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Gartner Executive Programs

Winning in the Platform Game, Part 2: Create a Foundation for Platform Business Success

Gartner

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Foreword

Nearly 40% of CEOs surveyed by Gartner want their enterprise to be an industry pioneer. A platform business offers that opportunity, enabling revenue growth and new customer experiences. Yet a platform business also creates channel conflict that may be met with organizational resistance. CIOs are well-positioned to lead their enterprises in meeting the challenges.

This report addresses the question: *How can CIOs create a foundation for platform business success?*

"Winning in the Platform Game, Part 2: Create a Foundation for Platform Business Success" was written by members of the CIO Research Group, led by Kristin Moyer (vice president and Distinguished Analyst), Lee Weldon (managing vice president), Hung LeHong (vice president and Gartner Fellow) and Mary Mesaglio (vice president and Distinguished Analyst).

This report is Part 2 of a three-part series. Part 1 addressed the questions: *What are platform business models, and how should enterprises position themselves to play and win in the platform game?* Part 3, to be published in 2017, will focus on how to build a platform business operating model.

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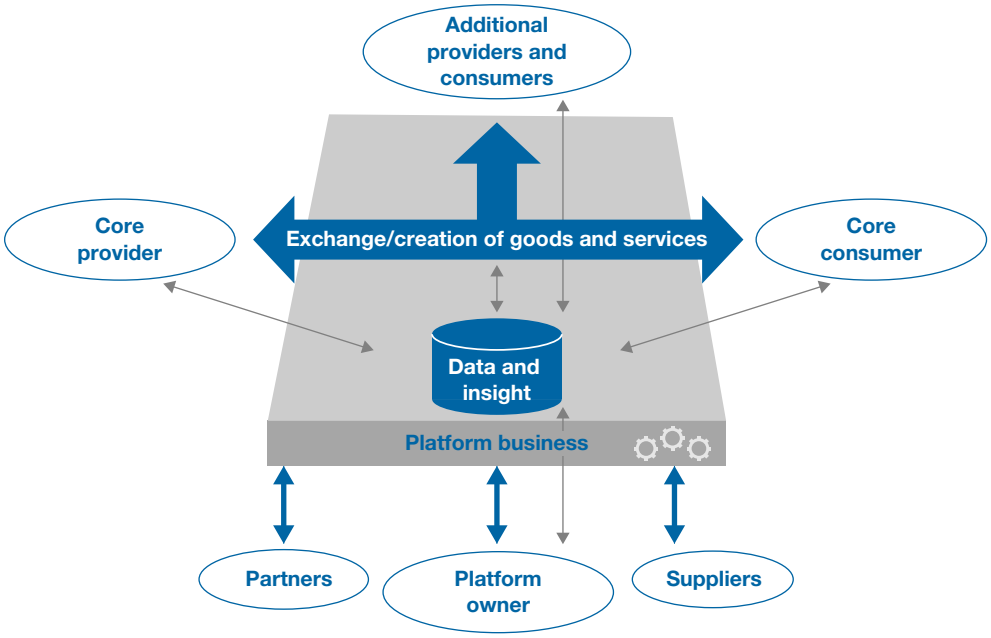
Executive Summary

By 2020, platform businesses will take center stage in every industry and impact every enterprise's revenue growth and customer experience. To prepare for these disruptions, CIOs should collaborate with their business counterparts to create a platform business model that embraces an IT and business strategy geared for success.

Platforms are creating new revenue sources and nonmonetary value (especially for government organizations), and they are disrupting industries (see "Winning in the Platform Game, Part 1: Understand the Game and Determine Your Role" in Further Reading). The figure on page 6 depicts a platform business's main components and their relationships.

Platform business framework



Although not all enterprises need to create a platform business and associated business model, every enterprise needs a strategy for adapting to the industry value and directional changes that platform businesses will entail. Platform businesses are an important trend for CIOs to address because of their impact in the following areas:

Financial performance. Sixty percent of the top 10 most valuable companies in the world are platform businesses.

Competition. Winners in the platform game usually take most of an industry's market share.

Disruption. Platform businesses can rapidly disrupt an industry.

