Futurum

Futurum Research 2025

Key Issues & Predictions

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Welcome to
Futurum's 2025 Key Issues & Predictions Report

As 2025 begins, I'm reminded of one fundamental truth: disruption waits for no one. Organizations and leaders who can anticipate, adapt, and act quickly will thrive. At The Futurum Group, we are focused on helping you decode the complexities of today's digital-first world so you can stay ahead of the curve.

From AI's pervasive influence across enterprise applications to seismic shifts in hardware, cloud, and customer experience, our team of analysts—some of the brightest minds in research and strategy—has dissected the forces driving change and outlined actionable insights for what's next.

I invite you to explore the predictions in this report and reflect on how your organization can harness these shifts to drive growth, improve outcomes, and elevate experiences for customers and employees alike.

Here's to meeting the future head-on—together.

Tiffani Bova
Chief Strategy and Research Officer
The Futurum Group

AI Software and Tools: Agentic AI Disrupts the Business Application Universe

Prediction: By the end of 2025, we will see a significant shift in how enterprise software is consumed. At least 30% of routine business software interactions will be mediated through AI agents rather than direct user interfaces, leading to a restructuring of software licensing models.

Why This is Trending:

- Recent breakthroughs in large language models have dramatically improved **agents' ability to understand context and execute complex instructions** across multiple systems.
- The **increasing complexity of enterprise software stacks** — most large companies have multiple hundreds of SaaS applications — has created an urgent demand for solutions that can **abstract away this complexity** for end users while maintaining operational efficiency.

Use Cases:

- **Cross-Platform Business Process Automation:** An AI agent could manage an entire employee onboarding process by automatically coordinating across HR systems, IT provisioning platforms, and training modules, all without manual intervention across multiple systems.
- **Intelligent Resource Optimization:** An agent could continuously monitor and manage enterprise resource planning (ERP) systems, procurement platforms, and inventory management software simultaneously.
- **Integrated Customer Experience Management:** An AI agent could simultaneously interact with CRM systems, support ticketing platforms, social media management tools, and email marketing software to provide unified, context-aware customer service and relationship management.

"This isn't just about automation; it's about fundamentally changing how businesses — and the people within them — interact with their software systems, potentially saving billions in training costs and dramatically reducing the cognitive load on workers."

Nick Patience
Vice President & Practice Lead, AI Software & Tools

NPU-Equipped AI PCs: A Revolution in the PC Market Is Underway

Prediction: AI-capable PCs — PCs equipped with an NPU and capable of running some AI training and inference workloads locally — will come to represent at least 40% of new PC shipments by the end of 2025.

Why This is Trending:

- The introduction of NPUs into device system architectures, which includes PCs, is enabling **devices to perform previously energy-intensive tasks far more efficiently** than they could with traditional CPUs and GPUs. This new capability unlocks next-gen AI training and inference capabilities directly on the device, which in turn creates entirely new horizons of added utility for users and their organizations.

- **Every major PC OEM is fully committed to this market transition**, with aggressive competition between silicon vendors Qualcomm, AMD, and Intel accelerating performance improvements at both the processor and system levels. NVIDIA is also rumored to enter the market within 6-12 months.

- The end of support for Windows 10 (slated for October 2025) will also help **drive the PC refresh cycle towards AI PCs** and accelerate the adoption of AI PCs in the commercial segment.

Use Cases:

- **Moving AI Processing from the Cloud to Devices:** Organizations will be able to train and test many of their models securely, onsite, and at a fraction of the cost they would have otherwise incurred, directly on PCs.

- **Agentic AI in the PC:** Agentic-AI forward experiences for users will range from drafting e-mail responses and managing calendars in seconds to reducing the time it takes to design a presentation or a report from hours to minutes.

- **All-Day and Multi-Day Battery Life:** PCs capable of delivering all-day and multi-day battery life, even in thin-lightweight form factors, will transform the way users work and play with their PCs.

