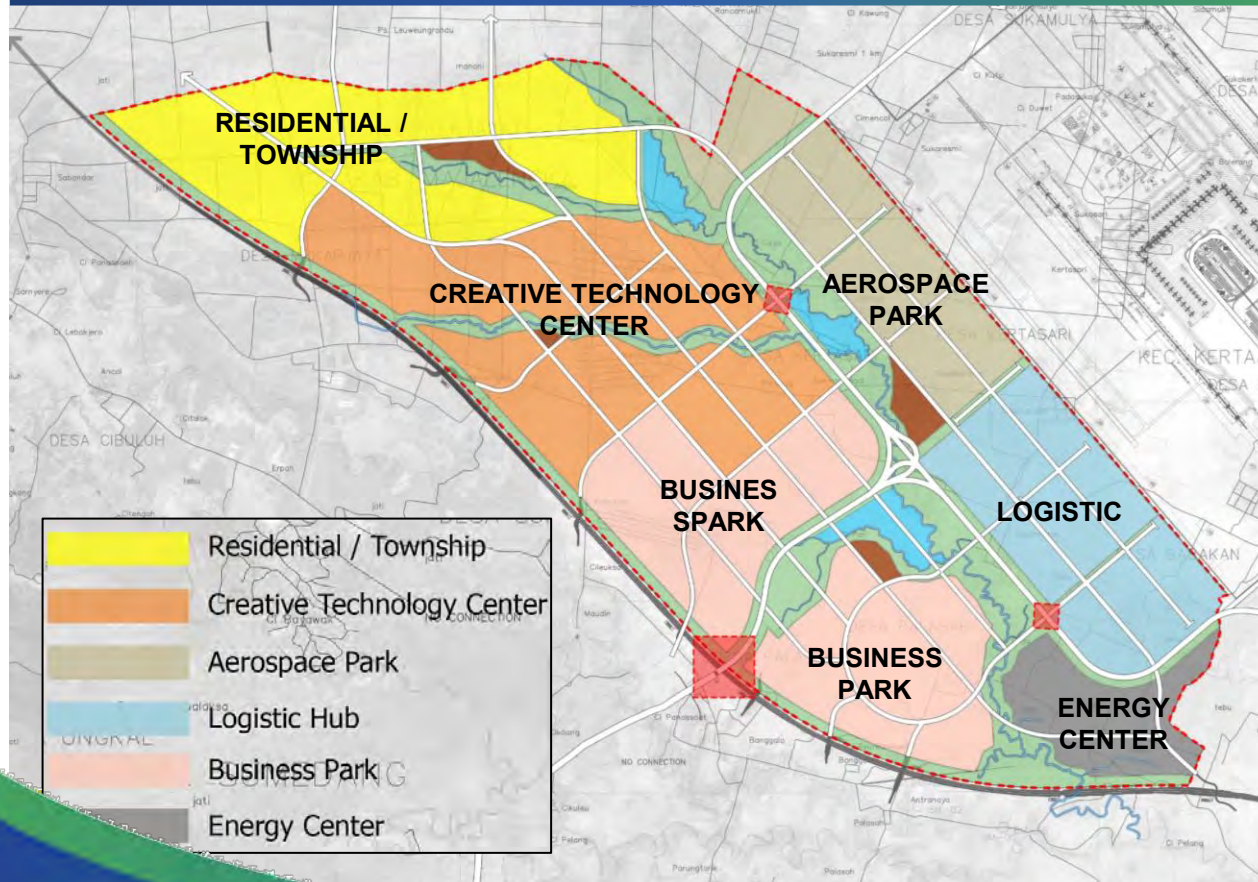
Stage II

In 9 other Industrial Areas (9 Industrial Areas that do not yet have a Masterplan)

KERTAJATI AEROCITY

Kertajati Aerocity covers an area of 3,689 hectares and is built in five phases. Phase I focuses on airport development, phases I-II will concentrate on developing Kertajati Aerocity, phase III will focus on developing Kertajati as an aerotropolis, and in the final phase, Kertajati Aerocity will pave the way for sustainable economic growth. This area is expected to create 1.3 million new jobs with a support capacity for up to 3 million residents.

Kertajati Aerocity Zone Distribution



BIJB North Side Aerocity Development

MRO (100 Ha)

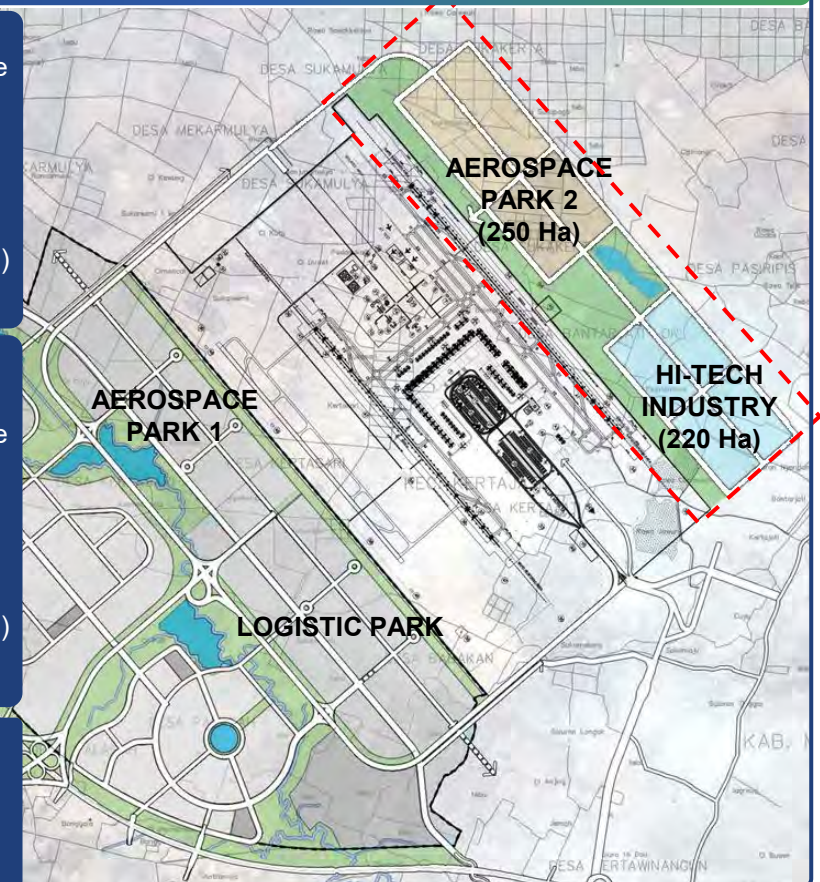
- Spare Parts Warehouse
- Maintenance Area
- Final Test Area
- Apron
- Office
- Employee Facilities (cafeteria, mosque, etc.)
- Parking Area

