

From Projects to Products — Three Essential Actions for Every CIO Aiming to Transform Their Digital Organizations

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CEOs are increasingly turning to digital investments to drive growth. These initiatives must improve product/service competitiveness or create new market opportunities. CIOs can lead or help transform their firms to exploit technology innovation and become more digitally product-centric.

Key Findings

- Many CIOs are under increasing pressure to help create new digital businesses that are more technology-leveraged and that drive revenue growth.
- Most traditional IT organizations (ITOs) are project-centric, and their current staffs' capabilities are ill-suited for creating and supporting customer/constituent-facing products/services and the requisite continuous upgrades at scale.
- Aggregate success rates for new products are low. Best practices and disciplines for rapidly iterating and failing fast are key for achieving better outcomes with lower risks and costs.

Recommendations

CIOs leading innovation and strategic business change should adopt Gartner's three-step model for shifting from a project- to a product-centric approach:

- Exploit software company models for orchestrating and scaling digital businesses and evolving from a project-oriented to a product-centric approach.
- Evaluate investment models and adopt key leading indicators utilized by modern software companies to help prepare for managing a product-centric organization.
- Invest in comprehensive product life cycle management as the core for driving digital vision, strategy, roadmap and prioritization to deploy digital services at scale.

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Introduction

The executive ambition for driving growth from digital offerings is primed. According to Gartner research, 84% of CEOs expect digital initiatives to increase profit margins, and more than 50% of CEOs say that their industries will be digitally transformed.¹

When it comes to products, the perspective is that 46% of product value will be derived from digital investments by 2020. CEOs expect digitally attributable revenue almost to double, from 22% in 2014 to more than 45% by 2019.²

Roughly 33% of CEOs plan to change their business models by 2018, which will introduce new sources of revenue, alter competitive playing fields and change revenue assumptions.²

Becoming a successful digital business requires enterprises to:

- Create advantage within core markets through innovative digital features that complement existing products or services; or,
- Create new digital products or services that extend the enterprise into new or adjacent markets

While the majority of leaders (66%) think they are transforming, we found that only 11% of the companies we surveyed in our 2018 Digital Business Survey are actually transforming.

While many CIOs do not have a role in the digitalization of existing products/services, others want to play an essential transformational role, moving beyond responsibility for operational systems.

CIOs must take significant steps to deliver competitive advantage through transformational product or service leadership within an existing or new market. Making this shift is analogous to creating a product-centric technology organization, akin to becoming a software or digital business.

The shift to a product-centric organization should be made in areas where there is a need to drive innovation for digital initiatives. Some of these initiatives will fall under the CIO, whereas many others will be executed by product managers and other functions in lines of business.

For a company that already takes a product-centric approach (e.g., a consumer goods manufacturer), new digital capabilities will still require an important shift for the ITO, which now must develop and support digital services that deliver end-to-end customer experience. In short, the ITO becomes part of the product team, whether formally responsible or a key stakeholder.

There are specific steps that CIOs must take to transform the part of their organization that focuses on digital innovation, including structure, skills and culture, and shift to a product-centric organization. These actions are key to scaling digital business initiatives that underpin top-line growth.

Analysis

While still important, operational efficiency moves to the background when aiming to drive significant scale and top-line growth from digital investments.

Digital business represents a new era of IT ("technology innovation" [TI]), where the role and objectives of IT morph into two different, although somewhat overlapping, directions. While traditional IT activities, like internal infrastructure management and application development, will still be required (although with increasingly fewer people and lower budgets), technology innovation will increasingly be a requirement for driving and scaling a digital business. This will often require significant changes to the business and economic (e.g., investment and funding) model. In turn, these shifts require changes in strategy, culture, organization and capabilities that extend beyond the ITO to encompass business and operational functions, and especially product management (see "What CIOs Should Do About Strategic Chief Digital Officers"). Product managers are no longer limited to consumer product firms or technology companies. They now play an increasingly crucial role in driving digital business success by orchestrating all relevant stakeholders to manage a continually evolving digital strategy (see "Product Managers Are Key to Digital Business Success").^{1,2}

In "2017 CEO Survey: CIOs Must Scale Up Digital Business," Gartner recommends that leadership mindsets must be shifted by opening up to tech ideas and encouraging entrepreneurialism. Part of this shift includes establishing a product-centric organizational model to drive digital innovation initiatives and to leapfrog competition.

