



Toward Space-Based Intelligence for All?

The Case of the Spring 2026 Iranian Strikes

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► Key Takeaways

- The emergence of the space-as-a-service model has lowered barriers to accessing space-based data and capabilities, making them accessible to countries that have no sovereign space infrastructure of their own.
- The boundary between civilian and military uses of space is blurring: satellites, services and data designed for commercial applications can be repurposed for intelligence collection, target selection or battle damage assessment.
- Artificial intelligence makes it possible to aggregate large volumes of data from multiple sources, improve the accuracy and near-real-time availability of intelligence products and produce operational intelligence quickly, precisely, and at lower cost.
- This transformation extends beyond space-based imagery to the full range of space capabilities (imagery, telecommunications, navigation signals, signals intelligence), making access to data increasingly difficult to control.

Introduction

The conflict in the Middle East has highlighted the effectiveness of Iranian strikes in identifying targets and conducting precision strikes. This raises the question: which capabilities enabled the Islamic Revolutionary Guard Corps (IRGC) to achieve these results?

The IRGC's use of space-based imagery, both to plan and to assess strikes against US installations in the region, has now been established. Effective long-range strike planning requires access to recent, high-quality imagery with a spatial resolution of less than one meter. However, the IRGC operates only three publicly acknowledged satellites: the Noor optical surveillance satellites, whose spatial resolution is several meters.¹

The origin of this imagery therefore remains uncertain, given the ostensibly civilian nature of the assets involved. Two concurrent developments could explain how the IRGC obtained imagery intelligence of this quality. First, the IRGC is believed to have purchased the Chinese civilian satellite TEE-01B after it reached orbit. This remote-sensing satellite, with a resolution of the order of 50 centimeters, provides Iran with imaging capabilities that far exceed those of its own sovereign assets. Second, open-source images and analyses released by the Chinese company MizarVision, drawn from commercial space data aggregated and enriched with artificial intelligence (AI), may also have supported the targeting process. Both developments raise the same question: what do the Iranian strikes of spring 2026 reveal about the growing accessibility of military space-based intelligence?

Use of a Chinese satellite

To address its imagery intelligence (IMINT) capability gaps, Iran appears to have turned primarily to China. According to the *Financial Times*, the IRGC Aerospace Force is believed to have purchased the Chinese TEE-01B satellite² in late 2024 for 250 million yuan (roughly \$36.6 million). The satellite is believed to have captured imagery of US military bases in the Middle East both before and after the March 2026 Iranian strikes, enabling Iran to support target selection and conduct post-strike battle damage assessments.

Officially, the TEE-01B, built by the Chinese company Chang Guang Satellite Technology Co., is classified as a commercial civilian satellite, meant to provide data and imagery services for agriculture, urban mapping, environmental monitoring, and disaster management. Its declared owner is the Chinese company Earth Eye Co.,³ known for an in-orbit delivery model. The satellite is built in China, launched from Chinese soil, then tested

1. "AEI Space Data Navigator | Trends in Launches, Satellites, and Orbital Debris", AEI Space Data Navigator, accessed April 29, 2026, available at: <https://spacedata.aei.org/space/>.

2. M. Johnson *et al.*, "Iran Used Chinese Spy Satellite to Target US Bases", *Financial Times*, April 14, 2026, available at: www.ft.com.

3. "AEI Space Data Navigator", *op. cit.*

and commissioned before being handed over to the end customer, often countries participating in the Belt and Road Initiative. The company serves as an intermediary in the international sale of Chinese satellites.⁴

As part of the TEE-01B sale, the IRGC is also believed to have gained access to the worldwide network of ground stations, including facilities in Asia and Latin America, as well as to the control center in Beijing.⁵ The network is operated by the Chinese company Emposat. This geographically distributed ground infrastructure provides operational redundancy. Locating the control center in China may enhance the resilience of satellite operations, as targeting infrastructure on Chinese territory would entail greater political risks than striking assets located in Iran.⁶

Emposat has denied any knowledge that Iran used its ground stations. It said it was committed to complying with Chinese export law and to the peaceful use of outer space. The Chinese Ministry of Foreign Affairs and its embassy in Washington have denied any state link to the alleged activities.⁷ Nevertheless, documented links exist between the Chinese government and the two companies, Emposat and Earth Eye Co.⁸

This transaction illustrates how rapidly access to space assets capable of supporting military applications has become normalized. Until the early 2010s, sub-meter resolution from optical satellites, paired with high revisit rates, was the preserve of states. It has now become a key issue for players across the space sector—new entrants⁹ and “legacy players” alike, who are betting on small satellites and the miniaturization of high-performance optical payloads to support a wide range of civilian activities.

