

Gartner®

# Top Strategic Technology Trends **2023**



# Bringing clarity to your tech priorities

Many business leaders expected by now to be focused squarely on postpandemic growth. Instead, most are now eyeing the threat of recession and managing the impact of persistent inflation, as well as dealing with crises in supply chain, energy sourcing and digital skills.

While the future is uncertain, your enterprise must still identify and commit to strategic outcomes and initiatives. Is your goal to save costs? Improve margins? Grow? Pivot to a reinvented business model?

Whatever it is, technology is key, but you have to know when and where technology trends will potentially have an impact. To help, Gartner provides an annual list of key technology trends that both business leaders and technologists should leverage in the next 36 months, whatever their business needs.

This eBook provides an overview of the trends and their opportunities, benefits and use cases — and some key actions for implementation.



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## Gartner Top Strategic Technology Trends 2023

### Optimize

- 1** Digital Immune System
- 2** Applied Observability
- 3** AI Trust, Risk and Security Management (AI TRiSM)

### Scale

- 4** Industry Cloud Platforms
- 5** Platform Engineering
- 6** Wireless-Value Realization

### Pioneer

- 7** Superapps
- 8** Adaptive AI
- 9** Metaverse

- 10** Sustainable Technology

# Viewing Technologies Through Strategic Goals

To clarify how these trends can drive value for you, start from the strategic objectives of your enterprise.

For example, Gartner research shows that 94% of CEOs want to maintain or accelerate pandemic-driven digital transformation. Consider, then, which technologies will be most relevant, while realizing that they don't all need to be implemented at once.

This view forms the beginnings of your strategic technology roadmapping process.

## Technology Trends Likely on the Roadmap for Accelerating Digital

Sustainable Technology	AI TRiSM	Wireless-Value Realization	Industry Cloud Platforms	Digital Immune System	Platform Engineering	Superapps	Adaptive AI	Applied Observability	Metaverse
Now	0-1 year			1-2 years			2-3 years		
		●	●	●	●			●	

## Technology Trends Relate to a Range of Enterprise Strategies

Choose your business goal ↓	Sustainable Technology	AI TRiSM	Wireless-Value Realization	Industry Cloud Platforms	Digital Immune System	Platform Engineering	Superapps	Adaptive AI	Applied Observability	Metaverse
	Now	0-1 year			1-2 years			2-3 years		
Create secure foundations		●	●		●	●		●		
Maximize value from data		●	●					●	●	
Protect and grow your brand	●	●			●					●
Attract and retain talent	●					●	●			●
Grow revenue	●			●			●			●
Accelerate digital			●	●	●	●			●	

# Technologies Drive Much-Needed Business Outcomes

## Optimize

Optimizing IT systems for greater reliability, improving data-driven decision making and maintaining value integrity of AI systems in production

### Related Trends:

Digital Immune System

Applied Observability

AI TRISM

## Scale

Accelerating vertical offerings, increasing the pace of product delivery and enabling connectivity everywhere

### Related Trends:

Industry Cloud Platforms

Platform Engineering

Wireless-Value Realization

## Pioneer

Enabling business model change, reinventing engagement with employees and customers, and accelerating strategies to tap new virtual markets

### Related Trends:

Superapps

Adaptive AI

Metaverse

Sustainable Technology

## Optimize



Digital Immune System

Applied Observability

AI TRiSM

## Scale

Industry Cloud Platforms

Platform Engineering

Wireless-Value Realization

Sustainable Technology

## Pioneer

Superapps

Adaptive AI

Metaverse

# 1 Digital Immune System

By 2025, organizations that invest in building digital immunity will increase customer satisfaction by decreasing downtime by 80%.

Source: Gartner

## Business value

A digital immune system (DIS) combines practices and technologies from observability, artificial intelligence (AI)-augmented testing, chaos engineering, autoremediation, site reliability engineering and software supply chain security to increase the resilience of products, services and systems.

## How a digital immune system optimizes resilience

A DIS provides a model to prepare your organization to mitigate potential risks and uses failures as learning opportunities to create a superior customer and user experience that is resilient to failures.

## Sample business strategies supported

- Create secure foundations
- Accelerate digital
- Protect and grow your brand

## Use cases

**American Airlines** uses site reliability engineering, chaos engineering practices and a “test-first” approach to better deal with increased system complexity and address unknown vulnerabilities and weaknesses. This has increased its system understanding and knowledge and revealed one large resilience vulnerability.

**Banco Itaú**, a Brazilian bank, added predictive and remediation capabilities to its monitoring systems to continuously assess health, improve system performance and deliver insight into what drives the best employee and customer experience. These capabilities increased automatic remediation of incidents by 37% and decreased their mean time to resolution by 45%.

# 1 Digital Immune System

## Technical profile and value

A DIS can be used as a frame of reference for investing in a set of practices to improve the quality and resilience of business-critical systems. The creation and evolution of a DIS leads to a more resilient business outcome and creates business

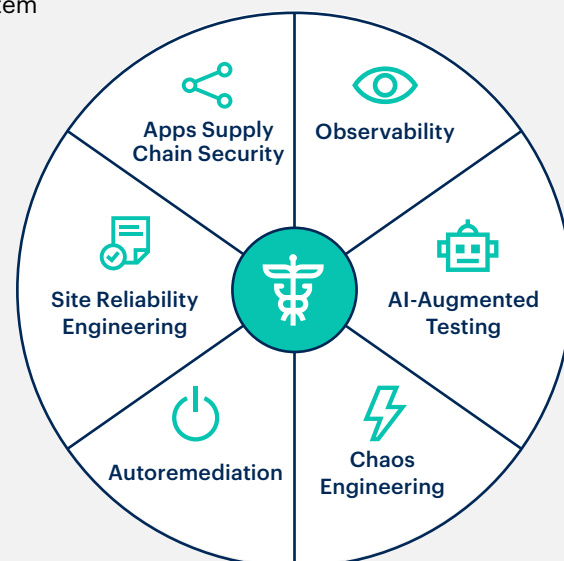
value for both business and IT stakeholders. As such, it enables you to play an essential role in connecting software development to business outcomes and supporting customer experience strategies through modern technologies and practices.