Agility. A platform business enables an enterprise to innovate rapidly to stay ahead of competitors.

CEO plans. Nearly 40% of CEOs want their enterprise to be an industry pioneer (see "2016 CEO Survey: The Year of Digital Tenacity" in Further Reading). A platform business is one way to achieve or continue this type of market dominance. Again, every enterprise may not need to create a platform business to succeed; however, every enterprise needs to create a response to the emergence of platform businesses.

In the context of this report, we define “platform” as follows:

DEFINITIONS

A **platform business** is an organization that enables value-creating interactions between people, businesses and things.

A **platform business model** is a design that consummates matches among providers and consumers (both also referred to as users) and/or facilitates the creation and/or exchange of goods, services and social currency, so that all participants are able to capture value.

A **platform** is the combination of technologies that enables platform business models. Platforms share assets such as data, algorithms and transactions (both monetary and nonmonetary) with business ecosystems to match, create and exchange services.

When it comes to platform business, the best platform wins. So far, platform business success has been dominated by “digitally born” companies such as Alibaba, Amazon, Apple and Facebook, and more recently, Airbnb and Uber. However, it is not just digitally born and startup companies that are creating value from platform business. Enterprises such as MiningCo (a company that wishes to remain anonymous), BBVA (Spain), John Deere (U.S.), Kakao (South Korea), Land Transport Authority (Singapore) and Tesco (U.K.) are using platform business approaches that are changing how their industries operate (see the case studies on MiningCo and Tesco in the Appendix).

These enterprises have discovered that being a platform business enables the following:

– Digital revenue growth

– Cost reduction

– New types of customer experiences

– Improved outcomes and citizen experiences

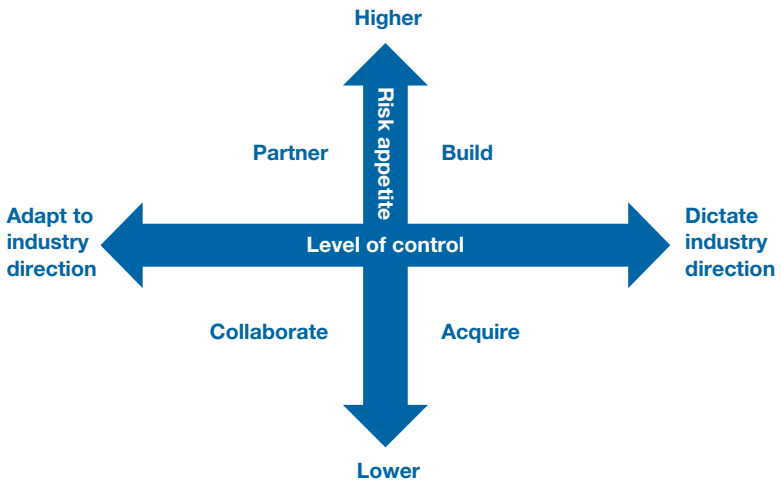
– Rapid and cost-effective innovation

However, a platform business creates new risks and challenges as well, requiring established enterprises to rethink what it means to be a strong industry performer. Becoming a platform business, or adapting to the presence of platform players in an industry, requires substantial changes to the enterprise’s vision, business model and operating model. For example, a platform business presents new monetization opportunities, but getting the monetization strategy right is challenging, and realizing significant new revenue can take time. Moreover, platform business revenue can cannibalize existing revenue (consider the Amazon Kindle, for example). New operational risks associated with security, integration, compliance and reputation may also emerge.

Despite the high percentage of CEOs who want their enterprise to be an industry pioneer, senior executives, boards of directors and line-of-business executives are often ambivalent about platform business. This almost always indicates cultural problems, including risk aversion. Such leaders fail to realize that platform business is not only an opportunity but also that mounting pressure from digitally born companies and new market entrants make it a requirement in many industries (e.g., media, retail, healthcare and banking).