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IMINT for all: the case of MizarVision

MizarVision is a Chinese commercial company that aggregates data from multiple sources, including satellite imagery, webcam feeds, radar systems, and Automatic Identification System (AIS) signals, and uses AI to provide clients with processed data and analysis in near real time.

4. “The Earth Eye Co., Ltd”, Teesat, accessed April 28, 2026, available at: www.teesat.com.

5. M. Johnson *et al.*, “Iran Used Chinese Spy Satellite to Target US Bases”, *op. cit.*

6. J. Congram, “Iran Allegedly Using Chinese Satellite Images, Surprising U.S. Space Force”, *China in Space*, April 16, 2026, available at: www.china-in-space.com.

7. J. Congram, “Emposat Denies Knowledge of Iran Using Chinese Satellite via Its Ground Stations”, *China in Space*, April 19, 2026, available at: www.china-in-space.com.

8. J. Brahy, “Iran Purchased Chinese TEE-01B High-Resolution Satellite to Target US Bases during March 2026 Attacks”, *Army Recognition*, April 15, 2026, available at: www.armyrecognition.com.

9. A. S. Belward and J. O. Skoien, “Who Launched What, When and Why; Trends in Global Land-Cover Observation Capacity from Civilian Earth Observation Satellites”, *ISPRS Journal of Photogrammetry and Remote Sensing. Global Land Cover Mapping and Monitoring*, Vol. 103, 2015, pp. 115-128, available at: www.sciencedirect.com.

The company has published detailed, annotated satellite imagery of several US military sites, just before and during the war against Iran.¹⁰ For example, on February 27, 2026, the day before the war began, it released images of Prince Sultan Air Base in Saudi Arabia, showing the location of dozens of US aircraft. Less than 48 hours later, Iranian fire struck the base, gravely wounding a US service member who later died in hospital.

The published imagery and accompanying analyses provide a high level of detail and accuracy. The software automatically counts and tracks aircraft, and pinpoints hangars, fuel depots, missile batteries, radar sites, and troop concentrations.¹¹

The provenance of the imagery MizarVision uses is unclear. It may come from a combination of commercial and open sources; a substantial proportion likely originates from the Chinese Jilin-1 constellation operated by Chang Guang Satellite Technology Co. Once fully deployed, the constellation is expected to achieve a spatial resolution of less than 50 centimeters and a revisit time of approximately ten minutes.¹² The aggregated data could also include imagery from Western commercial providers, among them Airbus, which some US politicians have criticized for allegedly making satellite imagery available to Iran. Airbus has formally rejected these allegations, stressing its strict compliance with sanctions and export-control regimes.¹³

A key feature of MizarVision's business model is its integration of AI into the processing and analysis of satellite imagery

The Chinese government has denied any involvement, stating that Chinese companies are always required “to conduct their activities in accordance with laws and regulations” and that “the satellite images released by the companies concerned were obtained from open sources, a common practice on the market”.¹⁴

A key strength of MizarVision's offering lies in its integration of AI into the processing and analysis of satellite imagery. The company uses AI to aggregate large volumes of data in order to improve the accuracy and near real-time availability of the resulting intelligence products while reducing dependence on any single data source. In turn, this enables the company to produce operational intelligence quickly, at scale, on a large number of images, identifying objects such as aircraft, buildings and vehicles.

Even unclassified space-based imagery from commercial sources can yield intelligence of high military value once it is aggregated, automatically labeled, and

10. H. Zwartz and K. Calderwood, “US Intelligence Says Chinese Satellite Imagery of Bases Is Helping Iran”, *ABC News*, April 5, 2026, available at: www.abc.net.au.

11. P. Sauveton, “MizarVision, l'œil chinois qui inquiète le Pentagone”, *OpexNews*, April 9, 2026, available at: <https://opexnews.fr>.

12. A. Jones, “Remote Sensing Satellite Firm Completes Huge Funding Round as Chinese Space Sector Activity Accelerates”, *SpaceNews*, December 11, 2020, available at: <https://spacenews.com>.

13. T. Novelly, “US Must Adjust to Iran's Use of Commercial Satellite Photos, Space Command Says”, *Defense One*, April 14, 2026, available at: www.defenseone.com.