The primary objectives associated with product leadership are:

- Rapid, technology-infused product/service development, testing and delivery
- Improved customer engagement and delivery channel evolution
- Establishing and maintaining competitive advantage
- Creating scale
- Revenue growth

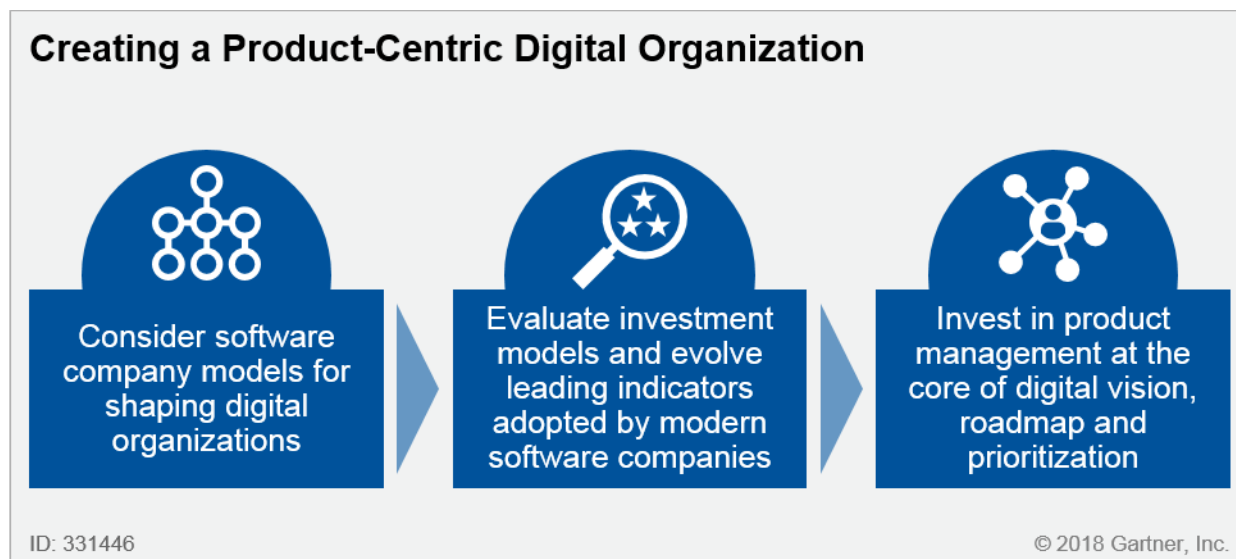
If the primary aim is operational efficiency, then a process-centric approach is appropriate. This research focuses on how to create a product-centric organization.

Product-centric approaches make it easier to rapidly innovate and iterate by focusing on the customer experience, evolving requirements, and the strategic differentiation for a product or service. The model also is ideal for integrating evolving digital technologies and for ascertaining their priority. While a traditional company that creates consumer products may have a product-centric R&D group, the success or failure of new product initiatives will increasingly hinge on digital services from the ITO. This necessitates a shift from the current CIO and the ITO, which now must be integral to digital experiences.

Product-centric models are aimed to enable significant scale to a business. This is where there should be a strong appeal for digital investments, which offer a promise of hypergrowth and better profitability.

Achieving a successful transformation to such an organization requires new skill sets and roles, as well as a new investment model, investment pool and culture. Furthermore, investment in business expertise, market expertise and the product management role pushes to the forefront.

Figure 1. Three-Step Model for Creating a Product-Centric Organization



Source: Gartner (February 2018)

