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MARKET REPORT

What is the “Next Big Thing”?

Following the money suggests that for 2026, the latest big trend is military technology.

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The “Next Big Thing” refers to the newest and biggest trend that everyone talks about and wants a piece of. There can be more than one at the same time, but not every trend is the Next Big Thing.

You can’t discover the Next Big Thing by looking for so-called technology breakthroughs that promise to capture market share or create new markets. These breakthroughs are obvious in retrospect, but one cannot be sure that an innovation will advance unimpeded to enable a large and expanding market. And even if it does eventually become a success, the time to market is usually long and uncertain.

Rather, to identify the Next Big Thing you have to “follow the money” by identifying trends in public and private funding. Commercialization needs funding, often lots of it, which trickles down to create other new opportunities. One can follow government announcements, the trade press and even mainstream media to find out where the money is going.

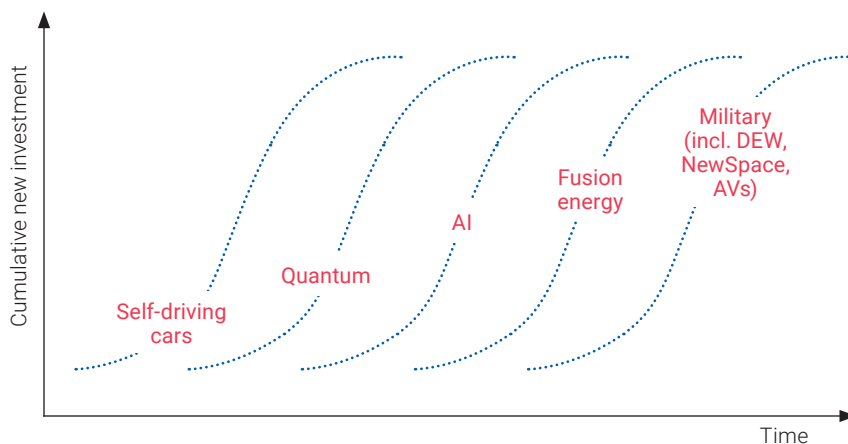
Some simplified examples

In venture investing, entrepreneurs pitch ideas to high-risk investors, who select early-stage companies to fund. Other funders then join in successively larger, later-stage

investments. The sector can become saturated, like a gathering mob, such that good investments become increasingly challenging to identify. Eventually, some companies exit to become publicly traded on the stock market, get acquired or close. The venture capital (VC) investors move on to other under-invested opportunities, and the cycle starts again. This is an oversimplified scenario, but it broadly describes the aggregate behavior.

Many speculative trends, such as crypto, are not relevant to optics and photonics, but many are. About a decade ago, system developers needed innovations for self-driving cars, which spawned new companies to develop lidar technologies. Steep growth in public and private funding in quantum technology also generated many startups. The release of OpenAI's GPT-4 drew enormous attention to artificial intelligence (AI) and concurrent investment into component technologies for optical interconnects in AI data centers. A recent surge in investment in fusion energy—including for laser-fired inertial confinement fusion—is supporting many startup companies. And there have been other hot topics over the years, including augmented and virtual reality (AR/VR), solar energy, LED lighting and the Telecom Bubble.

The diagram of investment trends provided here oversimplifies a dynamic and complicated financial market. Actual trajectories are not as smooth and equal as portrayed. Most technologies were in development for many years before they appeared to burst suddenly onto the scene as an “overnight sensation.” Some have even gone up and down multiple times before they become familiar household topics.



Simplified diagram of some investment trends in recent years.

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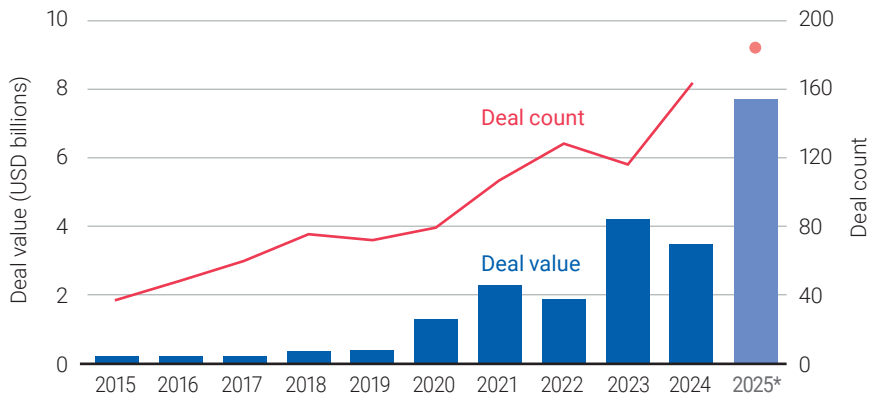
Speculation can become too big, too. AI is currently one of the biggest financial speculations in history in terms of money invested and high company valuations. A majority of new private investment is currently going to AI-related companies, bringing the inevitable whispers that many companies are overvalued and the sector is overinvested. Even without a market correction, however, technologies like AI can crowd out investment in other, well-deserving technologies that lack the momentum of the Next Big Thing.