## Key actions

- Form executive-sponsored teams to create and execute a DIS strategy. Start by assessing which business capabilities have the highest priority or will benefit the most from DIS investments.
- Create dedicated communities of practice (CoPs) to share lessons learned, guiding principles, reusable assets, standards, tools and any AI-based insights realized. Ensure that the DIS CoPs are led by enterprise architects so that all relevant domains are represented.
- Encourage and reward resilience improvements across the organization, especially collaboration on DIS opportunities, by making all leaders of resilience-related initiatives equally responsible for improving customer experiences.
- Foster a collaborative culture between development, security and operations teams to ensure ongoing support for these initiatives.

### Digital Immune System: Optimize Resilience

Six elements of a digital immune system



**76%**  
Digital teams  
responsible  
for revenue

**80%**  
Less downtime

Source: Gartner



# 2 Applied Observability

By 2026, 70% of organizations that successfully applied observability will achieve shorter latency for decision making, enabling competitive advantage for target business or IT processes.

Source: Gartner

## Business value

Applied observability is the applied use of observable data in a highly orchestrated and integrated approach across business functions, applications and infrastructure and operations (I&O) teams to enable the shortest latency from action to reaction and proactive planning of business decisions.

## How applied observability optimizes operations

Applied observability allows enterprises to make faster, more accurate future decisions. By applying this systematically, we can reduce the latency for response and optimize business operations in real time.

## Sample business strategies supported

- Create secure foundations
- Accelerate digital

## Use cases

**Tesla** is an example of an organization using targeted elements of applied observability. It offers vehicle insurance in several U.S. states to Tesla owners based solely on their “observable” real-time driving behavior. Tesla vehicles “observe” and measure driving behavior using sensors and Autopilot software to produce a monthly Safety Score. Tesla says that those deemed “average” drivers based on their Safety Score could save 20% to 40% on their premium, and those with the safest scores could save 40% to 60%.

**Klaveness Ship Management (Klaveness)** is a dry bulk operator that operates approximately 135 vessels. Klaveness collected operational and engine data. The data was secured, stored, contextualized and combined with other ecosystem data sources into a visual dashboard for business decisions. The results were reduced fuel consumption and operational costs.

## 2 Applied Observability

### Technical profile and value

Applied observability is the applied use of observable data in a highly orchestrated and integrated approach across business functions, applications and I&O teams. The observable data is cataloged, engineered and layered with semantic understanding for business

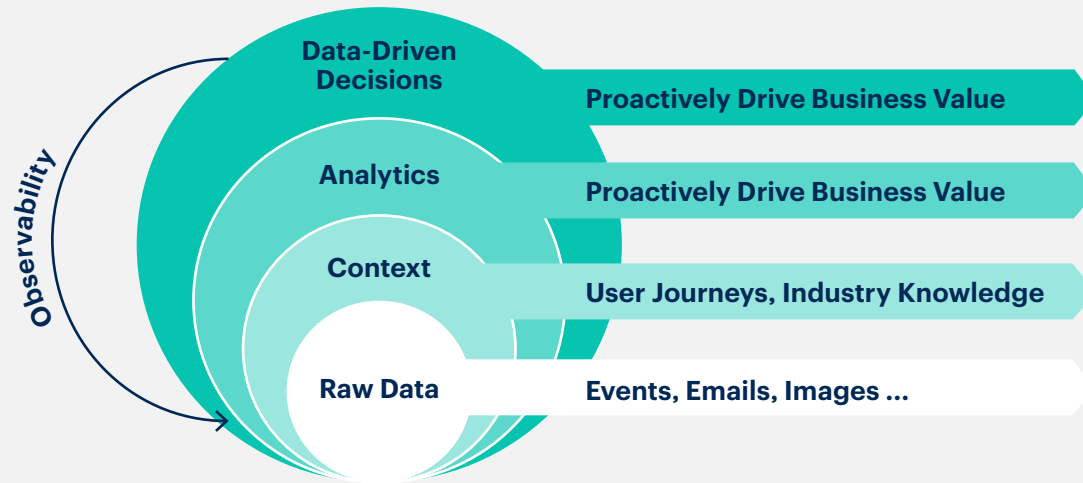
context, which results in both active and passive metadata. The architected use of this metadata drives better, faster and more consistent and effective business and IT decisions.

### Key actions

- Treat your observable data as your most precious monetizable asset. Focus on identifying business capabilities and use cases from active and passive metadata for competitive advantage. This will form the early foundation for strategically orchestrating multiple concurrent observability initiatives.
- Drive proactive decision making with the shortest possible latency by reframing the focus of the organization from monitoring and reacting to applying observability.
- Pave the way for organizational adoption of applied observability. Do so by focusing on the spectrum of business, application and infrastructure layers.

#### Applied Observability: Optimize Operations

AI analyzes data from, and the context of, prior decision making to drive faster and more accurate future decisions.



Source: Gartner

# 3

## AI Trust, Risk and Security Management

### (AI TRiSM)

By 2026, organizations that operationalize AI transparency, trust and security will see their AI models achieve a 50% result improvement in terms of adoption, business goals and user acceptance.