Aircraft Manufacturing (150 Ha)

- Spare Parts Warehouse
- Assembly Area
- Final Test Area
- Apron
- Office
- Employee Facilities (cafeteria, mosque, etc.)
- Parking Area

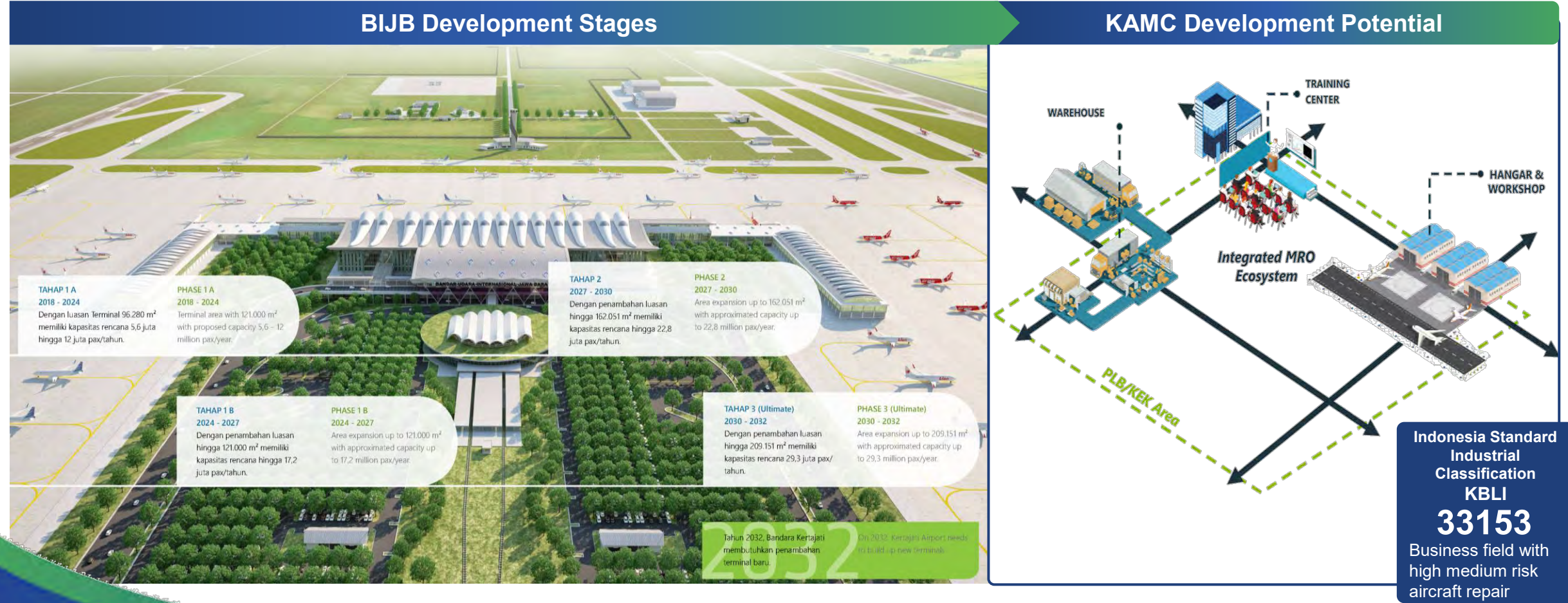
Heavy Industri (220 Ha)

- Steel Industry
- Krakatau Steel
- Pindad
- INKA



KERTAJATI AIRCRAFT MAINTENANCE CENTER PROFILE

KAMC is an aviation industry center with an integrated ecosystem supporting the fulfillment of continuing airworthiness with primary services including an aircraft maintenance hangar capable of accommodating up to 32 wide-body aircraft and 16 narrow-body aircraft, supported by warehousing and workshop facilities, offices and training centers, apron, parking and ground access, and engine run-up areas.



3. Supporting Infrastructure for the Project

LOGISTICS SUPPLY CHAIN INFRASTRUCTURE SUPPORT FOR BIJB

Connectivity support between BIJB and international ports such as Patimban and Tanjung Priok, as well as transportation accessibility to supporting areas has been established and is under construction to enhance MRO logistics supply chain efficiency and other supporting service sectors. This connectivity also links the MRO Area (KAMC) with agglomeration areas such as Jabodetabek, Bandung Raya, and Cirebon, which serve as supporting areas for various services like finance, housing, and emergency support.

