Business-Led IT

In the Shadows No More
Executive Summary

Gartner Research Board, February 2021

Foreword

This study was prepared solely for members of Gartner Research Board and its affiliated programs, which financed its completion. It contains operational information that may be considered highly sensitive. For this reason and other proprietary considerations, this study's distribution should be limited to Gartner Research Board member organizations, and its usage should be consistent with Gartner Research Board's antitrust guidelines.

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Acknowledgments

Introduction

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The Opportunities Above the Waterline

In this report, we use the term "business-led IT" to refer to *all significant digital efforts taking place outside the aegis of the IT function* — a broad category, to be sure. *Some* of those efforts are hidden, intentionally or not, from the IT function; following tradition, we call this *shadow IT*. A subset of this category is genuinely *rogue IT*, that is, *intentionally* covert digital activity that is potentially dangerous to the organization and must therefore be eliminated.

This report, however, is not about unsanctioned rogue or even shadow IT. Our focus here is the business-led IT efforts that are *above the waterline* (see Figure 1) and their significance and implications for members. In particular, we discuss two categories: *digital business initiatives* and *citizen technology efforts*.

Figure 1: Our Primary Focus — Above-the-Waterline Opportunities, Not Below-the-Waterline Risks

Distinguishing the Varieties of Business-Led IT
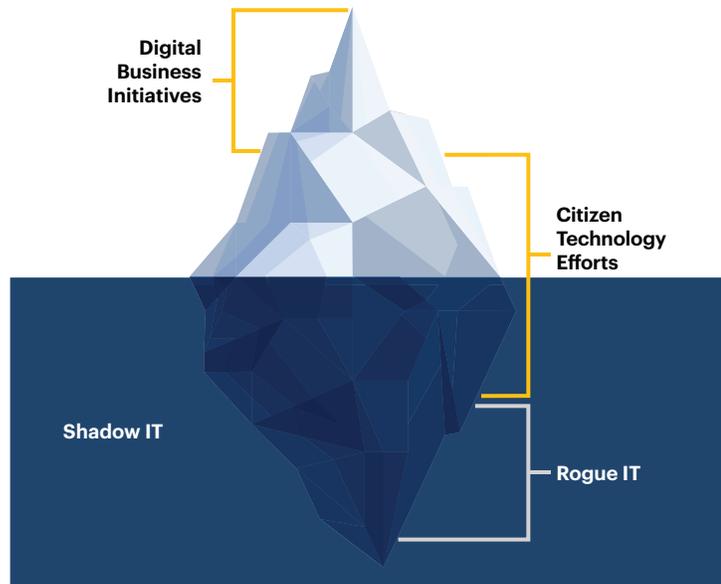
Source: Gartner Research Board

Citizen technology efforts involve non-IT professionals creating self-service solutions that solve real business problems. We think here of folks using the variety of low-code platforms proliferating in the market, automating workflows with RPA or bots, and tapping BI and analytical tools to create a novel visualization to glean new customer insights. In general, we can think of these efforts as forms of *bottom-up* business-led IT.

Some of these citizen efforts may indeed use unsanctioned platforms, which introduces real risk. At well-functioning companies, however, the vast majority of citizen technology efforts are fully sanctioned and above the waterline, with nothing shadowy about them. Yet such efforts can still introduce support headaches — citizen-developed bots are often quite brittle, for example — and untoward risk. So the special challenges of technology *production* by rank-and-file employees must be weighed against the benefits of a culture of experimentation.

In contrast to these citizen efforts, *digital business initiatives* are the technology-enabled business initiatives that are sponsored by a business function or line of business, often built by fusion teams (that is, multidisciplinary teams comprising individuals from the business line, IT, and perhaps other functions). Examples include standing up an online or mobile sales channel, performing subsurface modeling at an oil and gas company, and building a digital twin of an office building. Think of these as forms of *top-down* business-led IT.

Taming Tech: A Domestication Story

Attentive readers will have noticed that our definition of "business-led IT" is quite broad. After all, one might ask, are employees who are creating pivot tables in spreadsheets engaged in business-led IT? Well, no.

To understand why not, let's take a moment to consider a trend line that has run through GRB reports stretching back three decades: the diffusion of technology out into the hands of non-IT associates. As part of this trend, we have seen a steady *domestication* of IT. Each year, digital technologies that were once used exclusively by trained professionals become the workaday tools of rank-and-file employees. This process happens in part through the increased digital sophistication of employees, but also through the active domestication of these technologies by IT. Indeed, some of us may recall a time when enormous effort had to be put into rendering laptops safe for use by non-IT employees.

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Given this history, a useful definition for "citizen technologists" is "business associates using digital tools that *have not yet been fully domesticated*." What is *new*, then, is not that citizen technologists exist, but that their tools have reached a higher level of sophistication. What is also new, we have discovered, is members' attitudes toward these efforts. Today, members largely believe that they must develop *methods of domestication* for the technologies these citizens want to employ, rather than shutting them down altogether.

Digital business initiatives are not new either, but they are dramatically growing in size, scope, and commercial importance. This trend, too, implies greater technical sophistication of non-IT employees. Indeed, at many GRB member firms today, there are employees in lines of business with *greater* digital sophistication in their areas of expertise than anyone in the IT function.

But it also means that IT employees are working more closely with line-of-business employees than ever before. Fusion teams (multidisciplinary teams that blend IT professionals and other domain expertise to deliver products) are becoming more common with every passing year. In fact, these business-led technology efforts stand alongside — and sometimes blur into — more traditional IT projects, on the one side, and citizen technologist efforts, on the other. At the limit, we see a total breakdown of the business-IT divide: We lost track of the number of times members told us stories about visiting these teams and being unable to say with confidence who was employed by the line of business and who was (formally) an IT employee.