Step 1 — Consider Software Company Models for Shaping Digital Organizations

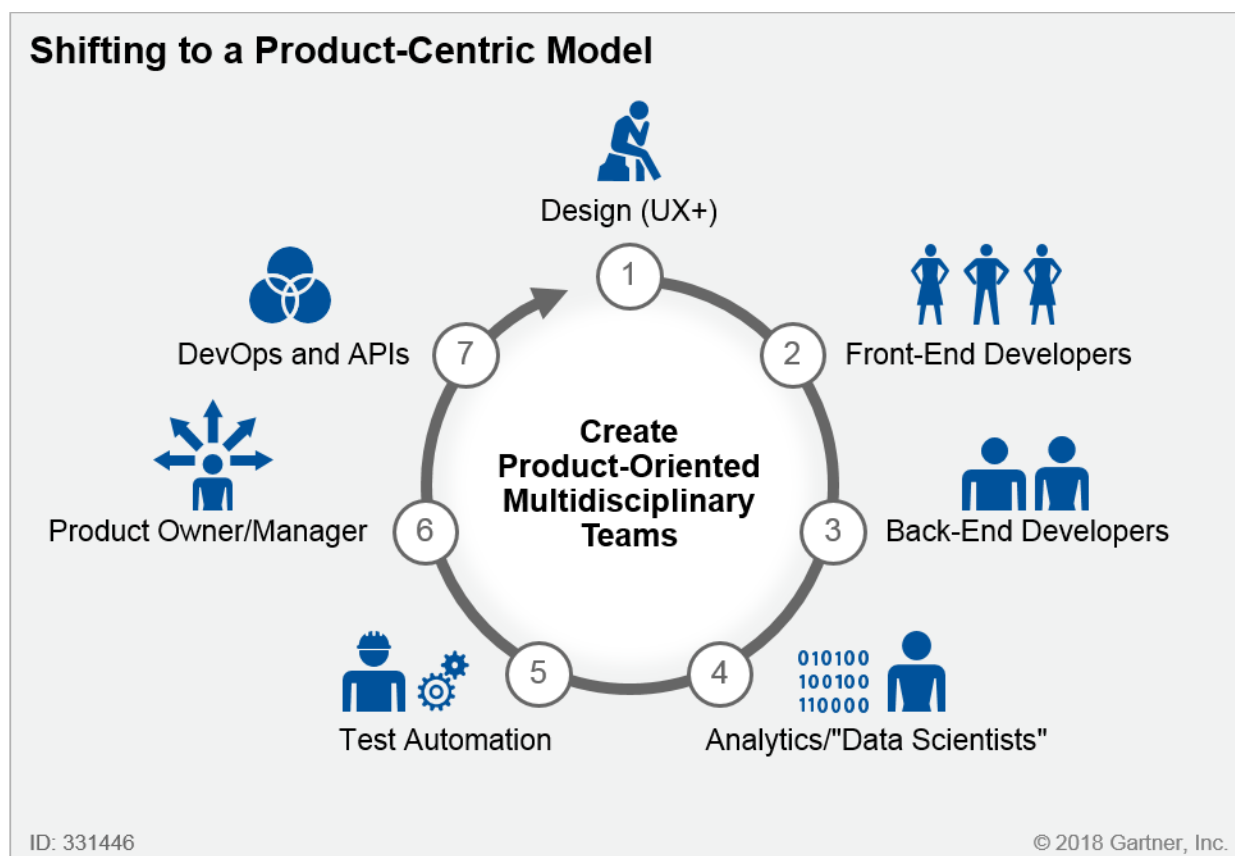
The shift to a product-centric organization should be made in areas where there is a need to drive innovation and collaboration (with business leaders, partners and so forth) for digital initiatives. In some cases, transformational CIOs will take on these initiatives (see "2017 CEO Survey: CIOs Must Scale Up Digital Business").

While there are many ways to organize successful digital initiatives, common sense is to look at peers that have built successful software technology organizations for rapid learning and addressing quickly evolving requirements. By their nature, these organizations have had to focus on evolving business models and disruptions. Central to their approach is a cross-functional organizational model that focuses on the market and product needs through a business-centric product management function.

Companies like Bosch, Caterpillar, Haier, Tesla and Volvo have already recognized that to deliver their digital business initiatives, at scale, will increasingly require becoming a software company. Capabilities include:

- Continuous product/service development and enhancement
- Constant stress and integration testing
- Software "patch" management
- Specified cycles for maintenance, upgrades and so forth
- Integration with other customer software environs and device management
- Integration of new tools, utilities and reporting
- API management
- Security and privacy management
- Continuous customer engagement and support (and upsell)
- Data and event collection and real-time analytics

Figure 2. Create Product-Oriented Multidisciplinary Teams



Source: Gartner (February 2018)

CEOs are tasking executive leaders and in some cases CIOs to create agile, digital product teams.

