MINISTRY OF
INTERNATIONAL TRADE AND INDUSTRY

ROADSHOW PASCA RANCANGAN MALAYSIA KE-12

SEKTOR PEMBUATAN: INDUSTRI AEROANGKASA

NAICO
MALAYSIA

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23 November 2021 | MOVENPICK HOTELS & RESORTS, SEPANG

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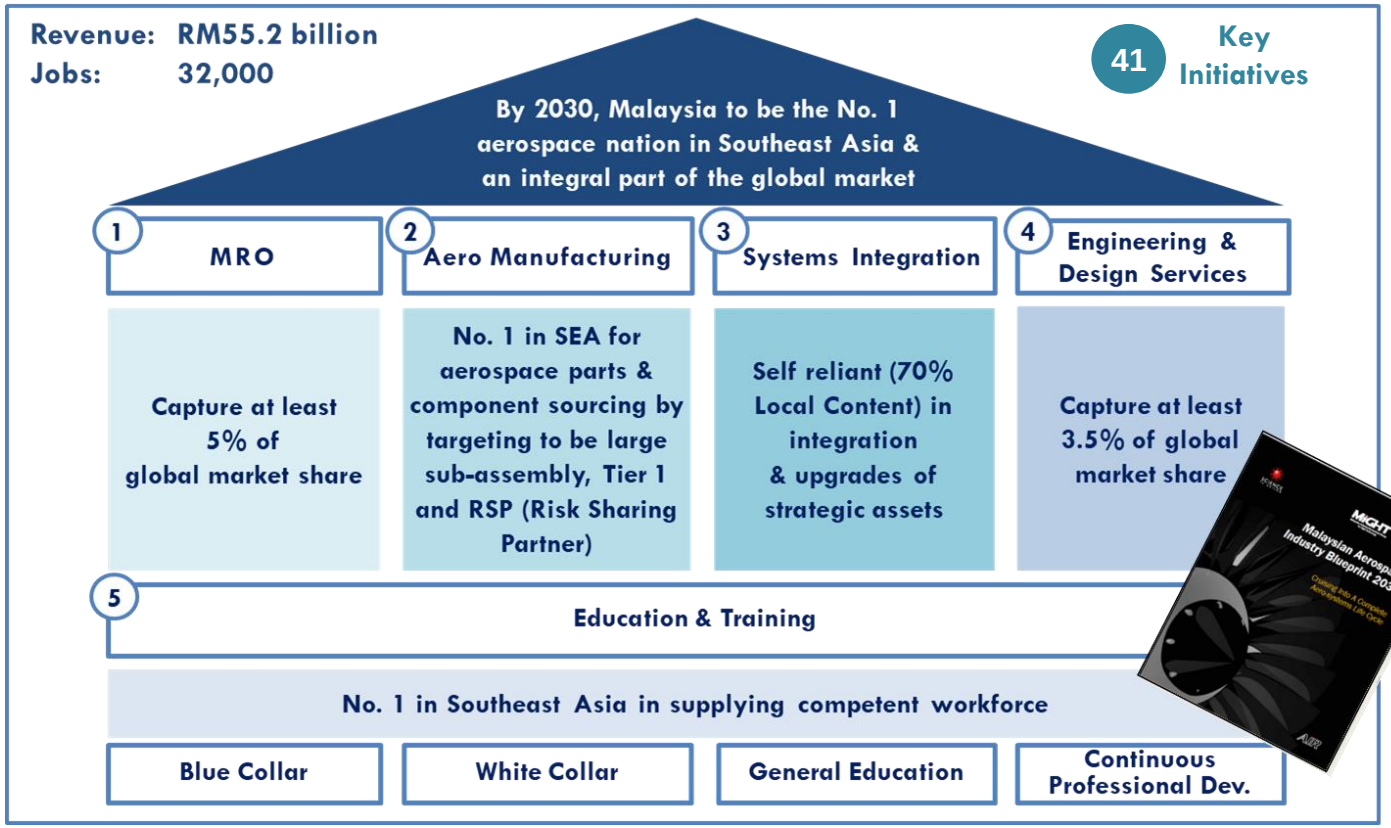
POLICY ON MALAYSIA AEROSPACE INDUSTRY

The Malaysian Aerospace Industry Blueprint 2030 aims to position Malaysia as the No. 1 supplier for competent workforce in Southeast Asia by 2030.