Figure 2: Technology Production Is No Longer the Special Province of IT

A Blurring of the Business-Led IT Divide
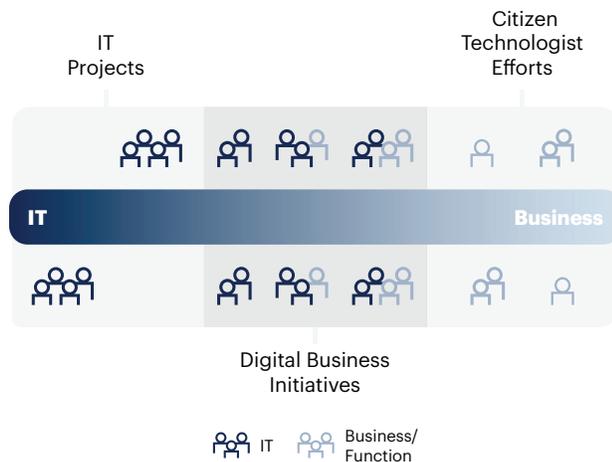
Source: Gartner Research Board

It is clearly no longer possible, then, to regard business-led IT as an aberration or a one-off affair. Members today must be focused on *enabling* these efforts, not killing them. But as both self-sponsored citizen development and technology-enabled digital business initiatives become more prevalent across member companies, members *will* need to guard against some familiar problems: avoiding frivolous diversity of systems and wasteful duplication of effort, maintaining data hygiene, ensuring that data and software capabilities are accessible to all users across the enterprise, and securing one's technology estate.

Thus the question for members, in short, is how to empower partners in business and functional units to leverage technology capabilities without creating the age-old problems of shadow IT.

One answer, we argue in Chapter 1, is a particular technical organizational model now being pioneered at several member firms. With some misgivings, we call this an "internal platform" model. Having been dubbed this by McKinsey, the term has stuck despite the fact that it is used elsewhere to refer to a particular sort of business model.

We adopt McKinsey's definition as well: an *internal platform model* is "a set of modular 'platforms' … [each of which] consists of a logical cluster of activities and associated technology that delivers on a specific business goal and can therefore be run as a business." These platforms are "managed individually … and, when 'assembled,' form the backbone of a company's technology capability." Chapter 1 give a general overview of this model. [Specific member examples removed from this summary.]

Members building out these internal platforms are necessarily taking on new responsibilities. But the rise of business-led IT, and the more general movement of member companies toward more "digital" commercial postures, has broader implications for the role and responsibilities of the CIO in the large enterprise. We explore the evolving role of the CIO in light of these trends in Chapter 2. There we argue, against the conventional wisdom, that a "more digital" company does not necessarily mean a "more strategic" CIO. Nevertheless, there are opportunities for ambitious members to expand their remits.

Finally, we conclude our report with a pithy series of next steps for members eager to build momentum and improve competitiveness by fully and safely embracing business-led IT.

Chapter 1:
The Internal
Platform Model

Business-IT Fusion

We begin our discussion of IT-business alignment with a hoary cliche:

"There should be no line between IT and 'the business.'"

This maxim has been touted for decades by consultants, members, and, indeed, Gartner Research Board. The imperative for IT to be more intimately integrated with lines of business and functional units — to be a legitimate strategic partner and not merely an "order taker" or service provider — is nothing new. But given today's increasingly digitally adept workforce, the inexorable consumerization of technology use and consumption, and consumers' expectations for seamless, technology-enabled experiences, the urgency to marry IT and "the business" is now greater than ever.

The trends just mentioned, taken together, are subtly shifting the locus of application development, automation, integration, analytics, and website development work away from members' IT organizations. Indeed, all across member firms, new centers of technology capability have emerged, in some cases with highly technically skilled employees who sit outside of IT: in autonomous mining operations, for example, or in the digital marketing units of consumer goods firms; in the call centers of insurers, the R&D arms of pharmaceutical companies, and the high-frequency trading units of banks. These are now the homes of critical *digital business initiatives*.

At the same time, relatively uncoordinated, bottom-up digital work is growing in members' organizations as well. The rise of these *citizen technologists* is a reflection, no doubt, of the increasing tech savvy of rank-and-file employees, but it also reflects newly domesticated digital capabilities: These new producers of technology tend to use no- and low-code platforms like Microsoft's Power Apps and data analysis and visualization tools like Salesforce's Tableau.

There have been prior waves of business-led IT, of course, but it is significant that such efforts have generally been anathematized as "shadow IT." Today, things are different: Members' focus in 2021 is squarely on harnessing, not quelling, the work of citizen technologists.

We have already noted what has changed in the meantime: increased technical competence of employees and the domestication of digital technology, along with the penetration of digital technology into every facet of industry. But there is another factor as well: an increased awareness among executives of the power of bottom-up, rank-and-file-driven experimentation — even, at times, where this involves procuring technology independently.

Chapter 1: The Internal Platform Model

Accordingly, we were not surprised to learn that the majority of members responding to our Member Profile Survey this year expect that non-IT employees will play a much more active and material role in technology initiatives over the next two years. Gartner's Peer & Practitioners group found similar numbers in a recent survey (see Figure 3).

Figure 3: The State of Business-Led IT Circa 2021

Business Technologists Are Becoming Vital Technology Producers

- **41%** Business Technologists
- **49%** Technology End Users
- **5%** Technologists in Central IT
- **5%** Technologists in Business Unit IT and Data Analytics Departments
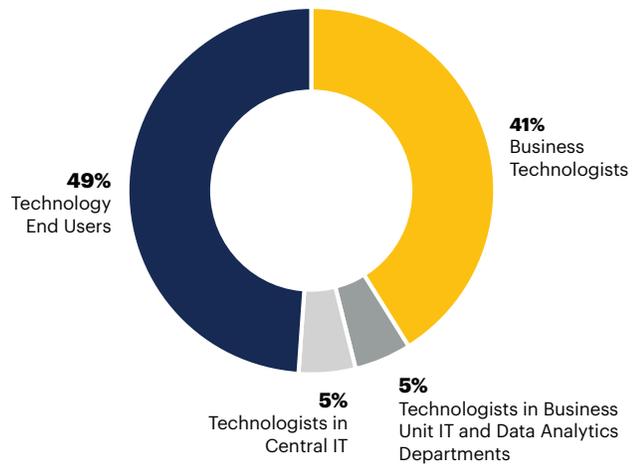
n=4,977 employees across the entire workforce

Source: Gartner Peer & Practitioner Research

But how to systematize these efforts? Platform operating models for IT are a good first step. Platform orientation is no longer the realm of just developers and business management gurus but also organizational architects. Given the rise of business technologists, we need to create platforms *of* people, not just platforms *for* people.