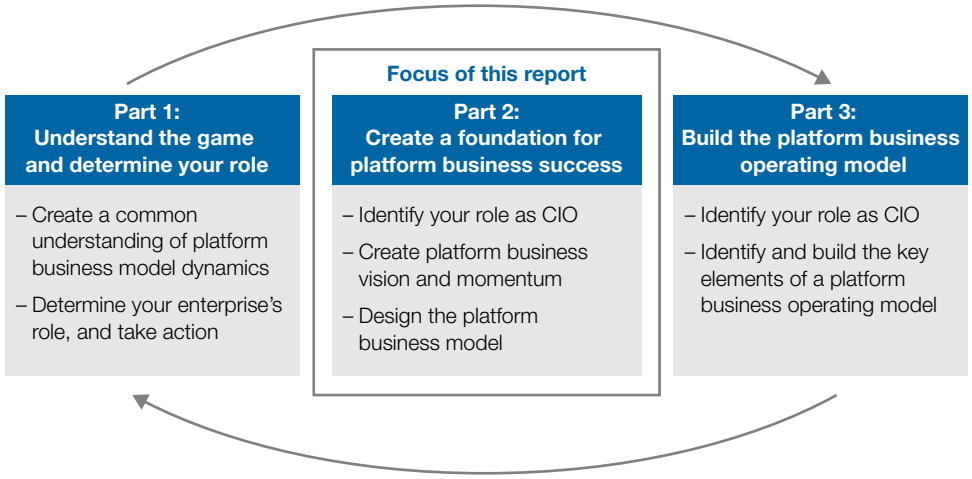
A CIO may not need to build an industry-leading platform, but he or she still needs to consider the approaches to creating, or collaborating with, a platform business (see figure below). CIOs who fully step into their role as a digital business leader are well-positioned to help their enterprise overcome the challenges.

Four approaches to creating, or collaborating with, a platform business



The figure below outlines the three-part Executive Programs series on "Winning in the Platform Game."

Winning in the Platform Game: A series of three reports



The CIO's unique role in shaping a platform business

In transforming their enterprise to a position where it can become a platform business or collaborate with one, CIOs should assume three new leadership roles:

– Visionary

– Designer

– Builder

At the same time, the CIO can become a pivotal advisor to, and collaborator with, the CEO. According to the 2016 Gartner CEO Survey, CEOs see themselves as leaders of the digital business transformation (see "2016 CEO Survey: The Year of Digital Tenacity" in Further Reading). However, many CEOs lack the technological expertise to develop and implement this transformation.

Though a CEO can turn to the CIO for this expertise, only 39% of CIOs are leading the digital transformation in their enterprise (according to "Building the Digital Platform: The 2016 CIO Agenda" — see Further Reading). Clearly, many CEOs can expand their view of who should manage the digital transformation. For their part, CIOs can persuade their CEO that they are equipped with the technological and organizational expertise to lead the transformation teams. Many CIOs already possess the necessary attributes:

– Leadership skills and relevance that go beyond the IT role

– Ability to make the enterprise more effective through a renovated IT core

– Ability to attract top talent into new organizational structures

Create platform business vision and momentum

Senior executives and LOB managers often react with ambivalence to the creation of a platform business model. The CIO must therefore be prepared to change the executive mindset to commitment so that the necessary budget dollars and employee resources can be secured. Indeed, lack of senior management support is the most significant reason for the failure of digital business transformation initiatives, which include creation of a platform business (see "Digital Business Transformation: Turning the Digital Dream Into Reality" in Further Reading).

First the CIO should gain CEO support with a game plan that covers the following:

– Gaining CxO and board-of-director commitment to a platform business

– Generating urgency by showing how platform businesses are taking over the industry

– Creating a platform business vision

Design a platform business model

Though CIOs possess the expertise to design and build a platform business model, it is also critical that they inspire employees from the business and IT sides to collaborate in achieving project success. Their inspirational game plan should do the following:

– Create a "digital first" team consisting of C-level executives, LOB leadership and IT leadership.

– Identify monetization strategies.

– Pinpoint potential channel conflict.

– Create the platform business model.