Source: Gartner

### Business value

AI requires new forms of trust, risk and security management that conventional controls don't provide. New AI TRiSM capabilities ensure model reliability, trustworthiness, security and privacy.

### How AI TRiSM optimizes trust

AI TRiSM drives better outcomes in terms of AI adoption, achieved business goals and user acceptance.

### Sample business strategies supported

- Create secure foundations
- Maximize value from data
- Protect and grow your brand

### Use cases

**The Danish Business Authority (DBA)** has developed a method for applying high-level ethical principles to its AI models. DBA ties its ethical principles to concrete actions, checks model predictions against fairness tests and sets up a model monitoring framework. DBA's approach helped it rapidly deploy and manage 16 AI models that monitor financial transactions worth billions of euros.

**Abzu**, a Danish startup, built an AI product that generates mathematically explainable models that identify cause-and-effect relationships. These allow Abzu's clients to validate results more easily and have led to development of more precise and effective breast cancer drugs.

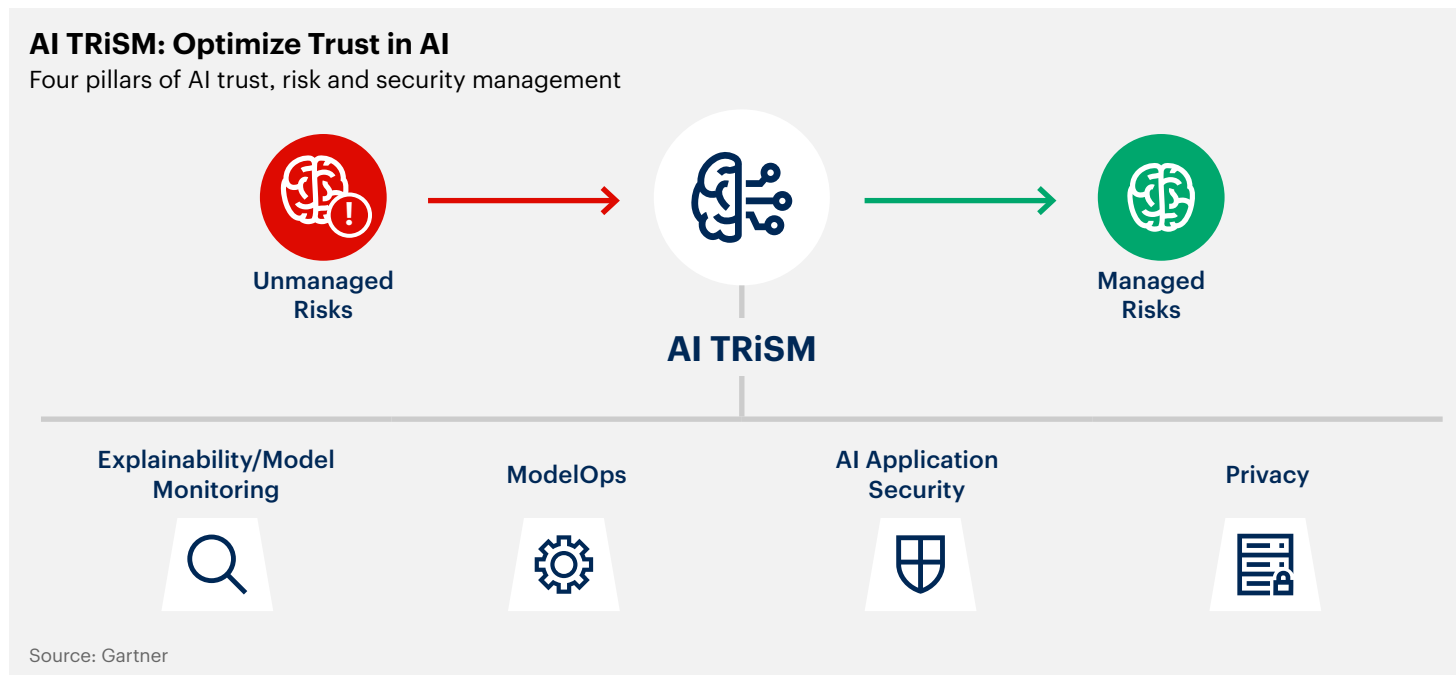
## 3 AI TRiSM

### Technical profile and value

AI TRiSM supports AI model governance, trustworthiness, fairness, reliability, robustness, efficacy and privacy. It includes solutions, techniques and processes for model interpretability and explainability, AI privacy, model operations and adversarial attack resistance.

### Key actions

- Set up an organizational task force or dedicated unit to manage your AI TRiSM efforts.
- Implement collective AI privacy, security and risk management for improved AI business outcomes, rather than just for the sake of compliance.
- Work across your organization to effectively manage best-of-breed toolsets as part of a comprehensive AI TRiSM program.
- Make your AI models explainable or interpretable by using open-source tools or vendor solutions that add value.
- Implement solutions that protect data used by AI models, and prepare to use different data protection methods for different use cases and their components.
- Incorporate risk management into model operations by using solutions that assure both model and data integrity, and constantly validate that they're operating reliably.



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Digital Immune System  
Applied Observability  
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## Scale



Industry Cloud Platforms  
Platform Engineering  
Wireless-Value Realization

Sustainable Technology

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Superapps  
Adaptive AI  
Metaverse

# 4 Industry Cloud Platforms

By 2027, more than 50% of enterprises will use industry cloud platforms to accelerate their business initiatives.

Source: Gartner

## Business value

Industry clouds create value for organizations by incorporating cloud services traditionally purchased separately into preintegrated but customizable (composable) industry-relevant solutions. As such, they can increase organizational agility, speed innovation and accelerate time to value.

