

INTEGRATED SOLUTIONS INSIGHTS

/ POWERING THE FUTURE OF MEDTECH THROUGH DATA-DRIVEN INNOVATION

Artificial Intelligence (AI) in medicine and science is rapidly impacting the healthcare industry and your business. As a forerunner in this space, data and the systems powering that data help you reshape your business. As competition increases, you want to remain focused on:

- Technology that can deliver **better patient outcomes**,
- Building agility and sustainability into your product's **lifecycle**,
- Producing **solutions at scale** – regionally and globally,
- Reducing financial risk and expense, while **managing credit and cash flow**, and
- Accelerating your **time to market**.

Positioning Your Medtech Business for Growth

Strategic developments that you should consider include:

1. Leveraging vast amounts of data, likely at the edge.
2. The adoption of large language models (LLMs).
3. The growing role of cloud providers and hyperscalers, like Microsoft.

Avnet Integrated Solutions and our partners are here to help. We empower medical technology innovators to drive product development forward, while providing the capability to help you design, optimize, deploy and support your solutions globally, at scale.



This Insights document is a continuation of our takeaways of the Gartner® Hype Cycle™ for Healthcare and Life Sciences Data, Analytics and AI 2025 report we previously sent you. This Hype Cycle tracks the emerging technologies that will have the greatest impact on data, analytics and AI initiatives in the payer, provider and life science sectors. CIOs can use this critical insight to guide their strategic planning decisions.

Here, we hope to provide you with some additional findings you may have missed. By leveraging reports like this one, we hope to help you enhance your decision-making process and ultimately offer you additional value.



/ THE GARTNER® HYPE CYCLE™ FOR HEALTHCARE DATA, ANALYTICS AND AI 2025 REPORT - OUR VIEW

Where to Start

From our experience in the Healthcare sector, here's three instances where the information in the Gartner® Hype Cycle™ will be of value.

- 1. Data Management** - The collation, maintenance and execution of a data and analytics strategy will help you leverage vast amounts of data being generated throughout healthcare, increasingly including compute-heavy visuals, images and scans.
- 2. Data Utilization** - With performance measuring and reporting, AI can be used for modeling to assist in predicting outcomes and therefore next actions to help with diagnosis and treatment.
- 3. LLMs** - The adoption of large medical models across a range of critical areas offers opportunity but also risk if not managed correctly. AI-driven complex LLMs trained on vast amounts of patients data offer powerful predictive futures and require powerful hardware solutions.

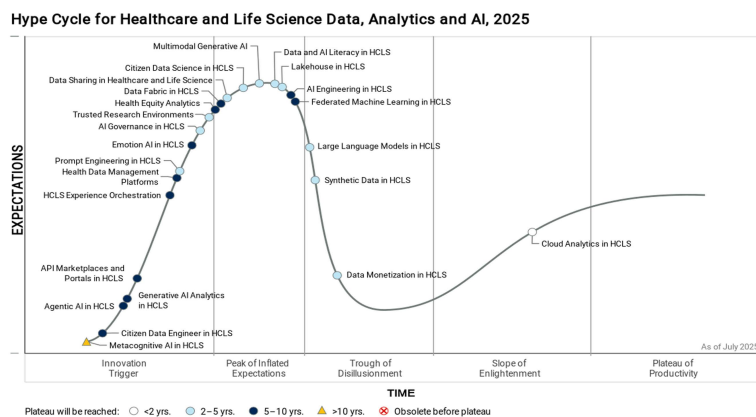
For us, the key highlight from the 2025 Gartner® Hype Cycle for Healthcare Data, Analytics and AI is, of course, the Hype Cycle graphic itself. This Hype Cycle tracks the emerging technologies that will have the greatest impact on data, analytics and AI initiatives in the payer, provider and life science sectors. CIOs can use this critical insight to guide their strategic planning decisions.



What's a Gartner® Hype Cycle™?

