Digital Products and Services Primer for 2023

Published 2 February 2023 - ID G00782499 - 10 min read

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Initiatives: Digital Products and Services

CTOs and technology innovation leaders must provide platforms and services for their organizations to support distributed innovation. Well-architected platforms can also minimize technology and security risks by making it easier to build, validate, audit and monitor secure software.

Scope

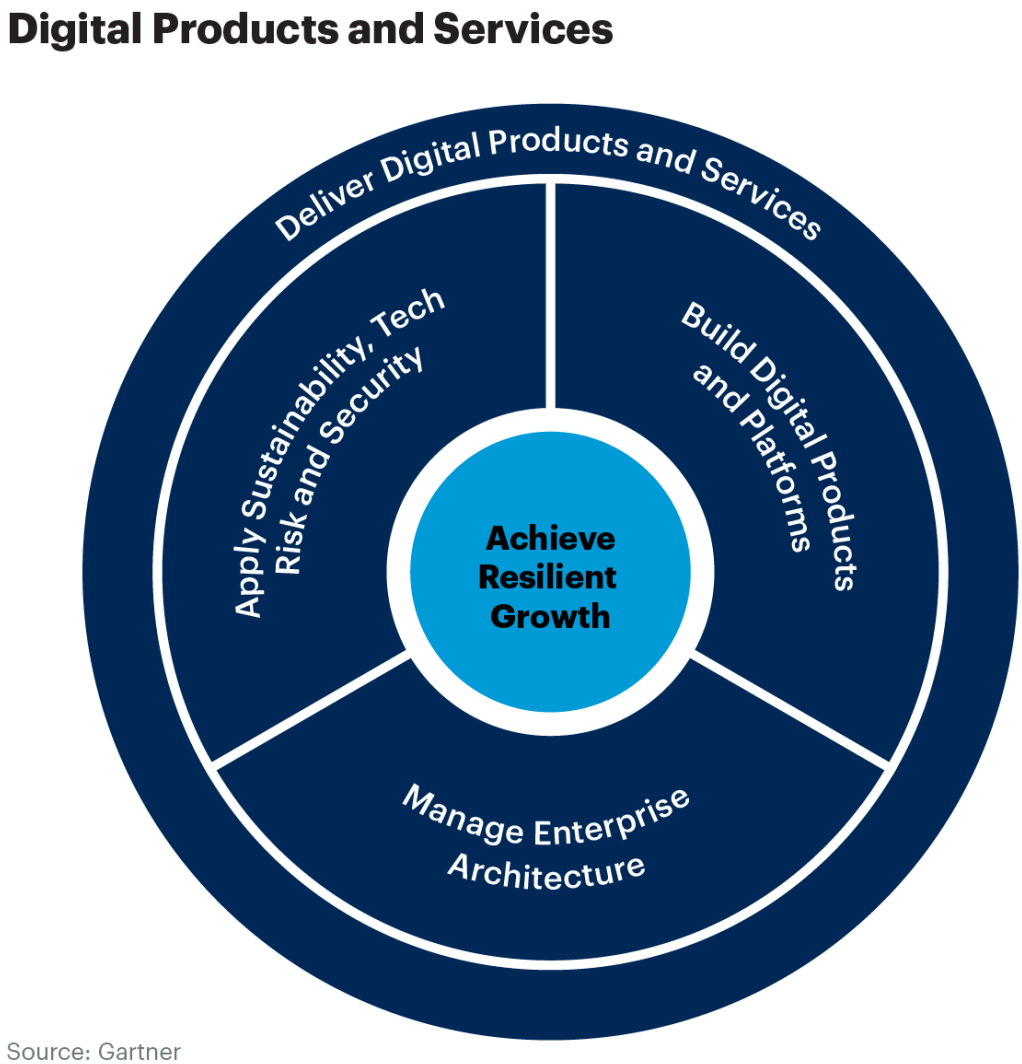
This initiative helps advance the technology vision to deploy the digital products and services defined by the business model and the enabling platforms and architectures.