The organizations best positioned to harness the power of business-led IT have recast the IT function as an ecosystem of logical platforms that blur the distinction between tech production and tech consumption — and with it, the distinction between the business and IT.

Layering to Change Behavior and Improve Alignment

Drawing on the work of Jeanne Ross, the now retired former director of MIT's Sloan School's Center for Information Systems Research, as well as initiatives that are underway at member firms, we divide our conceptual platform operating model into three distinct layers: the *operational backbone,* the *digital business enablement layer*, and the *citizen engagement layer*.

Figure 4: A Platform-Oriented Technology Operating Model

A Trio of Individually Managed Platforms That Cluster by Activity and Associated Technologies
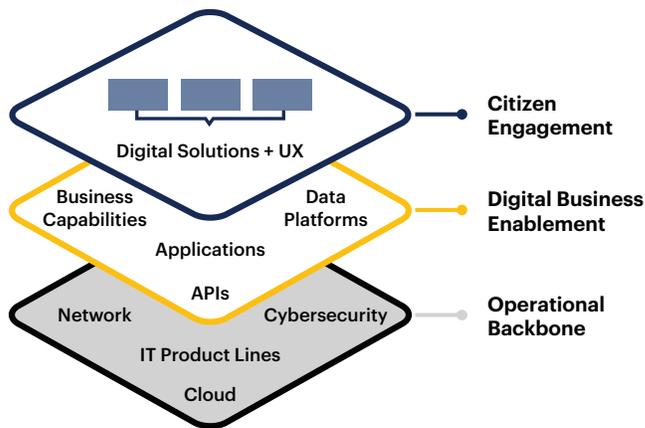
Source: Gartner Research Board

The point of distinguishing these three layers — both theoretically and in practice — is, in the first place, to firmly distinguish *domains of control*. The foundational layer, consisting as it does of shared, nondifferentiated services, must be firmly in the control of the IT function: There is little sense in allowing different functions to stand up their own network services, for example. The enablement layer, by contrast, may host application services and perhaps data platforms that are unique to a particular line of business and, indeed, these may be built, in part, by cross-functional fusion teams that include individuals from those lines. The engagement layer, finally, will host digital solutions that are largely unique to the function or line of business. Consequently, it will often make sense to allow users in each function to have some role in the sourcing — if not the purchase — of such applications.

Distinguishing these layers is also helpful insofar as they will change over time at different rates — and indeed, these rates will *themselves* evolve over time — with the higher layers evolving more rapidly, and therefore requiring ever-tighter planning horizons and, ideally, clearer accountability for budgeting and prioritization.

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We turn now to a closer examination of each of these layers.

The Operational Backbone

The most basic function of any IT organization could be roughly stated thus: to capture economies of scale by providing *core, shared infrastructure,* and *cross-cutting systems* that deliver operational excellence reliably and securely.

Simple enough! The rub, of course, is that this is not a one-off job: The operational backbone must be continuously "modernized"; for many members today, that means embracing software-defined networks and cloud infrastructure. Or, as one member put it to us, "IT needs to make sure that the trains are running on time, yes, but also that new track is laid." The next technological paradigm shift is indeed always just over the horizon, making the all-important work of infrastructure modernization never-ending.

As we noted above, the IT function itself must be the locus of expertise and control for this all-important foundational layer. But it is at the same time vital that this backbone not look like a black box to fellow business leaders: As DXC Technology CIO Chris Drumgoole rightly points out, non-IT business leaders "often lack an appreciation for the importance and complexity of operating and maintaining the plumbing," a fact that, unaddressed, can seriously impede modernization efforts.

But as members well know, simply being a world-class plumber does not a powerful partnership make. Ultimately members have to help the business use technology to drive growth and innovation as well.

The Digital Business Enablement Layer

The digital business enablement layer houses all the data and analytics and technology components needed to create (and improve) the digital capabilities and "products" — whether customer-facing or not — that will be crucial to the firm's growth and transformation agenda (think development environment, integration capabilities, and published APIs). In many cases, these "products" will be developed by cross-functional teams comprising individuals from both IT and a particular line of business.

Given the central role *data* is playing in member company strategies, an enablement layer will often also include the AI engines and machine learning models that developers, data scientists, and, yes, even a few savvy citizen technologists will need in order to extract business value and meaning from the firm's data corpus.

One key objective here is *ease of use:* Members definitely do not want their enablement layer to be worked around by digitally literate business folks. Accordingly, producers of technology capabilities — IT professionals — must collaborate with the consumers of those capabilities — business and functional leaders and citizen technologists — to design and build a modern and attractive enablement layer the latter group will *want* to work on.

In general, we can divide the design, creation, and operation of the enablement layer into two parts: *strategy* (the "what") and *execution* (the "how"). Business and functional leaders, with the help of what one member calls "communities of expert practitioners," need to be able to drive the "what": They need to identify business problems and objectives and work with IT leaders to determine what capabilities should be housed in the enablement layer to help their teams achieve value-creating outcomes. Technology leaders must support the "how": translating those business objectives into a technology roadmap, determining the digital imperatives that will govern the platform, and providing their technical expertise and governance. This cross-functional leadership structure should also be reflected in the hybrid teams that execute the technology initiatives in the enablement layer.

The Citizen Engagement Layer

The citizen engagement layer supplies an interface for folks in the business and functional units (be they citizen technologists or more traditional end users) to interact productively with the technology, tooling, and data services housed in the digital business enablement layer — to uncover new insights or automate repetitive tasks, for example.

The bulk of self-sponsored citizen development, analysis, and integration will take place in the engagement layer. As we noted in the Introduction, these unplanned projects can create significant efficiencies for individuals, for fusion teams, and the larger organization — even the occasional breakthrough innovation. Accordingly, members need to provide non-IT professionals, as well as the fusion teams operating within business units, a safe and secure environment in which to experiment.

