Kementerian Perindustrian
REPUBLIK INDONESIA

ASTTA
Asosiasi Sistem & Teknologi Tanpa Awak

FOCUS GROUP DISCUSSION

Indonesia Industry Landscape & Market Opportunity for Drone

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Asosiasi Sistem & Teknologi Tanpa Awak (ASTTA)

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Asosiasi Sistem & Teknologi Tanpa Awak (ASTTA) or Unmanned Systems & Technology Association of Indonesia is presence to accommodate business players, developers, activists, professionals, and communities in the field of unmanned systems & technology development which includes unmanned systems & technology in the air, land, water surface, underwater, and supporting ecosystems.

Our Mission

INCREASE INDUSTRIAL COMPETITIVENESS

Increase Indonesia's competitiveness at the regional and international levels in terms of unmanned system development, operation, and other cooperation

COLLABORATIONS

Establish active relationships to improve the domestic industry's capabilities in the field of unmanned systems

IMPROVE SKILLS

Develop and improve human resource capabilities in the field of unmanned systems

PROTECT & PROMOTE

Protect the community and work together to advance the development, application, and security of unmanned systems

OUR PROGRAMS

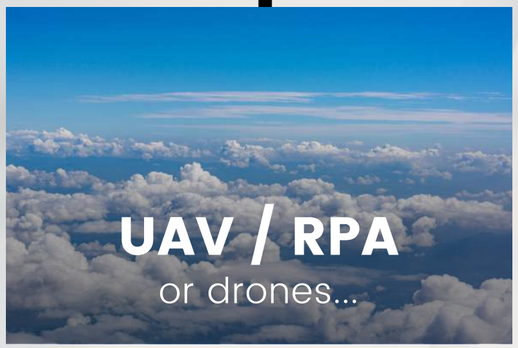
WORKSHOP & WEBINARS	BUSINESS FORUMS	MARKET REPORT	EXPO (upcoming)
Routine events to share news & updates between the members	Link & match events for members to meet potential customers & investors	Annual report crafted by our research team to visualize the current trend	An event specialized for drone companies to showcase their products & use cases

What is drone?

A general term for Unmanned System (US) or Vehicle (UV)

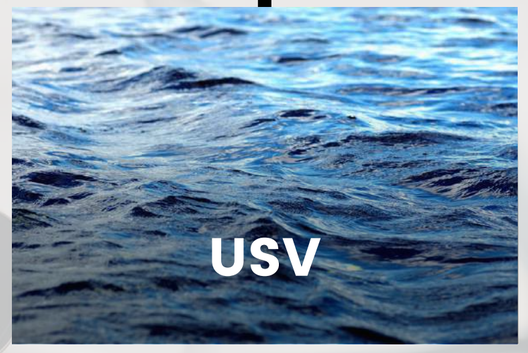
Can be defined as an “electro-mechanical system, **with no human operator aboard**, that is able to exert its power to perform designed missions”

Unmanned Systems (US)



- Agriculture
- Photography & Filming
- Search & Rescue
- Mapping & Surveying
- Powerline Monitoring
- Structure & Building Monitoring
- Transport & Logistic
- Defence & Security
- Etc.

- Agriculture
- Search & Rescue
- Transport & Logistic
- Industrial Automation
- Material Handling
- Defence & Security
- Etc.



- Ocean Sampling
- Seabed Mapping
- Search & Rescue
- Inspection of Structures
- Harbor Patrolling
- Defence & Security
- Etc.

- Surveillance, Reconnaissance
- Monitoring Undersea Infrastructure
- Oil & Gas Exploration
- Oceanography
- Hydrography
- Commercial Salvage & Aquaculture
- Defence & Security
- Etc.

Why Drones?

Safety

is number one priority

Cost Effective

Time Efficient

Improved Quality

Source https://droneii.com/

Global Market Forecast

Asia is the fastest growing market

Rp 186 trillion in 2022 to
Rp 300 trillion in 2030

- The global drone market is worth an estimated **Rp 479 trillion** in 2022
- The commercial drone market will experience a **CAGR of 8.3%** until 2030
- The market as a whole will expected to be worth **Rp 873 trillion** by the year 2030