Strategic Connectivity of KAMC at BIJB

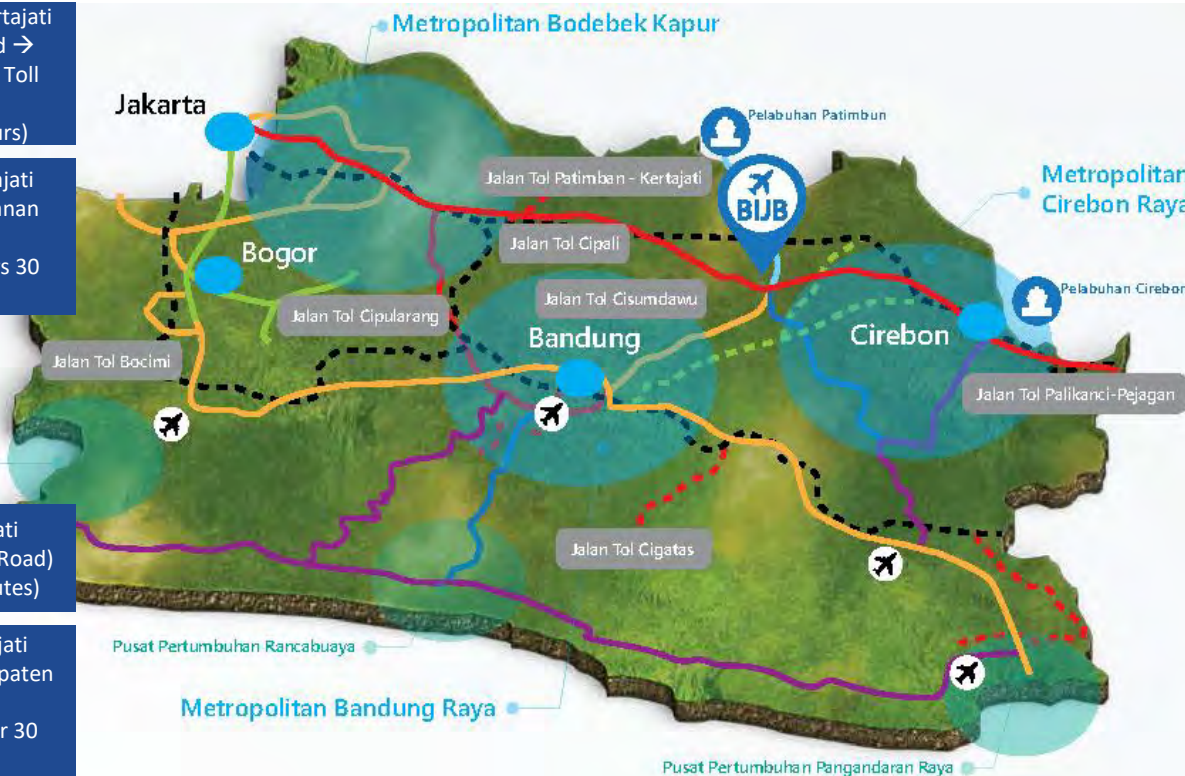
Connectivity Support

Pelabuhan Ratu - Kertajati
(via Provincial Road →
Cikopo - Palimanan Toll
Road)
(± 277 Km; ± 6 hours)

Rancabuaya - Kertajati
(via Cikopo - Palimanan
Toll Road)
(± 272 Km; ± 6 hours 30
minutes)

Bandung - Kertajati
(via Cisumdawu Toll Road)
(± 85 Km; ± 60 minutes)

Indramayu - Kertajati
(via Jatibarang - Kadipaten
Road)
(± 55.6 Km; ± 1 hour 30
minutes)



Bodetabek - Kertajati
(via Cikampek Toll Road
→ Cikopo - Palimanan
Toll Road)
(± 202 Km; ± 2 hours 45
minutes)

Bandung - Kertajati
(via Cipularang Toll Road
→ Cikopo - Palimanan
Toll Road)
(± 167 Km; ± 2 hours 30
minutes)

Cirebon - Kertajati
(via Cikopo - Palimanan
Toll Road)
(± 69.5 Km; ± 1 hour 20
minutes)

Kuningan Regency - Kertajati
(via Provincial Road → Cikopo -
Palimanan Toll Road)
(± 92 Km; ± 2 hours)

Pangandaran - Kertajati
(via National Road III)
(± 185 Km; ± 6 hours 30
minutes)

Runway for Cargo Aircraft Only

- Current runway size 3.000 x 60 msq, capable for Boeing 777-300
- Planned extension to 3.500 m

Toll Roads

- CIPALI toll access to the airport
- Toll access to Patimban Port (planned)
- Cigatas toll access (planned)

Railway

- Automated People Mover System at the airport (planned)
- Routes from Tanjungsari-Kertajati, Jatibarang-Kertajati, Kertajati-Arjawinangun (all planned)
- Intermodal station (planned)
- LRT in the area (planned).

Ports

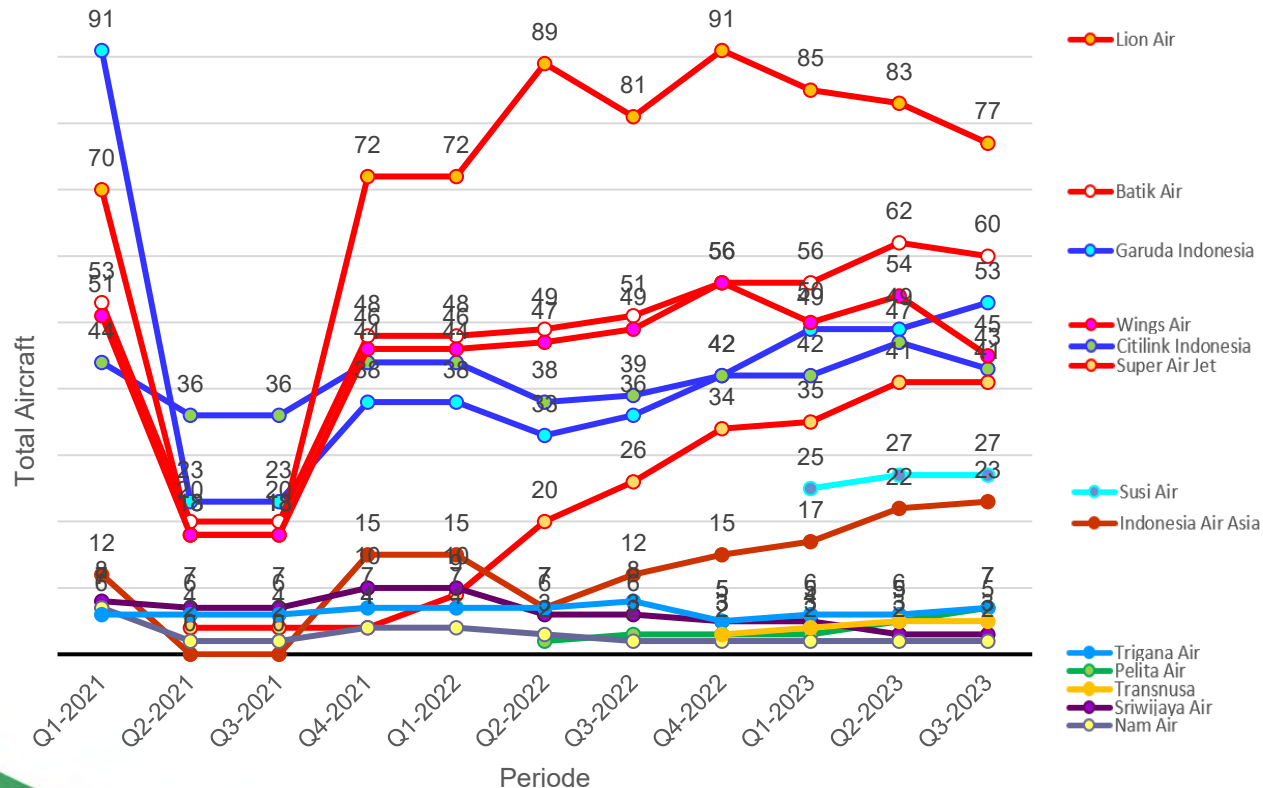
- Patimban Port (under construction)
- Cirebon Port