## How industry cloud platforms drive scale

Industry cloud platforms enable a shift from generic solutions to platforms designed to fit the specifics of the user's industry.

## Sample business strategies supported

- Grow revenue
- Accelerate digital

## Use cases

**Intermountain Healthcare** selected a platform from a hyperscale provider to help it support positive end-user experiences, while innovating to keep up with changing business needs. The organization's initial strategy is to use much of the stack from that provider, but the organization's enterprise architecture team expects to remain flexible to continually evaluate alternatives and transform from an order taker into a proactive source of ideas and innovations.

**Hangzhou**, one of China's most populous cities, partnered with Chinese tech company Alibaba to build a platform to manage congestion and streamline daily city operations. Its "smart city brain" combined digitized infrastructure, a central data platform and massive applications. After implementation, the city slashed its congestion ranking, dropping from the fifth most congested city in China to out of the top 50.

## 4 Industry Cloud Platforms

### Technical profile and value

Industry cloud platforms combine software, platform and infrastructure as a service (IaaS) with tailored, industry-specific functionality that can more easily adapt to the relentless stream of disruptions in their industry.

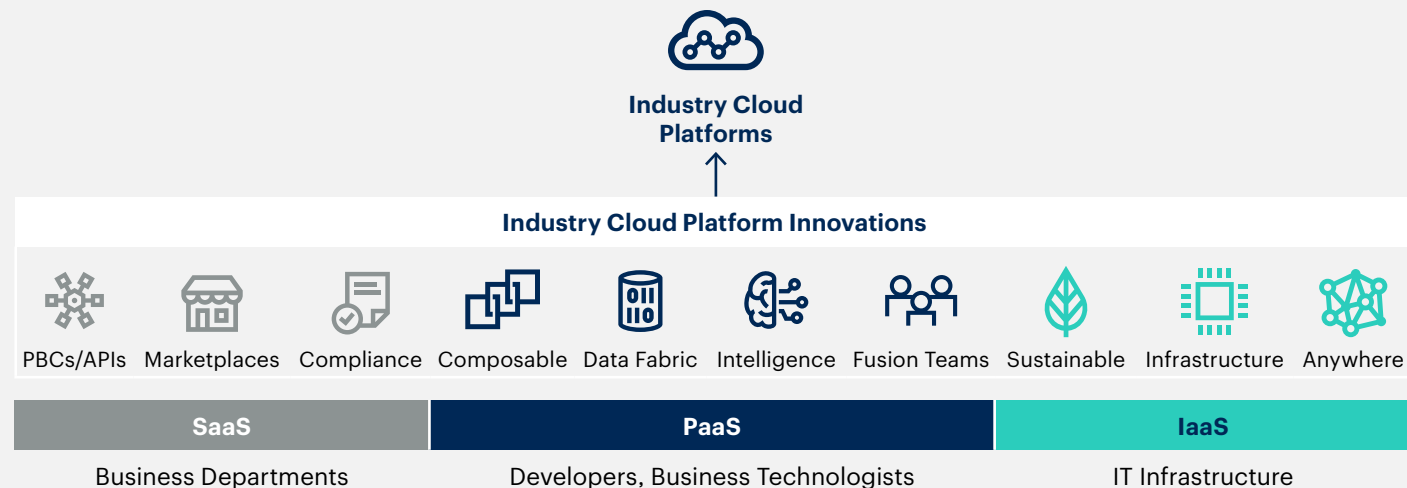
Enterprises can use the packaged business capabilities (PBCs) of industry cloud platforms as building blocks to compose unique and differentiating digital initiatives. That provides agility, innovation and reduced time to market, while avoiding lock-in.

### Key actions

- Target industry cloud platforms to complement the existing portfolio (like an exoskeleton) with new capabilities that add significant value rather than as full-scale replacements of largely already existing functionality with more up-to-date technology.
- Create enterprisewide understanding and support for the industry cloud journey by engaging business technologists and fusion teams. Set up such teams if they don't already exist.
- Formulate rules for when to deploy industry cloud platform capabilities as a productive platform for optimization and modernization by improving existing processes, and when to actively recompose them for more differentiating transformation and innovation initiatives.

#### Industry Cloud Platforms: Scale Vertically

Traditional enterprise cloud categories will morph into composable industry cloud platforms.



Source: Gartner

# 5 Platform Engineering

By 2026, 80% of software engineering organizations will establish platform teams as internal providers of reusable services, components and tools for application delivery.

Source: Gartner

## Business value

To help developers, data scientists and end users, and reduce friction for the valuable work they do, forward-thinking companies have begun to build operating platforms that sit between the user and the backing services on which they rely.

## How platform engineering scales delivery

Platform engineering optimizes developer experience and accelerates digital delivery.

## Sample business strategies supported

- Create secure foundations
- Accelerate digital
- Attract and retain talent

## Use cases

**Nike** has built “composable platforms” that unite “strategically related global business capabilities that are implemented by modular and composable technologies exposed through APIs.” Nike finds the platform allows it to respond more quickly to change, drive faster time to market, increase scalability and decrease operating costs.

**Politiet**, Norway’s police, replaced legacy middleware with a self-service developer platform. This increased developer autonomy and enabled rapid product innovation while maintaining stability. Politiet also created a team with the required skills to build and maintain the platform.



