

Gartner Research

# Emerging Technologies and Trends Impact on Products and Services Primer for 2024

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## Emerging Technologies and Trends Impact on Products and Services Primer for 2024

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Initiatives: Emerging Technologies and Trends Impact on Products and Services

Effectively capitalizing on emerging technologies will enhance products and services to improve customer value, retention and revenue. Product leaders can use this initiative to make critical decisions on when and how to invest in and monetize emerging technologies and trends.

### Scope

Use this initiative to discover, strategically assess, monetize and integrate emerging technologies and trends (ETTs) in products and solutions.

Topics in this initiative include:

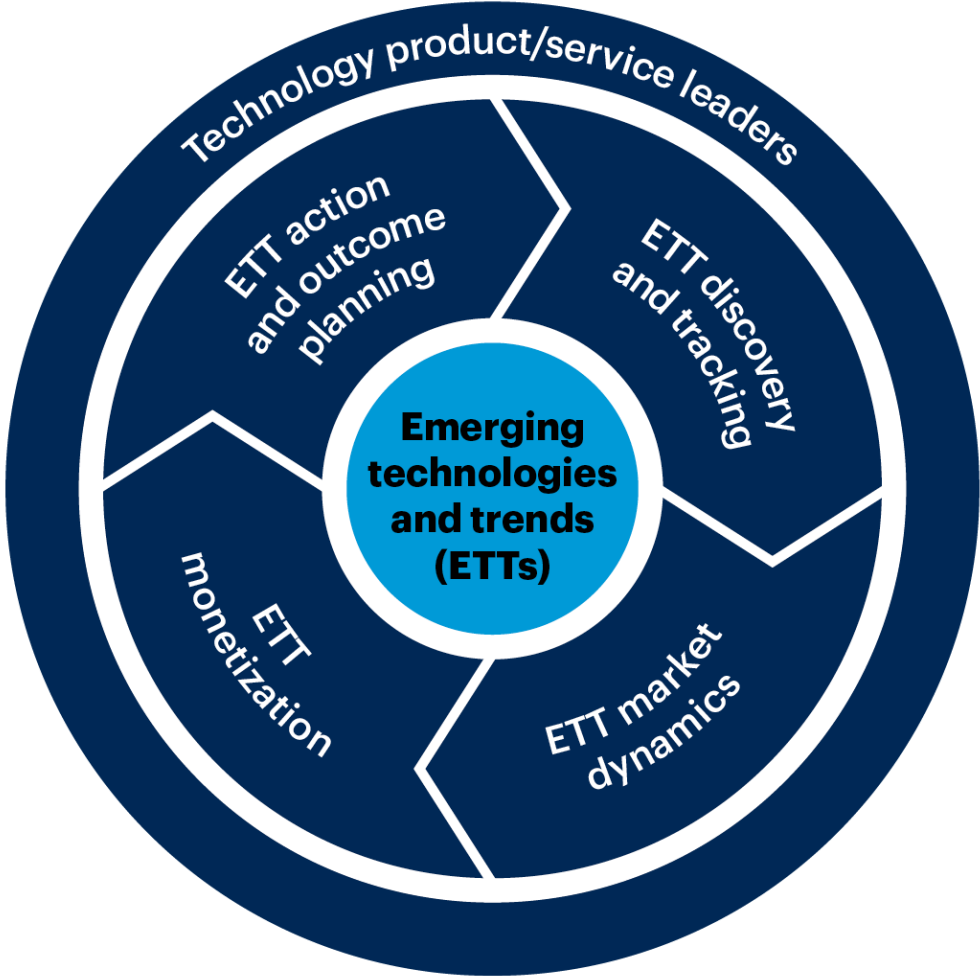
- **ETT Discovery and Tracking:** Identify, analyze and monitor how key emerging technologies and trends will impact your business over time. The goal is to assist Gartner clients in identifying the new technologies that matter to their business and in determining the right time to act.
- **ETT Market Dynamics:** Study market patterns to craft a successful go-to-market strategy, achieve differentiated positioning and build valuable channel relationships.
- **ETT Monetization:** Develop economics-based strategies to monetize emerging technologies.
- **ETT Action Planning and Execution:** Build emerging technologies into business strategy, business model, product and service roadmaps, pricing structures, go-to-market plans, and competitive messaging.

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Analysis

Figure 1: Emerging Technologies and Trends Impact on Products and Services Overview

# Emerging Technologies and Trends Impact on Products and Services



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Emerging technologies and trends (ETTs) define the future success of products, driving challenges for product leaders. They face risks of poor investment choices and timing that can result in less competitive or even obsolete products and services. Conversely, those that invest effectively will win market share and increase revenue. Gartner's ETT research is expressly designed to assist product leaders in making the right investment decisions at the right time to capitalize on and monetize emerging technologies. We track and analyze over 650 emerging technologies from chip manufacturing to the industrialization of space and just about everything in between — including artificial intelligence (AI) and cybersecurity.