14. H. Zwartz and K. Calderwood, “US Intelligence Says Chinese Satellite Imagery of Bases Is Helping Iran”, *op. cit.*

disseminated quickly. An actor such as Iran could use this process to carry out operational targeting for its missile and drone systems.¹⁵

A paradigm shift in access to data and space assets

Historically, space-based IMINT capabilities were concentrated in a small number of states (including the United States, Russia, France and China) with fully integrated space-based intelligence architectures. As in other areas of the space sector, this domain is being reshaped by the emergence of new actors and the widespread use of space-based data for civilian applications. The emergence of the space-as-a-service model has lowered barriers to accessing space-based data and capabilities that previously required substantial investment and were beyond the reach of most public and private actors. Under this model, customers, whether states or private companies, no longer need to acquire an entire space system, encompassing launch capabilities, orbital assets and ground infrastructure. Instead, they can purchase specific services or access the data generated by space systems. At the same time, the proliferation of commercial and open-source applications, combined with the integration of AI, has increased both the availability and usability of space-based data, including for military applications. The Iranian case thus looks less like an exception than like evidence of a structural transformation in the space domain and its role in armed conflict. Several trends emerge from this transformation.

The emergence of the space-as-a-service model has lowered barriers to accessing space-based data and capabilities

Democratization of access to space data and the criticality of infrastructure

Historically, control over space-based capabilities provided a strategic advantage in intelligence collection, navigation and secure communications. The democratization of access to space-based data and services, driven by commercial providers, partnerships and open sources, has reduced the strategic advantage traditionally enjoyed by a few spacefaring powers.

15. A. Servaes, "Iran Uses Chinese AI Satellite Imagery to Target U.S. Military Bases and Equipment in Middle East", *Army Recognition*, April 8, 2026, available at: www.armyrecognition.com.

Space is no longer a strategic advantage in itself but an essential condition for modern military operations

As General Stephen Whiting, who heads US Space Command, explains,¹⁶ nearly every state now has access to space-based imagery and a near-continuous capacity to observe the Earth. Consequently, military planners must assume that adversaries can exploit space-based data, including commercially available imagery, to enhance situational awareness and improve operational effectiveness.

Space is no longer a strategic advantage in itself but an essential condition for modern military operations: for intelligence, communications and navigation. Losing space capabilities during a war would place a country at a serious disadvantage. This further increases the strategic importance of space infrastructure and makes space a domain of conflict in its own right.¹⁷ Space infrastructure is becoming a strategic target. This creates a dual imperative: to strengthen the protection of assets, both in orbit and on the ground, and to build resilient architectures based on redundancy and the geographic dispersion of sites, including beyond national territory.¹⁸

Repurposing of civilian assets

Iran's use of satellite imagery illustrates the growing reliance on civilian, commercial and open-source data for military applications. The TEE-01B satellite is a case in point, illustrating that a space platform is not inherently civilian or military. What ultimately determines its civilian or military purpose is how the platform and the data it produces are used.

The large-scale use of open-source intelligence (OSINT) for military applications is a second structural driver of change. Such shifts stem from the industrial model's move toward space-as-a-service, which fragments the value chain and makes it easier to aggregate data from multiple sources.

In the case of imagery, this disintermediation makes it possible to aggregate data from multiple constellations, enhance the images, and interpret them to produce high-value intelligence. In some cases, commercial systems now achieve performance levels comparable to, and occasionally exceeding, those of certain military systems in terms of spatial resolution (in the order of 30 to 50 centimeters), revisit frequency (of a few hours), data volume, and multi-source fusion. These capabilities are now accessible to countries that possess no sovereign space infrastructure of their own.

16. T. Novelly, "US Must Adjust to Iran's Use of Commercial Satellite Photos, Space Command Says", *op. cit.*

17. "Stratégie nationale spatiale 2025-2040", Secrétariat général de la défense et de la sécurité nationale, November 12, 2025.

18. "Stratégie de sécurité spatiale", Gouvernement fédéral, November 19, 2025.

The difficulty of establishing an international control mechanism

Efforts to regulate access to space-based imagery and data face major operational challenges. Control mechanisms do exist; in France, the Secrétariat général de la défense et de la sécurité nationale (SGDSN) oversees the release and sale of imagery. However, monitoring and controlling these data flows is becoming increasingly difficult and may eventually prove impractical.

A proliferating set of actors, public and private, Western and non-Western, can now produce or redistribute imagery data. This makes access hard to control. Restricting access to one source does not necessarily prevent access to alternative sources, including those available through intermediaries or actors operating under less stringent regulatory frameworks. Legally, each country sets its own rules and control mechanisms, which makes harmonization difficult. This challenge is further compounded by the broader trend toward relaxing international regulatory standards. In the future, only very-high-resolution data, captured by the military satellites of the few nations that possess the necessary technologies to produce it, will remain effectively controllable.