## 5 Platform Engineering

### Technical profile and value

Platforms provide a curated set of tools, capabilities and processes selected by subject matter experts and packaged for easy consumption by end users. The goal is a frictionless self-service experience that offers the right capabilities to enable users to do valuable

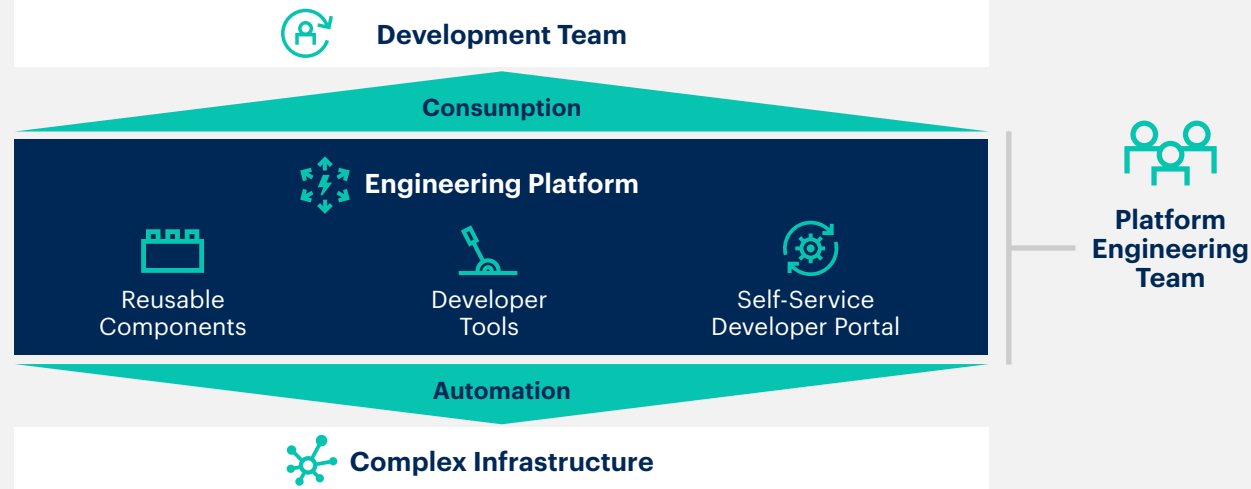
work with as little overhead as possible, increasing end users' productivity and reducing their cognitive burden. The platform should include everything the user team needs, presented in whatever manner best fits best with their preferred workflow.

### Key actions

- Start with internal developer portals (IDPs). Aim your early platform-building efforts at IDPs, since they are the most mature and well-understood species of platform. Your experiences will be extensible to other platforms in the future.
- Embed security into platforms. Platforms must embed security into user workflows. Security teams need to “shift left,” embedding security controls into the production workflow as early as possible. Platform engineers should incorporate comprehensive, automated security and compliance checks as part of their test suites.
- Don't expect to buy a turnkey platform. Though some vendors may claim otherwise, any commercially available tool is unlikely to provide the entirety of the platform you need. A substantial amount of time and effort will be required to customize a platform to your needs.

#### Platform Engineering: Scale Delivery

Conceptual outline of an example platform and its principal components



Source: Gartner

# 6 Wireless- Value Realization

By 2025, 50% of enterprise wireless endpoints will use networking services that deliver additional capabilities beyond communication, up from less than 15%.

Source: Gartner

## Business value

The integration of multiple wireless technologies will provide a more cost-efficient, reliable and scalable technical foundation that reduces capital expenditure.

## How wireless-value realization drives scale

It promotes the future of greater wireless usage, more wireless protocols and a wider range of wireless capabilities being used to support digital business.

## Sample business strategies supported

- Create secure foundations to track location
- Maximize value from data
- Accelerate digital transformation

## Use cases

**Shufersal**, an Israeli retailer, is using power harvested from the network to tag goods with low-energy Internet of Things (IoT) chips. It uses these to track vegetables directly from the farm to the store shelves, providing supply chain visibility, inventory management and provenance information.

**Bosch-Siemens** uses ultrasonic sensors to slow down forklifts in real time. In addition to eliminating forklift accidents, there was a 98% reduction in near misses and a 10% increase in productivity. The technology is being implemented in 2.5 million square feet of production and warehouse areas with readers on 250 forklifts and 500 pedestrians.

## 6 Wireless-Value Realization

### Technical profile and value

Wireless-value realization covers everything from traditional end-user computing, through support for edge devices, to digital tagging solutions. All of which will need connectivity to operate and require a spectrum of wireless solutions to cater to all

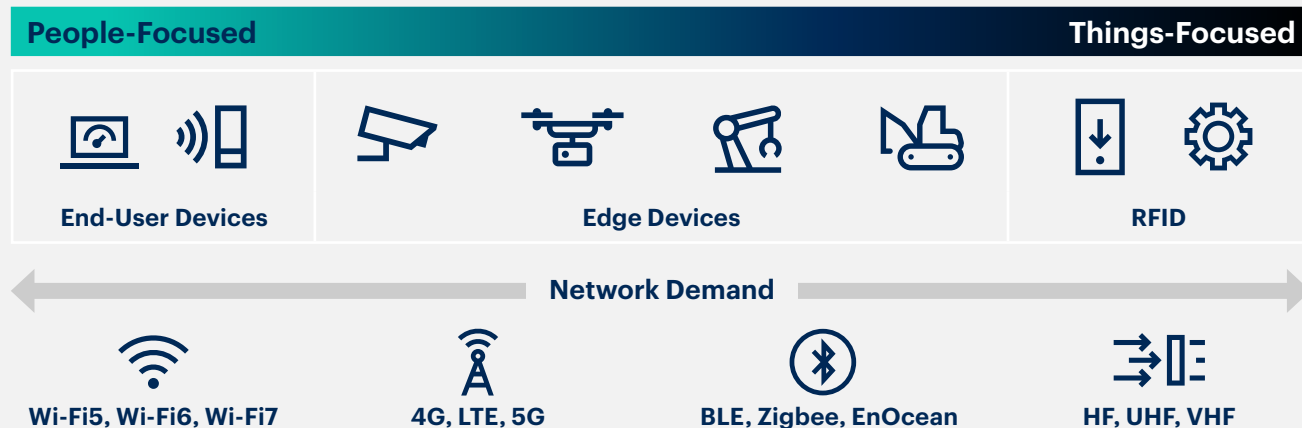
environments. Networks will go well beyond pure connectivity to become a source of direct business value. Wireless is moving from a communications technology to become a broader digital innovation platform.