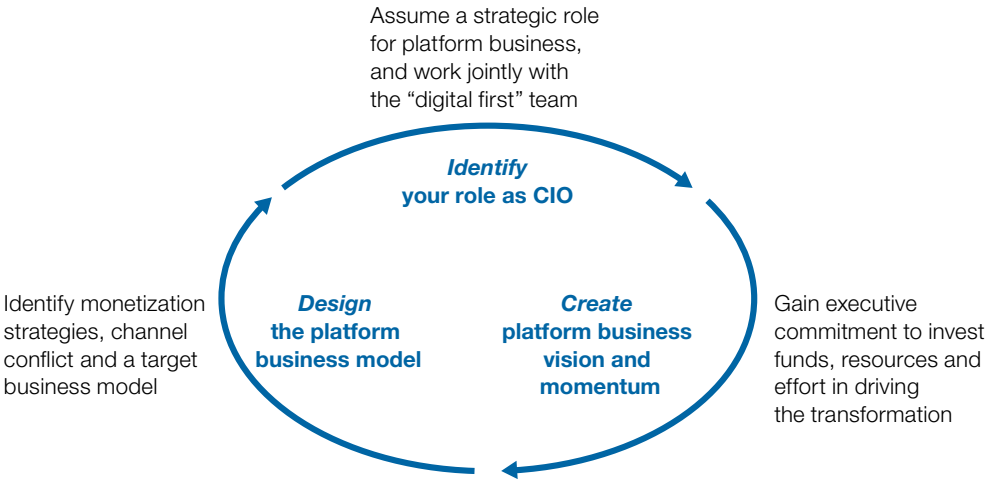
As part of the model, the CIO should specify key deliverables and desired outcomes. Two crucial steps follow:

– Gain commitment and funding to pursue the building of the platform operating model.

– Gain consensus on the targeted business model.

As the figure below illustrates, winning in the platform game requires CIOs to identify their role, create a platform business vision, and design a platform business model with the "digital first" team.

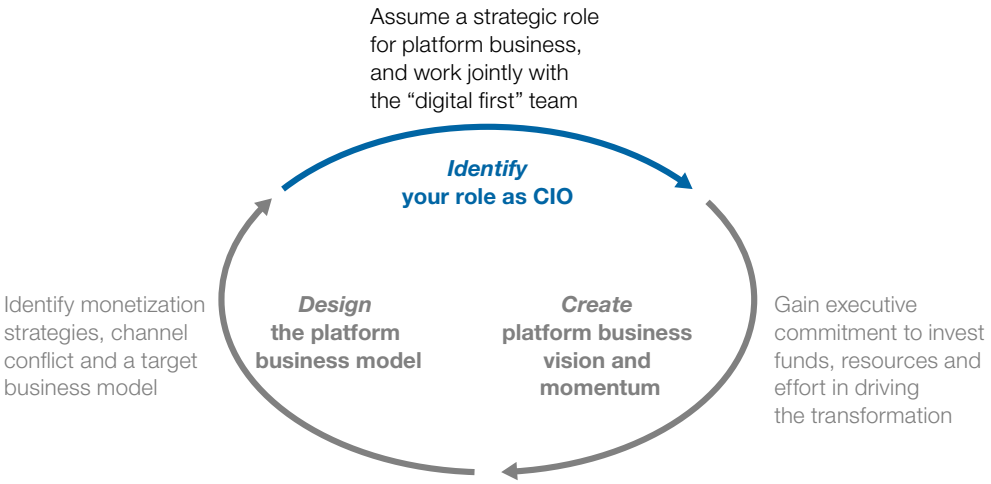
How a CIO builds the foundation for a platform business



1. The CIO's unique role in shaping a platform business

CIOs generally possess a deep understanding of the transformational potential of digital technology — a knowledge not always shared by CEOs and the rest of the "digital first" team. They should seek to play the roles of visionary, designer and builder to create a platform business with other digital business leaders.