4. Market Opportunities for the Project

MRO MARKET OPPORTUNITIES IN INDONESIA

The increase in domestic air transport has not been matched by aircraft readiness due to a high number of non-serviceable aircraft. The main causes of limited fulfillment of continuing airworthiness are shortages in spare parts availability and limited ratings/capabilities possessed by domestic Aircraft Maintenance Organizations (AMOs). Therefore, PT Bandar Udara Internasional Jawa Barat (BIJB) is developing a business plan for Kertajati Aircraft Maintenance Center (KAMC).

Aircraft Readiness 2021-2023 by Operator



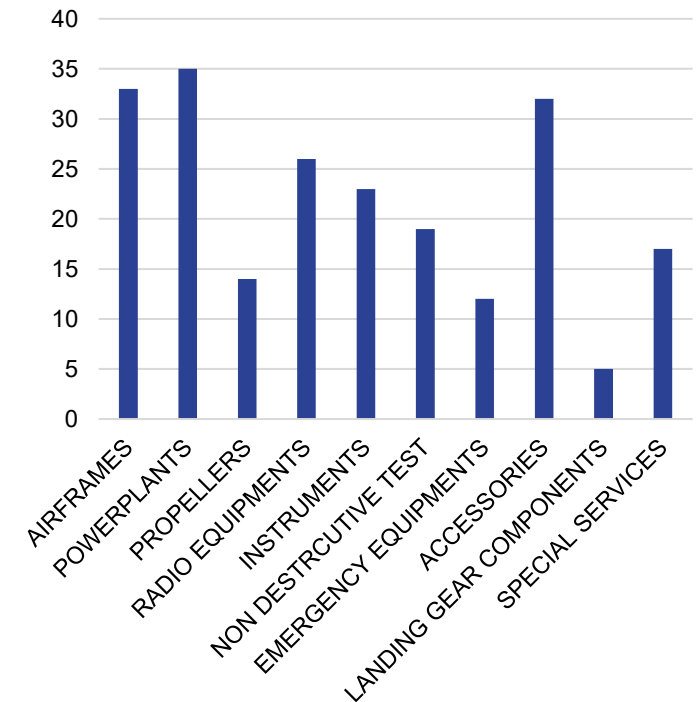
Served by 62 domestic AMOs

Aircraft with
Valid Certificate

584 AIRCRAFT
AOC 121
303 AIRCRAFT
AOC 135

Domestic
Aircraft
Readiness
69%

Domestic AMO Capabilities

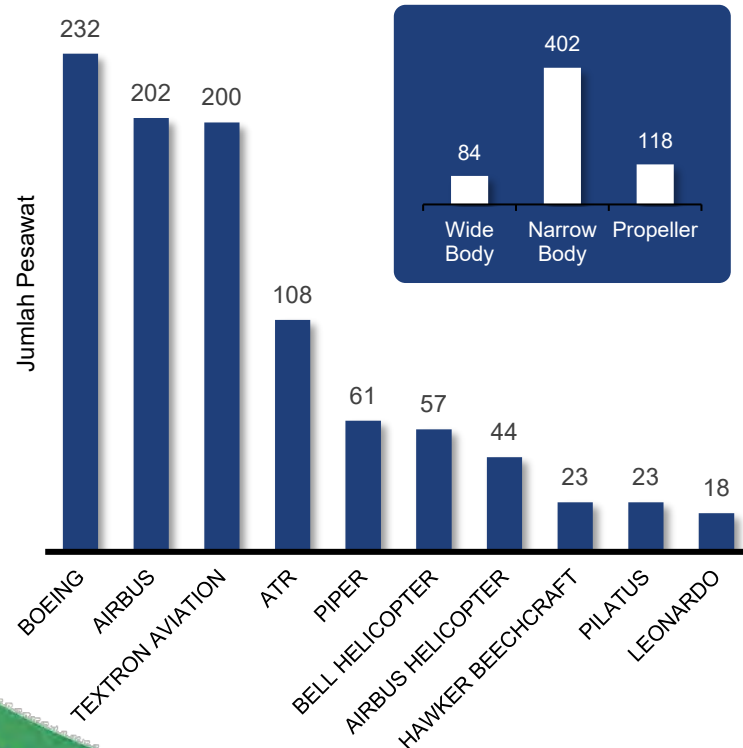


4. Market Opportunities for the Project

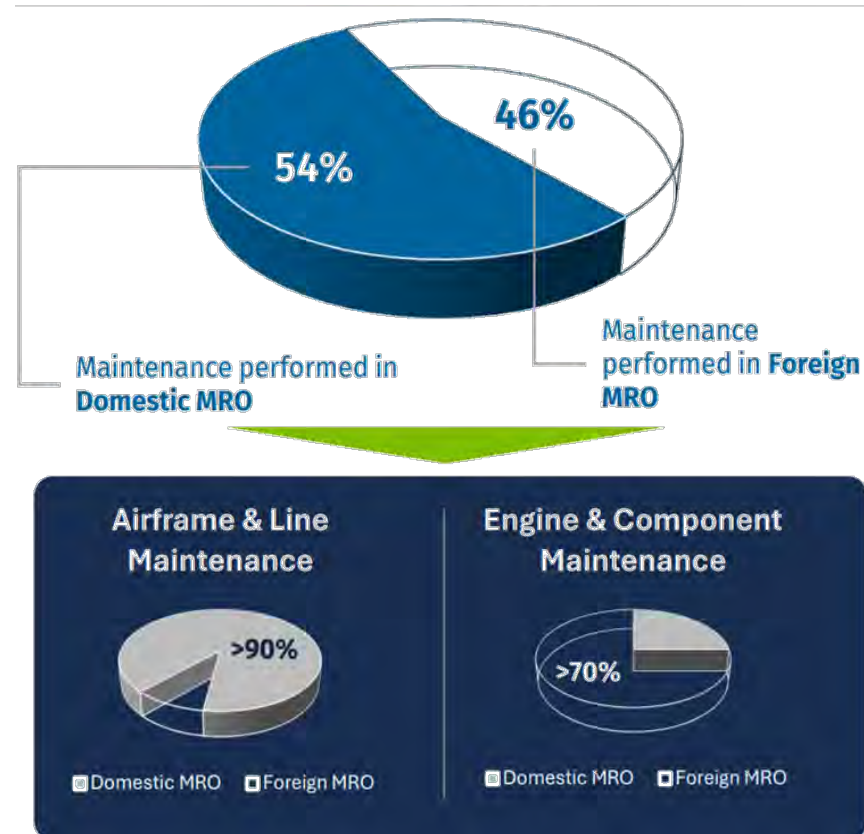
MARKET OPPORTUNITIES AT KERTAJATI AIRCRAFT MAINTENANCE CENTER

Indonesia is the largest MRO market in Southeast Asia. The total MRO market in Indonesia in 2023 is estimated at USD 1-1.5 billion, with 46% of that market's work still being done abroad. The Engine Shop and Component Shop facilities will strengthen the national aviation industry and reduce dependence on foreign MRO services (currently over 70% of engine and component maintenance is still performed outside Indonesia).

MRO Market Composition in Indonesia



MRO Market Absorption in Indonesia



KAMC Development Potential

In order to develop capabilities and capacity, manufacturer/OEM support is needed for human resource development, manuals/technology, material support, tools and equipment, as well as funding support from investors (through investment/partnership with local companies)