When new technologies make bold promises, how do you discern the hype from what's commercially viable? And when will such claims pay off, if at all? Gartner® Hype Cycles™ provide a graphic representation of the maturity and adoption of technologies and applications, and how they are potentially relevant to solving real business problems and exploiting new opportunities. Gartner® Hype Cycle™ methodology gives you a view of how a technology or application will evolve over time, providing a sound source of insight to manage its deployment within the context of your specific business goals.

Figure 1: Hype Cycle for Healthcare and Life Science Data, Analytics and AI, 2025



Gartner



/ OUR VIEW OF THE KEY TRENDS IN HEALTHCARE DATA, ANALYTICS AND AI: TURNING POSSIBILITY INTO REALITY



Large language models in Healthcare and Life Sciences

LLMs have demonstrated a dramatic advance in performance since 2022 and in healthcare are first impacting areas where they can improve efficiency with a higher tolerance for error, such as autogenerating clinical trial reports and searching scientific literature. Expectations of rapid delivery and improvements in worker productivity are creating urgency for CIOs in this space. Engineering and tooling techniques are helping to mitigate risks such as hallucinations and LLMs have been trained to understand scientific languages to unlock new opportunities in bioengineering.

Outcome: Transformational in 2-5 Years



Advanced analytics architecture for Payers and Providers

With an expected market penetration of up to 50%, advanced analytics architecture is an approach to derive value from data. As well as reports and dashboards, there is exploration assisted by data science and machine learning. Modeling and decision hubs help to deploy real-time insights into operations and allow providers to influence actions often in real time across operational, clinical and business processes. The continued growth in the volume, variety and velocity of data sources demands a more flexible architecture that supports faster time to innovation.

Outcome: High Benefit in less than 2 years



Emotion AI

Emotion AI, also called affective computing, uses AI to analyze the emotional state of the user via computer vision, audio/voice input, sensors and software logic. It can then provide personalized actions to fit the consumer's mood, or to sense the patient's emotional state. Building empathy with users can help to build trusted and personalized interaction. It can also be used to improve the understanding of emotional responses to treatments, triage patients and discern emotion in call centers or from automated tools.

Outcome: Transformational in 5-10 Years



AI Engineering

AI engineering is essential in allowing healthcare and life sciences businesses to deliver AI solutions at scale. According to Gartner®, "AI has been incorporated into business and technology strategy at a breakneck pace in HCLS, but the execution of AI projects has lagged substantially."

Outcome: High Benefit



/ GARTNER™ HYPE CYCLE™ FOR HEALTHCARE DATA, ANALYTICS AND AI 2025 REPORT

Our Key Takeaways



Data is extraordinarily valuable:

As more and more data is generated both for patients and businesses alike, including large and complex files, the need to manage it across various platforms becomes more urgent. Data privacy and usage also becomes more of a consideration and a potential risk so systems for storage, analysis and sharing become more important. Data security is paramount as healthcare businesses are targeted in cyber-attacks.



Utilizing data will drive innovation:

As AI capabilities rise, there's huge opportunity to transform business practices, increase efficiency and drive innovation. But new technologies need to be managed carefully, tested thoroughly and integrated with expertise.



Hyperscalers may accelerate value:

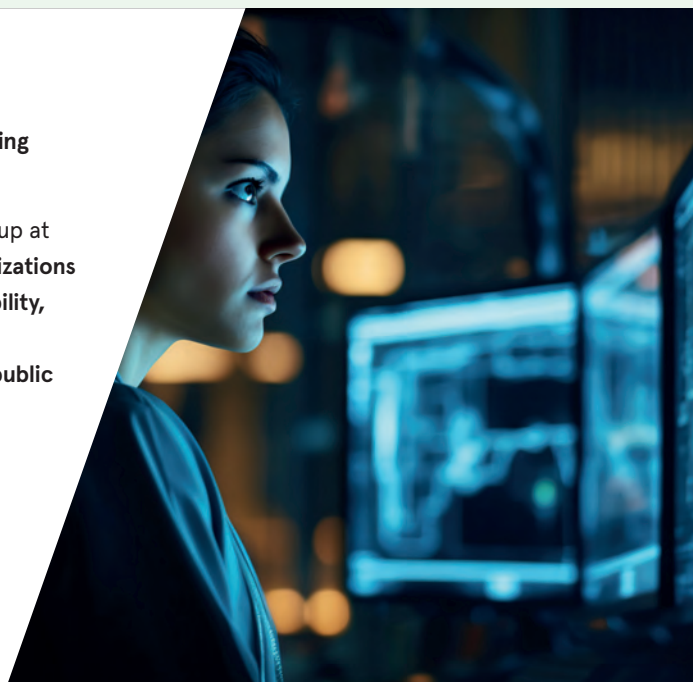
The increasing roles for hyperscalers such as AWS, Microsoft, Google and Oracle which combine native analytics techniques and architectures represent both an opportunity and potential risk for healthcare providers. Tapping into their capabilities can shorten development cycles but also means that businesses may need to align internal processes and platforms to do so.