But as we noted at the outset, the increasing tech literacy of non-IT professionals is not exactly an unalloyed good: These lay developers often know just enough to be dangerous. Members will want to make sure the work of citizen technologists is performed securely and, when prudent, can be easily integrated into the firm's broader ecosystem and scaled across the organization. Among other things, that means providing the relevant training to these would-be citizen technologists.

The role of members' organizations in the engagement layer then will be one of governance, support, and education. For instance, the IT organization should dictate the digital imperatives with which all developers — both within and outside the IT organization — must comply. (Think Bezos' 2002 memo outlining his API mandate:

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"All teams will henceforth expose their data and functionality through service interfaces.") Likewise, IT personnel should be embedded in cross-functional teams to help execute on technology initiatives and to expose non-IT professionals to technology-centric methodologies (like DevOps) and ways of thinking (like "security first").

Our interviews suggest that the level of focus and investment members put into bolstering the capabilities of the citizen engagement layer varies widely. Much depends on one's historical sourcing and governance biases, corporate culture, and industry affiliation — not to mention the general level of digital fluency among corporate leadership. Nevertheless, one thing is clear: The vast majority of members recognize that a growing group of non-IT citizen technologists will find a way to embrace more self-service analytics and will seek to get more work done by automating routine tasks with bots. Some may be more ambitious still: In one member company, two engineers, working on their own time, deployed a machine learning algorithm to all but eliminate quality defects on a fiber manufacturing line. And while this is an exceptional case, it is precisely these types of exceptional cases upon which members must capitalize.

Embrace, Empower, and Engage

The majority of members we spoke with, and nearly all of the CIOs and CDOs we interviewed from key tech suppliers and digital upstarts, advise that a new playbook (and perhaps a new platform-oriented operating model for IT) is in order. Their collective advice: Resist the urge to squelch business-led IT, and devise mechanisms to safely embrace it, engaging citizen technologists wherever possible.

The reality is that today's spectrum of business-led technology initiatives and self-sponsored citizen development and analysis are vital and look very different than they did in the heyday of CASE tools, Powerbuilder, Lotus Notes, or freemium SaaS offerings (Dropbox). Accordingly, the time has come for members to elevate their games and redefine their roles, always seeking to avoid the knee-jerk reactions long associated with prior waves of business-led IT, much of which lurked in the shadows.

Chapter 2: Tech Leader Archetypes in a World of Business-Led IT

The Endless Road to "Becoming More Strategic"

Flip through any IT trade journal, and you will see some variation on the following claim:

"While CIOs used to make their careers on cost-efficient and reliable infrastructure, today they are emerging from the back office, becoming strategic players and directly impacting the top line."

Then check the date of the article.

Such claims have been made monthly in *CIO Magazine* and the *Wall Street Journal's CIO Journal* for the past three decades. Indeed, when William Synnott and William Gruber coined the term "chief information officer" back in 1981, their argument for a new title was based on the observation that information technology had become a strategic asset and was no longer just a way to reduce costs. It seems, then, that CIOs are always "becoming more strategic" — but never quite getting there.

But is this true? Or is there an element of hype?

This year being the 40th anniversary of the "CIO" title, it may be a good time to reexamine some of the old clichés and take a hard look at some of the conventional wisdom we've all gotten used to hearing about the role. One cliché we *will* wholeheartedly endorse: Information technologies have been in a state of constant evolution over the last 40 years, and the role of technology in businesses as disparate as automotive and financial services has become more vital every year.

Our view, then, is that these prognosticators were *half* right: The dynamic evolution of digital capabilities and their expanding role inside the enterprise has meant there has been an *opportunity* for CIOs to become more strategic players, to take a larger role in digital business optimization and transformation decisions, and to more generally increase the power and visibility of their roles. Some CIOs over the last 40 years have made the most of these opportunities; many have not.

Today, CIOs have such an opportunity once again, in part because of the two trends we've mentioned: (1) the ongoing infusion of digital capabilities and developer talent into both the product organizations and operations of large enterprises, a process which has been occurring for some time; and (2) the rise of what we've called "citizen technologists," that is, non-IT employees who lack substantial IT or CS training but who are now making more significant contributions to business technology consumption and, in some cases, production.

The Impact of "Techquilibrium" on the Strategic Importance of the CIO

The increasing importance of software and data in achieving competitive advantage was the subject of last spring's report, *Competitive Emulation*. There we noted that nearly every member firm is moving toward the digital end of the traditional-to-digital spectrum — that is, software and data are becoming increasingly critical to their competitive posture. Meanwhile, the internet superpowers and digital upstarts are moving in the opposite direction: selectively but aggressively investing in more traditional physical assets. The optimal resting point on the spectrum will differ from industry to industry, and from company to company, but the goal, for all companies, is to find the right balance, or "techquilibrium."

Figure 5: Seeking Techquilibrium

Traditional and Digital Companies Are Coming to Resemble Each Other

Traditional   Disney →   ← Netflix   Digital

Disney has rolled out streaming services even as Netflix has gotten into content production.
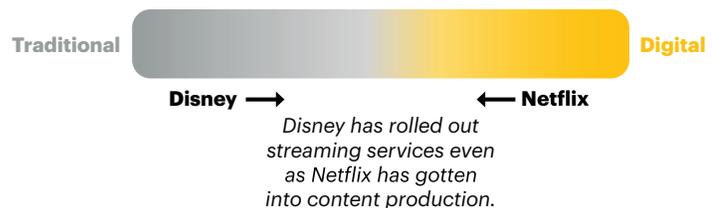
Source: Gartner Research Board

As member firms become more "digital," the percentage of employees at these firms who are trained technologists correspondingly increases, as does the general technical and digital acumen of the company's associates, naturally enough.

Many have concluded, on these grounds, that CIOs will correspondingly have a larger, more strategic role to play in their organizations — a more "business-centric" role, if you like. The logic runs roughly thus: Information technology is becoming increasingly important in such and such an industry; the CIO is the apex technology officer; therefore, the CIO will become increasingly important.