Impact on all capabilities of the space domain

Although recent media coverage has focused on the use of space-based imagery to support strikes against US bases, the normalization of access to space capabilities and their military use has implications across the full range of space capabilities.

Global Navigation Satellite System (GNSS)

Satellite positioning and navigation signals, from the American (GPS), European (Galileo), Russian (GLONASS), and Chinese (BeiDou) systems, have become indispensable for both civilian and military use. Military signals are generally more resistant to jamming and provide more accurate positioning, although access to these signals remains under the control of the states that operate the systems. Civilian signals remain broadly usable for military purposes, since the states operating these systems do not restrict which actors may use them.

Iranian strikes in early 2026 reportedly demonstrated greater accuracy than those conducted during the Twelve-Day War between Israel and Iran in June 2025. Some experts attribute this improvement to advances in missile guidance, enabled by access to China's BeiDou GNSS.¹⁹

19. N. Montagu-Smith, "Could Iran Be Using China's Highly Accurate BeiDou Navigation System?", *Al Jazeera*, March 11, 2026, available at: www.aljazeera.com.

Telecommunications

In Ukraine, the Starlink constellation has played a critical role in maintaining resilient military communications by supporting command-and-control chains, enabling drone operations, and transmitting tactical data despite attacks on terrestrial infrastructure.²⁰ Commercial telecommunications services can provide redundancy for sovereign communication systems, as shown by the February 24, 2022, cyberattack on the Viasat network used by the Ukrainian command.²¹

However, the growing involvement of private actors gives these companies direct influence over military operations, as illustrated in 2022 by Elon Musk's refusal to switch on Starlink for a Ukrainian operation against the Russian fleet in Crimea.²² This trend blurs the line between civilian and military infrastructure.

Signals intelligence (SIGINT)

Capabilities traditionally associated with military SIGINT are increasingly becoming accessible to civilian actors too. The microsatellites operated by the French company Unseenlabs were initially developed to complement AIS-based maritime surveillance. By detecting radio-frequency emissions independently of AIS, they can also identify military vessels and so-called "dark vessels" that deliberately switch off their AIS transponders, detect submarines leaving naval bases, and locate emitting ground-based radars.

Conclusion

The Iranian strikes of spring 2026 reveal a deep transformation in military space-based intelligence. They show that access to space-based data and services is no longer the preserve of powers with sovereign capabilities alone; it is steadily reaching a growing

Strategic advantage no longer rests solely on owning high-performance satellites

number of actors. Strategic advantage therefore no longer rests solely on owning high-performance satellites. It increasingly depends on the ability to rapidly access diverse, timely and actionable data, and transform it into operational intelligence. Strategic advantage is therefore shifting from data acquisition toward the ability to fuse, process and exploit information at operationally relevant speed.

This paradigm shift is driven in part by the emergence of the space-as-a-service model, which lets actors acquire space capabilities as services or data without mastering the entire space chain. Highly advanced sovereign space capabilities retain significant

20. K. A. Bingen, K. Johnson and M. Young, "Space Threat Assessment 2023", Center for Strategic & International Studies, April 2023, available at: www.csis.org.

21. A. Maurin, "La guerre en Ukraine et le théâtre spatial", *Revue Défense Nationale*, Hors-série, No. 111, 2023, pp. 31-37, available at: www.defnat.com.

22. V. Kim, R. Pérez-Peña and A. E. Kramer, "Elon Musk Refused to Enable Ukraine Drone Attack on Russian Fleet", *The New York Times*, September 8, 2023, available at: www.nytimes.com.

strategic value, particularly when it comes to accessing sensitive and otherwise difficult-to-obtain data. The ability to combine sovereign, commercial and open-source data and to draw on external services when needed is now a decisive factor in resilience and operational effectiveness.

This shift reaches beyond imagery intelligence and now includes every space capability, from telecommunications to positioning and signals intelligence. It is gradually redrawing the roles of states and private actors, and it confirms that in today's conflicts the challenge is no longer merely to own the best sensors, but to master the entire value chain of space-based intelligence.

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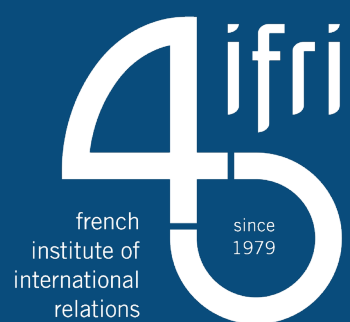
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