

The Significance of Unmanned Aerial Vehicles (UAVs) in Strategic Contexts

Stratejik Bağlamlarda İnsansız Hava Araçlarının (İHA) Önemi

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Abstract

Unmanned aerial Vehicles (UAVs) refer to autonomous/semi-autonomous or remotely controlled aerial vehicles without any person on board capable of controlling the aircraft. UAVs, which vary in size and shape, are equipped with various sensors and technologies and stand out as an essential technology for military, commercial, and humanitarian use. Today, their versatility, operational capabilities, and adaptability have increased their strategic importance and reshaped approaches to military, economic, disaster response, and humanitarian aid. As such, they have gone beyond their physical capabilities and come to represent a paradigm shift in industries and international relations. The strategic importance of UAVs stems from their ability to provide enhanced capabilities and reduced risks in such diverse domains. They contribute to a more interconnected, sustainable, and innovative future. Countries or organizations that invest in these smart systems are likely to add value shortly. In the modern world, UAVs are not only capable of flying in the sky but are also seen as assets of strategic importance. In addition to these issues, the study emphasizes UAVs' economic impact and importance and tries to provide a different perspective on how this technology affects the business world and society.

Keywords: UAVs, Strategy, Innovation

Özet

İnsansız Hava Aracı (İHA) terimi ile üzerinde kontrol etme kabiliyetine sahip herhangi bir kişi olmadan otonom/yarı otonom ya da uzaktan kontrol edilen hava araçları ifade edilmektedir. Boyut ve şekil bakımından farklılık gösteren İHA'lar, çeşitli sensör ve teknolojilerle donatılmış olarak askeri, ticari ve insani yardım amaçlı kullanımlarda önemli bir teknoloji olarak öne çıkmaktadırlar. Günümüzde, çok yönlülükleri, operasyonel kabiliyetleri ve uyarlanabilirlikleri sayesinde stratejik önemleri artmış, askeri, ekonomik, afetlere müdahale ve insani yardımlara yönelik yaklaşımları yeniden şekillendirmişlerdir. Böylelikle, fiziksel kabiliyetlerinin ötesine geçerek endüstrilerde ve uluslararası ilişkilerde bir paradigma değişimini temsil etmeye başlamışlardır. İHA'ların stratejik önemi, bu denli çeşitli alanda gelişmiş yetenekler ve azaltılmış riskler sağlama kabiliyetlerinden

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kaynaklanmaktadır. İHA'lar birbiriyle daha bağlantılı, sürdürülebilir ve yenilikçi bir geleceğe katkıda bulunmaktadır. Bu akıllı sistemlere yatırım yapan ülke ya da kuruluşların yakın gelecekte kendilerine değer katacakları olası görülmektedir. Modern dünyada İHA'lar sadece gökyüzünde uçma kabiliyetlerinden öte, stratejik önem taşıyan birer varlık olarak görülmektedirler. Çalışmada, bahsedilmiş olan bu konulara ek olarak İHA'ların ekonomik etkisi ve önemi vurgulanmış, bu teknolojinin iş dünyasını ve toplumu nasıl etkilediğine dair farklı bir bakış açısı kazandırılmaya çalışılmıştır.

Anahtar kelimeler: İHA'lar, Strateji, İnovasyon

1. Introduction

UAVs cover all aerial vehicles that can fly without any person on board with the ability to control the aircraft. UAVs can be controlled fully/semi-autonomously by computers or remotely by a human on the ground. UAVs come in various sizes and shapes, from small to large military drones. Depending on their intended use, they can be equipped with multiple sensors, cameras, and other technologies (Austin, 2011). In recent years, UAVs have emerged as a deterrent technology of high strategic importance in many domains, including military, commercial, and humanitarian applications. Their versatility, operational capabilities, and adaptability have made them fundamental tools that reshape our approach to various strategic challenges. It has changed how we approach military operations, economic activities, disaster response, and humanitarian efforts. Their ability to provide real-time intelligence, reduce risks to human life, increase productivity, and protect the environment highlights their strategic importance. As technology advances and societal needs change, UAVs play different and vital roles in various sectors. One of these technologies is digitization technology (Mohamed, et al., 2020; Fan, et al., 2020). The strategic importance of UAVs in the new world order is poised to increase. Responsible and innovative use of this technology in our modern world requires strategic planning and cooperation between government agencies, private sectors, and research institutions.