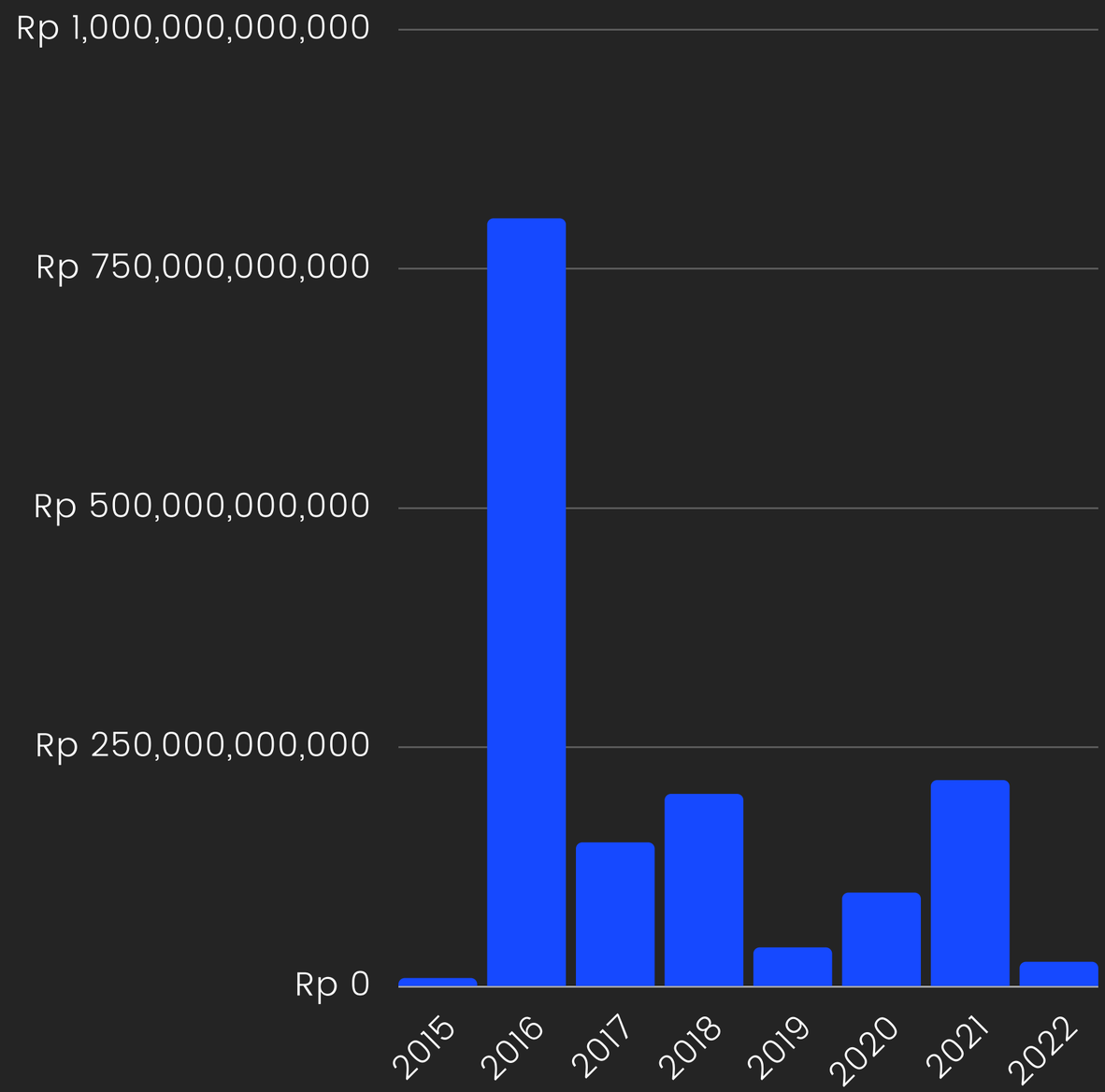
Source https://droneii.com/

Indonesian Market

Indonesian government procurement of goods and services

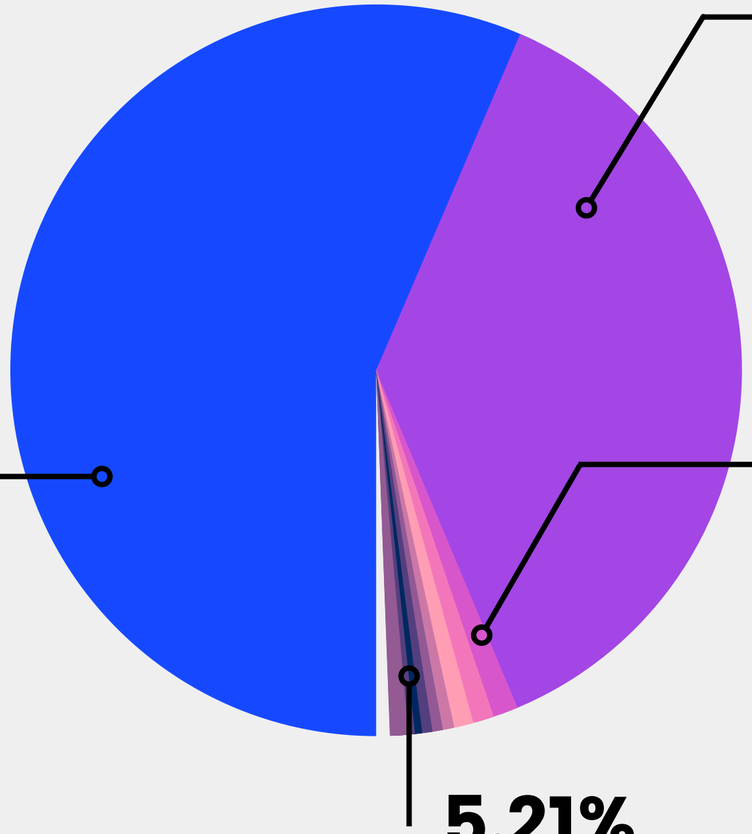
From 2015 to November 2022 there was a total of Rp 1.5 trillion in procurement of goods and services related to drones

Source https://opentender.net/



Indonesian Market

Indonesian government procurement of goods and services



56.4%

LPSE Kepolisian Republik Indonesia
Rp 866,502,679,191

- PENGADAAN NANO TACTICAL DRONE APBN TA. 2018 (Rp 103,606,800,000)
- PESAWAT TANPA AWAK PENGINDERAAN (Rp 98,990,250,000)
- PENGADAAN DRONE PEMANTAU SAMAPTA PROGRAM APBN T.A. 2022 (Rp 89,621,250,000)

37.2%

LPSE BADAN KEAMANAN LAUT
Rp 571,747,082,307

- Pengadaan 2 Sistem Unmanned Air System/Drone yang Terintegrasi dengan BIIS (Rp 571,747,082,307)

1.1%

LPSE kementrian perhubungan
Rp 16,985,924,909

- Navigation Aids Inspection Drones For Safety Audit, Monitoring and Evaluation (Rp 8,030,000,000)
- Pengadaan Sistem Digitalisasi Pemetaan dan Pengendalian Pesawat Udara Tanpa Awak (Rp 5,763,312,500)
- Pengadaan Drone dan LIDAR untuk Survei Obstacle Sebagai Bahan Validasi Instrument Flight Procedure (IFP) (Tender Tidak Mengikat) (Rp 2,038,756,409)