Source: Malaysian Aerospace Industry Blueprint 2030, 11MP, 12MP Aerospace Strategic Plan

ELEVENTH MALAYSIA PLAN 2016-2020

Energising Manufacturing

Phase I Blueprint Implementation (2016-2020)

- *Aerospace Industry Development*
- *Supply Chain Development*
- *Aerospace Research & Technology (R&T)*

TWELFTH MALAYSIA PLAN 2021-2025

Establishing a Sustainable Aerospace Industry

Phase II Blueprint Implementation (2021-2025)

1. ***Eco-System Development***
2. *Aerospace COE*
3. *Digital Transformation*
4. *Sustainable Aviation*
5. *AS9100 CB*

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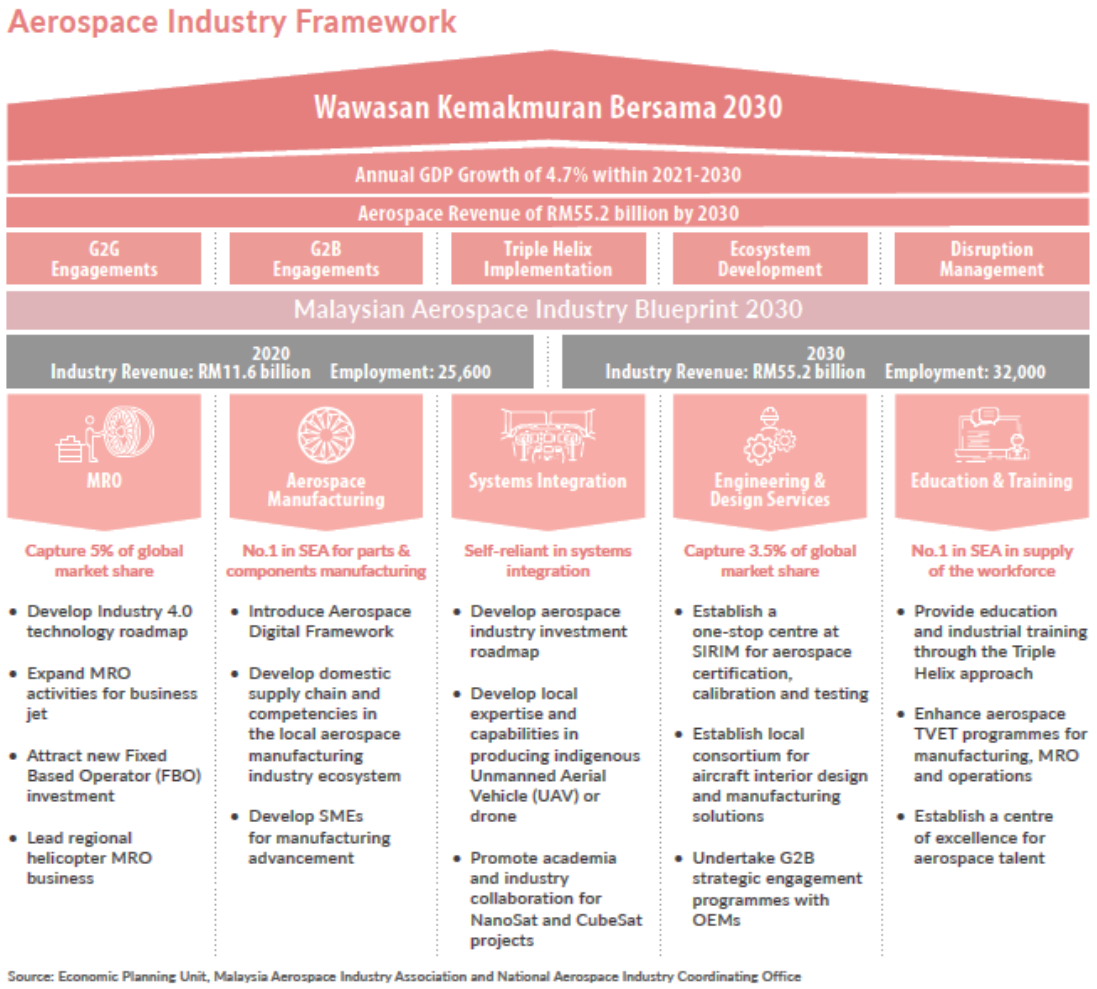
RMKe-12: AEROSPACE INDUSTRY FRAMEWORK