For 2024, ETT teams will address:

- **AI/generative AI (GenAI):** GenAI is moving to grounded reality as large language models (LLMs) have reached a critical point in effectiveness. 2024 themes include:
  - AI marketplaces
  - AI governance
  - Economics of generative AI
  - Responsible AI
- **Cybersecurity:** Emerging tech provides adversaries easier ways to deceive others in a more convincing manner. 2024 themes include:
  - Automated moving target defense (AMTD)
  - Autonomous systems cybersecurity
  - Disinformation security
  - Advanced electronic communications security
- **Hardware devices and vehicles:** 2024 themes include:
  - Ambient computing
  - Advanced sensor technology
  - Smart satellites
  - Electric vehicles and energy storage

- **Semiconductor technologies:** Emerging semiconductor tech will enable increased or better computing power, human-machine interfaces, and energy efficiency. 2024 themes include:
  - Advanced semiconductor manufacturing
  - AI semiconductor evolution
  - Business implications of custom silicon
  - Wide-bandgap transistor technologies
- **Software:** Product leaders have accelerated new emerging software capabilities to include in products to improve offerings and solutions. 2024 themes include:
  - Augmented reality
  - Simulation twins
  - Software engineering

To drive revenue and deliver solutions to the market, product leaders must know what ETTs are on the horizon driving buyer interest, and changing markets or competitive positions. 2024 priorities include:

- Advanced wearable technologies
- Advanced chip production
- AI marketplaces
- Automated moving-target defense
- Foundation models as a service

## Topics

Gartner insight helps product leaders to understand and act upon emerging technologies by delivering analysis of trends, data-driven insights and case-based research on how to factor emerging technologies into product and service roadmaps, as well as risk analysis. This initiative provides product leaders with best practices and insights on how to leverage emerging technologies and trends to deliver highly successful products and services and grow their businesses.

Our research in this area addresses the following topics:

## ETT Discovery and Tracking

Gartner looks at a wide range of ETTs and evaluates their potential impact on the technology market in terms of early recognition of emerging technologies and their market relevance; depth, breadth and speed of market impact; and current state of maturity and expectations on future evolution

### Questions Your Peers Are Asking

- What are the emerging trends and technologies we need to watch?
- Why are these emerging technologies important to the future state?
- When do we need to act on these emerging technologies?

### Recommended Content

🔑 Some recommended content may not be available as part of your current Gartner subscription.

- Emerging Tech Impact Radar: Generative AI
- Emerging Tech: Security – Emergence Cycle for Automated Moving Target Defense
- Emerging Tech: The Future of Cloud-Native Security Operations
- Emerging Tech Impact Radar: Sensing Technologies and Applications

### Planned Research

- The future of generative AI
- The impact of AI and deepfakes on identity verification
- Impact of the rise of vector databases
- The future of advanced wearables

## ETT Market Dynamics

This topic covers the opportunities and challenges an emerging technology creates in the market. Gartner's ETT coverage strives to assist product leaders in determining the path to sustainable competitive advantage. We examine the market players from the largest to the smallest tech providers. We also explore trends around current and future adoption patterns including target industries, business functions and use cases. Additionally, we analyze go-to-market approaches including target markets, differentiated value propositions and partner ecosystems.

### Questions Your Peers Are Asking

- Who are the key players in the market?
- How are buyers adopting technology today and what are the future opportunities?
- How are tech vendors pursuing the market and what are the best opportunities?

### Recommended Content

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- Emerging Tech: Techscape for AI Seed Stage Startups
- Emerging Tech: Top Emerging GenAI Use Cases in AI Services
- Emerging Tech: Top Use Cases for AI in Threat Detection, Investigation and Response
- Emerging Tech: Demand-Driven Innovators in the Metaverse
- Emerging Tech: Tech Innovators for Digital Twins – IT Providers

### Planned Research

- Technology landscape for generative AI innovators and disruptors
- How generative AI adoption creates new cybersecurity opportunities
- Risk strategy projection of generative AI on enterprise software, infrastructure software and conversational AI
- Roadmap implications for big data in the automotive industry
- Technology landscape for alternative auto fuels

## ETT Monetization

ETT monetization explains how product leaders can turn emerging technologies and trends into revenue growth and profitability. It addresses the fundamental economic, business model and pricing structure alternatives associated with successful ETT productization. It also explores revenue opportunities such as market sizing projections, customer value estimation, unit economics, profitability analysis and cannibalization risk.