Product management responsibilities for new digital initiatives can be staffed either within lines of business or through a CIO with responsibility for digital transformation.

Skill sets and roles are particularly important when it comes to driving successful transformations, including the shift to broader digitalization. For example, a product-centric organization must make trade-off decisions that are in the best long-term interest of a product/service, as opposed to satisfying the needs of the loudest customer.

Successful product managers at technology companies learn over time that saying "no" (e.g., to requests for "minor customizations") is an essential competency.

This is one example of how different a product-centric organization operates versus a project-centric organization. The latter typically is focused on satisfying internal "customers" or project-specific requests.

Examining the transformation through another lens, a project-centric organization means that people typically shift from one project to another, placing a premium on tactical success and their technical skills. In contrast, product centricity places a premium on full-stack skills. Core elements of product management disciplines include technology-infused innovation, business fundamentals and metrics, continuous (digital) customer engagement, and understanding market delivery and competition.

Resources who contribute to a product will intensely work toward product release or launch objectives. They will also assist with minor enhancements and fixes when a product is in maintenance, and they may shift to work on new products, depending on the trajectory of an offering that is now in the market.

Continuity and expertise in the product are valued by product organizations, which cannot be continuously shifting resources in or out — which is often the case for a project-centric organization.

Product-centric organizations are measured on business outcomes: revenue growth, profits, customer adoption and attrition, and customer experience metrics.

Mindset, attitude and aptitude typically trump technical skills when building out a product organization. New skills and types of workers come to the forefront, with many organizations that make the shift to digital looking for "T-shaped" profiles. Here, there is a combination of depth in a

particular field (the vertical axis) and the ability to collaborate across disciplines and functions (the horizontal axis). The term "T-shaped" was originally defined by Tim Brown of IDEO, which is well-known for creating interdisciplinary work teams that drive innovation.

Successful Project Managers Do Not Necessarily Make Strong Product Managers

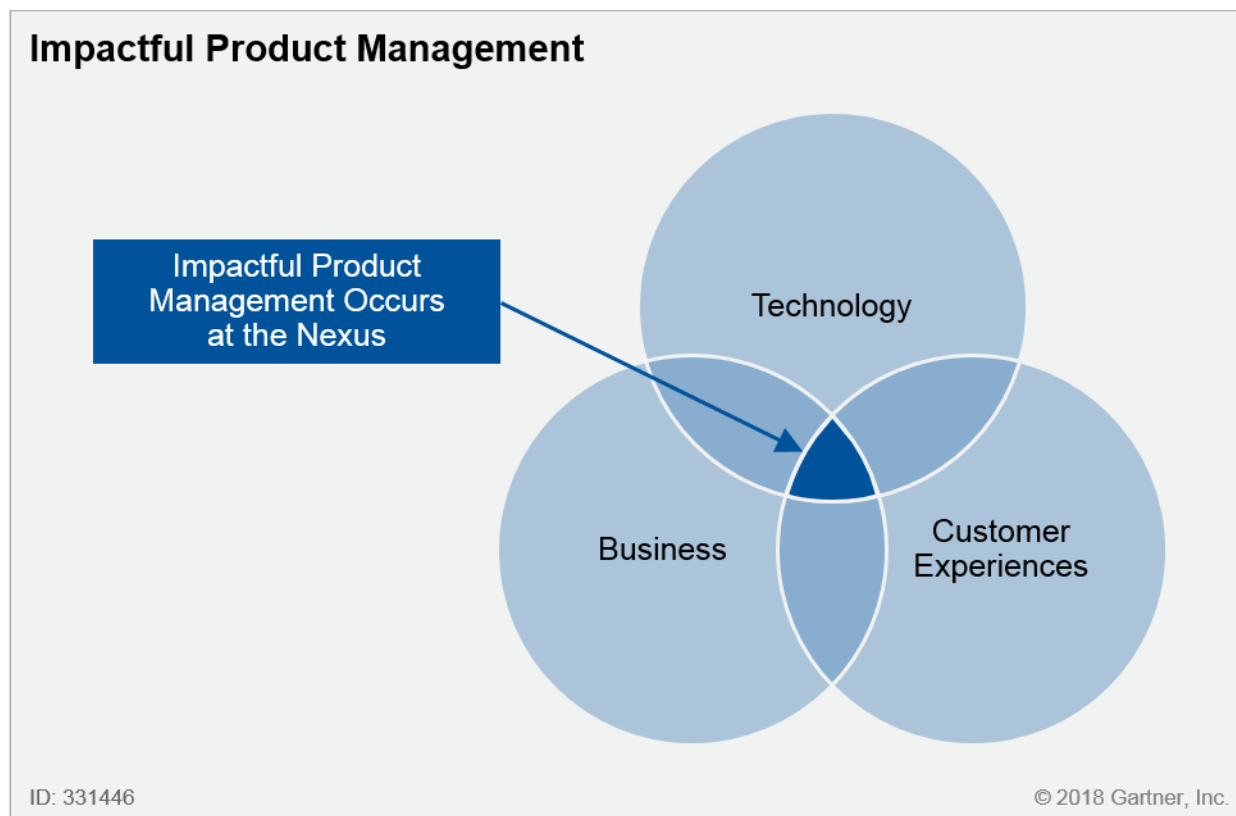
A focus on details, cross-functional collaboration and timeliness is needed for a successful product manager. But skills that are even more important for product management are business acumen and a keen and inquisitive eye for the competition and technology. In fact, overly focusing on delivery of development objectives and concerning oneself with how things are being done are derailment factors for product managers. For more, see "Moving From Project to Products Requires a Product Manager."