Strategic significance refers to the critical value of a particular asset, capability, or element in a broader context, usually in the areas of military, geopolitical, economic, or organizational strategy. This concept is closely linked to the idea that certain factors can significantly impact the outcome of a situation or the achievement of set objectives. Strategic importance can be assessed according to the extent to which a particular factor is essential for achieving long-term goals, maintaining competitive advantages, or ensuring security and stability. In this regard, research has argued that it is not enough to focus solely on economic returns as a competitive factor; rather, it is essential to consider the impact on the environment and society (Reuter, et al., 2010). In various contexts, the term "strategic importance" can be applied to different issues such as geographical locations, natural resources, technologies, military assets, alliances, economic factors, etc. (Ahmad, 2012). Understanding the strategic importance of these elements is therefore crucial for informed decision-making and effective strategy development. For example, a Bosphorus or a canal controlling access to busy sea transportation routes is a strategically important location in the military domain. Geographical locations are also crucial for developing different strategies, whether on land or at sea (Sloan and Gray, 1999). On the other hand, a strategic resource such as oil can be a strategic commodity with far-reaching implications for a country's energy security and economic stability (Cherp, et al., 2012). In today's rapidly advancing technology, a pioneering invention can provide a strategic advantage to the organization or country that owns it. Companies should not consider innovation independent from their strategy development processes (Berman and Dalzell-Payne, 2018). Assessing strategic importance is a dynamic process that changes as priorities and technologies evolve. Governments, organizations, and individuals need to constantly review their

strategies to ensure their long-term success or security by assessing the changing strategic phenomenon.

The use of UAVs in warfare goes back almost a century. From their initial conceptualization and primitive development to the advanced, sophisticated systems we see today, UAVs have a history spanning more than a century. This history reflects the evolution of technology, innovation, and military, commercial, and civilian applications. UAVs have become an integral part of modern society, playing an essential role in surveillance, reconnaissance, scientific research, disaster management, and more. Important milestones and developments in the use of UAVs in the history of warfare can be described as follows (Mátyás and Máté, 2019):

- **World War I and After:** The first UAVs were generally intended for reconnaissance and target application. The concept of unmanned flight dates back to the mid-19th century, with early inventors designing aircraft that could perform missions without risking human life. However, no significant progress was made until the 20th century. During the First World War, research into the use of radio-controlled aircraft for military purposes was conducted in both the United States and the United Kingdom. Although these early UAVs were primitive by today's standards, they laid the foundation for future developments.
- **World War II:** More advanced UAVs were developed by various nations. The Second World War witnessed a significant advancement in UAV technology, driven by the need for reconnaissance and targeting. The most notable was the German V-1 Buzz Bomb, an early cruise missile that could be considered a precursor to modern UAVs. Conversely, the US developed UAVs such as the Radioplane OQ-2, which were used for target training. These early successes demonstrated the potential of UAVs in military applications.
- **Korean and Vietnam Wars:** UAVs were used for reconnaissance and surveillance during the Korean War and Vietnam War. The US could conduct important intelligence activities by deploying UAVs such as Ryan Firebee for reconnaissance missions.
- **1980s:** The second half of the 20th century saw significant advances in UAV technology. Smaller and more versatile drones were developed for various applications, from surveillance and mapping to weather monitoring and scientific research. The US military began to build and deploy more advanced UAVs in the 1980s. In particular, the Predator UAV developed by General Atomics was introduced during this period. The Predator laid the foundation for future armed UAVs. In the 1980s, GPS technology was introduced for navigation, significantly improving control.
- **1990s:** The 1990s saw an increased use of UAVs in military operations, particularly in the Balkans and the Gulf War.
- **2010s:** Armed drones have played an essential role in US military operations in Afghanistan, Pakistan, Yemen, and Syria. UAVs such as the MQ-9 Reaper enabled precision airstrikes against designated targets. In recent years, Turkey has emerged as a significant player in developing, producing, and utilizing UAV technology. This journey dates back to the 1990s and has since witnessed remarkable progress and achievements. Turkey's UAV history can be characterized by indigenous innovation, expanding capabilities, and international recognition, with the X1-Shahid, Anka, Bayraktar TB2, and many significant developments (Çetinkaya, 2023; Sökmen and Canbolat). In recent years, the country's growing influence in the global UAV industry has been of considerable importance. These platforms have been used in surveillance, reconnaissance, and combat missions, including counter-terrorism against various groups. With its capabilities and cost-effectiveness, Bayraktar TB2 has attracted international attention. Countries in different geographies, such as Ukraine, Qatar, and