But is that true? In the first place, we would stress here that the process of technology *domestication* makes it possible for a technology to be ubiquitous and important but still largely irrelevant to competitive *advantage*. Smartphones and spreadsheets come to mind.

Second, the idea that CIOs at "genuinely digital" companies will have especially strategic roles in their organizations is belied by the evidence on the ground. We spoke to several CIOs (former and current) at digital darlings like Uber and Box, as well as at more established suppliers like Microsoft and DXC Technology, for this report. While we would hardly disparage the importance of the CIO position at these firms — still less the individuals occupying them — our overall assessment is that most of these CIOs play less than "strategic" business roles, particularly with respect to "digital technology and its possibilities."

Figure 6: What Happens When Companies Garner More Revenue From Digital Lines of Business?

The Strategic Importance of the CIO Ultimately Diverges From the Percentage of Technologists in the Organization
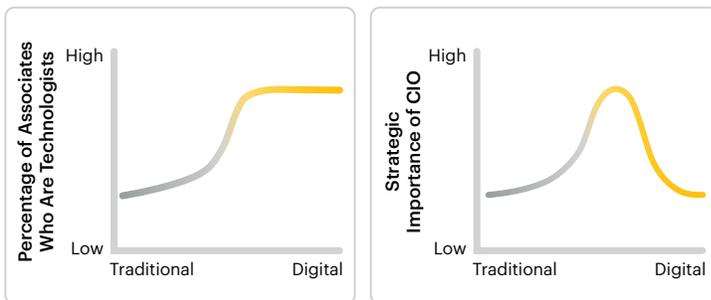
Source: Gartner Research Board

There are two reasons for this.

First, given the critical commercial importance of technology at such firms, a dedicated cadre of CTOs and chief product officers often takes the lead on identifying and leveraging new technologies within a given line of business, not the CIO. Second, since the digital dexterity of the rank and file is quite high, there is less need (or room) for a CIO to play an educational or evangelizing role. CIOs at such companies therefore have a more traditional remit, with some added responsibilities as "customer zero" for their firms' wares.

So will member firms also move toward more operational roles for their CIOs as they become more digital? Not necessarily. For one thing, there is no reason to think that member firms will move to the digital extreme. There is little risk, then, of member firms' IT shops coming to organizationally mirror Box or Uber.

**Chapter 2: Tech Leader Archetypes in a World of Business-Led IT**

But this much is clear: In general, there is not a simple, linear correlation between *position on the digital spectrum* and *size or strategic importance of the CIO role*. CIOs at the two poles of our spectrum look rather similar to each other. *In between*, however, there are all sorts of possibilities, and CIOs at member firms are coming to play a number of different roles.

Technology Leader Archetypes

The GRB membership is more diverse today than ever, in terms of titles, focus, and day-to-day responsibilities. Nevertheless, a number of archetypes have been identified, and we discuss them in the following pages.

Figure 7: Technology Leader Archetypes

These Four Archetypes Are Most Prevalant Among GRB Member Companies
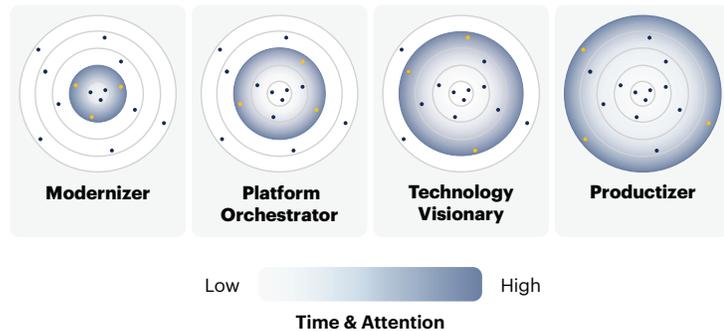
Source: Gartner Research Board

Three factors control which archetype tech leaders fall into: the leader's major responsibilities; the amount of time and energy spent on each responsibility; and the degree to which these responsibilities are shared with other tech leaders in the organization.

These aforementioned responsibilities run from what might be termed *"core IT" responsibilities*, through *modernization* and *digital platform orchestration* responsibilities, and all the way out to more ambitious *digital product incubation* and ultimately to *digital P&L* responsibilities. As members expand their range of responsibilities, they naturally will spend less time on the traditional IT responsibilities, delegating them, outsourcing (or cloud-sourcing) them, or simply leaving them to the business itself. The expanding responsibilities of the modernizer, orchestrator, and visionary have been annexed more recently. The final set of responsibilities, that of the productizer, is often divided, at member companies, between a number of different technology leaders or "digital centers of power" within the company.

We turn now to these digital centers of powers before we look more closely at our four main technology leader archetypes.

New Pockets of Technology Leadership

Although relatively few GRB companies rely heavily on selling software, *many* member companies have (what we might call) "centers of digital power" that reside well beyond the IT function.

Figure 8: Pockets of Digital Power Are Proliferating at Member Companies

The CIO Sits Atop But One Center of Digital Competency, Making Powerful Partnerships Vital
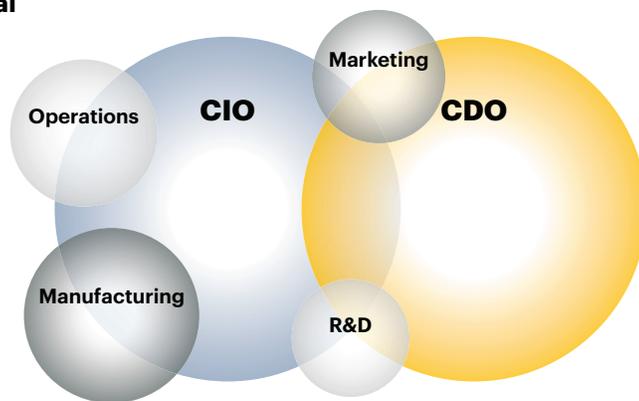
Source: Gartner Research Board

The R&D arm for pharmaceutical firms, the connected-car unit of automakers, and the upstream production lines of business at oil and gas giants all represent major centers of digital power in 2021. Likewise, the chief marketing officers at consumer packaged goods firms are major centers of digital power today. Indeed, marketing is a major locus of business-led IT these days, with its own "martech" stack of tools, from content management systems to analytics applications to search engine optimization and personalization tools.