Historically, premiums are put on technical expertise or operational excellence within the CIO office.

In the digital age, business expertise and knowledge of the market, including competitive offerings, partners and customer experience, are essential to driving top-line growth.

As shown in Figure 3, product management has the most impact at the nexus of technology, business and customer experiences.

Figure 3. Business and Customer Experience Skills Rise to Forefront in Product-Centric Organizations

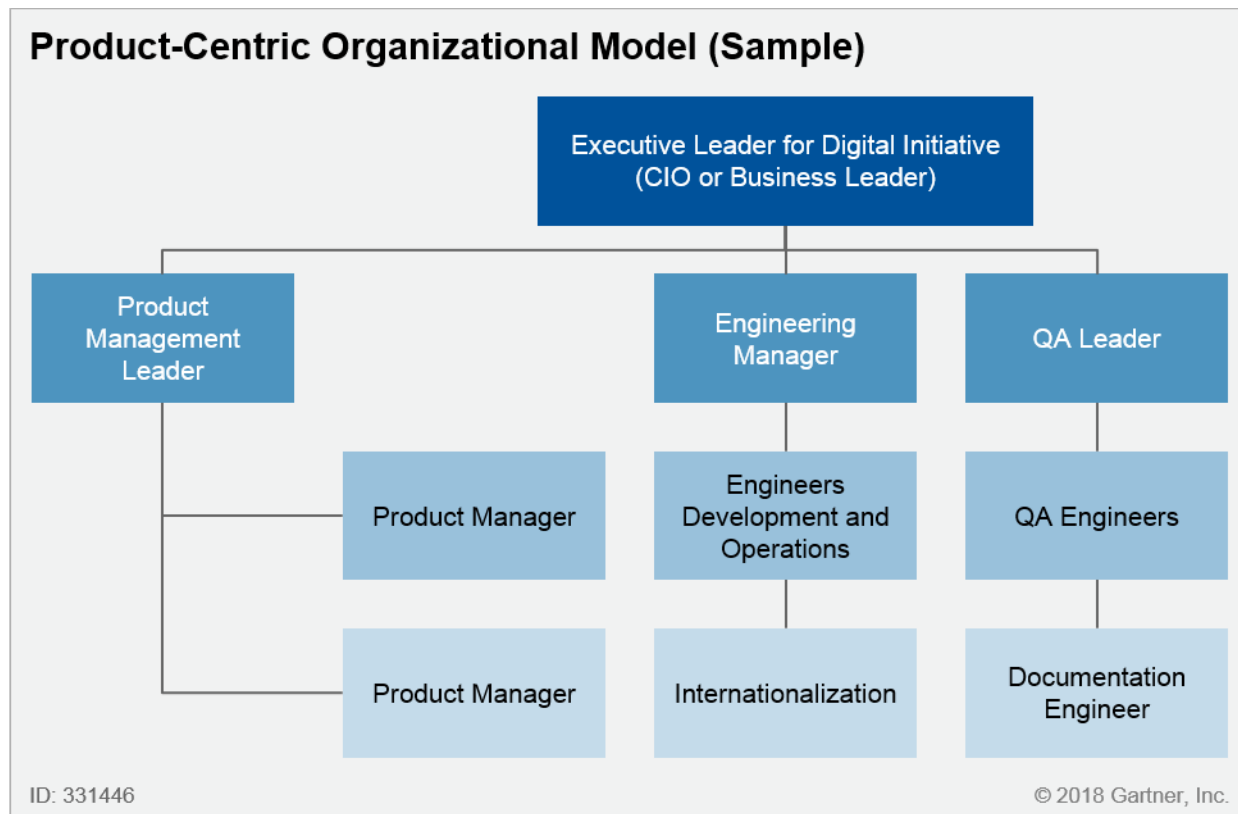


Source: Gartner (February 2018)

Sample Product-Centric Organizational Model

See Figure 4 for an overview.

Figure 4. Product-Centric Organizational Model (Sample)



Source: Gartner (February 2018)

Key considerations:

- Profit and loss (P&L) responsibilities could be with an operating officer or executive, who could be the CIO, the CDO, someone reporting to the CIO, or someone in a business role responsible for digital transformation and product management.
- Alternatively, an experienced executive product management VP (hopefully with some technical "chops," like engineering or computer science) could have direct P&L responsibilities. This is a common model within a software or technology company.
- Product management should report into a function that has business responsibility. Product management leadership should not report to development or engineering. A healthy friction between these functions is essential to innovation.

Does Part of IT Become a Product-Centric Organization Focused on Digital Initiatives?

If the CIO is to play a central role in digital transformation, then it is logical that part of the ITO should transform into a digital group, independent of traditional IT delivery. It is arguable whether such a digital offering or product group should report into the CIO organization or be run separately

by a business unit. In either case, the ITO must continue to support horizontal IT services, but some groups within the ITO may transform into digital product-centric organizations.

Many traditional firms are faced with rapidly growing, often disruptive competition from digitally native companies or new market entrants that are threatening the growth or profitability outlooks of their non-digital-business models. This is particularly true in industries such as media, retail, automotive, transportation and healthcare.