Azerbaijan, have included it in their inventories. In 2020, when it was used effectively by the Azerbaijani army, its role in the Nagorno-Karabakh conflict between Armenia and Azerbaijan further increased its visibility.

- **2020s:** The use of UAVs in warfare accelerated during these years. Some companies have developed swarm drones capable of coordinated attacks. Despite these developments, the use of drones by both state and non-state actors in various conflict zones remains a matter of concern and debate.

In the 21st century, UAVs have become widespread in the civilian and commercial sectors. UAVs have found applications in agriculture, search and rescue, environmental monitoring, filmmaking, and more. Companies such as DJI have emerged as leaders in the consumer drone market by offering affordable and accessible UAV technology (Xu and Muneyoshi, 2017). Research and development on UAV technology is ongoing in areas such as autonomous flight, artificial intelligence, and swarm technology. These developments aim to make the applications of UAVs even more acceptable, from urban air mobility and medical delivery to disaster response and environmental protection. As advances continue, UAVs are poised to reshape industries, improve our lives, and play an increasingly vital role in military and civilian applications.

The USA has the largest and most advanced UAV fleet in the world. It uses many different types of UAVs, especially for defense and intelligence. Israel has made significant progress in UAV technologies and has a large fleet of UAVs for defense purposes. China has rapidly progressed in UAV technologies and has a large fleet of UAVs. It uses various UAV models for both military and civilian purposes. Turkey draws attention with its UAVs. In particular, it uses UCAV (Armed Unmanned Aerial Vehicle) models operationally and has proven its capabilities to the whole world with its operations. Countries like Russia, Iran, and the UK invest in UAV technologies and use various UAV models. Various initiatives have also been taken by European Union countries (URL1).

The strategic importance of UAVs stems from their ability to provide militaries and other organizations with enhanced capabilities, reduced risks, and adaptability in a rapidly changing global environment. In the modern economic environment, UAVs can play essential roles in shaping and optimizing various sectors. Their strategic role in the new financial structure can contribute to efficiency, innovation, and sustainability. Collaboration between governments, industries, and technology developers is required to maximize the integration of UAVs and their positive impact on economic growth and sustainability. Furthermore, job creation, training programs, and ethical use are crucial for the responsible and inclusive integration of UAVs into the economic structure. This study examines the strategic importance of UAVs and highlights their widespread use and contributions to defense, intelligence, and national security.

2. Military Applications

UAVs and Armed UAVs are highly strategic systems that minimize the losses of the army in which they are used, provide significant economic and time savings, can create adequate pressure on enemy elements, and fundamentally change the dynamics of combat. In many countries, UAVs are seen as an important area within the Defense Industry (Davis, et al., 2014). In this area, countries have established policies to encourage the development of indigenous products. UAVs are playing an increasingly important role in modern warfare and strategic operations. These versatile, remotely controlled, or autonomous aerial vehicles have become critical components of military strategy, intelligence gathering, surveillance, and more. Over the last 30 years, UAVs have evolved rapidly, advancing sensor, communication, microprocessor, and software technologies. Initially used mainly for reconnaissance and surveillance purposes, UAVs have been increasingly used in combat missions