"The AI PC is a radically better PC than pre-AI PCs. The all-day battery life alone is such a radical system improvement that even without its AI capabilities, it would be worth the upgrade. In the long term, the AI PC also lays the foundation for the next generation of software experiences."

Olivier Blanchard
Research Director & Practice Lead,
AI Devices

Channel and GTM: The Use of Cloud Marketplaces Surges Forward

Prediction: Cloud marketplaces will become as big a Go-to-Market (GTM) for Independent Software Vendors (ISVs) as traditional distribution is for commercial hardware. Nearly $400 billion of committed cloud spending will continue to help fuel this engine.

Why This is Trending:

- **Marketplace fees have gradually been coming down** from north of 20% to about 3% as standard, and in some cases, as low as 1.5%. At this price point, marketplaces are as cost competitive as traditional distribution channels.
- As of Q3 2024, cloud-committed **spending across the leading three hyperscalers surged to $393 billion** (representing nearly 30% growth year-on-year), leading to a ready-made marketplace economy for ISVs to tap into.
- Hyperscaler "Private Offer" programs **enable partners to create custom offers** for their customers via the marketplace. This ensures that ISVs wanting to participate in the cloud marketplace can still leverage their partner ecosystem and reward them for that activity via their own partner programs.

Use Cases:

- **Crowdstrike:** One of a handful of companies that has surpassed $1 billion in total sales in the AWS Marketplace. AWS has been its fastest-growing route-to-market since 2017 and is also responsible for delivering a higher-than-average deal size (compared to its other sales channels).
- **NetApp:** NetApp Data Infrastructure Insights on the Azure Marketplace helps customers planning an Azure migration with streamlined observability and real-time telemetry data. It is the first vendor to offer first-party services with all three leading hyperscalers.
- **Salesforce and AWS:** As part of their 2023 agreement, select Salesforce products became available in the AWS Marketplace for the first time. In its Q3 2024 earnings, Salesforce highlighted AWS as a key growth driver.

"Every vendor is trying to figure out its marketplace strategy: which ones to prioritize, how to operationalize it, and how to bring traditional partners on that journey. AWS has been the pioneer in this space, but Microsoft and Google are quickly gaining steam."

Alex Smith
Vice President & Practice Lead,
Channels & GTM

CIO: With AI Ascendent, IT Leaders Rethink How They Wield the Cloud

Prediction: Enterprise IT will undergo a transformation, as CIOs re-architect their cloud infrastructures to meet the demands of AI-driven workloads. According to Futurum's latest CIO Insights survey, 89% of CIOs report leveraging AI for strategic improvements, with 71% reevaluating environments for running cloud workloads.

Why This is Trending:

- The rise of generative AI and large-scale machine learning models has introduced **unprecedented compute and storage requirements** that legacy architectures cannot support.
- Organizations are seeking to **balance the flexibility of public clouds with the control and cost predictability** of private or hybrid cloud environments.
- Increased awareness of **data sovereignty and compliance needs** is driving CIOs to redesign their cloud strategies with AI in mind.

Use Cases:

- **AI-Optimized Data Centers:** Enterprises are deploying on-premises GPU-based architectures to support cost-effective training and inferencing workloads while also maintaining data control.
- **Making AI Affordable:** Making AI workloads inexpensive enough to operate is critical, especially for complex knowledge work in price-sensitive industries like healthcare and insurance.
- **AI-Enhanced Business Resiliency and Disaster Recovery:** Implementing AI-driven predictive analytics to optimize failure resistance, operational failover and recovery processes across multi-cloud architectures is a smart business move.

"As AI becomes integral to business strategy, the need for low latency, cost efficiency, and compliance in AI applications is driving a rapid shift toward hybrid and multi-cloud strategies. 2025 will be a pivotal year for a comprehensive realignment of infrastructures with the realities of the AI era."