### Key actions

- Design an intelligent infrastructure strategy, starting with selecting the right technologies and vendors that understand solutions that can accommodate, secure and manage five or more diverse wireless systems of the future.
- Educate business peers on the new potential use cases for wireless technology, such as location and sensing. Collaborate with them to identify innovation opportunities to drive new digital products and services.
- Drive standardization of connectivity and security elements that, as interoperable components, create a solid, secure, resilient core foundation for wireless devices and applications.

#### Wireless-Value Realization: Scale Everywhere

Different devices utilizing different technology create value beyond communication.



Source: Gartner

## Optimize

Digital Immune System  
Applied Observability  
AI TRiSM

## Scale

Industry Cloud Platforms  
Platform Engineering  
Wireless-Value Realization  
Sustainable Technology

## Pioneer



Superapps  
Adaptive AI  
Metaverse

# 7 Superapps

By 2027, more than 50% of the global population will be daily active users of multiple superapps.

Source: Gartner

## Business value

A superapp is an app that provides end users (e.g., customers, partners or employees) with a set of core features, along with access to independently created miniapps. The superapp is built as a platform to deliver consistent and personalized app experiences.

## How superapps pioneer engagement

Users can discover and activate their own set of apps, providing a highly personalized and contextualized digital experience inside a single app.

## Sample business strategies supported

- Attract and retain talent
- Grow revenue

## Use cases

**Revolut** is a U.K.-based fintech superapp disrupting traditional financial services. It offers digital banking services for consumers and has expanded its ecosystem into businesses, where small and midsize businesses and freelancers can offer services in the superapp.

**PayPay** is a Japanese payment provider, with almost 50 million users. A key part of its growth strategy is to integrate the purchasing of third-party products and services within its superapp, and it already provides third-party miniapps for buying cinema tickets, ordering food deliveries and bicycle sharing, alongside its own apps for financial management services and retail shopping, among others.

# 7 Superapps

## Technical profile and value

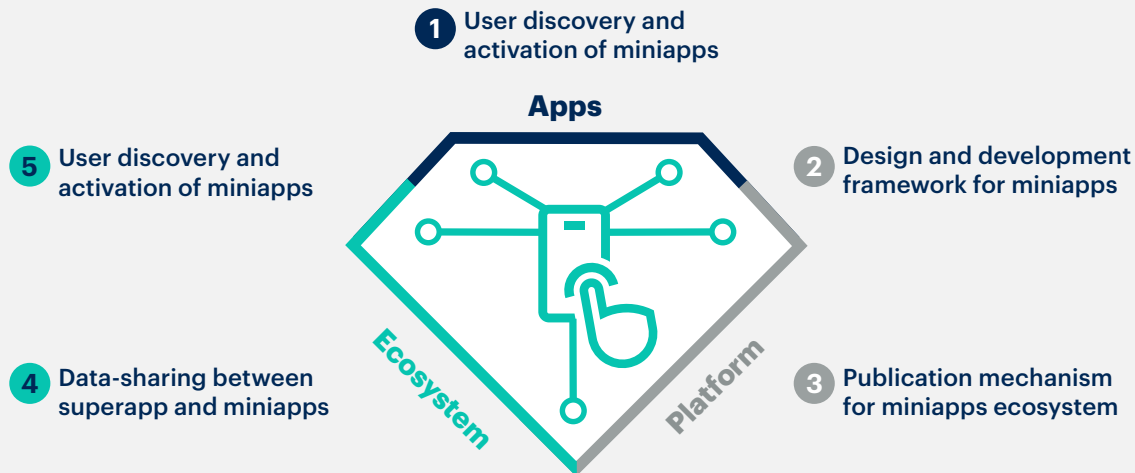
A superapp is more than a composite application or portal that aggregates services, features and functions into a single user interface. A superapp represents the ultimate manifestation of a composable application and architecture.

## Key actions

- Increase superapp delivery model effectiveness by designing for people-centric products, processes and services.
- Identify core, high-engagement features in your superapps that will drive a critical mass of end users.
- To attract and support development partners, ensure a mutually beneficial business model and dedicated organizational enablement and success resources.
- Offer an easy developer experience and convenient developer tools for partners to build, test, register and submit miniapps for potential monetization.
- Define security and data protection requirements for miniapps by establishing ecosystem governance reinforced with shared platform capabilities.

### Superapps: Pioneer Engagement

Five characteristics of a superapp



Source: Gartner

## 8

# Adaptive AI

By 2026, enterprises that have adopted AI engineering practices to build and manage adaptive AI systems will outperform their peers in the operationalizing AI models by at least 25%.

Source: Gartner

## Business value

The value of operationalized AI lies in the ability to rapidly develop, deploy, adapt and maintain AI across different environments in the enterprise. Given the engineering complexity and the demand for faster time to market, it is critical to develop less rigid AI engineering pipelines or build AI models that can self-adapt in production.

## How adaptive AI pioneers acceleration

Adaptive AI accelerates value and continuously keeps AI aligned to enterprise goals in real time.