IT leaders need to accelerate the delivery of the most innovative and valuable digital products and services by adopting product management practices from the Lean Startup community. Gartner predicts that, through 2019, a startup product management and engineering culture will penetrate more than 50% of enterprises' innovation efforts (see "Predicts 2018: Application Strategy and Governance").

In some cases, techquisitions are being executed for the purpose of acquiring product talent and organizations (see "The CIO's Role in Successful Techquisitions").

Step 2 — Evaluate Investment Models and Evolve Leading Indicators Adopted by Modern Software Companies

Cost Model for a Product-Centric Organization

The vast majority of a product (especially software) organization's costs come from labor, but other factors include travel for customer situations, conferences, partner meetings and internal workshops. A different sales and marketing organization, or at least a differently focused and incentivized group, may be required when shifting to a product-centric approach. In addition, there may be technology costs, like OEM components for a new digital solution or product. For new investments, offshoring is typically not a preferred option. It is critical to establish a close collaboration model between the product management organization and the development team.

In terms of costs, different economic and investment models and metrics are required for managing a product-centric entity. These include leading indicators such as:

- Percentage of your customers/constituents purchasing or utilizing products/services through digital channels.
- Growth in the number of data points collected per customer
- Retention rate and revenue growth among your customers (especially the largest)
- Customer lifetime value estimate
- Number of new partnerships in your ecosystem
- Fewer warranty service calls per customer base
- Number of automated resolutions per customer call

More important, traditional IT is viewed as a cost center, while the development and deployment of digital products/services is more of an **investment**, with significantly different (longer-horizon) ROI characteristics. For instance, most digital did not make money for three to five years after their initial funding, and some (e.g., Amazon and Uber) took even longer. Different funding sources (versus corporate allocations) and financial engineering will likely be required.