Topics in this initiative include:

- **Build Digital Product Capabilities:** Implement best practices for delivering products across product lines.
- **Build Digital Platform Capabilities:** Architect platform services that enable product teams to rapidly deploy new features.
- **Apply Business Architecture:** Implement business architecture methods to plan for business change requirements.
- **Manage Reference Architecture:** Determine the principles, standards, and solution patterns to evolve to the architecture vision.
- **Evolve Sustainable Operations:** Define, track and lead initiatives to achieve the organization's technology sustainability goals.
- **Manage Technology Risk and Security:** Ensure that technology risks are within the boundaries of the organization's risk appetite.

Analysis

Figure 1: Digital Products and Services Overview



Gartner's 2022 Distributed Technology Innovation Management Survey found that 81% of respondents say that business technologists are more involved in TI efforts now than they were two years ago. Although the quality of innovation ideas is high, 47% of innovation leaders indicate business technologists lack the digital acumen and skills to innovate independently. [1] Part of the reason is that the complexity of infrastructures inhibits the democratization of innovation. How can organizations pursue innovative products in such complex technical environments?

The answer is to architect the digital platforms that provide innovators, inside and outside of IT, with a self-service development portal with the tools and reusable components to enable technology innovation. Well-architected platforms can also minimize technology and security risks by making it easier to build, validate, audit and monitor secure software.

In the 2022 Gartner CEO and Senior Business Executive survey, environmental sustainability became a top 10 business priority for the first time ever. [2] CTOs and TI leaders play a key role in realizing the organization's sustainability goals through digital transformation and technology life cycle management.

Topics

As technology innovation (TI) accelerates and becomes increasingly decentralized, CTOs and TI leaders must provide the platforms and services to enable the organization to embrace innovation opportunities wherever they originate. A complex technology environment also increases technology and security risks.

To support the demands of TI in organizations, our research in this area addresses the following topics:

Build Digital Product Capabilities

CTOs and TI leaders are developing technology strategies and architectures, and are evolving the business architecture by focusing on the digital products and platforms that will drive growth and enable innovation. They are responsible for overseeing technologies throughout their life cycle to minimize technology risks and achieve sustainability goals.

Questions Your Peers Are Asking

- How do I align products with software engineering?
- What are the most important digital product capabilities?
- How can my teams modernize the application architecture for products?
- What are the digital product opportunities that we should explore to optimize total experience?
- How can I establish governance and quality assurance (QA) protocols that enable high-quality digital delivery at speed?

Recommended Content

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

- Tool: Roles and Responsibilities Description of Product Managers in Software Engineering
- Gartner Digital Product Landscape: Shaping the Digital Future of Your Enterprise
- 2023 Planning Guide for Application Architecture, Integration and Platforms
- 5 Governance Steps to Accelerate Your Project to Product Transition
- Innovation Insight for Internal Developer Portals

Planned Research

- How design, development and product management work together successfully
- How enterprise architects can build a partnership with software engineering
- Skills that enable software engineering leaders to work effectively with product management
- Innovation insights for software engineering intelligence platforms
- The CTO's guide to digital product management
- Three ways that software engineering leaders can benefit from strong partnerships with product management

Build Digital Platform Capabilities

Platform engineering is the discipline of building and operating self-service internal developer platforms (IDPs) for software delivery and life cycle management. Each platform is a layer that is created and maintained by a dedicated product team, designed to support the needs of software developers by interfacing with tools and processes. The goal of platform engineering is to optimize the developer experience and accelerate product teams' delivery of customer value.

Questions Your Peers Are Asking

- What are the most important digital platform capabilities?
- How can my teams modernize the application architecture for platforms supporting products?
- How can my teams migrate to modern technology platforms, including cloud-native?
- How do I establish platform engineering and create product and platform teams?