5.21%

OTHERS
Rp 79,987,660,592

Source https://opentender.net/

Indonesian Market

Sale of drones on e-commerce platforms

Commercial drone

Rp 50 billion

¬90,000 drones population with prices below Rp 20 million

Industrial Drone

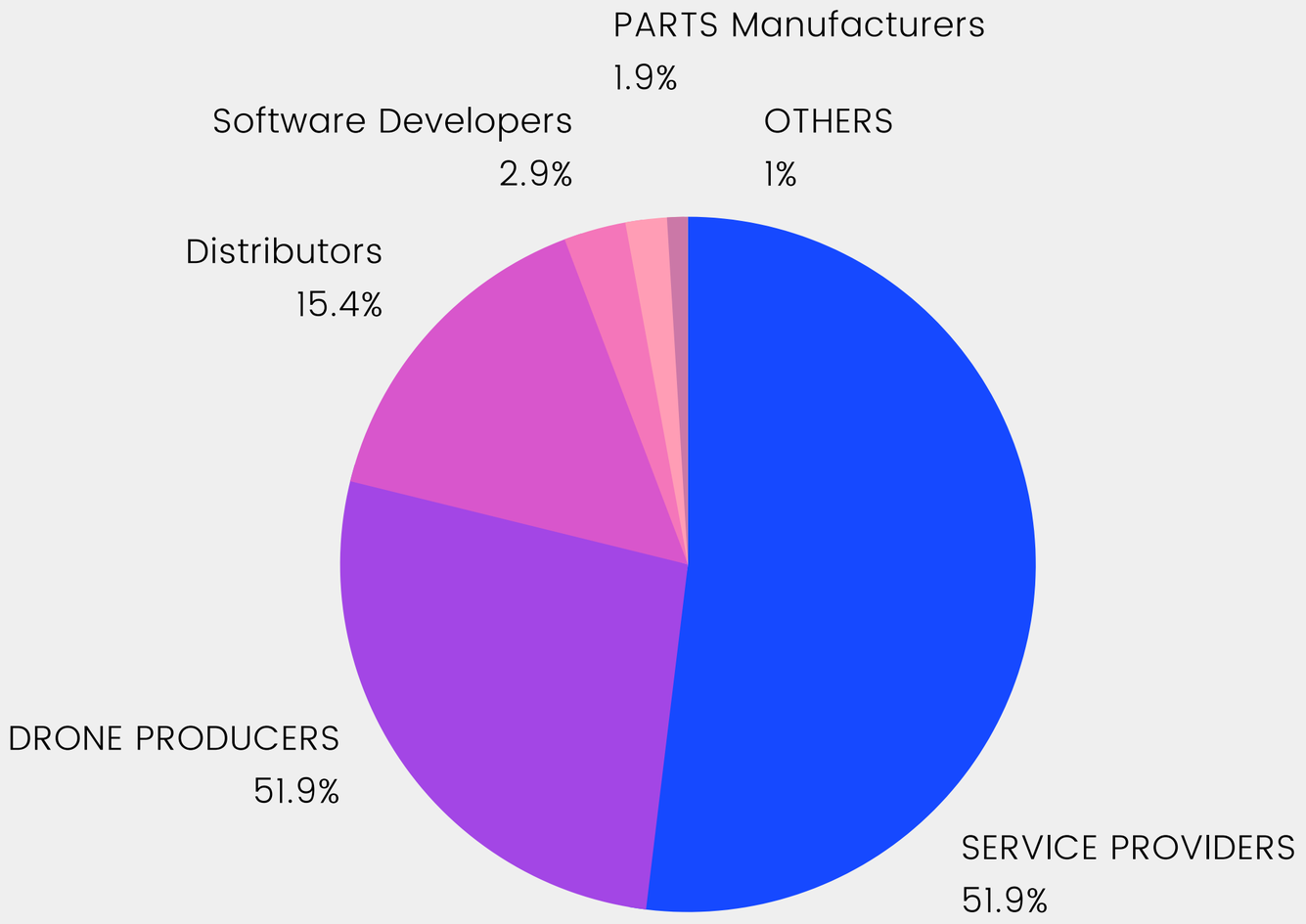
Rp 170 billion

¬10,000 drones population with prices above Rp 20 million

Source : ASTTA research

Indonesian drone industry players

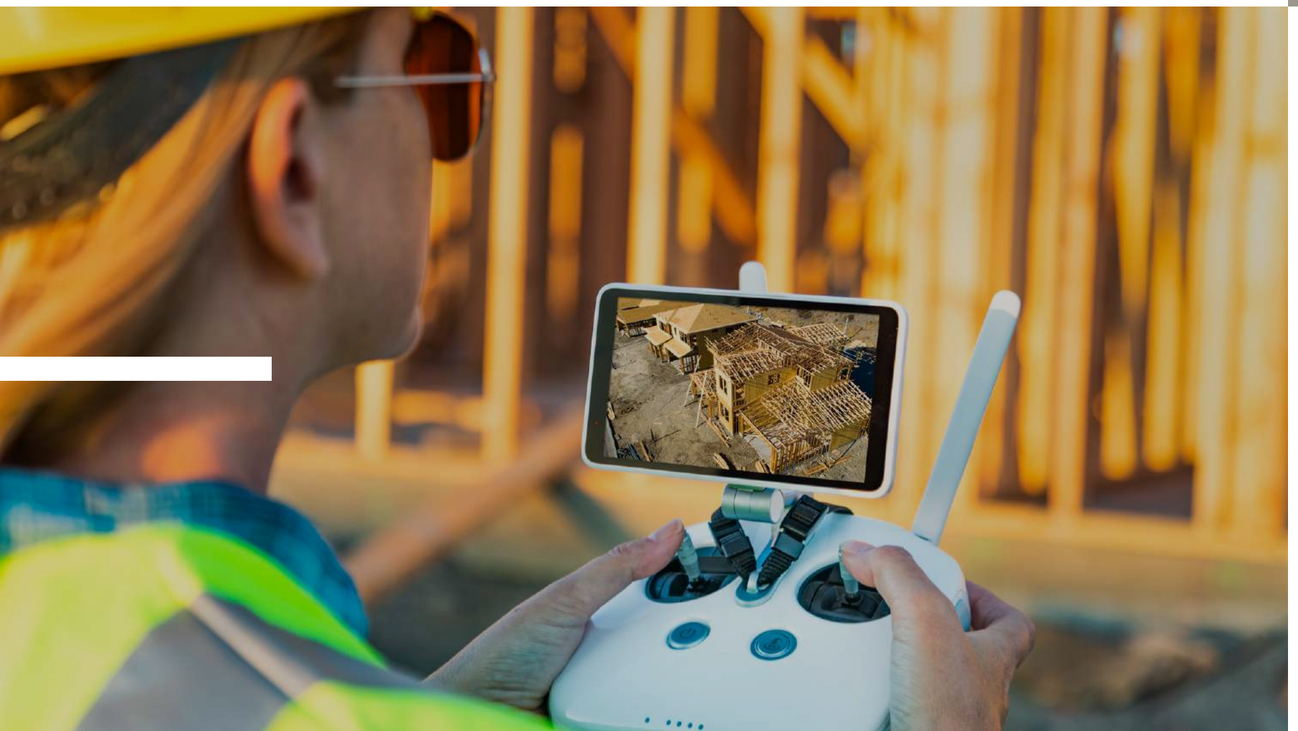
There are 104 companies, most of which are SMEs