since the early 2000s as the maturity of their systems has increased. These developments have led to the evolution of security and operational concepts, and UAVs have become essential in the field. Considering the impact of UAVs on warfare, some experts have stated that they have directly affected the global concept of warfare. In contrast, others have stated that they have not caused revolutionary changes (Boyle, 2020; Calcara, et al., 2022; Rossiter, 2023). On the other hand, the history of UAV warfare is an excellent example of the progress of technology and its integration into military operations. With the development of sensors used by UAVs, they have become increasingly sophisticated and have begun to reshape modern warfare. An example from the past is the tanks used in World War II, which directly influenced and determined the direction of the war. Tanks were so successful in those years that a tank industry was established for the next half-century. In recent wars, however, UAVs have been able to hunt tanks on the battlefield easily and have caused a drive to evolve in a different direction ([URL2](#)) This not only changed the direction of wars but also led to a differentiation in cost-effectiveness.

UAVs for military and commercial use have become prominent in military operations with their versatile capabilities, such as surveillance, reconnaissance, precision strike, and force protection capabilities (Chávez and Swed, 2023). They have become indispensable assets in various military branches due to their ability to increase situational awareness, conduct precision strikes, and reduce risk to human personnel. Some critical military applications of UAVs are as follows (Park, et al., 2019; Chaturvedi, et al., 2019).

2.1. Surveillance and Reconnaissance

In combat environments, it is critical to continuously monitor enemy activities and provide instant information to fire support vehicles and operational units - i.e. Imagery Intelligence. UAVs have significant advantages over fighter jets and manned reconnaissance aircraft for imagery intelligence. These advantages include low operating costs, long endurance, low cruising speed, and reduced personnel requirements. In short, UAVs are exceptionally prominent for such operations.

Today, UAVs are widely used in surveillance and reconnaissance missions. Equipped with high-resolution cameras, infrared sensors, and other advanced imaging technologies, UAVs provide real-time intelligence and imagery. This data helps track enemy movements, assess terrain, and identify potential threats. Surveillance and reconnaissance UAVs, often called ISR UAVs (Intelligence, Surveillance, and Reconnaissance UAVs), are a specialized category of UAVs designed specifically for intelligence gathering, surveillance, and reconnaissance missions. They are also used to protect existing troops by acting as an early warning radar against approaching enemy forces. This helps troops in defensive positions to prepare for potential threats, thus eliminating the element of surprise. The main features of surveillance and reconnaissance UAVs are shown in Figure 1.

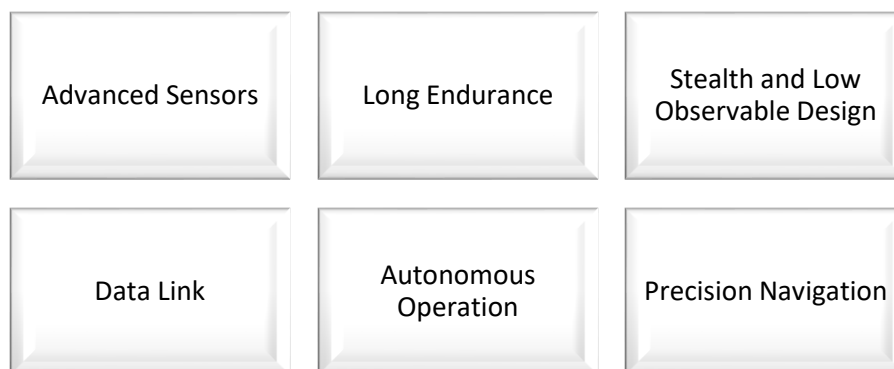


Figure 1. Main features of surveillance and reconnaissance UAVs.

The main military application areas of surveillance and reconnaissance UAVs are shown in Figure 2.



Figure 2. *Main military application areas of surveillance and reconnaissance UAVs.*

Thanks to their advanced sensors, long endurance, and autonomous capabilities, surveillance and reconnaissance UAVs are highly effective in gathering critical information and relaying it to decision-makers promptly and accurately. They increase situational awareness, reduce risks to personnel, and contribute significantly to the success of various missions.

