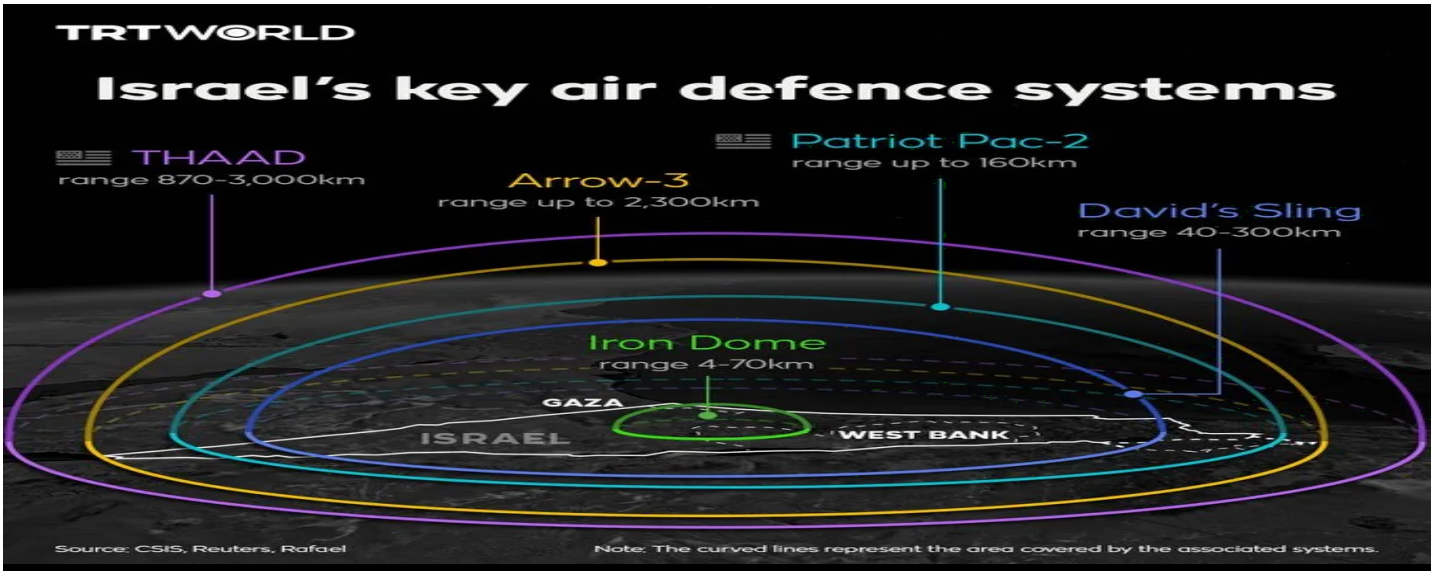
Inside Israeli Air Defenses: The System That Seems Invincible or Almost

Published on 24/03/2026

Israeli air defenses are considered among the most advanced in the world. That's why it makes news when missiles manage to get through: it happened on the night between **March 21 and 22, 2026**, when two Iranian ballistic missiles hit **Arad** and **Dimona** in southern Israel, prompting the army to open an investigation into the missed interceptions. The impacts caused extensive damage to residential buildings and showed, once again, that even a very sophisticated system can be penetrated.

When talking about the Israeli shield, the name **Iron Dome** is often used, the "**Iron Dome**". In reality, it is only one of the layers of a much broader network. Israel indeed has a **layered air and missile defense**, built over time to respond to different threats: **short-range rockets**, **drones**, **cruise missiles**, and **ballistic missiles**. Its strength lies precisely in this multilayer architecture, where each system has a specific task and intervenes depending on the type of attack.

The **innermost layer** is precisely Iron Dome, designed to intercept close threats: rockets, mortar shells, some drones, and other short-range targets. It works with three main components: a **radar** that detects the launch, a **command and control system** that calculates the target's trajectory and decides if it truly constitutes a threat, and finally the **Tamir interceptors**, launched against projectiles heading towards populated areas or sensitive infrastructure. One of its most notable elements is precisely this: it does not attempt to hit everything, but only what risks causing real damage.



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2. The Other Layers: David's Sling, Arrow, and the New Iron Beam

Above Iron Dome is **David's Sling**, the "**David's Sling**", which occupies the intermediate level of defense. It is designed to intercept more challenging threats, such as **medium-range ballistic missiles**, **cruise missiles**, **aircraft**, and **drones**. Essentially, it is positioned between Iron Dome, which protects against closer threats, and the more advanced systems intended for ballistic missiles launched from far away.

The **outermost layer** is formed by **Arrow 2** and especially **Arrow 3**, developed to tackle long-range ballistic missiles, those that can come from countries like **Iran** or **Yemen**. **Arrow 2** intercepts in the atmosphere, while **Arrow 3** is designed to hit targets **outside the atmosphere**, destroying them as far as possible from Israeli territory. The idea is to stop the threat before it re-enters and before it can cause damage on the ground.

This network is complemented by other support systems and cooperation with the **United States**, which in recent years have helped Israel strengthen both operational capabilities and the production of interceptors. Then there is **Iron Beam**, the new **laser** defense system that Israel considers the next technological leap. Its main advantage is economic: each interception costs much less compared to one carried out with a missile. For now, however, Iron Beam does not replace Iron Dome: it integrates it, adding an additional level of protection against closer threats.

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3. Why Missiles Can Still Get Through

The case of **Arad** and **Dimona** clearly shows why even a very efficient shield can fail. The first reason is **saturation**: if many missiles arrive almost simultaneously, perhaps from different directions, the number of targets can put pressure on radars, launchers, and interceptor stocks. The second concerns the **nature of the threat**: **Iranian ballistic missiles** are much faster and more complex than the homemade rockets against which Iron Dome was originally conceived.

There is also a third factor: the evolution of Iranian arsenals. Some missiles can carry **submunitions** or adopt flight profiles designed precisely to make interception more difficult. In these cases, having an advanced system is not enough: all levels of defense must work in a coordinated manner and be able to react very quickly. When this does not happen, even partially, the missile can reach its target.

For this reason, when a missile gets through, it does not automatically mean that “**Iron Dome did not work**”. More often it means that the threat belonged to another category, that the interception failed due to a combination of technical and operational factors, or that the attack was designed precisely to challenge a multi-layered defense. This is the essential point: Israeli air defenses remain among the most effective in the world, but **they are not invulnerable**. Their strength is in the combination of specialized systems; their weakness emerges when the adversary manages to **saturate them**, complicate the target profile, or strike at a point where one of the layers is not enough.

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