## Sample business strategies supported

- Create secure foundations
- Maximize value from data

## Use cases

**Dow**, the U.S. chemical and materials manufacturer, deploys adaptive AI systems that use feedback on usage patterns and business value optimization to enhance enterprise analytics. It has resulted in a 320% increase in value generated by the analytics platform.

**Cerego**, AI-based training software used by the U.S. Army, enables adaptive learning. The solution knows what to teach, how to measure progress and when to test, adapting its lessons to each individual's learning progress.

**The Danish Safety Technology Authority (DSTA)** has to monitor the safety of products sold in Denmark, regardless of where they come from. Its AI tool rapidly learns to identify products and their manufacturers, speeding up identification of product issues. DSTA has now created a spin-off product that is being deployed in 19 other European countries.

## 8 Adaptive AI

### Technical profile and value

Adaptive AI systems allow for model behavior change postdeployment by learning behavioral patterns from past human and machine experience and within runtime environments to adapt more quickly to changing real-world circumstances.

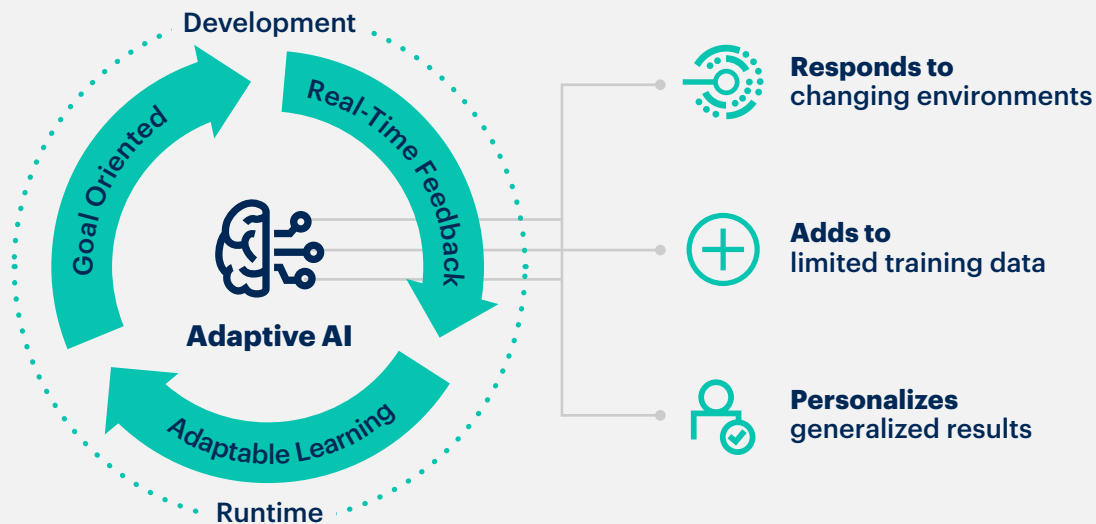
AI engineering provides the foundational components of implementation, operationalization and change management at the process level that enable adaptive AI systems.

### Key actions

- Create the foundations of adaptive AI systems by complementing current AI implementations with continuous intelligence design patterns and event stream capabilities, eventually moving toward agent-based methods, giving more autonomy to systems components.
- Make it easier for business users to adopt AI and contribute toward managing adaptive AI systems by incorporating explicit and measurable business indicators through operationalized systems and incorporating trust within the decisioning framework.
- Maximize business value from ongoing AI initiatives by establishing AI engineering practices that streamline the data, models and implementation pipelines to standardize AI delivery processes.

#### Adaptive AI: Pioneer Acceleration

Adaptive AI systems use real-time feedback to learn dynamically and adjust, even for unforeseen real-world changes.



Source: Gartner



# 9 Metaverse

By 2027, over 40% of large organizations worldwide will be using a combination of Web3, spatial computing and digital twins in metaverse-based projects aimed at increasing revenue.

Source: Gartner

## Business value

Metaverse is a combinatorial innovation made up of multiple technology themes and trends. Individually, these trends are projected to provide new opportunities, and challenges, to organizations across a wide spectrum of industries and use cases.

## How metaverse pioneers new opportunities

Organizations are developing ways to provide better engagement, collaboration and connection to their employees through virtual workspaces and the use of internal metaverse experiences called intraverses.

## Sample business strategies supported

- Protect and grow your brand
- Attract and retain talent
- Grow revenue

## Use cases

**OneRare**, an Indian virtual reality startup, is creating an immersive and gamified experience for lovers of food, allowing food brands access to a global market, attracting gamers through food offerings and leveraging Web3 across virtual and physical outlets.

**JPMorgan Chase**, the U.S. investment bank, bets metaverse is a \$1 trillion per year opportunity as it becomes the first bank to open in Decentraland — one of the world's most popular metaverse platforms.

**Siemens** has partnered with NVIDIA to create an industrial metaverse. Clients will be able to use the immersive environment to collaborate in creating innovative engineering solutions and solving real-world problems involving digital twins, IoT and real-time analytics.