Investment Model for a Product-Centric Organization and Common Metrics

With a software product team, the investment expectation is that the team's budget will operate at a deficit until an offering with market traction is established. The typical metric for software profitability is the ratio of development expenses to revenue, also referred to as "development E/R." For a new offering in a new market, E/R ratios will range wildly until adoption picks up. An E/R of 24% would be considered healthy for a high-growth, established business. For a nascent business, the E/R ratios should drop down to a range of over 100% to 70% as adoption picks up. Low-growth product teams, where a product is the clear market leader, can have E/R ratios in the single digits. These product-centric businesses or product teams underpin the primary revenue and profit engines for well-established technology companies.

Step 3 — Invest in Comprehensive Product Management as the Core for Driving Digital Vision, Strategy, Roadmap and Prioritization at Scale

In "CIO New Year's Resolutions, 2018," Gartner notes that CIOs who are regularly exhorted to innovate become more agile and entrepreneurial. Gartner's 2017 survey showed that greater entrepreneurship is one of the top digital leadership traits for large-company business leaders.

One tangible step that CIOs with digital growth responsibilities can take with respect to entrepreneurship is to invest in business-centric product management, which is at the epicenter of successful software technology companies. In fact, just as many technology business unit leaders have a background in product management, product managers within ITOs may be well-suited for future CIO roles (see "CIO Futures: A Day in the Life of a CIO in 2030").

The ability to continuously innovate faster than the competition becomes the primary means of sustaining success in the digital era. The digital disruptor's obsession with creativity (including hybrid design thinking), the "art of the possible" (e.g., abstracting customer requirements and the products/services they consume into new areas) and continuous innovation are sharply contrasted with the "steady and proven" model of many traditional organizations (see "Reframing Your Mindset to Match Digital-Era Reality").

Products Impact Markets, Competition and the Top-Line Growth of the Business

Some ITOs have transformed from a project-oriented approach (even for the delivery of a standardized service) to continuous development for service delivery (see "Use Continuous Modernization to Build Digital Platforms From Legacy Applications").

These shifts toward continuous development are important in the evolution of IT. But they should not be mistaken for business transformations that directly impact products in the market or for investments that directly contribute to the top-line growth of the company.

Impacting revenue growth with digital offerings requires shifting toward a business and market orientation. This orientation can be developed or often hired.

Creating an agile ITO is an essential step toward being able to adapt to changing requirements and improve service delivery. But a business focus and associated expertise are required to transform the ITO, or at least some portion of it, into a digital product/service-oriented team.

Organizational Culture

In general:

- Project-centric cultures differ significantly from product-centric cultures.
- Previously cherished skills that made some IT staff successful may directly inhibit change.
- Cultural change requires establishing new metrics and norms for success.

Draft Plan for Skills Gaps, HR Partnering, Investment Model and Organizational Design

Action Plan Template

1. Identify skills gaps, including:
 - Business: Market, competition and technology
 - Functional: Product management, quality control, engineering and others
2. Partner with HR to establish talent needs, pipeline and development assignments.
3. Create an investment plan, including needs for external hiring or new head count.
4. Draft an organizational model.

Also see "Best Practices in Staffing for Technology Innovation."

New offerings have high failure rates, with most failures attributed to poor requirements.³ Most executives in software and technology companies invest heavily in product management to improve product success odds and to drive sustainable growth.

Establishing a successful product management focus can be of strategic importance to a company organization looking to scale the business. The role typically has responsibility for setting the vision for an offering (see "Tech Go-to-Market: Product Management Must Establish a Customer-Centric Vision to Drive Product Success"), as well as making difficult trade-off decisions for what is and what is not included in a release (see "Tech Go-to-Market Toolkit: How to Prioritize When Planning

Your Next Product Release"). Product managers often play an active role in strategic sales situations, particularly those in which understanding the product roadmap plays a pivotal role in the purchase decision.

CIOs and other cross-functional executives, as well as business unit leaders, must set the tone for the importance of product management in driving successful growth and scale. The overriding motivation typically will center around the need to scale the business in a sustainable way, through improved product success rates or the ability to successfully enter adjacent markets (see "Tech Go-to-Market: Five Essential Actions to Scale a Business Through Growth in Adjacent Markets"). It is critical that the role definition is clear to all stakeholders. Fundamental to the role definition are its vision and objectives, goals, and scope and metrics — specifically, the metrics for transitioning toward a customer-centric approach for innovation.