*Perhitungan dengan pembandingan GMF AeroAsia dan BAT

REGULATORY COMPLIANCE AND PROJECT STRUCTURE

The KAMC project is planned to be implemented through a B2B cooperation scheme between PT BIJB (Perseroda) and business partners for a duration of 25 years. The type of cooperation expected by PT BIJB includes land leasing and sharing gross revenue or BOT with sharing gross revenue. Compliance with various regulations from the Ministry of Transportation is required to conduct these types of businesses.

Regulatory Compliance for KAMC Project



Law (Undang-Undang) No. 1 of 2009 on Aviation

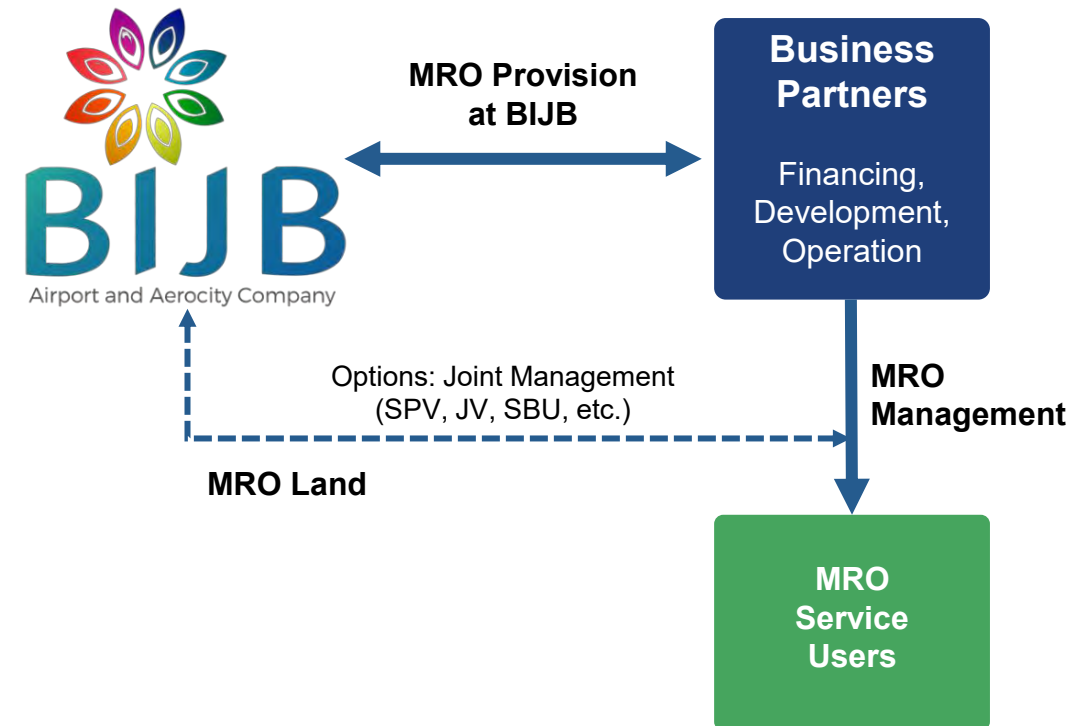
Basic regulations governing the aviation industry in Indonesia, including requirements for MRO companies



Transportation Ministerial Regulation No. PM 164 of 2015 on Amendments regarding Civil Aviation Safety Regulations Part 145 regarding Aircraft Maintenance Organization Certification:

- Aircraft Maintenance Organization (AMO) Certification: Companies wishing to perform aircraft maintenance and repair must have an AMO certificate issued by the Directorate General of Civil Aviation (DGCA).
- Operational Requirements: Organizations or companies wishing to establish an aircraft workshop or MRO must meet various operational requirements, including having an AMO certificate.
- Safety Standards: MRO companies must meet safety standards set in Indonesian aviation regulations to ensure that aircraft maintenance and repairs are carried out safely and in accordance with safety standards.