Propelling Growth of Strategic and High Impact Industries as well as Micro, Small and Medium Enterprises
Strategy A3: Establishing a Sustainable Aerospace Industry



RMK12

Specific Action Plans Related to Technology and Human Capital Development

- Develop/implement **industry 4.0** technology roadmap
- Develop **local expertise and capabilities** in **producing indigenous aerospace products** – i.e. UAV, drone
- Promote **academia and industry collaboration** for NanoSat and CubeSat projects
- Enhance **aerospace TVET programmes** for manufacturing, MRO and operations
- Provide **education and industrial training** through **Triple Helix approach**
- Establish a **Centre of Excellence** for aerospace talent

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ESTABLISHING A SUSTAINABLE AEROSPACE INDUSTRY

The industry will be transformed to produce more complex products and services. The initiatives will include developing a sustainable ecosystem, clustering and zoning of aerospace activities, establishing an aerospace digital system and venturing into sustainable energy.

2020 Achievement

REVENUE
- RM 11.6 Billion*

TOTAL WORKFORCE
- 25,600* Technical Workforce

REGIONAL POSITION
- 2nd in Southeast Asia

GLOBAL POSITION
- Main producer of Airbus/ Boeing Composite Wing Components
- One of Airbus Regional Centre for MRO Engineering

Note: * Impact of COVID-19 Pandemic

Aerospace Industry Development Strategy

2025 Targets: REVENUE [RM 30 Billion] WORKFORCE [30,000]

AEROSPACE CLUSTER & ZONING
- Selangor 3S
- Kuantan Aerospace City
- NS Aerospace Valley
- Kedah Aerotropolis
- KK Aerospace Hub
- Sarawak Helicopter Hub

DIGITAL TRANSFORMATION
- Development of Malaysia Aerospace Digital System
- Industry 4.0 Adoption
- Enhancement of Research & Technology (R&T) Activities

SUSTAINABLE AEROSPACE ECOSYSTEM
- Establishment of **NAICO Malaysia** as an aerospace development agency
- National Aerospace Centre of Excellence
- Triple Helix Collaboration between Government, Industry and Academia

SUSTAINABLE ENERGY
- Sustainable Aviation Initiative
  - Biojet Fuel
  - Bio-based Material

2030 Targets

REVENUE
- RM 55.2 Billion

TOTAL WORKFORCE
- 32,000 Highly-Skilled Workforce

REGIONAL POSITION
- No. 1 in Southeast Asia

GLOBAL POSITION
- Integral Part of Global Supplu Chain
- World Class Aerospace Products Producer and Service Provider