Source : ASTTA research

50,000
Drone Pilots

30% increase from 2021. Only about 5% have a remote pilot license from the Ministry of Transportation.



4
Certified Drone Pilot Academies

Recognized by the Ministry of Transportation to carry out drone pilot certification.

ASTTA Indonesia Drone Industry Report 2021

Key Insights

TOTAL INVESTMENT 2016-2021

Rp 50 billion

TOTAL REVENUE 2016-2021

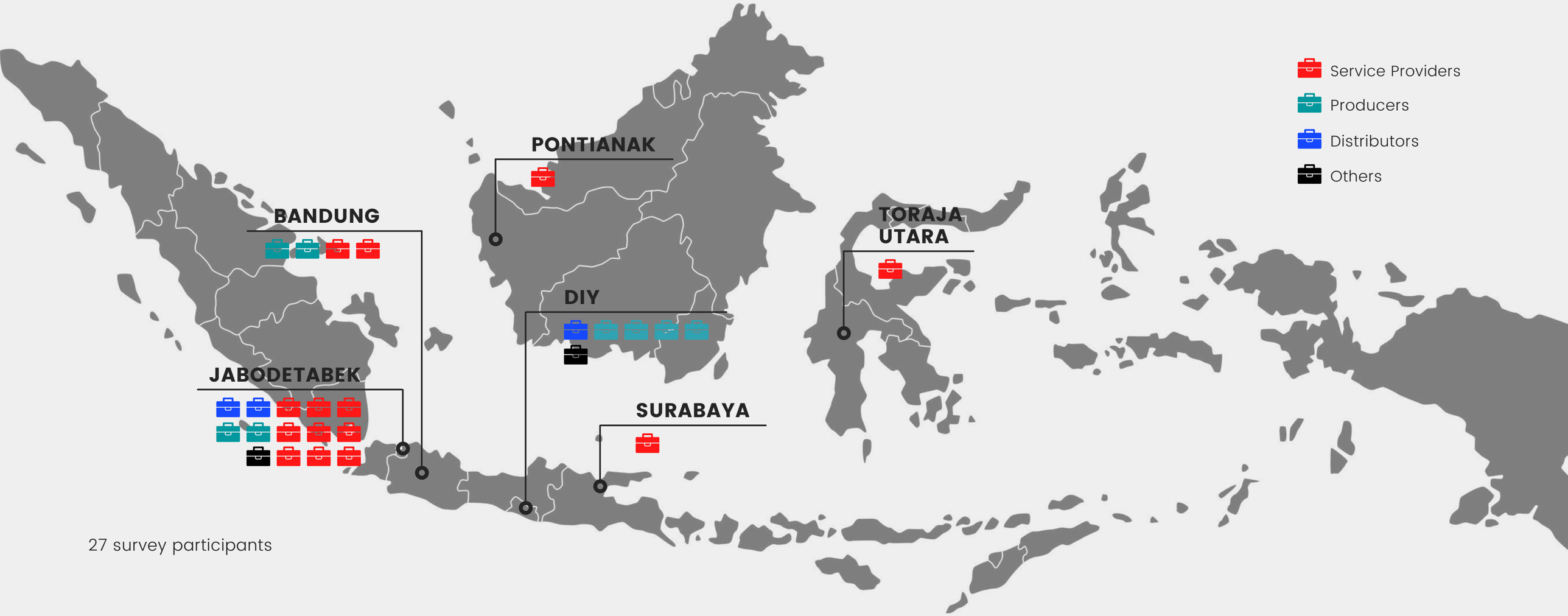
Rp 160 billion

27 survey participants

- Land, urban planning, surveys, and GIS are the business sectors most worked on, followed by agriculture, plantation and forestry;
- Despite being predominantly based in JABODETABEK, drone services have spread across the archipelago, with Sumatera being the main area of interest;
- All locally made drones are produced in Java Island, with Yogyakarta having the most producers;
- Aerial Mapping is the most common use-case for drones in Indonesia, with the market being dominated by DJI drones;
- Most companies are still SMEs.

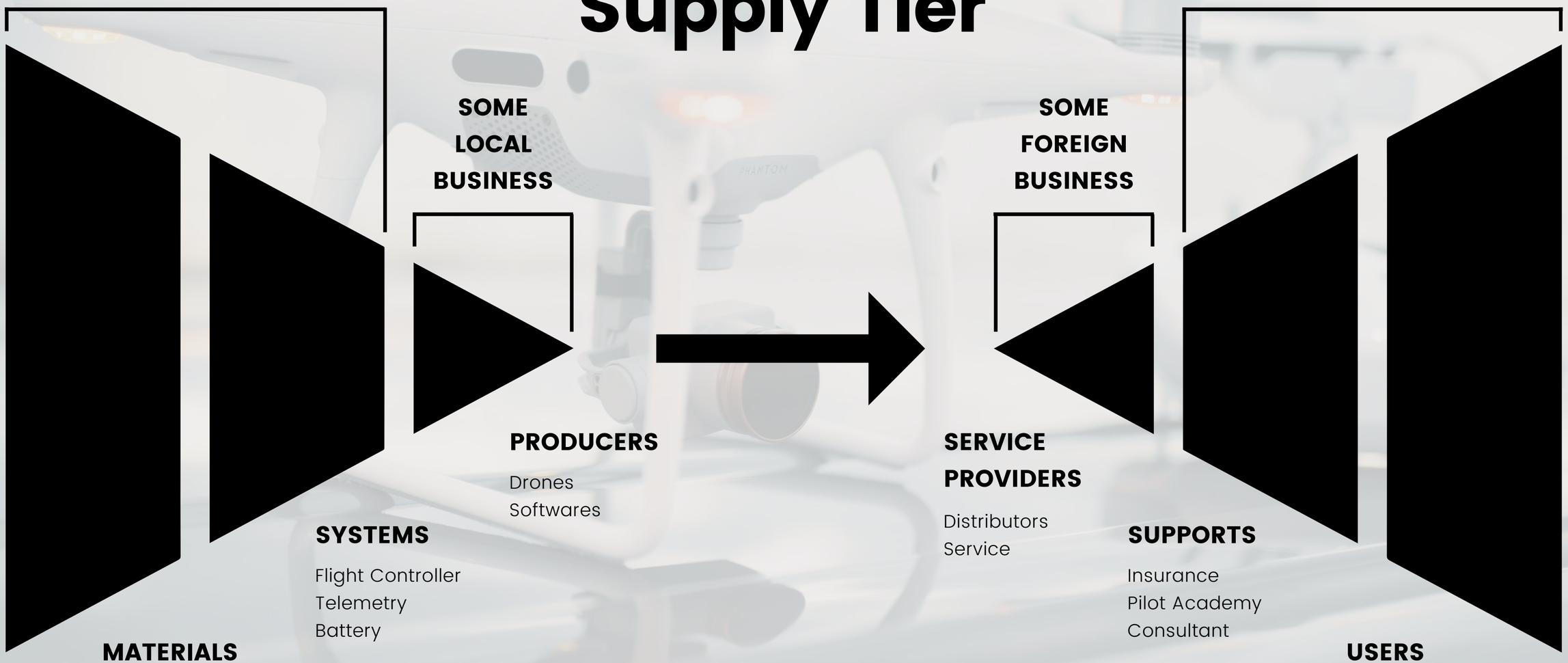
ASTTA Indonesia Drone Industry Report 2021