Indication of KAMC Project Cooperation Structure



GOVERNMENT INCENTIVES SUPPORT

The KAMC project receives non-fiscal incentives during investment preparation stages (construction and development). During operational phases, KAMC receives import tax exemptions through SKTD applications. Proses pengajuan PLB disertai proses revisi Permendag No. 8 Tahun 2024 akan berdampak pembebasan cukai, PPh pasal 22 dan PPnBM impor untuk KAMC. Potensi insentif lain dapat diupayakan melalui pengajuan KAMC menjadi KEK

Current Incentives for KAMC Project



Presidential Regulation No. 49 of 2021 concerning Amendment to Presidential Regulation No. 10 of 2021 on Investment Business Fields KBLI 33153A Aircraft repair and maintenance MRO business activities are included in the Priority Business Fields entitled to receive incentives in the form of:

Non-Fiscal Incentives

Ease of business licensing, provision of supporting infrastructure, guarantee of energy availability, guarantee of raw material availability, immigration, employment, and other facilities in accordance with the provisions of laws and regulations



Import Tax Exemption through Application for Certificate of Non-Collection (SKTD)

- Stipulated in Minister of Finance Regulation 41/PMK.03/2020 concerning Requirements and Procedures for Import and Delivery of Certain Transportation Equipment and Delivery and Utilization of Taxable Services Related to Certain Transportation Equipment that are Not Subject to Value Added Tax

Incentives being implemented by the Government and BIJB



Process of Revising Trade Minister Regulation No. 8 of 2024 concerning Third Amendment to Trade Minister Regulation No. 36 of 2023 concerning Import Policy and Regulation

- Agreement between IAMSAs, INACA, DGCA, Ministry of Finance, Ministry of Industry, Ministry of Trade that will provide verification leniency for Aircraft Spare Parts (as long as stated in the Illustrated Parts Catalog)



Process of Establishing Kertajati Bonded Logistics Center (PLB)

- Facilities including suspension of Import Duty, exemption of Excise, Income Tax Article 22 on Import not collected, VAT and/or Luxury Goods Sales Tax not collected

FINANCIAL FEASIBILITY OF THE KAMC PROJECT

With a business cooperation scheme implemented over a period of 25 years, along with primary revenue from MRO engine & spare parts (hangar rentals, landing gear & brake shop, engine shop), estimated revenues reach IDR 1 trillion (Phase I), IDR 2 trillion (end Phase II), IDR 4 trillion (end Phase III). Positive NPV and IRR higher than commercial bank interest rates indicate that the KAMC project is feasible for investor offering.

Estimated CAPEX

○ Phase I Investment (Y1-Y5)	Rp 1.425.360.291.068
<ul style="list-style-type: none"> • 4 hangars • Gedung kantor tahap I • Engineer office in hangar • West side access to airside • Supporting service access • Access to main road 	
○ Phase II Investment (Y6-Y15)	Rp 458.312.497.259
<ul style="list-style-type: none"> • 2 additional hangars • Landing gear & engine shop facilities • Phase II office building • Mosque & cafeteria • Supporting service access 	
○ Phase III Investment (Y16-Y25)	Rp 674.306.085.915
<ul style="list-style-type: none"> • 4 additional hangars • Phase III office building 	
Total MRO Investment/Ulimate	Rp 2.557.978.874.241
NPV	Rp 1.800.793.137.798

Business Prerequisites

1. Primary business activities of Kertajati International Airport running optimally according to projections
2. MRO operations running effectively, both in management and financially
3. Only one business partner with obligation to implement 3 (three) development stages
4. MRO business partner pays upfront land rental fees
5. MRO business partner willing to pay surcharge fee as a form of commitment
6. All movement predictions can be achieved according to projections

Investment Feasibility Estimation

Internal Rate of Return



19,79%

Payback Period



8,3 Tahun

Benefit Cost Ratio



2,17%

Weighted Average Cost of Capital



11,50%

Discounted Payback Period



11,10%

INVESTMENT FEASIBILITY FOR KAMC PROJECT

Investment in Kertajati Aircraft Maintenance Center (KAMC):



Large Market Potential

Indonesia is the largest MRO market in Southeast Asia, with total Indonesian MRO Market estimated at 1-1.5 BUSD in 2023. The Engine Shop and Component Shop facilities will strengthen the national aviation industry and reduce dependence on foreign MRO services (currently >70% of engine and component maintenance is still done outside Indonesia)



Financial Feasibility

With a business cooperation scheme implemented over a 25-year period, and KAMC's main revenue coming from MRO engine & spare parts (hangar rental, landing gear & brake shop, engine shop), estimated revenue reaches Rp 1 trillion (phase I), Rp 2 trillion (end of phase II), Rp 4 trillion (end of phase III). Positive NPV, 19.79%, with a payback period of 8.3 years



Infrastructure Support

Strategic connectivity between KAMC and the agglomeration areas of Jabodetabek, Greater Bandung, and Cirebon has been and is being built to improve MRO logistics supply chain efficiency and other supporting service sectors. Toll access to the airport, Patimban port, and railways has been planned to accelerate transportation accessibility to supporting areas



Government Incentives

The KAMC project receives non-fiscal incentives (ease of business licensing, supporting infrastructure, energy availability, and other facilities in accordance with statutory provisions). During the operational phase, KAMC receives tax allowance incentives and import tax exemptions through SKTD applications.

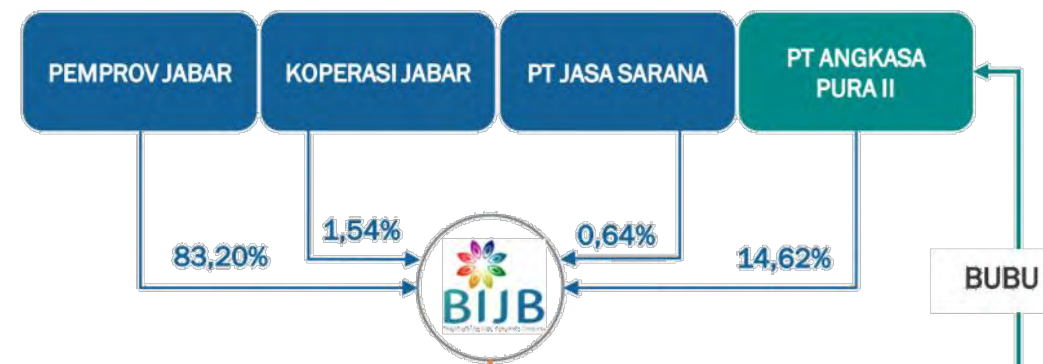


Project Cooperation and Structure

The KAMC project is planned to be implemented through a B2B cooperation scheme between PT BIJB (Perseroda) and Business Partners for a duration of 25 years. The preferred type of cooperation expected by PT BIJB is land lease and sharing gross revenue or BOT with sharing gross revenue. Thus, investors can choose the cooperation model that best suits their business strategy