# 9 Metaverse

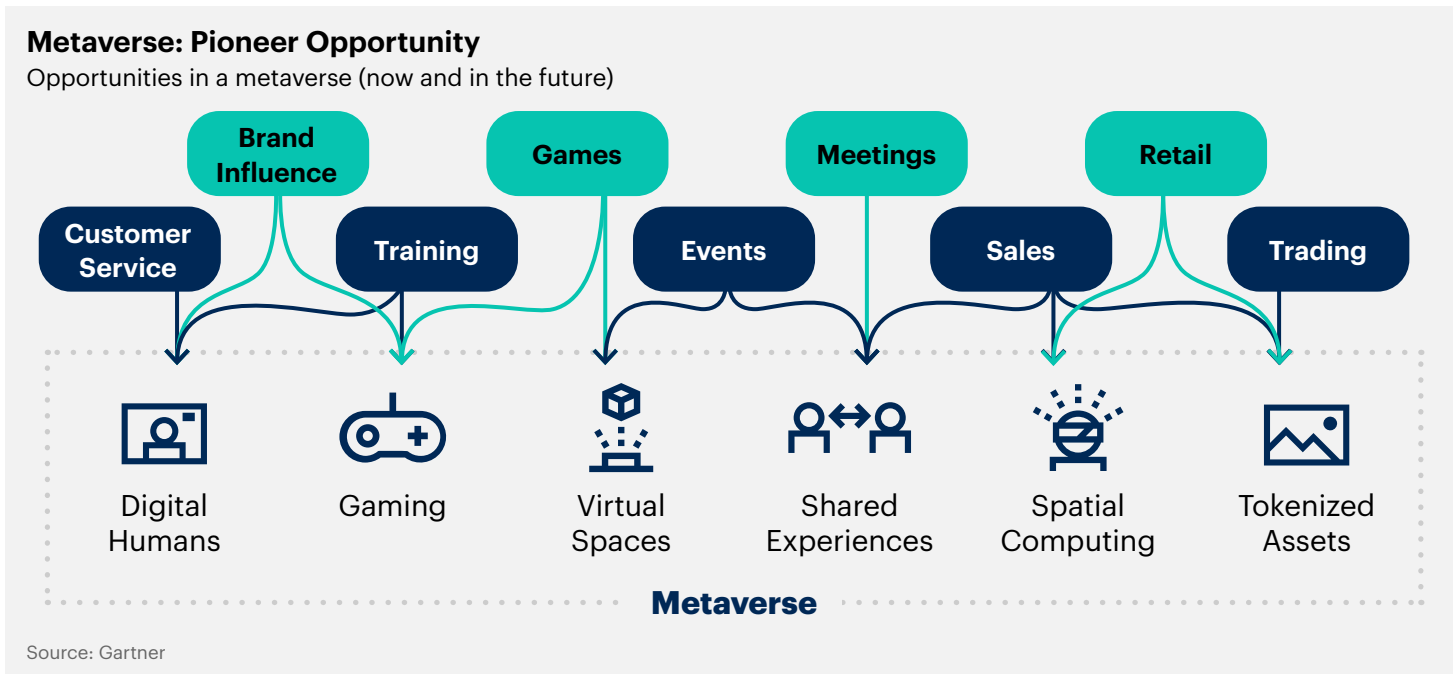
## Technical profile and value

Metaverse technologies allow people to replicate or enhance their physical activities. This could happen by transporting or extending physical activities to a virtual world or by transforming the physical one.

Think of metaverses as a combinatorial innovation and not a single technology. Implications of emerging metaverse technologies will vary across industries.

## Key actions

- Explore opportunities where metaverse technologies could optimize digital business or create new products and services.
- Build metaverse products and solutions through a pipeline of innovation.
- Identify metaverse-inspired opportunities by evaluating current high-value use cases.
- Develop technology strategies that leverage the built-in infrastructure and participants.
- Invest in specific emergent metaverses cautiously, as it is still too early to determine which investments will be viable in the long term.
- Protect your reputation by proactively establishing a data governance, security and privacy policy to protect customer and employee data.



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Sustainable Technology

# 10 Sustainable Technology

By 2025, 50% of CIOs will have performance metrics tied to the sustainability of the IT organization.

Source: Gartner

## Business value

Sustainable technology is a framework of solutions that increases the energy and material efficiency of IT services; enables enterprise sustainability through technologies like traceability, analytics, renewable energy and others; and helps customers become more sustainable through apps, software, marketplaces and more.

Investments in sustainable technology also have the potential to create greater operational resiliency and financial performance, while providing new avenues of growth.

## Sample business strategies supported

- Protect and grow your brand
- Attract and retain talent
- Grow revenue

## Use cases

### Smart solutions drive efficiencies and protect resources.

- Mitsui O.S.K. Lines uses AI-powered models to improve shipping efficiencies within the maritime industry.
- Utilities, such as Dubai Electricity & Water Authority (DEWA), use IoT and digital twins to create smart building management solutions that use 50% less water.

### Circular economy initiatives reduce waste.

- Apple uses robots for recycling.
- IKEA publicly shares a circular product design guide to assist others in promoting circularity.

### Tech-enabled products support customers' sustainability goals.

- BBVA's tech-enabled financial services products include carbon tracking and green finance tools.
- Timberland uses environmental, social and governance (ESG)-focused employee engagement software to encourage employees to participate in personal, social and societal sustainability initiatives.

# 10 Sustainable Technology

## Technical profile and value

Sustainable technology is a framework of digital solutions that can be used to enable ESG outcomes.

- Environmental technologies: Prevent, mitigate and adapt to risks in the natural world.
- Social technologies: Improve human rights outcomes, well-being and prosperity.
- Governance technologies: Strengthen business conduct and capacity building.

## Key actions

- Increase the energy and material efficiency of IT infrastructure and workplace services (“sustainable IT”).
- Prioritize technology investments based on the sustainability issues most material to your enterprise strategy. Examples might include:
  - Cloud services to raise utilization rates of shared resources and reduce environmental impacts.
  - Enterprise greenhouse gas emissions management software to facilitate collection, analytics and reporting of past, present and future emissions data.
  - Supplier sustainability applications to track ESG performance of third parties.
  - Supply chain blockchain to protect, verify and trace transactions, for example, to ensure ethical sourcing.