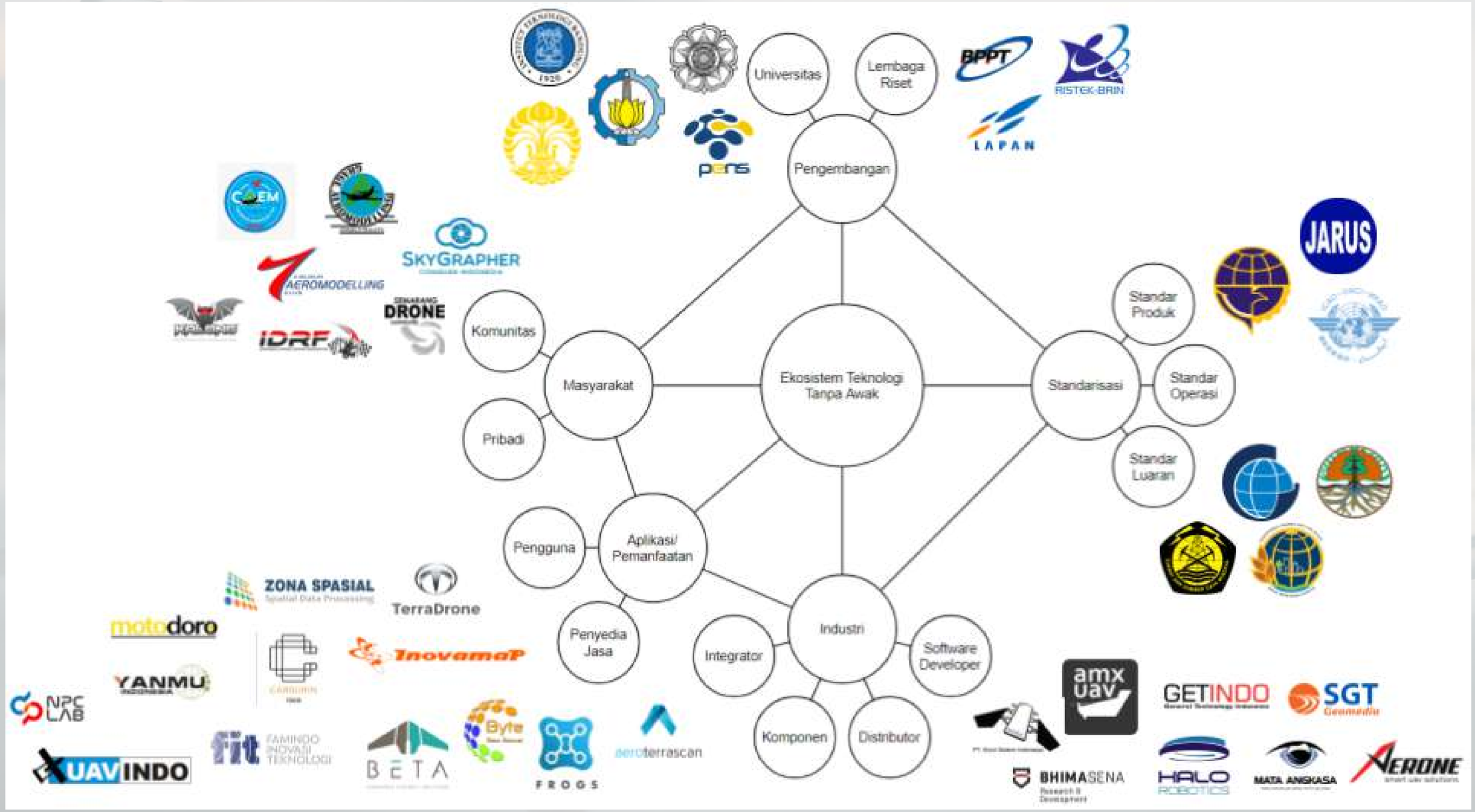
Business Locations



27 survey participants

Supply Tier


MOSTLY IMPORTS
SOME LOCAL BUSINESS
SOME FOREIGN BUSINESS
MOSTLY LOCAL BUSINESS
MATERIALS
Fiberglass
Electrical Parts
Basic Components
SYSTEMS
Flight Controller
Telemetry
Battery
PRODUCERS
Drones
Softwares
SERVICE PROVIDERS
Distributors
Service
SUPPORTS
Insurance
Pilot Academy
Consultant
USERS
Private companies
BUMN
Government