Dion Hinchcliffe
Vice President & Practice Lead,
CIO Insights

Cybersecurity: AI Accelerates the Race Between Attackers and Defenders

Prediction: Generative AI will become an important differentiator across the cybersecurity toolchain. According to The Futurum Group's Cybersecurity Decision Maker IQ data, more than 40% of cybersecurity decision makers noted the integration of new technologies such as generative AI as a top spending priority relating to cybersecurity, and 39% noted new AI-driven security platforms.

Why This is Trending:

- Malicious actors are using AI to develop **more evasive and sophisticated threats** with greater speed and efficiency.
- In response, defenders must also **adopt AI-powered tools** to reduce the likelihood of a successful breach and mitigate the resulting damage in the event of a successful breach.
- Vendors are responding in kind by **baking AI-based capabilities into their solutions** to support security and infrastructure teams alike from the standpoint of their cyber-resiliency.

Use Cases:

- **Automated Threat Detection:** AI can be used to analyze vast amounts of data, such as logs, and to draw correlations between multiple disparate data stores. As a result, it can uncover patterns and anomalies, such as unusual network traffic or suspicious user behavior.
- **Rapid Incident Response:** Generative AI can automate incident response tasks such as identifying affected systems and recommending recovery points and remediation steps.
- **Enhanced Security Awareness Training:** AI can create realistic phishing simulations that can be used in training to improve security awareness.

"As attackers use AI to elevate their game, organizations must also start evaluating AI as a crucial tool to fight back. Cybersecurity vendors are steadily integrating generative AI into their solutions for a myriad of outcomes to help organizations optimize the resilience of their most critical business services."

Krista Case
Research Director & Practice Lead, Cybersecurity

DevOps and App Dev: GenAI's Biggest Gains Are in Old and New Code

Prediction: By the end of 2025, generative AI will be valued just as much, if not more, for its ability to reduce developer toil and tackle technical debt then for its ability to generate new code.

Why This is Trending:

- Generative AI is proving to be **particularly well suited to software development tasks** that require an understanding of software's inner workings.
- Generative AI's strengths in **natural language processing and inferencing** are highly applicable to software, which is written in symbolic language such as programming languages, scripts, configuration files, and markup languages.
- AI agents are conducive to tasks including **writing unit and functional tests, performing code and security reviews**, and performing routine updates and bug fixes.

Use Cases:

- **Streamlining Development Tasks:** AI agents simplify the creation of software and technical documentation, including API documentation, architectural diagrams, readme and configuration files, and software unit and function software test cases.
- **Examining Full Codebases:** AI agents can automatically perform code reviews quickly and continuously examine entire codebases to identify reusable code, reoccurring software bugs, security vulnerabilities, non-compliant coding practices, and code that is no longer used.
- **Refactoring and Modernizing Code:** AI agents can perform basic code improvements, such as removing inefficiencies in code, to more complex tasks, such as examining an application codebase and developing multiple approaches to refactoring legacy code into microservices.

"Generative AI is not only revolutionizing new software development but also fundamentally changing how software developers work with existing codebases. Agentic AI will have a profound impact at tackling the mountain of technical debt and reducing the toil developers deal with as part of their everyday work."

Mitch Ashley
Vice President & Practice Lead,
DevOps & Application Development

Enterprise Applications: Pricing Models Are Shifting

Prediction: Generative AI-powered features will enter widespread use, thereby requiring significant shifts in pricing models. A 2024 Futurum Intelligence survey found that 40% of decision makers were paying for software on a consumption-based pricing model, and 15% were using an outcomes-based model.

Why This is Trending:

- Both vendors and enterprise customers are realizing that AI is enabling work to be completed more quickly and efficiently than ever before, and **paying for a full-seat license is inefficient** and lacks a direct connection to business results.
- Consumption-based models **more closely track usage of AI services to cost**, whereas outcome-based models ensure that customers do not pay for software that is not delivering promised results.
- As AI agents proliferate, we expect **a strong shift to outcomes-based pricing models** in 2025.