Sumber: NAICO, EPU

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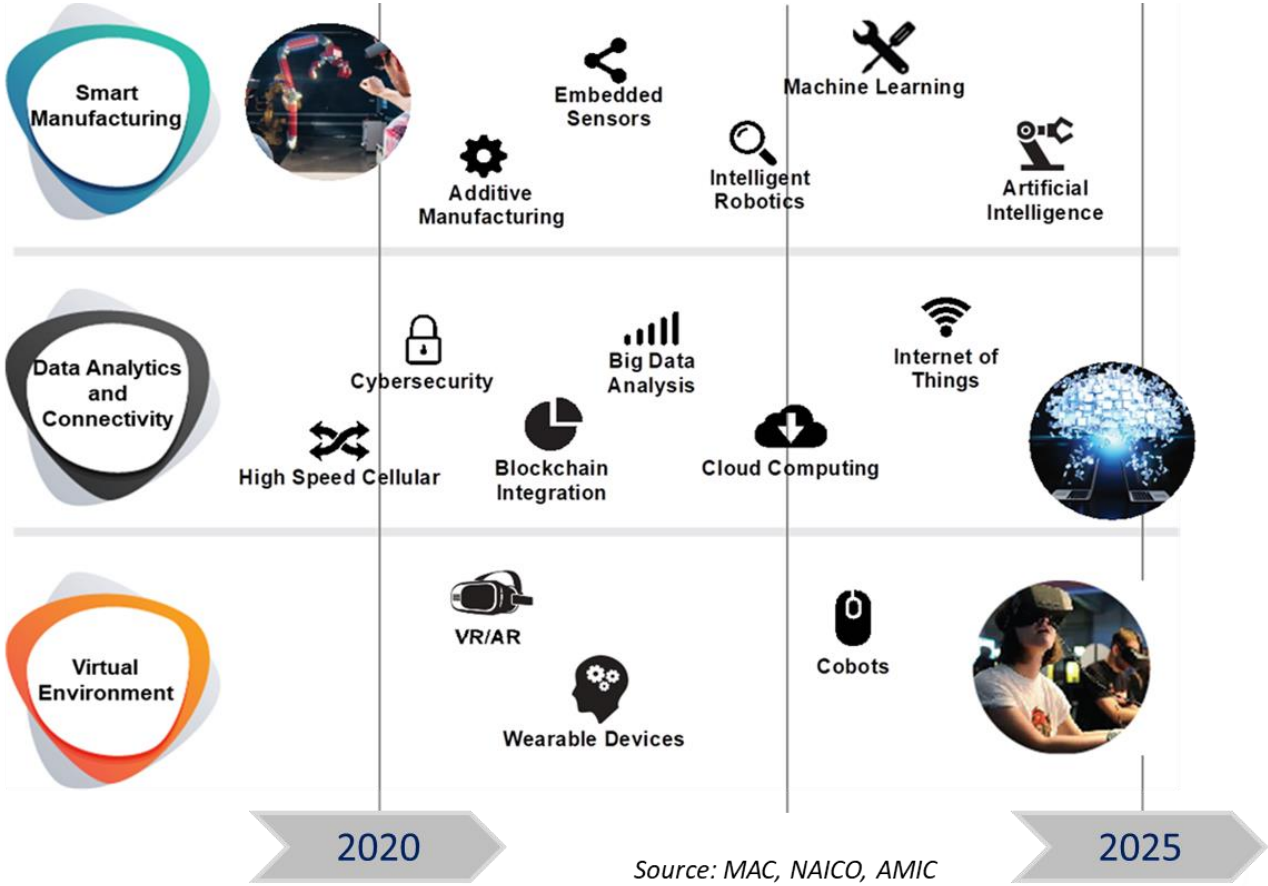
AEROSPACE DIGITAL TRANSFORMATION

In order to sustain Malaysia's Competitiveness and Sustainability, competency development plan emphasised on Digital Transformation & Sustainable Aviation is currently being implemented under RMKe-12 Aerospace Strategic Plan.



Source: MAC, NAICO, AMIC

Aerospace Industry 4.0 Projects Being Implemented under 11MP

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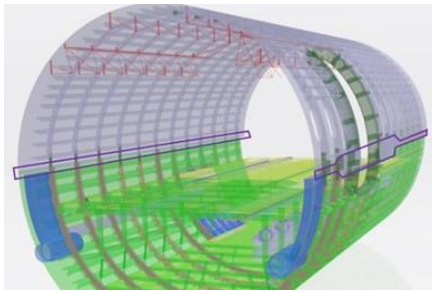
POTENTIAL AREAS OF GROWTH

Among the R&D areas that will elevate Malaysia's technological capability to higher competency level at the global arena:



- Additive Manufacturing
- Cold Spray Process
- Electron Beam Welding
- Horizontal Forging

- Digital Connectivity
- Automation & Robotics
- Sensor Technologies
- Artificial Intelligence
- Virtual/Augmented Reality
- Simulated Data
- Multiphysics Simulations

- Advanced MRO Technologies
- Smart Airport Systems
- Air Traffic / Radar Systems

- Smart Materials
- Bio-sourced Materials
- Bio-Jet Fuel
- Hydrogen Fuel
- Green Technology

- Electric Aircraft
- Autonomous Flight Systems
- Urban Air Mobility
- UAV/Drone
- eVTOLs
- Satellite/Rocket

- Airframe Enhancement
- Aircraft Cabin Parts
- Aircraft Recycling/Remanufacturing