Recommended Content

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

- CTOs' Guide to Containers and Kubernetes — Answering the Top 10 FAQs
- A CTO's Guide to Serverless Computing
- A CTO's Guide to Cloud-Native: Answering the Top 10 FAQs
- Cool Vendors in Platform Engineering for Improving Developer Experience
- Building a Platform for Product Team Productivity (adidas)

Planned Research

- A CTO's guide to platform engineering
- How to start and scale your platform engineering team
- How can you start platform engineering in your organization
- How platform engineering and platform teams simplify and improve the developer experience

Apply Business Architecture

CTOs and TI leaders must offer easily consumable and minimally viable architecture tactics and deliverables to plan for business change. Tactics and deliverables can range from journey mapping to value stream mapping or the development of idea canvases. As democratization continues, CTOs and TI leaders must find ways to support business partners in the independent use and creation of business architecture tactics and deliverables for decision making.

Questions Your Peers Are Asking

- How can I help design and facilitate transformative changes to our business and operating models?
- How can business architecture inform strategy, planning and execution decisions?
- What other business architecture tactics can be used to better engage business stakeholders (e.g., value streams, journey maps, canvases)?

Recommended Content

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

- Tool: Business Architecture Activities and Deliverables Close the Strategy-to-Execution Gap
- Design a Better Digital Business With the Business Architecture Landscape
- What Business Leaders Need From EA to Make Their Own Technology Decisions
- Use Value Streams to Design Service and Operating Models and Enable Application Composability

Planned Research

- Business architecture: revamped for digital (infographic)
- Defining the composable business architecture vision
- Case study: Architecting the transition to composability (Kaiser Permanente)
- People-centric innovation with personas and journey maps
- What business architecture deliverables are necessary to compose applications?

Manage Reference Architecture

The growth and rapid evolution of digital platforms in organizations, creates an architectural lag between the capabilities these platforms continue to deliver and the reference models that have been agreed on and documented. To address this, enterprise architecture (EA) leaders must be proximate to the evolution of platform technologies and the strategic principles of the organization. This is to ensure the delivery of minimum viable reference architectures and models that can guide platform and technology ecosystem decisions and designs to keep pace with the developments.

Questions Your Peers Are Asking

- How can I reduce technical debt?
- How can I coach delivery teams to make good solution design and architecture decisions?
- How can I provide an effective architecture framework that supports and coordinates across distributed product teams?

Recommended Content

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

- Reference Architecture Implementation Guide
- Create a Reference Architecture Program That Facilitates Composability
- How CTOs Can Create Effective Technology Roadmaps
- Adaptive EA Governance: 4 Styles That Enable Digital Delivery
- Predicts 2023: Enterprise Architecture Charts New Path for Postdigital Era

Planned Research

- Tool: architecture domain wireframe
- Tool: developing your first EA principles
- Top practices for how EA can help shape your cloud operating model
- Quick Answer: A checklist to help you determine IT's involvement in cloud service selection and provisioning
- Using critical delivery metrics to support successful EA assurance

Evolve Sustainable Operations

CTOs and technology leaders are feeling pressure to adopt sustainability practices to ensure the sustainable operation of their IT systems and to meet stakeholder demands. This can involve defining and adopting sustainability within IT, as well as extending these goals and definitions across the business. Conduct a materiality assessment to establish a clear vision of the current state of IT sustainability and where it can make the biggest impact in the future. Set quantified targets and formalize sustainability as a criterion for all technology decisions in IT and across the business.

Questions Your Peers Are Asking

- What are sustainability technology best practices?
- How do I determine environmental, social and governance (ESG) impact and determine the sustainability technologies that we should adopt?

Recommended Content

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

- A CTO's Guide to Achieving Sustainability Leadership
- Top Strategic Technology Trends for 2023: Sustainable Technology
- A Framework for Sustainable Technology
- Use Digital to Achieve Sustainability Goals
- Predicts 2023: Sustainability — It's Complicated

Planned Research

- Quick Answer: how do I embed ESG in vendor contracts?
- Corporate sustainability's hidden risk: beware the carbon debt of your IT infrastructure
- The business benefits of sustainable IT infrastructure
- Developing IT's sustainability strategic plan and program — what you need to know
- Maverick: the metaverse — an ally for smart cities and urban sustainability

Manage Technology Risk and Security

Technology risks are inherent for organizations investing in digital business. Technology risks extend beyond cybersecurity to include application and infrastructure fitness, skills scarcity, vendor support, and architecture alignment. Understanding and operationalizing an organization's risk appetite is crucial for mitigating these risks. Many IT leaders do not formally articulate their risk appetite, leading to inappropriate decision making.