Lenovo on AI in Healthcare Data

Lenovo has also emphasized the importance of AI in transforming healthcare data management.

Ashley Gorakhpurwalla, President of Infrastructure Solutions Group at Lenovo, remarked: **"To harness AI's transformative power, organizations need a data-driven strategy that ensures scalability, interoperability, and tangible business outcomes. At Lenovo, we believe a hybrid approach to AI—seamlessly integrating and enabling private and public models — is essential for delivering scalable solutions, driving measurable impact, and accelerating AI-powered business transformation."**

Lenovo's perspective highlights the necessity of a hybrid AI approach to effectively manage and utilize healthcare data, aiming for scalable and impactful solutions.



Source: Lenovo CIO Playbook 2025

/ GROW YOUR REVENUE AND PROFIT WHILE FOCUSING ON YOUR IP DEVELOPMENT

We understand that your product lifecycle is complex to execute and scale. Rich engineering and IP development are required to create the fundamentals of a differentiated, winning product.

As you take that design to market, you have to consider how to scale the solution, NPI management, transactional strategies, service solutions and how to maximize your go to market motion to help you realize your differentiation and grow your revenue and profits.

Avnet can turn your vision into a reality

We offer a suite of capabilities designed to help you achieve your vision and maximize revenue and profits.

We do this in across 3 areas:

1. Integration

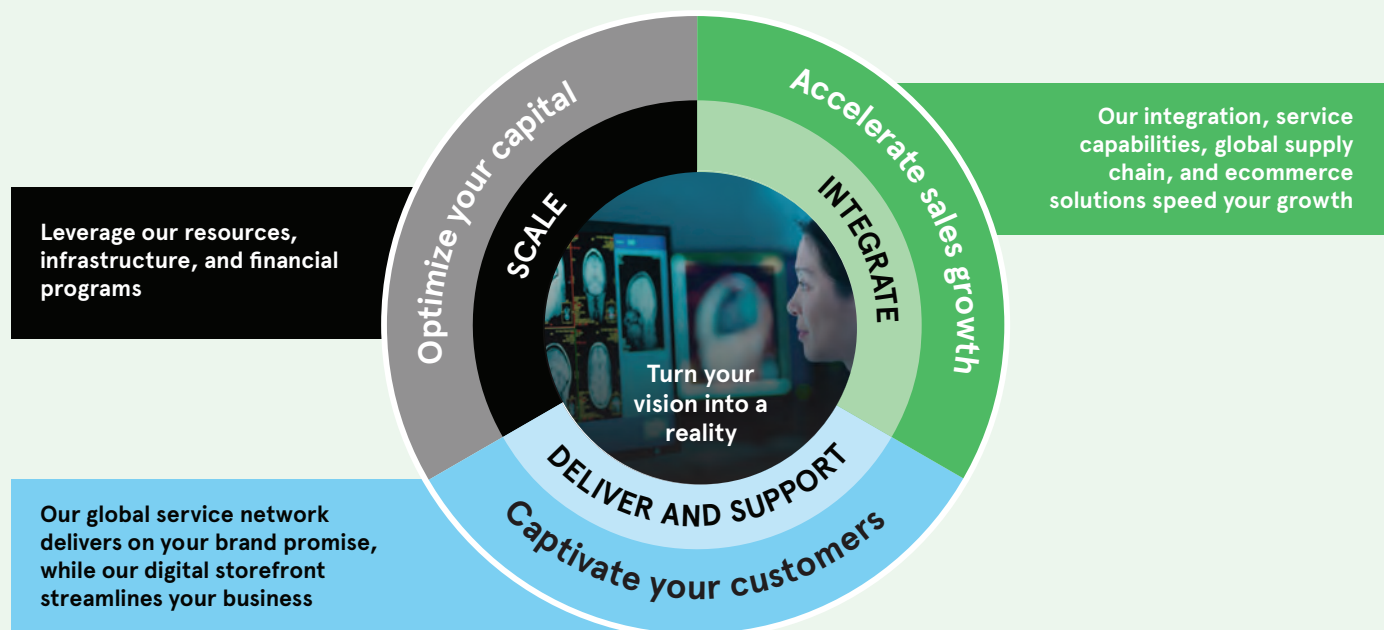
We build and integrate your products, freeing up your capital to extend your competitive IP and your go to market motion.