First, a vision and objectives for the role should be outlined and shared with key stakeholders or the executive team. It is critical to contrast the current state against the desired state (with product management) to drive alignment, as well as current and future financial assumptions, including investments and ROI, as discussed earlier.

Second, establishing a set of specific and measurable goals for the role and organization is paramount to success. Goals should be both desirable and achievable.

Example product management goals include:

- Revenue and customer growth
- Market and thought leadership
- Customer advocacy and retention
- Customer acquisition costs (CACs)
- Customer lifetime value (CLTV)

In "Tech Go-to-Market: Product Management Must Establish a Customer-Centric Vision to Drive Product Success," a model is provided for ensuring that goals drive engagement, morale and performance.

The technique can also be adopted when articulating and depicting a new product management role to gain support among business leaders. Such support for establishing the product management role is key to ensure its success, which hinges on strong support from functions, including engineering, customer support and sales.

Finally, scope and metrics should be well-defined for the role. See Tables 1 and 2.

Table 1. Examples of Product Management Scope Definitions

Area	Description of Responsibilities
Product development	Customer experience and requirements creation
Product release planning	Primary customer experience and requirements prioritization
Roadmap creation and communication	Primary for creation and communication
Agile development process	Product owner and customer perspectives
Market knowledge	Keen understanding of competitive offerings, including how they go to market, and what differentiates their products or services

Source: Gartner (February 2018)

Table 2. Examples of Product Management Success Metrics

Metric	Measurement
Growth	Revenue or net-new client adoption
Average selling price	Rate of increase
Win/loss	Win/loss rates
Product launch metrics (see "Tech Go-to-Market Toolkit: Plan for a Successful Technology Product Launch")	Product-launch-specific metrics (for example, those tied to a major or minor release)
Strategic objectives	Execution of strategic objectives that are clearly linked to product management (for example, improved cross-sell, upsell and/or geographic expansion)
Valued member of agile process/development team	Feedback from the scrum master and/or cross-functional team
Competitive metrics	Comparative revenue growth

Source: Gartner (February 2018)

Metrics should be specific, measurable, achievable, results-oriented and time-bound (SMART). It may be highly beneficial to align metrics across product management and development to help forge a stronger partnership between these two functions that are pivotal for new digital product success.

Summary

Digital initiatives have the potential to create new engines of growth that directly contribute to the top line of an organization. But for most non-IT product/service companies (e.g., industrial, retail, consumer product goods and utilities), creating significant scale and growth through digital products or services requires a transformation. The organizational model must shift to become product-centric. Business and market expertise must be brought to the forefront of talent development or hiring, and an investment must be made in a market-focused product management organization and discipline. Taking these concrete steps offers the best potential of developing and deploying digital offerings that tangibly impact a company's growth, as well as future profitability.

Gartner Recommended Reading

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

"The Three Steps Every CIO Should Take to Create New Digital Businesses, Products or Services"

"Moving From Project to Products Requires a Product Manager"

"Power Your Digital Leadership by Tapping Three Hidden Forces That Shape Behavior"

"Tech Go-to-Market: Increase the Business Impact of Product Management by Applying Gartner's Maturity Model"

"Information and Technology Strategy for the Enterprise on the Cusp of Digital Business"

"The Case for Change: Why Digital Business Needs a New Approach to Strategy"

"Four Scenarios for How CIOs Can Clarify or Deduce Their Business Strategies"

"Tech Go-to-Market: Business Leaders Invest in Product Management to Scale the Business"

"Disruptors Impact Corporate Strategy, Including M&As: Apply Four Steps to Improve Success Odds"

"A Day in the Life of a Product Manager"

Evidence

¹ "Highlights of the 2016 CEO Survey: Business Leaders Are Committed to Digital Industry Transformation." Gartner.

² 2017 Gartner CEO and Senior Business Executive Survey.

³ 2012 Survey. Association of International Product Marketing and Management (AIPMM).

Other sources included:

- "Five Steps to Build Your Digital Business Dream Team." Gartner.
- "The Hunt Is on for the Renaissance Man of Computing." The Independent. 17 September 1991.

More on This Topic

This is part of an in-depth collection of research. See the collection:

- Redesigning Your Enterprise as a Digital Business: A Gartner Theme Insight Report

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