2.2. Target Acquisition

UAVs are capable of identifying and tracking enemy targets for target acquisition. Identifying targets for the precision-guided missiles they carry on board or carried by external manned aircraft, they help increase the success rate of attacks.

Target Detection UAVs, also known as TA-UAVs, are specialized unmanned aerial vehicles designed to detect prioritized targets in various operational environments. These UAVs provide real-time target location information to security forces and facilitate precision strikes, which are crucial deterrents in modern military operations. These play a vital role in modern military strategy, increasing the precision and effectiveness of operations while reducing risk to friendly forces and civilians. Their advanced sensors and real-time data transfer capabilities have made them indispensable for identifying and neutralizing specific threats on the battlefield.

2.3. Artillery and Fire Support

UAVs with advanced sensors can assist artillery and fire support missions by helping to adjust artillery fire accurately. They can monitor the impact of artillery shells and provide real-time feedback to adjust targeting (Bartulović, et al., 2023).

2.4. Electronic Warfare (EW)

UAVs have found various applications in Electronic Warfare (EW), which involves using electronic systems to detect, jam, and disrupt enemy electronic systems and communication networks (Krátky, et al., 2020). UAVs with electronic warfare payloads can contribute to offensive and defensive EW operations. Some of the primary uses of UAVs in Electronic Warfare are shown in Figure 3.



Figure 3. *Some of the primary uses of UAVs in Electronic Warfare.*

EW UAVs have become essential in modern warfare scenarios by providing enhanced situational awareness, intelligence gathering, and electronic countermeasures capabilities. In short, EW UAVs have become versatile aerial vehicles that can be used in various security operations to gain an advantage in the electromagnetic spectrum and protect allied forces.

2.5. Counter-IED Operations

UAVs are used in a variety of ways to effectively detect, identify, and neutralize improvised explosive device (IED) threats (Sharland, 2015). Some UAVs have specialized sensors, such as ground penetrating radar (GPR) or radio frequency detectors, to locate hidden or buried IEDs. These sensors can detect ground disturbances or electromagnetic signatures associated with IED components.

2.6. Battle Damage Assessment (BDA)

After an airstrike or military operation, UAVs can conduct BDA to assess the extent of damage to enemy targets and infrastructure (Slater, 2003). This information helps security forces assess mission success and plan future operations.

2.7. Logistics Support

UAVs are used to deliver critical supplies, medical equipment, and ammunition to troops in remote or inaccessible areas (Michalska and Karpinska, 2018). In this way, the negative effects of supply lines that extend as the front expands and the risks to supply convoys will be reduced.

2.8. Training and Simulation

UAVs are increasingly used for training military personnel in various scenarios, including flight training, mission planning, and tactical simulations.

The strategic importance of UAVs in military applications lies in their ability to provide real-time intelligence, enhance operational capabilities, and reduce the risk to human life. As technology advances, the range of military applications for UAVs will likely expand, further cementing their role as key utility tools in modern warfare.

3. Commercial and Industrial Applications

UAVs have found various applications in both commercial and industrial sectors, primarily due to their versatility and affordability. Some of the application areas are as follows (Shakhatreh, et al., 2019):