While VC funding provides a useful forward-looking indicator, it is just one of many funding sources for optics and photonics companies and not necessarily the best. Others include private equity; government contracts, grants and loans; corporate investment in internal R&D and suppliers; and even wealthy relatives.

What’s the Next Big Thing of 2026?

One of the biggest recent developments is a dramatic increase in government military budgets. The Stockholm International Peace Research Institute (SIPRI) reports that world military expenditures exceeded US\$2.7 trillion in 2024, with the steepest rise since the Cold War. More than 100 countries increased their military spending, with further increases sure to come. At this writing, the US budget request for all military and defense-related activities exceeds US\$1 trillion for the first time. NATO announced in 2025 that all member countries will likely achieve its goal of “core” military spending of 2% of GDP on troops and weapons. It set a new goal of 3.5% by 2035, and an additional 1.5% for non-core spending, such as for infrastructure and developing domestic supply chains.

In some ways, this is like a typical government spending cycle: increasing during conflicts, followed by cuts when the conflict subsides, until another conflict drives growth in spending again. And indeed, many procurements are for conventional technology, including



VC funding for defense-technology startups.
Source: Pitchbook, *as of 15 October 2025

for replacement of munitions used in conflicts. These are supplied from traditional military contractors such as Lockheed Martin, RTX and Northrup Grumman (in the United States); BAE Systems, Airbus and Leonardo (in Europe); AVIC, Norinco Group and CETC (in China); and Rostec (in Russia).

What makes the current growth different from the usual economic or spending cycle is the interest in military technologies that depart from legacy systems of the past. It is a generational shift to things such as AI-enhanced drones and other autonomous systems, constellations of military satellites, and laser-enabled directed energy weapons. Optics and photonics enables many of the technologies.

The interest in new technology creates opportunities for suppliers not traditionally associated with military contracts. In the United States, this includes established companies like Palantir and SpaceX, but also relatively new suppliers such as Anduril and Shield AI. Europe is home to new players like Helsing, Harmattan AI and Tiberius Aerospace. Even long-time laser manufacturer Trumpf announced last fall a partnership with Rohde & Schwartz to integrate its high-power laser technology into

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systems to shield against unauthorized drones.

There are now nine defense-technology “unicorns” (privately held companies valued over US\$1 billion). The chart above shows new venture investment in defense technology through mid-October 2025. Total deal value for 2025 is expected to exceed US\$10 billion. A majority of the investment is in drone technology.

The interest from VC firms is remarkable because the conventional view has been that venture investors don’t match well with slow, bureaucratic government contracting. The exponential growth that VCs expect is not necessarily the goal with military technology, and the Silicon Valley philosophy to “move fast and break things” can be reckless when human lives are at stake. Governments also want to

maintain export controls on the technology and limit foreign ownership of supplier companies, which can hamper VC efforts to grow quickly.

However, governments have become more willing to reform processes to use the private sector to fill gaps in technology, shifting from inventors to adopters. For their part, many venture investors have seen the opportunity as financially viable. And even if venture investors tire of the market, there are other types of investors who invest in the sector.

And what’s after that?

Technology advances relentlessly, but it is hard to know what the world will want or need a few years from now that will rise to become the Next Big Thing.

That said, there’s already talk that the energy sector is ripe for new investment. Expansion of data centers for AI is driving up the demand for energy. Military technology needs a secure supply chain of rare earth metals, and the refinement of rare earths is highly energy-intensive, which could also raise long-term energy needs—not just for energy generation but also for efficient distribution. This illustrates how growth in one sector can trigger growth in another.

Following the money to identify the Next Big Thing can only go so far, however. The best approach is to stay informed and talk to your customers and colleagues. Often when speculation rises to the attention of mainstream media, it’s already too late for new investors. But it’s not necessarily too late for optics and photonics companies looking for new business. **OPN**

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