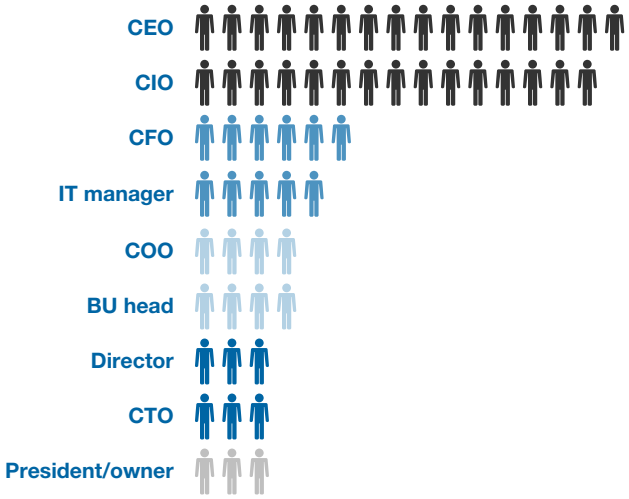
How a CIO builds the foundation for a platform business



Most CEOs view themselves as the leader of digital business transformation (see "2016 CEO Survey: The Year of Digital Tenacity" in Further Reading and figure below), even though many of them have little or no technology background. Indeed, "digital and IT" is the most important skill area cited by CEOs when asked how they should develop their professional role to lead modern business. We believe this is why CEOs list the CIO as their close second among digital strategic change leaders.

Today only 39% of CIOs are leading digital transformation, and only 9% of enterprises have a chief digital officer (CDO) (see "Building the Digital Platform: The 2016 CIO Agenda" in Further Reading). The latter percentage may change, given that CIOs list the CDO as fifth in terms of the importance of hiring this role in the next three years (see "Survey Analysis: Trends and Practices in Organizing for Digital Business and Bimodal IT" in Further Reading). In the meantime, at enterprises identified as top digital performers, CIOs are working closely with CDOs and heads of innovation (see "The 2017 CIO Agenda: Seize the Digital Ecosystem Opportunity" in Further Reading).

The primary leader of digital strategic change to the business: The CEO's view



Q: Which member of your executive leadership team has primary responsibility for leading digital strategic changes to your business (actual job title)? If there is no digital strategic change in your organization, please write "no change." (n = 396)

Source: "2016 CEO Survey: The Year of Digital Tenacity."

Clearly, CIOs have an opportunity to lead a response to the emergence of platform businesses, especially in light of what will likely be some C-level ambivalence toward this development due to issues like operational risk, culture, monetization and time to ROI. In turn, CEOs may expand their view of who is ultimately responsible for the platform business as it starts to yield results and becomes better appreciated. At the moment, most CIOs can play a strategic role in creating a foundation for platform business success. In the context of this report, we define "platform" as follows:

DEFINITIONS

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A **platform** is the combination of technologies that enables platform business models. Platforms share assets such as data, algorithms and transactions (both monetary and nonmonetary) with business ecosystems to match, create and exchange services.

Why the CIO is uniquely positioned for platform business leadership

Not only does the CIO have the opportunity to play a strategic role — he or she is also uniquely positioned to create a response to the emergence of platform businesses, as shown in the figures below and opposite.

The CIO's unique platform business qualifications

CIO characteristic	Description	How this enables a platform business
Possesses leadership skills and relevance that go beyond the IT organization	A strategic CIO is an enterprisewide leader who easily crosses the boundaries of the IT organization, exerting a high level of power and influence over the company and its future.	A platform business requires collaboration well beyond the borders of IT.
Enables a highly effective enterprise through a renovated IT core	A strategic CIO has created a lean and agile IT organization that continuously improves the maturity of its operating practices and the value it delivers.	CIOs who have renovated the IT core and adopted a digital platform (see "Building a Digital Business Technology Platform" in Further Reading) will move to a platform business more quickly and easily because the renovated core will in most cases be service-based.
Attracts top talent to new organizational structures	A strategic CIO draws in top talent and acts as a visionary coach to mold a powerful IT leadership team. Such a CIO delivers through a complex network of multidisciplinary teams and entities, arranged in fluid new organizational structures.	A platform business will require new talent that can build, manage and maintain the platform itself.
Focuses on innovation and exploration of new business models	A strategic CIO's daily agenda should devote more time to decisions on products/services (made with business peers and external ecosystems), and less to managing the IT shop. Top-performing organizations are moving away from operations, and toward business/product/service outcomes (see "The 2017 CIO Agenda: Seize the Digital Ecosystem Opportunity" in Further Reading).	New business models are the cornerstone of a platform business, enabling CIOs and their enterprises to create new types of digital revenue, nonmonetary value (e.g., for governmental organizations), customer experiences and digital products and services, using internal and external business ecosystems.