- **Agriculture:** With the help of UAVs, the development of agricultural products can be monitored, needs such as fertilizer and water can be determined, and pests can be detected. In this way, agricultural practices can be optimized, yields can be increased, and precision agriculture activities can be carried out successfully using natural resources more efficiently. In addition, UAVs can reduce the need for physical labor by enabling the efficient and accurate application of pesticides to crops.
- **Infrastructure Inspection:** UAVs facilitate access to hard-to-reach areas for inspecting critical infrastructure such as bridges, power lines, and pipelines and can provide high-resolution data for maintenance and safety assessments.
- **Cargo Delivery:** E-commerce companies with large user bases continue to develop drone-based delivery services to speed up cargo delivery (Kanat, 2023).
- **Media and Entertainment:** UAVs are used for aerial filming for movies, TV shows, sporting events, concerts, and commercials.
- **Oil and Gas Industry:** Drones can be used to inspect oil rigs, pipelines, and offshore platforms.
- **Surveying and Mapping:** UAVs help in land surveying, creating detailed maps, and monitoring changes in the landscape over time.
- **Wildlife Conservation/Environmental Monitoring:** Wildlife monitoring is used for environmental research and conservation efforts such as illegal tree cutting or hunting.
- **Law Enforcement:** Law enforcement agencies use drones for surveillance of crime scenes, crowd monitoring during events, and tracking suspects in urban or rural areas.
- **Event Security:** During large-scale events such as sporting events, festivals, or political gatherings, UAVs provide persistent aerial surveillance to enhance security and monitor crowds for potential security threats.
- **Traffic and Transportation Management:** In urban areas, UAVs provide real-time aerial imagery of traffic conditions, aiding permanent traffic monitoring, accident detection, and transportation management.

UAVs can be an essential part of industrial automation. In addition, their use should not be limited to outdoor applications (Mourtzis, et al., 2021).

4. Humanitarian Operations

Humanitarian operations are often conducted in challenging environments and require careful planning, logistics, and financing. The main objective is to save lives, reduce suffering, and help societies regain self-reliance and resilience in adversity. Humanitarian operations refer to organized efforts undertaken by governments, non-governmental organizations, international agencies, and humanitarian organizations to assist and support people affected by disasters, conflicts, and crises. In humanitarian crises, drones have facilitated the delivery of essential supplies, medicine, and food to remote or disaster-affected areas. They help with damage assessment and effective planning of relief efforts. In these operations, UAV capabilities are utilized to increase humanitarian operations' efficiency, speed, and effectiveness in various contexts.

UAVs can transmit high-resolution imagery and data to help assess the extent of damage in disaster-affected areas, identify critical needs, and plan response efforts more effectively. UAVs with thermal cameras and other sensors can assist in search and rescue operations. Especially in cases where satellite imagery cannot be obtained, and ground transportation is not possible quickly, UAVs under the clouds are an essential solution point (Bravo and Leiras, 2015).

5. Economic Impact of UAVs

UAVs have emerged as transformative technologies with multifaceted applications in various sectors, contributing significantly to economic growth. The economic impact of UAVs has gone beyond the aerospace sector, directly impacting agriculture, infrastructure, logistics, and many other areas. This rise in UAV technology has become an increasingly important actor in the process management of businesses (URL3).

5.1. Cost-Efficiency and Increased Productivity

Cost efficiency refers to the ability of an organization or system to achieve its objectives or produce the desired outputs with the minimum amount of resources expended. In simpler terms, it means obtaining the most value or output with the least input or cost. Cost-effective processes aim to minimize expenses while maintaining the quality of products or services. This concept is essential for businesses and industries that want to optimize operations, increase profitability, and use available resources effectively. Incremental efficiency refers to an improvement in the output of a system, process, or workforce, usually measured by the ratio of output to input. It is the capacity to produce more goods or services within a given time frame or with the same level of resources. Improved productivity is a key objective for organizations that aim to maximize their output while minimizing costs (Keleş, et al., 2023).

In the case of UAVs, cost efficiency can be thought of as reducing the costs associated with traditional methods for tasks such as data collection, surveillance, or transportation. UAVs contribute to overall operational efficiency by providing cost savings through lower labor costs, faster operations, and the ability to access hard-to-reach areas. In sectors such as agricultural spraying, infrastructure inspection, and logistics, the use of UAVs can accelerate processes, leading to higher productivity levels. To summarize, cost efficiency and productivity growth are interconnected concepts that businesses and industries strive to achieve. While cost efficiency focuses on minimizing costs, productivity growth emphasizes maximizing output. Integrating technologies such as UAVs into various sectors contributes to achieving these goals by streamlining processes, reducing operational costs, and increasing overall efficiency.

In the dynamic environment of modern industries, UAVs have emerged as a catalyst for transformative change, enabling cost efficiencies and increased productivity in numerous sectors. As such, UAVs have changed operational dynamics, realizing economic advantages through cost-effective solutions and increased productivity.