Finally, and famously, many member companies have both a CIO and a chief digital officer — a unique case which we examine separately below.

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What's the proper relationship between IT and these other centers of digital power? Parent to child? Sibling rivalry? Different arrangements will be appropriate at different firms, of course.

But there are two overriding principles that should guide members' thinking on this score. First, of course, it is paramount to avoid unnecessary duplication of systems and frivolous diversity of functionality: Insofar as it is possible, all employees, regardless of where they sit, should share the common platforms of the company. A corollary to this point: Members should also constantly seek to identify systems and functionality developed by the business that should sediment down into a shared, common, standard platform that can be tapped by all.

The second principle derives from the historical record: *Digital technologies get domesticated over time*. That is, digital technologies that were once considered cutting-edge — and consequently required supervision — tend to become unremarkable business tools over time. Thus, while there is no reason to think that marketing departments will become *less* reliant on digital technologies over time, this fact alone does *not* imply that marketing departments will always be significant "centers of digital power" — any more than sales or finance departments are, with their spreadsheets and laptops.

In short, today's "citizen technologists" are tomorrow's business associates. The upshot is that the technologies the IT function must take under its own control are all those that are either (1) widely shared, and therefore belong to no other function, or (2) cannot be safely handled by business associates without supervision (yet).

Still, it must be stressed: These technologies will not domesticate *themselves*. Members must formulate a *plan* for domesticating technologies and turning them over to the broader business.

The Four Main Tech Leader Archetypes

Before launching into our discussion of the tech leader archetypes, let us mention one other archetype that we will *not* be discussing: a kind of hyperminimalist *operato*r or "corporate IT director" role whose responsibilities are limited to being an internal IT services provider, offering up enterprisewide systems of record and engagement — what we've called "fundamental IT" in the past. In a world of static technology, such a role might be sufficient; in the real world, CIOs must consistently adapt to new tech paradigms as they emerge. Now for a quick flyby of our four main technology leader archetypes.

The Modernizer

In our view, CIOs at member firms tend, at a minimum, to play the role of the *modernizer*. Indeed, nearly all members share at least some of these responsibilities.

**Figure 9:** The Infrastructure and Application Modernizer — Basic Table Stakes
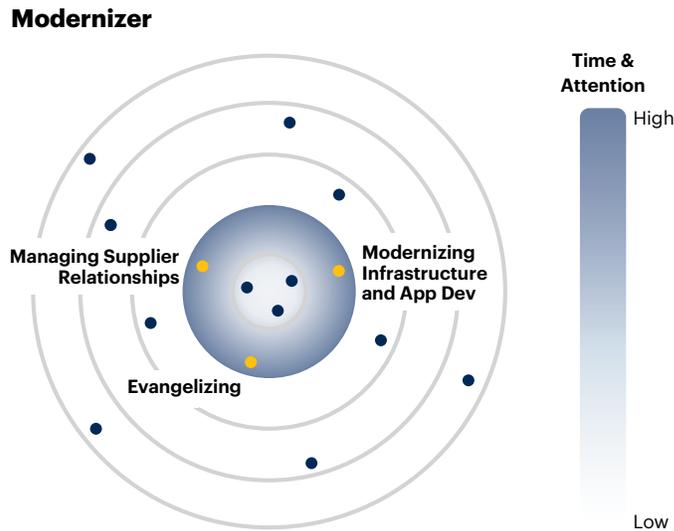
Source: Gartner Research Board

The Platform Orchestrator

As we detailed in Chapter 1, many members today are moving well beyond the modernizer role, taking on the responsibility for building the internal platform *and* the organizational structure that has become critical in the context of business-led IT.

Figure 10: The Platform Orchestrator — An Increasingly Popular Archetype

Platform Orchestrator
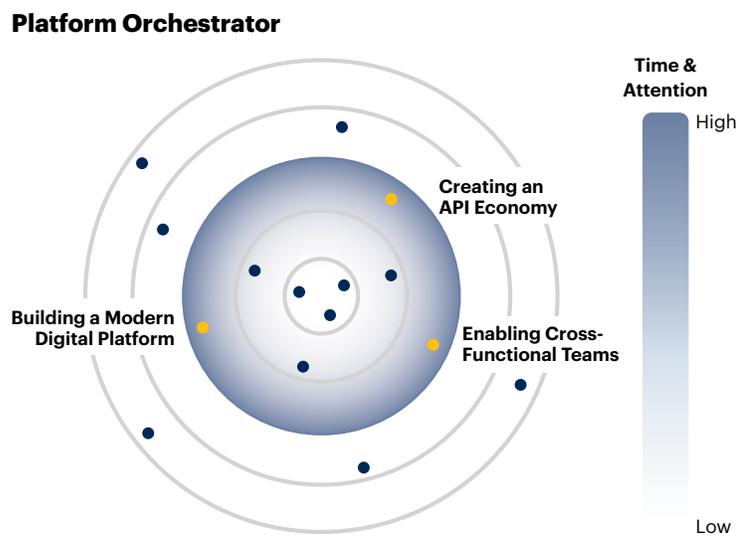
Source: Gartner Research Board

The Technology Visionary

Members whose enabling digital platforms are mature are taking a larger role in supporting their businesses' digital business optimization and transformation initiatives and, in some cases, going well beyond portfolio management and digital evangelism to actually incubate future digital products or lines of business. At more digital companies, these members are also assuming responsibility for setting the technical vision for their firms and, indeed, helping the business implement that vision.