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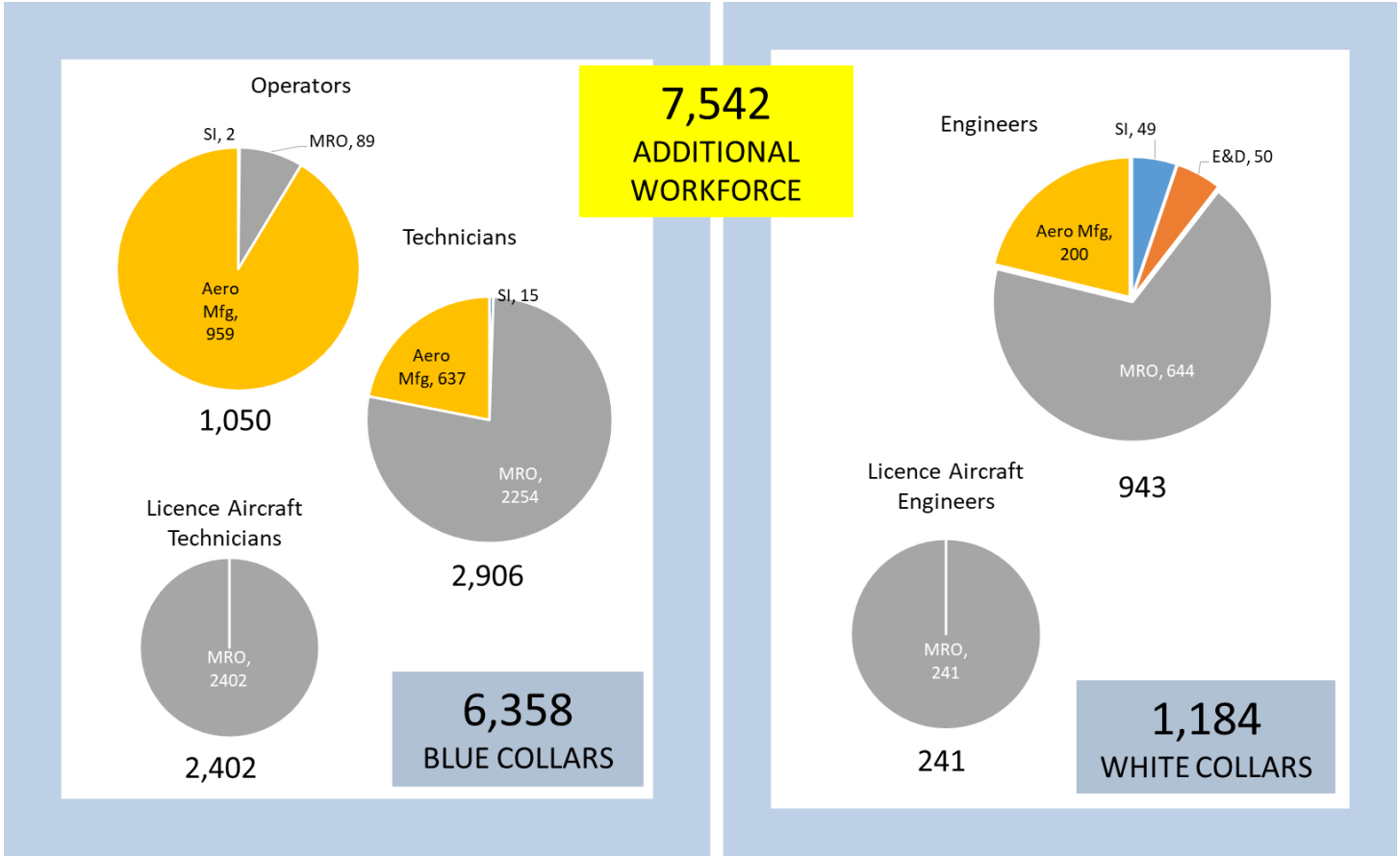
EMERGING SKILLS IN DEMAND

Due to the global aerospace technological advancements and Industry 4.0 implementation, the Malaysian aerospace industry will requires a generation of workers with new emerging skills.



Source: JPK/NAICO Study on Supply & Demand of TVET Workforce in Malaysia Aerospace Industry 2019 (Pre-COVID 19)

Skills In Demand

- Aircraft Painting
- Sheet Metal Skills
- Titanium Welding
- Non Destructive Testing
- Avionics Component/Material Specialist, SQE SCM
- Spacecraft Electronics Assembler
- Knowledge & Experience on Next Generation Aircraft
- Quality Control Analysis / Quality Inspection / Quality Assurance Management
- Green Technology
- Agility and Adaptability Skills
- Problem Solving and Analytical Skills
- English Language Literacy & Proficiency