Universitas
Lembaga Riset
Pengembangan
Komunitas
Masyarakat
Pribadi
Ekosistem Teknologi Tanpa Awak
Standar Produk
Standar Operasi
Standar Luaran
Standarisasi
Pengguna
Aplikasi/ Pemanfaatan
Penyedia Jasa
Integrator
Industri
Software Developer
Komponen
Distributor

Regulations and Policies

Airworthiness

Ministry of Transportation

Operations

Ministry of Transportation

Frequencies

Ministry of Communication and Informatics

Securities

Ministry of Defences

Trade

Ministry of Trade

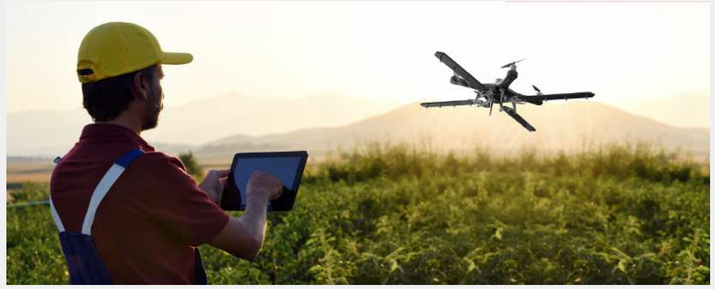
Industrialization

Ministry of Industry

Operating Standards

Geospatial Information Agency,
Ministry of Environment & Forestry,
Ministry of Public Works,
National Land Agency,
National Board for Disaster Management,
Ministry of Energy & Mineral Resources,
etc.

Market opportunities



GLOBAL FOOD SECURITY

Drone technology can be used to ensure food security with periodic monitoring and efficient spraying

OIL & GAS INDUSTRIES

Many large oil and gas companies already have routine drone programs for pipeline monitoring, asset inspection, and security

MINING INDUSTRIES

There are approximately 4,000 mining concessions with a total area of 10 million hectares that must be reported regularly based on the policy of the Ministry of Energy and Mineral Resources

Market opportunities

Construction & Infrastructures

There are many national strategic projects that must be reported regularly based on the policy of the Ministry of Public Works

Oil Palm Industries

There are more than 1,000 palm oil companies with a total concession area of at least 15 million that need regular census and monitoring

INDUSTRIAL FOREST

There is a total concession area of 11 million hectares of industrial forest and 27 million hectares of conversion forest which requires periodic spraying and monitoring

Market opportunities

POWER INDUSTRIES

PLN has developed a strategic plan for inspection of transmission lines using drones

PLANNING & LAND USE

Drones are starting to be required to speed up field data collection for Complete Systematic Land Registration (PTSL)

Market Challenges

- **Low Competitiveness**

  Limited technological mastery due to funding and supply chain constraints.

- **No Market Guarantee**

  government ministries & agencies should be able to prioritize local products in every programs

- **Limited Supply Chain**

  There is no reliable domestic basic component industry

- **Low Investment**

  Difficult to conduct research and development activities

- **Slow Domestic Growth**

  Limited domestic market growth, 15-20% per year

- **Limited Human Resource**

  Human resources in the field of unmanned systems and technology are still small

Strategic Issues

The use of local drones in government agencies is still limited

Purchasing foreign goods and services appears to be easier and more appealing

The lack of protection for the local drone industry against foreign drones that are becoming more affordable as a result of import duty reductions

TKDN calculations are still complicated and expensive for the drone industry, most of which are still SMEs

Producers must continue to rely on foreign supplies because the domestic basic component industry has not yet developed

Producers must continue to rely on foreign supplies because the domestic basic component industry has not yet developed

There is no government support for farmers to facilitate procurement of agricultural drones

Proposed policy

- Incentives for the private sector to use locally manufactured drones;
- Link and match with potential users, especially government agencies, and potential investors;
- facilitating the supply chain and national certification process for local industries;
- Accelerate local industries for raw materials and basic components;
- Reduce the ease of import for foreign drone products;
- Cooperation between government agencies related to policies and regulations
- Actively promoting local drone products to other government agencies;
- Long term master plan for drone industries.

Asosiasi Sistem & Teknologi Tanpa Awak (ASTTA)

Thank You

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