BANDAR UDARA INTERNASIONAL JAWA BARAT/KERTAJATI SAAT INI

Current Company Profile of PT BIJB



West Java International Airport / Kertajati Current Status

3.000 x 60 msq
Runway I Dimensions
Masterplan 2 Runway
3.500 x 60 msq

Passenger Terminal
Capacity
**5.6 million passengers
/ year (96,000 sqm)**

34 Flight
at peak season

**Critical Aircraft
Boeing 777-300 ER**
Cargo Aircraft Only

**Hajj Embarkation
Airpor KMA
989/2019**

Terminal masterplan 23 million
passengers / year and 500
thousand tons of cargo / year

**Airport Hierarchy
Primary Hub**

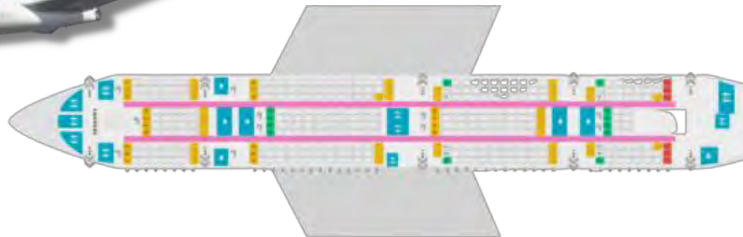


AIRCRAFT TYPES IN KAMC HANGAR PLANNING

Wide body hangar (WB hangar) is designated for maintenance, upkeep, and inspection services of 2 (two) wide body (WB) aircraft and 1 (one) narrow body (NB) aircraft. The WB hangar has dimensions of 200 x 97.3 sqm with a clearance height of 23 m. For narrow body hangar (NB hangar) is designated for maintenance, upkeep, and inspection services of 4 (four) narrow body aircraft. The NB hangar has building dimensions of 176 x 76 sqm with a clearance height of 18 m.

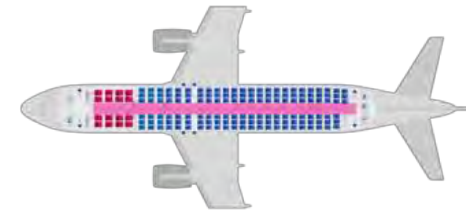
WB Aircraft Types that can enter WB Hangar

Aircraft Types	Wingspan (meter)	Length (meter)	Tail Height
B747 200	59,6	70,6	19,3
B747 300	59,6	70,6	19,3
B777 200	64,9	63,7	18,5
B777 300	64,9	74,0	18,5



NB Aircraft Types that can enter WB & NB Hangars

Aircraft Types	Wingspan (meter)	Length (meter)	Tail Height
B737 300	29,0	33,4	11,1
B737 400	29,0	36,0	11,1
B737 MAX 10	25,9	43,8	12,3
ATR 42	25	23	7,6



MRO COMPONENT & ENGINE OPPORTUNITIES

MRO requires support from OEM/manufacturers to develop repair capabilities, especially in the component and engine segments. The needs include access to manuals, tools & equipment, training, engineering support, and materials, which can be obtained through licenses granted by OEMs. Currently, there are no MROs that have high authorization levels in component and engine repairs, making it an opportunity for KAMC to partner with OEMs/manufacturers.

Domestic MRO License for Component and Engine Segments

Potential Partner/Investor OEM

Tipe Component/Engine	Current Authorization Level	Target Authorization Level	
• Avionik	• Repair Level 1	• Repair Level 3	• Thales
• Sistem Elektromekanik	• Repair Level 2	• Repair Level 3	• Diehl Aerospace
• Avionik dan Sistem Elektromekanik	• Repair Level 2	• Repair Level 3	• Honeywell
• Vulkanisir Ban	• No Capability	• Full Capability	• Dunlop
• Vulkanisir Ban	• No Capability	• Full Capability	• Michelin
• Perlengkapan Pendaratan	• Subcon Minor	• Overhaul	• Safran
• Pemeliharaan	• No Capability	• Level IV	• Safran AE
• Pemeliharaan mesin CFM56-3/ -5/ -7	• No Capability	• Level IV	• CFM International