5.2. Job Creation and Industry Growth

Integrating UAVs into various sectors has not only transformed operational dynamics but also created jobs, leading to significant industry growth. The growing UAV industry has stimulated job creation and supported economic growth. As demand for related services and technologies increases, new job opportunities emerge in UAV manufacturing, software development, maintenance, training, and operation. Moreover, the expanding market drives the sector forward by encouraging innovation and competition. As a result, integrating UAVs into various sectors creates a ripple effect, creating jobs in different fields and stimulating overall industry growth.

5.3. Market Growth and Innovation

The UAV market is experiencing significant growth due to increasing demand for commercial applications. The market is estimated to reach €53.1 billion by 2025 (Höhrová, et al., 2023). Another study predicts that the unclassified military UAV market will reach USD 13.2 billion in 2032, an increase of 41% compared to 2023 (Zaloga, et al., 2022; Sanders and Holderness, 2023). This growth encourages innovation, with companies investing in research and development to improve UAV capability and reliability. Emerging technologies such as artificial intelligence and advanced sensors contribute to the continuous development of UAVs. As demand for UAVs has increased, various companies and start-ups have entered the market, leading to business opportunities in research and development, manufacturing, sales, maintenance, and software development. The economic growth generated by the UAV sector has led to pilot training, data analysis, and consultancy. complementary services.

5.4. Global Trade and Collaboration

The widespread adoption of UAV technology promotes global cooperation and trade. Countries and industries investing in UAV development and use benefit from improved connectivity, information exchange, and collaborative initiatives. Shared knowledge and expertise contribute to a more interconnected and efficient global economy. The development and advancement of UAV technology is often a collaborative effort between countries, research institutions, and private enterprises. Joint ventures and international partnerships facilitate the bringing together technological know-how, accelerating the advancement of UAV capabilities. This collaborative approach contributes to the global advancement of technology and strengthens diplomatic ties between cooperating organizations. It thus emerges as a soft power dynamic in diplomatic relations. Joint projects and initiatives build trust and cooperation, supporting countries' ability to work together for common goals. This collaborative diplomacy goes beyond economic benefits and promotes positive international relations. The global adoption of drone technology is an integrator for cooperation, economic exchange, and diplomatic relations. Whether through joint research projects, standardized regulations, or cross-border applications, UAVs contribute to an interconnected global society. As the UAV industry continues to evolve, its role in promoting international cooperation will only increase.

Despite the economic benefits, the proliferation of UAVs raises issues such as cybersecurity risks and potential job losses in specific sectors. Addressing these challenges through careful regulation and responsible practices is crucial to maximizing the positive economic impact of UAVs. In conclusion, the economic impact of UAVs is profound and far-reaching, impacting various sectors and contributing to overall economic development. The positive impact of UAVs on productivity, efficiency, and innovation will likely grow and shape a future where these unmanned systems play an essential role in promoting economic growth and sustainability.

6. Final Thoughts

Unmanned Aerial Vehicles have become strategically indispensable tools for many sectors of the modern world. Their applications span various industries and offer numerous benefits, including increased efficiency, security, cost-effectiveness, and innovation. UAVs can respond to changing threats and challenges in a dynamic global environment, making them essential national security and strategic success tools. As technology advances, UAVs will likely play an even more critical role in shaping the future of military and strategic operations. Today, UAVs have evolved from a niche technology to a strategic asset with wide-ranging implications. Their versatility in military, commercial, and humanitarian domains highlights their impressive potential.

In conclusion, the strategic importance of UAVs extends far beyond their physical capabilities. They represent a paradigm shift in how industries operate and nations cooperate. As UAV technologies continue to evolve, it will be essential to approach their integration with ethical, regulatory, and societal implications in mind. The strategic importance of UAVs is understood to lie in their ability to fly in the sky and their capacity to shape a more connected, sustainable, and innovative future for humanity. It is evident that countries or organizations that act innovatively and visionarily by investing in smart systems flying in the sky will add value to themselves shortly.

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