Use Cases:

- **Adobe:** By offering generative credits or tokens correlated with the consumption of compute, Adobe helps its customers understand the value and costs of its powerful text-to-image and text-to-video services.
- **Zendesk:** The cloud-based customer service platform has announced the use of outcome-based pricing with its AI agents, under which customers will only pay for successful interactions.
- **Workhuman:** The employee engagement platform has fully shifted to an outcomes-based model, under which larger overarching metrics, such as employee engagement or retention, are used to assess whether Workhuman has delivered on its promises.

"The combination of generative AI and automation technologies has rapidly transformed the ability of vendors to deliver far more functionality within its software offerings. New pricing models are required to realign the economic model more closely and fairly while providing additional transparency."

Keith Kirkpatrick
Research Director & Practice Lead,
Enterprise Applications

Semiconductors: Chiplets, Heterogeneous Integration, and Advanced Packaging Will Enable High-Performance Applications

Prediction: Chiplets will account for an increasing share of semiconductor foundry services, with some leading advanced packaging equipment suppliers expecting chiplets to account for 25% of foundry revenue by 2030, according to BE Semiconductor Industries.

Why This is Trending:

- As overcoming the technical challenges associated with Moore's Law's monolithic scaling has become too expensive to justify for all but a few semiconductor device types, **industry investment has shifted more towards advances in packaging technology**.
- By partitioning the chip into separate functional elements (chiplets), **only the advanced logic functions need to be fabricated on leading-edge process nodes**. Less-critical functions can be processed using legacy nodes or a different process technology altogether.
- Heterogeneous integration enables **lower power consumption and better heat dissipation**, which are increasingly important system performance metrics.

Use Cases:

- **Stacked Die:** Heterogeneous integration utilizes a variety of 2.5D and 3D advanced packaging process technologies.
- **High-Bandwidth Memory (HBM):** For use in applications such as high-performance computing (HPC), HBM achieves much higher bandwidth than standard dynamic random-access memory (DRAM) by stacking multiple vertically interconnected DRAM dies.
- **Co-Packaged Optics:** Co-Packaged Optics (CPO) is the advanced heterogeneous integration of optical components and semiconductor devices on a single package to address performance and power challenges.

"We will see an increasing share of industry investment (both R&D and CAPEX) directed towards the advanced packaging technology required to deliver heterogeneous integration of chiplets."

Richard Gordon
Vice President & Practice Lead, Semiconductors

Resiliency: It's Time to Fix Fragile Applications

Prediction: The development and platform communities will be busy confronting the persistent phenomenon of error-prone applications, figuring out what to do about them, and pondering whether AI can help save the day.

Why This is Trending:

- Developers, application managers, CTOs, and users are too often gritting their teeth in **fearful anticipation of a release**, an update, or just some random global event taking down their business-critical application. Awareness of risks to application availability, dependency, and performance is increasing.

- **Application resiliency is now a primary design point**, not just in the application architecture (12-factor coding, microservices, cloud-native development) and the infrastructure (containers, platform engineering, infrastructure as code) but also in the culture and processes of DevOps, DevSecOps, and CI/CD.

Use Cases:

- **Smarter Code Review:** Developers are integrating static code analysis tools into their development pipeline to automatically detect potential vulnerabilities, coding standard violations, and other issues. AI-powered code review tools can significantly enhance the quality assurance process by using machine learning algorithms and natural language processing to analyze code for syntax errors, logic inconsistencies, and potential bugs.

- **AI-Assisted Test Generation:** AI tools can automate the creation of test cases based on functional requirements and code structure. This includes generating unit tests, API tests, and UI autotests, which can help identify issues that might be missed in manual testing.

"Leaders are demanding answers for hosting environments that are supposed to 'just work' but don't, pipelines that have broken or been breached, edge devices that have polluted the data stream, and of course, systems that have been taken down by cyberattacks or malformed software updates."

Guy Currier
Vice President & CTO of Visible Impact, part of The Futurum Group

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