2. Deliver and support

We deploy and service your products, dramatically accelerating your growth by compressing your time to money through innovative commerce solutions and optimal product availability.

3. Scale

We provide supply chain and transactional solutions, giving a consistent experience across your entire product line, from transaction to deployment and maintenance.



/ TRANSFORMATIVE GROWTH REQUIRES STRONG PARTNERSHIP

Partnering for Success with Avnet Integrated Solutions, Lenovo and Microsoft

When you're building products and solutions for the healthcare market, innovating, future proofing and getting to market fast set you on the road to success. As AI helps to improve how data and architecture are designed and developed, you need partners you can rely on to bring your products to life, help you develop, test and learn, and the build, distribute and support you, globally.



“With our extensive experience in building and deploying healthcare globally and at scale, we pride ourselves on managing the ‘messy middle’ for our clients. Avnet takes away the pain points of designing, delivering, deploying, and supporting our customers’ solutions so they can focus on IP development and growth.”

Nicole Enright, President



01. Product Development

Our team and partnership with Lenovo and Microsoft can assist you with identifying the optimal design solutions that encapsulate the latest software and technology. Future-proofing your devices will help you maximize business value and return on investment.



03. Manufacture

We can advise on the most efficient design for manufacture and serviceability, ensuring regulatory compliance and certification as required. We can get you to market faster through manufacturing standardization and test automation.



02. Sourcing and component selection

We can help you evaluate whitebox vs branded options, product lifecycle and component selection and analyze supply chain sustainability and sourcing options. Lenovo's OEM solutions are ideal when you're looking for top tier products from a trusted leader.



04. Scale and support

Avnet Integrated Solutions, as the leading partner in the technology supply chain can help you delivery, install and service your solutions globally enabling you to focus on extending your IP advantage and driving demand.



/ WORKING WITH LENOVO AND MICROSOFT WE CAN OFFER

Lenovo's OEM Solutions



Advanced Customization and Cutting-Edge

Lenovo OEM Solutions redefine customization, focusing on rebranding elements like custom firmware, logos, chassis colors, ideal for healthcare and life sciences. Our approach includes zero-change manufacturing, ensuring consistent quality and design over time, complemented by performance optimization and recommended configurations for peak efficiency.



Tailored and Cost-Effective Healthcare-Specific Solutions

Our healthcare-specific solutions are designed to be both tailored and cost-effective. Lenovo OEM understands the unique challenges across the sector, crafting affordable, cutting-edge solutions that don't compromise on quality or performance, thus ensuring a smart investment for our clients. These offerings are supported by our life-cycle management, ensuring long-term viability and adaptability of our solutions, catering to evolving demands, especially relevant in rapidly changing times driven by AI advances.

Lenovo

"AI offers transformative opportunities for patients, care teams, and researchers across almost every touchpoint, helping providers to prioritize patient experiences, reduce clinical errors, accelerate the drug-to-market pipeline, and modernize workflows."