### Questions Your Peers Are Asking

- What monetizable value and revenue opportunity does an ETT add to the current market?
- What are the business and pricing model alternatives?
- What are the underlying economics that determine when and how to invest in an ETT?

### Recommended Content

🔒 Some recommended content may not be available as part of your current Gartner subscription.

- Emerging Tech: Grow Your Security Service Revenue With Cybersecurity Validations
- Emerging Tech: Security – Leverage Emerging MDR Trends to Grow Your Security Service Revenue
- Emerging Tech: How Tech Providers Make Money From Enterprise Digital Business Units
- Emerging Tech: Revenue Opportunity Projection of Spatial Computing
- Infographic: Product Leaders Should Ramp Up Now for the Fast-Growing, Foldable Smartphone Market

## Planned Research

- Revenue opportunity projections for external attack surface management
- Monetization strategies for emerging tech in identity and access management
- Revenue opportunity projection for digital business units
- Revenue opportunity projection for silicon photonics
- Revenue opportunity projection for computer vision

## ETT Action Planning and Execution

Gartner strives to assist clients in making critical decisions on when and how to invest in emerging technologies. This involves determining how to capitalize on emerging technologies for maximum business gain.

## Questions Your Peers Are Asking

- What are the critical decisions we must make to determine when and how to invest in an emerging technology?
- How do we build action plans to take an emerging technology from idea to implementation?
- How do we manage through the risks and challenges of successfully integrating an emerging technology into the business?

## Recommended Content

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- Emerging Tech: Security – Improve Threat Detection and Response With AI-Based Behavioral Indications
- Emerging Tech: Top Challenges Hindering Innovation for MSSPs
- Emerging Tech: Generative AI Code Assistants Are Becoming Essential to Developer Experience
- Emerging Tech: Top Use Cases of the Metaverse

## Planned Research

- Roadmap implications for vehicle electrical/electronic architecture evolution
- Semiconductor advanced packaging drives GenAI performance
- Battery management system for electric vehicles
- How AI and Auracast are turning earbuds into lifestyle essentials
- Security opportunities GenAI brings to threat intelligence
- AI-enabled wearables drive new value for the enterprise

## Suggested First Steps

- Emerging Tech Impact Radar: 2024
- Emerging Tech Impact Radar: Security
- Emerging Tech: Security – Top Trends in the Security Market for 2023
- Emerging Tech: Top Use Cases for Generative AI

## Essential Reading

- Emerging Tech: Critical Trends for Security Service Leaders to Consider in 2024
- Emerging Tech: Top Security Concerns for Earth Intelligence
- Emerging Tech Impact Radar: Environmental Sustainability
- Emerging Tech: Tool – Digital Twin Business Value Calculator
- Emerging Tech: Top Enabling Technologies for Metaverse
- Webinar: Managed Security Services Trends and the Future
- Webinar: The Current State and Future Business Opportunity of Web3 and Blockchain Technology
- Webinar: Current Status and Future of Quantum Computing
- Webinar: The Transformative Power of Generative AI: Changing How Business Innovates and Operates
- Webinar: Sustainability Management Software – Charting a Sustainable Path to the Future

## Document Revision History

Emerging Technologies and Trends Impact on Products and Services Primer for 2023 - 2  
February 2023

Emerging Technologies and Trends Impact on Products and Services Primer for 2022 - 4  
February 2022

Emerging Technologies and Trends Impact on Products and Services Primer for 2021 -  
20 January 2021

Emerging Technologies and Trends Impact on Products and Services Primer for 2020 -  
17 April 2020

## Related Priorities

Initiative Name	Description
Product and Services Strategy for Tech CEOs	This initiative helps tech CEOs create evidence-based product and services strategies that support critical, growth-oriented GTM decisions.
Product/Service Discovery and Validation	This initiative can help develop product and service offering plans and strategies based on best practices and insights for assessing customers' needs, market trends and competitive positions.
Technology Market Essentials	This initiative helps organizations harness growth opportunities by providing a quantitative fact base with market analysis and insights on market dynamics and technology trends.
Tech Buying Behavior	This initiative covers technology buyer behavior — how organizations and the people in them make buying decisions, what these buyers want and how high-tech providers must adapt to that behavior.

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## Webinar

### 2024 Leadership Vision for Technology General Managers

Discover the playbook for leading in the middle.

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## Report

### Top Trends for Tech Providers for 2024

Learn the top trends impacting tech providers.

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## Webinar

### IT Spend Forecast 4Q23: What to Expect in 2024 and Beyond

Separate the hype from the spending on AI and GenAI.

[Watch Webinar](#)



## Research

### Emerging Tech Impact Radar: 2024

Explore these technologies to capitalize on market opportunities.

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