Figure 11: The Technology Visionary — A Stable Archetype in More Digital Companies
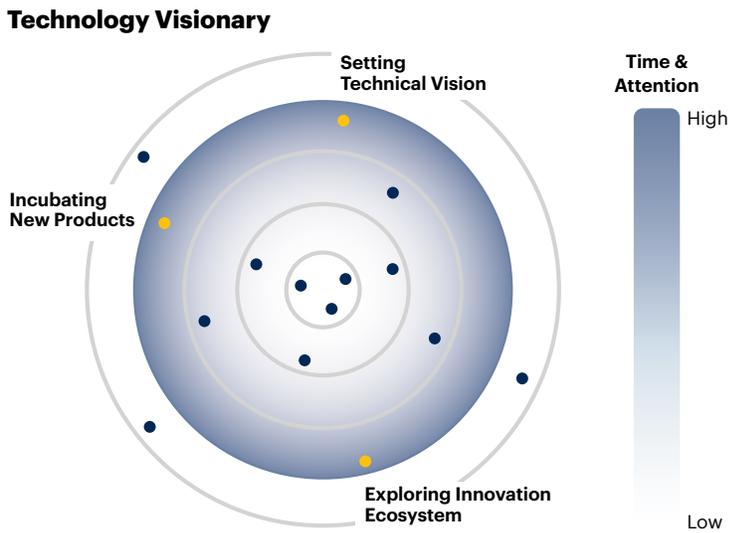

Source: Gartner Research Board

More broadly, these tech leaders see themselves as responsible for disrupting their businesses from within. Several members stressed that it is highly useful to have *someone* in the company taking an "outside-in" view of the disrupting potential of technology.

The Productizer

Some members spend comparatively little of their time and effort on the core IT responsibilities, focusing instead on *running digital lines of business*, complete with profit and loss responsibility, or overseeing, nurturing, and stress-testing digital products that were incubated by internally. These *productizers* are often additionally charged with *monetizing data assets*.

Figure 12: The Productizer: An Offramp?
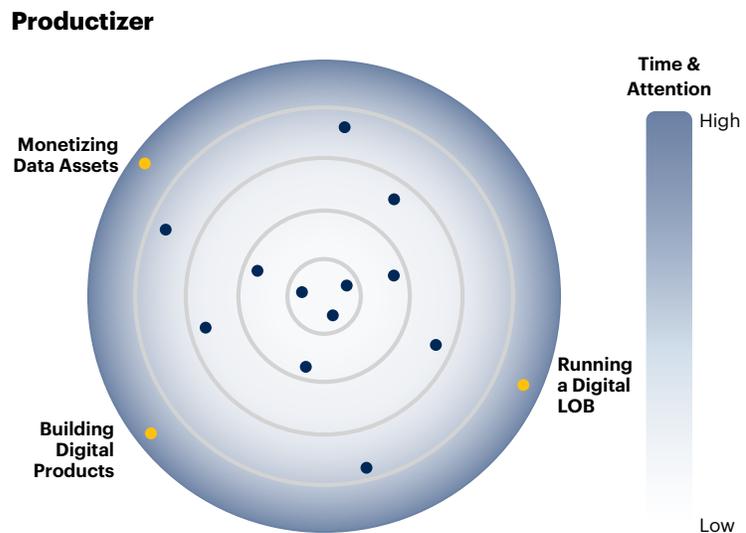
Source: Gartner Research Board

Is this a stable configuration of responsibilities? In our view, the answer is "no."

As software becomes increasingly critical to competitive advantage at a given firm — that is, as that firm moves toward the digital end of the traditional-digital spectrum — it will become correspondingly important to have *someone* leading the firm's most successful digital business initiatives. Nevertheless, we would contend that this is not a job for a CIO, nor even a CDO; it is a job for a business leader. That business leader may, of course, be an *ex*-CIO (or ex-CDO). The instability of the productizer role comes from trying to retain some CIO duties while simultaneously leading a business unit.

In the extreme case, a company building digital products is a true *software* company, and the individual in charge of such initiatives is the CEO, with the CIO owning a more traditional remit. Of course, becoming a pure "software company" is an unlikely future for most GRB member firms — and there is no shame in that. Even at this late date, it is impossible to dominate a traditional vertical entirely on the strength of software or data prowess. (We don't deny, of course, that digital innovation can allow a firm to steal a march on its rivals.)

Many GRB member companies today derive significant competitive *advantage* from their software and data assets, either through *digital products* or through the *deployment of proprietary digital technologies in internal operations*. Many of these companies, too, will require one or more individuals to oversee and run the firm's various digital lines of business. The rare CIO may step into one of these roles. Most productizers, then, will eventually hit a very real fork in the road: Do they aspire to run their own digital line of business — that is, to take an offramp from the IT function? Or are they content to hand over the technologies they have incubated and return to one of the more stable archetypes?

Choose Your Fighter

It is of course tempting, but in our view a mistake, to think of these four archetypes as falling on a kind of ladder, with the implicit assumption that "up is better." We *do* believe that GRB-scale firms need more than a corporate IT director, and that all members should at least be playing the role of *modernizer*.

For member firms that are making progress toward the digital end of our spectrum, and all that that entails in terms of fusion teams and product orientations, something like the digital platforms described in Chapter 1 will also be appropriate. These members must (re-)assume *platform orchestrator* roles.

Members within companies that have moved significantly toward the "digital" end of the spectrum have an opportunity to become their firms' technology visionaries, working right alongside the business as they apply the firm's technology roadmap to their biggest challenges and opportunities — acting, as one member puts it, like VCs within their firms. Indeed, in such companies, this role will have to be performed by someone; if members do not step up and seize it, they may find themselves reporting to someone else.

By contrast, members who set their sights on new products and internal disruption should look beyond the disruptor role to the digital lines of business they wish to run in the future.

Will some members occupy more than one archetype at once? Well, life being what it is (messy), there will be all sorts of in-between cases, gray areas, and so on. But in our view, *time and attention* are fundamentally limited quantities and consequently most members will find themselves falling chiefly into one archetype or another. Members who spend most of their time and attention on one set of responsibilities will necessarily have to spend less on other sets.

Nevertheless, the full raft of responsibilities might well be split among individuals in different ways at different companies and, indeed, at the same company at different times. At some member firms, the CIO plays something like the modernizer role while the CDO acts as platform orchestrator; at others, the CIO has the platform orchestrator role, and the CTO is the tech visionary. Interestingly, these divisions of duties may themselves be unstable. We turn to this question next.