Windows 11 IoT Enterprise



Windows 11 IoT Enterprise LTSC 24H2

The latest iteration in Microsoft's LTSC lineup offers significant enhancements and new features that distinguish it from its predecessor, Windows 10 LTSC IoT Enterprise to provide a stable, secure and reliable operating system for embedded devices.



Modern User Interface

Design for improved usability and improved productivity tools like Microsoft Edge.



Long-Term Support

Extended support lifecycle with security updates for up to 10 years, ensuring stability and reliability for critical systems.

 **Microsoft**

"Working alongside healthcare organizations, Microsoft is making the promise of AI real by empowering the industry to tackle its biggest challenges and create a real difference in the lives of clinicians and patients."



/ MICROSOFT PURPOSE BUILT EMBEDDED SOFTWARE

Microsoft embedded licensing is purpose built for embedded solutions. Available as bulk licensing with 10-year support and lifecycle, it offers long term stability for your products out in the field and healthcare settings. Reliable and secure, there are different Windows Embedded software solutions tailor-made to satisfy your business needs.

By providing the technologies and expertise you need to capitalize on the Internet of Things, Microsoft builds intelligent systems to gather, store and analyze your organization's data. From devices on the edge of your network, to back-end systems and services, the data that flows through your enterprise will drive a new level of business intelligence.

Key Points for an Embedded / IoT System

- Operating system must be preinstalled (HW bundled).
- System has a dedicated, industrial function.
- Must have a license sticker (COA) attached (non-visible attachment possible).
- Recovery media is optional (no mandatory installation CD for the end-customer).

Key Advantages provided through the Embedded Channel

- Cost effective and simple licensing model (only license stickers: stick and forget).
- Componentized operating systems possible (Windows Embedded Standard, Windows CE/Compact).
- Separate OEM channel with own OEM agreement without any quantity bindings.
- Easy deployment, same as for large OEMs.
- Microsoft OPK (OEM Preinstallation Kits) available through Avnet Silica.
- Long product availability (10-15 years).
- Language and version independent license stickers.
- MUI Multi Language Packages available.
- OEM Activation possible.



Lenovo

/ LENOVO SERVERS

Lenovo ThinkEdge SE455 V3

Ideal for large and demanding Edge-AI and Telco workloads, featuring new capabilities including best-in-class performance and built-in sustainability.

Deliver faster insights at the Edge for AI, Telco, and critical workloads with Edge optimized compute performance from AMD, together with all-flash storage, acoustic optimizations, and robust security.



Lenovo ThinkSystem MX455 V3

A versatile AI-optimized turnkey infrastructure with Azure Local delivering seamless integration with on-prem and Azure cloud environments.

The ThinkAgile MX455 V3 Edge Premier Solution is a versatile edge solution belonging to the top tier of Azure Local solution categories delivering new levels of AI, compute, and storage performance at the edge, built through close engineering collaboration between Lenovo and Microsoft.



Lenovo ThinkEdge SE360 V2

Purpose-built to perform across a wide variety of the most demanding Edge-AI workloads in harsh environments.

- The SE360 V2 has a compact form factor that makes it ideal for space constrained environments.
- ThinkShield lifecycle security, physical tamper protection, and key encrypted storage.
- Full remote manageability via the Cloud-based ThinkShield Key Vault Portal.
- Easy connectivity with Bluetooth and WLAN.



Lenovo ThinkEdge SE450

The ThinkEdge SE450 is NVIDIA-Certified and brings the data center to the edge. It is designed to help revolutionize transformative AI systems.

- 10-36 server cores with up to 1TB of memory.
- Broad-wired and wireless connectivity.
- Robust server that can continuously operate between 5°C and 45°C.





Get started now!

Building innovation based on AI, new technology and data demands means getting to market fast. Reimagine the optimal support for your healthcare solutions, by partnering with Avnet to speed up your design, development, manufacture and distribution. We can get you from design to scale – fast. Contact us at integrated@avnet.com

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