THALES

DIEHL
Aerospace

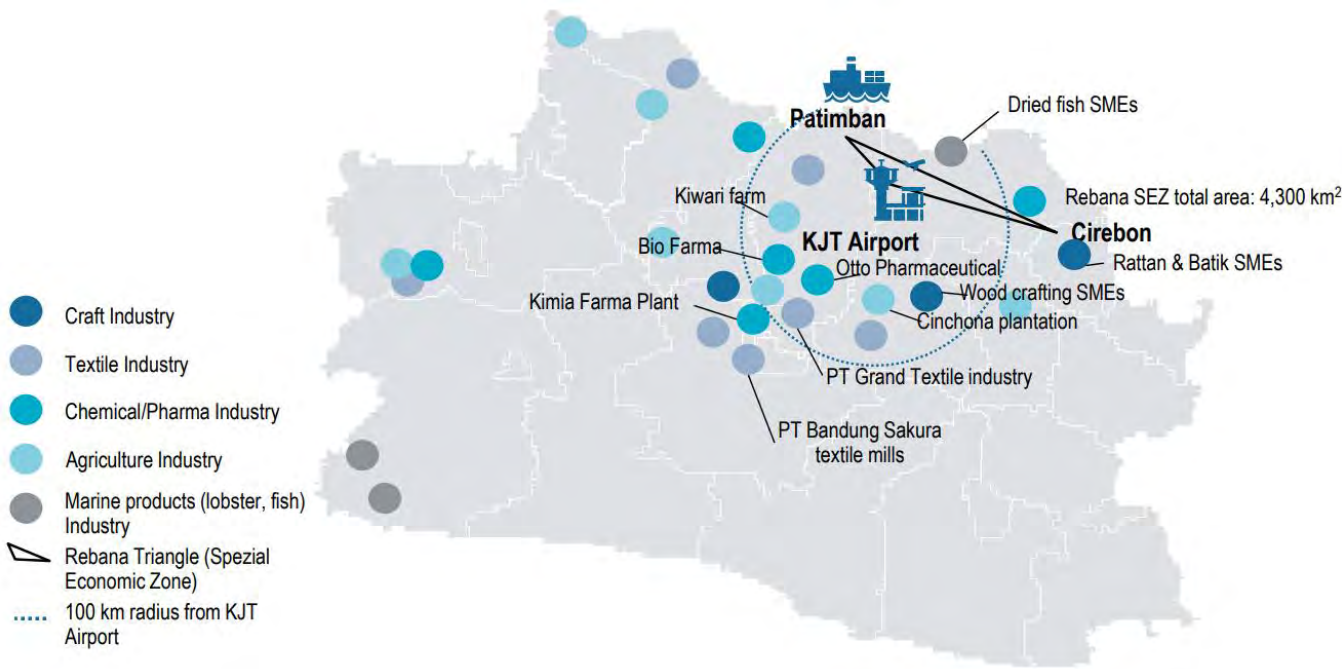
Honeywell
Aerospace

SAFRAN
AEROSPACE · DEFENCE · SECURITY

POTENTIAL DEVELOPMENT OF DEDICATED AIR CARGO TERMINAL

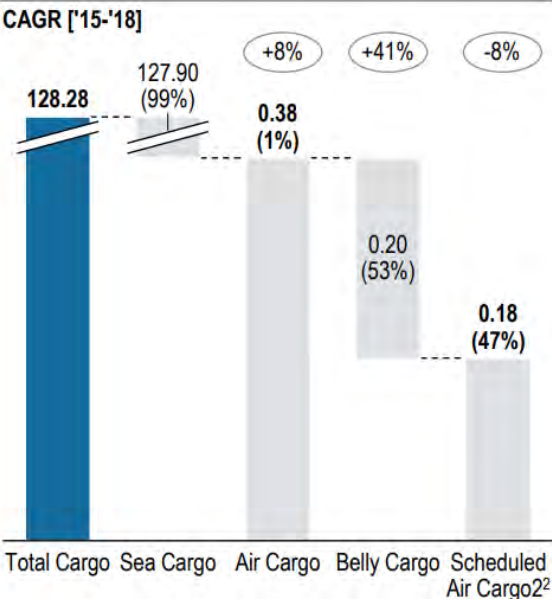
Kertajati Airport is located in an industrial area producing handicrafts, textiles, chemicals, agriculture, and fisheries, which has the potential to be supported by air logistics. From 2018 until the pandemic, there was an increase in air cargo volume and rates (9%-300%). According to the Indonesia National Air Carriers Association (INACA), Air Cargo has begun to be dominated by belly cargo (cargo using passenger aircraft), as scheduled air cargo using dedicated air cargo has longer Custom processing times. This has resulted in the accumulation of air cargo demand, especially at Soekarno Hatta Airport.

Air Cargo Potential from Industries Around Kertajati

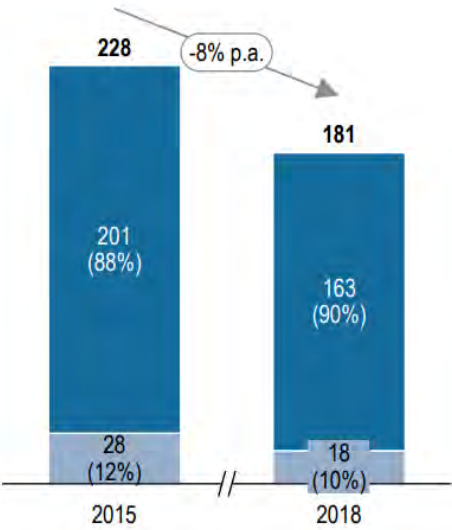


Air Cargo Distribution in West Java

Cargo in Western Java 2018 [m ton]



Scheduled air cargo in Western Java airports [000 ton]



IMPACT OF KERTAJATI AIRCRAFT MAINTENANCE CENTER

Positive Impact on Economy and Society

Regional Economic Growth

Majalengka Regency's GRDP increased after Kertajati Airport construction. In 2017, Majalengka Regency's GRDP grew by 6.81%, exceeding national (5.07%) and West Java (5.29%) economic growth in the same year. KAMC development will accelerate industrialization and construction sector surge in the wider planned area (REBANA). West Java's GRDP growth is estimated to reach 7.16%.

Infrastructure Development

To support private infrastructure investment, particularly in Kertajati (including KAMC), the government is developing Kertajati toll access from Cikopo – Palimanan (CIPALI) toll road and Cileunyi – Sumedang – Dawuan (CISUMDAWU) toll road. Along with hajj dormitory construction in Cirebon supporting Hajj passengers in Kertajati, and shuttle development to Bandung. Infrastructure developed by private sector includes office buildings, residential areas, local roads, transportation modes, and other regional utilities

Job Creation

The estimated workforce needed for Kertajati Aircraft Maintenance Center (KAMC) with a total capacity of 32 wide-body aircraft and 16 narrow-body aircraft is 3,394 workers. The estimated indirect job creation due to the development of Industrial Areas around Kertajati (Rebana) reaches 4.49 million workers.

Investment Growth

Total estimated investment for KAMC is Rp. 2.56 trillion. Meanwhile, indirect investment due to the development of Industrial Areas around Kertajati (Rebana) reaches Rp. 392.4 trillion.

Flight Operations Efficiency

With domestic MRO engine & sparepart operations, aircraft maintenance waiting time is reduced, allowing airlines to operate their aircraft more efficiently and reduce downtime. As a result, airline revenue can be increased, enabling airlines to provide competitive services/rates. Estimated cost savings from sparepart storage and ordering reach 20%, contributing to improved operational efficiency.

Investment Growth

Total estimated investment for KAMC is Rp. 2.56 trillion. Meanwhile, indirect investment due to the development of Industrial Areas around Kertajati (Rebana) reaches Rp. 392.4 trillion.

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