On the Likelihood of Lasting Role Bifurcation

Without doubt, there is no new C-level role that has gained as much traction in recent years as the chief digital officer. But there is a parallel phenomenon from two decades ago that is instructive to revisit: heads of e-commerce. In retrospect, the heyday of the "e-commerce czar" was very short indeed — but not, of course, because e-commerce went away. On the contrary, it is now absolutely ubiquitous; indeed, the "e" has largely been dropped.

Today, "e-commerce" is simply one facet of commerce. But its very ubiquity means that large enterprises no longer need a special individual to run it. And although it remains true, of course, that firms can do better and worse jobs with their omnichannel strategies, nevertheless "e-commerce" is largely a solved problem. That is to say, the real problems facing online commerce today are basically *business* problems, not technical problems.

We see much the same thing these days with today's CDOs: At many firms, we expect they will simply go away — and not because "digital business initiatives" are going away. Rather, as digital tools get easier to use and consume and (what is different) as end users become more technologically sophisticate, "digital business initiatives" are becoming, simply, *business* initiatives.

As always, there is no one-size-fits-all rule here. But for the reasons just mentioned, we believe that the need for a stand-alone CDO is likely to be fleeting for most firms. As we argued first in *Jamais Vu* (2018), "We will soon see a return to a more familiar era where there is an apex tech leader overseeing both IT and digital strategy, be it a global CIO, a head of tech and ops, a CTO, or a CDO."

It also bears mentioning what many of the thought leaders we spoke with emphasized to us: that the appointment of a CDO generally signals a lack of confidence in the CIO's business acumen. Or, as one industry leader told us bluntly, "The only companies with CDOs are ones where the CIO is failing." In less blunt terms, companies tend to hire CDOs when CIOs have failed to add the responsibilities and nurture the powerful reciprocal partnerships that have become newly vital to their remit.

Cats and Dogs

Insofar as members see themselves in one of our four archetypes, they must ask themselves two questions. First, given where my company sits on the traditional-digital spectrum, am I playing the right role — that is, am I occupying the right archetype?

But second, and at least as important, which is the archetype best suited to my talents, proclivities, and temperament? We give the final word here to Tim Chou, serial entrepreneur, former president of Oracle on Demand, and now a lecturer at Stanford: "In my experience, there are humans who are good in operations roles and humans who are good in innovation roles. Call them 'cats' and 'dogs.' I guess it's amateur psychology, but if you look into their backgrounds, profile these two characters, you're going to see they're very different. Not better, just different: Life is about being part of a club; you need both kinds of character. But it's hard for a cat to be a dog."

Conclusion

Like many terms of art in the industry, the term "business-led IT" will have, we suspect, a short shelf life. But this is not because the phenomenon it names is unreal. It is rather because the technologies that are, today, thought of as varieties of "information technology" will, down the road, be merely regarded as some of the many tools that folks "in the business" need to get their day jobs done. In a word, they will be domesticated. New technologies will then come to occupy the gray area between wild and tame, and no doubt new terms of art will be devised to talk about them.

In this way, the term "business-led IT" is a bit like the other buzzword du jour, "digital." It is impossible today to open a trade magazine without reading about companies executing "digital transformations," starting "digital lines of business" or, indeed, just "going digital." (Indeed, we have used the term "digital" ourselves, of course, albeit in a tightly circumscribed way. The popular usage is considerably looser.)

While it's easy to scoff at such terms, they too serve a purpose. At this moment, there are a number of technology paradigms — cloud computing, machine learning, SDx, and so on — that are changing and even transforming industries. If member companies are to survive and thrive, they must adopt these technologies themselves and, in some cases, transform their business models around them. It can be useful to have a catchall term to describe and draw attention to this vital process of gestation, installation, and deployment.

The *problem* with a term like "digital transformation," as it is commonly used in the trade press, is its tendency to suggest that there is some *end state* which might be reached — the state at which a company has "become digital," perhaps. But no such end state exists. In a decade, a new raft of technology paradigms will come along, and member firms will have to adapt and transform them once again.

But each of these waves of transformation brings opportunities for the technology leaders within each company to champion new technologies and, indeed, in some cases, to lead the transformations of their own businesses. If, as we have argued, today's "digital business initiatives" are tomorrow's "business initiatives," nevertheless *today* they are "digital" initiatives — that is, today they require the insight, technical sophistication, and support that members are especially well-positioned to provide. That is the challenge, and the promise, of business-led IT.

Members who want to accept this challenge should consider these next steps:

- Lower the waterline: Bring the efforts of citizen technologists into the light.

- Rather than squelching citizen technologists' efforts, develop plans for the *domestication* of the tools associates want to use.

Conclusion

- Identify those areas where you are willing to allow duplication and experimentation — and where you aren't.

- Think about adopting a three-tiered, platform-based tech operating model to empower vital centers of digital capability, as well as citizen technologists — end users who are capable of becoming technology producers in their own right by creating lightweight apps, integration, and data analyses.

- On top of your operational backbone, consider building and aggressively marketing a digital-business-enabling layer that folks really want to work with — and in.

- For those members sitting toward the digital end of the techquilibrium spectrum, don't make the fatal mistake of underinvesting in the citizen engagement layer.

- In a world in which business strategy and digital strategy are all but synonymous, it is even more important that your technology roadmap and investment priorities both *are informed by* and *inform* your business strategy.

- Determine where your firm sits on the traditional-digital spectrum — and where it will likely be in five years — and consequently what kind of technology leader you firm needs today and in the near future.

- Become an evangelist for the enabling technology, tools, and paradigms your digital leaders and business technologists will need to compete effectively with traditional foes, digital upstarts, and perhaps even the internet superpowers.

- Form an honest appraisal of which sort of technology leader role your particular talents and proclivities suit you for. Are you a cat or a dog — or something else?

- Particularly if you are in a productizer-like role, decide whether your ambition is to become a line-of-business head or to occupy a more traditional, CIO-like role.