Questions Your Peers Are Asking

- How can my teams build security into the engineering processes?
- How can I assess technology risk on business, products, services, people, and other technologies and capabilities?

Recommended Content

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

- Top Trends in Cybersecurity 2022
- Executive Leaders Must Build an Actionable Technology Risk Appetite Framework
- Predicts 2023: Enterprises Must Expand From Threat to Exposure Management
- Fundamentals of Risk: Information Security
- Manage Technology Debt to Create Technology Wealth
- Toolkit: Cybersecurity Incident Response Plan

Planned Research

- CTO's role in technology risk assessment
- Toolkit: tabletop exercise for the business response to a cyberattack
- How should you price risk in the face of proliferating cyber attacks?
- Toolkit: assessing the effectiveness of recovery plans following a business disruption
- Next-step privacy: key pillar for the information governance strategy

Suggested First Steps

- Strategic Roadmap for Becoming a World-Class Software Engineering Organization
- 3 Steps to Kickstart Platform Engineering in Your Organization
- Presentation: Business Architecture 2.0: Revamped for Digital
- Reference Architecture Management Framework

Essential Reading

- Top Strategic Technology Trends for 2023: Platform Engineering
- How CTOs Can Create Effective Technology Roadmaps
- Use Value Streams to Design Service and Operating Models and Enable Application Composability
- A CTO's Guide to Achieving Sustainability Leadership
- Top Trends in Cybersecurity 2022 for 2023: Platform Engineering

Evidence

[1] **2022 Gartner Distributed Technology Innovation Management Study:** This study was conducted to address how best to manage technology innovation and the different activities involved in a distributed innovation management.The research was conducted via online sampling during March 2022 among 100 respondents from across all industries and company sizes within the United States, United Kingdom, Canada, and Australia. Respondents were screened to be director level or above, with responsibilities related to leading efforts to exploring, developing, and/or managing efforts to implement or scale innovative technology products and services. The survey was developed collaboratively by a team of Gartner analysts and was reviewed, tested and administered by Gartner's Research Data and Analytics and tools (RDAT) team.

Disclaimer: Results of this study do not represent global findings or the market as a whole but reflect sentiment of the respondents and companies surveyed.

[2] **2022 Gartner CEO and Senior Business Executive Survey:** This survey was conducted to examine CEO and senior business executive views on current business issues, as well as some areas of technology agenda impact. The survey was conducted from July 2021 through December 2021, with questions about the period from 2021 through 2023. One-quarter of the survey sample was collected in July and August 2021, and three-quarters was collected in October through December 2021. In total, 410 actively employed CEOs, and other senior executive business leaders qualified and participated. The research was collected via 382 online surveys and 28 telephone interviews. The sample mix by role was CEOs (n = 253); CFOs (n = 88); COOs or other C-level executives (n = 19); and chairs, presidents or board directors (n = 50). The sample mix by location was North America (n = 176), Europe (n = 97), the Asia/Pacific (APAC) region (n = 86), Latin America (n = 40), the Middle East (n = 4) and South Africa (n = 7). The sample mix by size was $50 million to less than $250 million (n = 58), $250 million to less than $1 billion (n = 81), $1 billion to less than $10 billion (n = 212) and $10 billion or more (n = 59).

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Related Priorities

Initiative Name	Description
Digital Innovation and Enablement Function	This initiative advises how to generate business value from the digital innovation and enablement function, build effective teams, and design the composable business to achieve resilient growth.
Digital Future	This initiative guides the continuous monitoring of emerging technologies and other trends to discover, assess and prioritize opportunities and define the roadmap to achieve resilient growth.

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