Industry 4.0 Related

- Big Data Analytics / Engineering
- 3D Rapid Modelling & Prototyping
- Content Digitalisation & Modelling Used in Aircraft Maintenance, Retrofit & Modification
- Adaptive Technology & Additive Manufacturing
- UAV Related Skills
- Electronic – IT & IT Enablers
- NC Programmers Engineering
- CMM Programmers
- Aircraft MRO Enterprise Resource Planning

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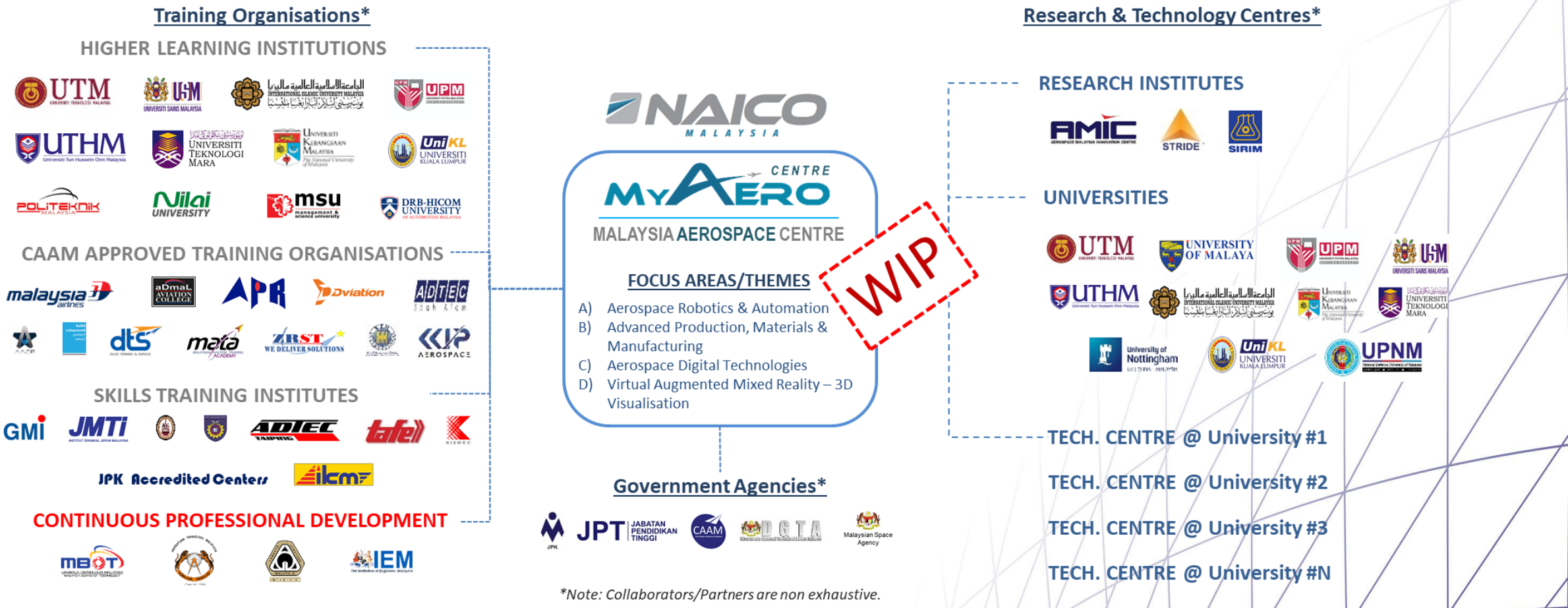
MOVING FORWARD

NAICO Malaysia as the National Aerospace COE will connect all relevant aerospace organisations/institutions to collectively work as a training and R&T consortium towards developing a Professional Aerospace Community that will support the creation of sustainable aerospace ecosystem.



*Note: Collaborators/Partners are non exhaustive.

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CONCLUSION

1. In RMKe-12, efforts will be focused on accelerating aerospace industry to be more sophisticated by producing high value added activities and products, attracting quality investments and expanding exports as well as contributing to green economy agenda.

2. Throughout RMKe-12 implementation period, RM100 million has been allocated for aerospace industry development programmes.

3. The Government, under 2022 Budget allocated RM100 million matching grant to support the enhancement of Bumiputera Aerospace small-medium enterprises (SME). In addition, RM80 million will be allocated to MITI to train 20,000 workers to support industrial clusters including Maintenance, Repair and Operations (MRO) in Subang, Electrical and Electronics (E&E) in Kulim and Chemistry in Gebeng.

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