The CIO's unique platform business qualifications (continued)

CIO characteristic	Description	How this enables a platform business
Drives the digital business strategy	A strategic CIO leads the executive team through a collaborative process to identify digital opportunities/threats and create a vision and digital business strategy for transforming the enterprise.	A CIO's understanding of technology and the way in which a platform business can dominate an industry provides just the right perspective.
Has a visionary leadership style and skill in coaching	A strategic CIO acts as a visionary and coaching leader, capable of inspiring, motivating and developing people to execute their mission beyond IT-related accomplishments. Peers and team members view such a CIO as a distinguished leader.	A platform business requires someone in the enterprise who creates momentum and drive. Visionary CIOs help their enterprise understand the potential of a platform business and inspire development of new types of revenue, business models, cost-efficiencies and customer experiences.
Acts as a change agent	A strategic CIO is a visible and vocal agent for changing enterprise culture. He or she champions the value of digital business to the future of the company — evangelizing, educating and aligning employees at all organizational levels.	A platform business changes the way an enterprise creates value and interacts with customers. A change agent is required because channel conflict will arise in the likely event that new sources of revenue cannibalize existing sources.

Defining the role of the CIO

In addition to the role of C-level leader, CIOs have three main roles they can play as they create a response to platform business working with the "digital first" team (see figure on page 16 and "Orchestrating the Digital Team" in Further Reading):

Visionary. Envision the platform business and create the momentum to bring it to fruition.

Designer. Design the platform business model.

Builder. Build the operating model for the platform business (to be covered in Part 3 of the report series).

We advise CIOs to play all three roles, though CIOs not positioned in their enterprise as a C-level leader will mainly play the role of builder.

The CIO's three main roles in response to the emergence of platform businesses

Winning in a platform business will be a team sport, just as it is for digital business in general (see "Digital to the Core: Remastering Leadership for Your Industry, Your Enterprise, and Yourself" and "The 2017 CIO Agenda: Seize the Digital Ecosystem Opportunity" in Further Reading). The CIO should leverage members (individuals and groups) of the "digital first" team, along with relevant stakeholders, as follows — ensuring that all collaborate on the integration, coordination and leadership of the platform business:

Board of directors — balances the risk of action with inaction

CEO — shapes the platform business vision and helps create momentum

CFO — adapts the financial model and monetization strategy for the platform business

COO — helps create the platform operating model

LOB leaders — help adapt to platform business change while maintaining traditional revenues and customer/constituent value to fund the shift to platform business

CMO — accelerates awareness of the enterprise's platform business vision

Chief HR officer — builds new talent pools to run a platform business and business ecosystem

Chief legal counsel — addresses impacts of the platform business on legal practices

Chief strategy officer — helps create a platform business vision

Head of risk, regulation and compliance — adapts internal risk parameters to the platform business, ensuring that it complies with regulations and mitigates reputational risk, operational risk and other areas of risk specific to the industry and the enterprise

Chief data officer — helps leverage data to monetize the platform and govern it properly

Chief digital officer — co-leads the platform business with the CIO (few enterprises have this role, though it may be more prevalent in enterprises that use a platform business as their primary mode of operation)

As mentioned, some CIOs are waiting for the opportunity to play the role of a C-level strategic leader, but they can still identify the roles and responsibilities of the digital business leadership team in responding to platform business. For each stage of the platform business, a RACI matrix can be used to identify who is responsible, accountable, consulted and informed (definitions adapted from "Role and Responsibility Charting" — see Further Reading):

Responsible: Individuals who complete the task (i.e., the "doers" responsible for action/implementation)

Accountable: The individual who is ultimately in control, with yes/no decision-making power

Consulted: Individuals who are consulted before a final decision or action (i.e., their input is required to move forward)

Informed: Individuals who need to be informed after a decision is made

Our advice to CIOs is to take a leadership role when possible, but adapt as needed. The figure on page 18 includes examples of roles that the CIO (and others) could play if the CIO is unable to assume leadership or accountability for the platform business.

RACI matrix: When the CIO is unable to play the role of C-level leader (Example)

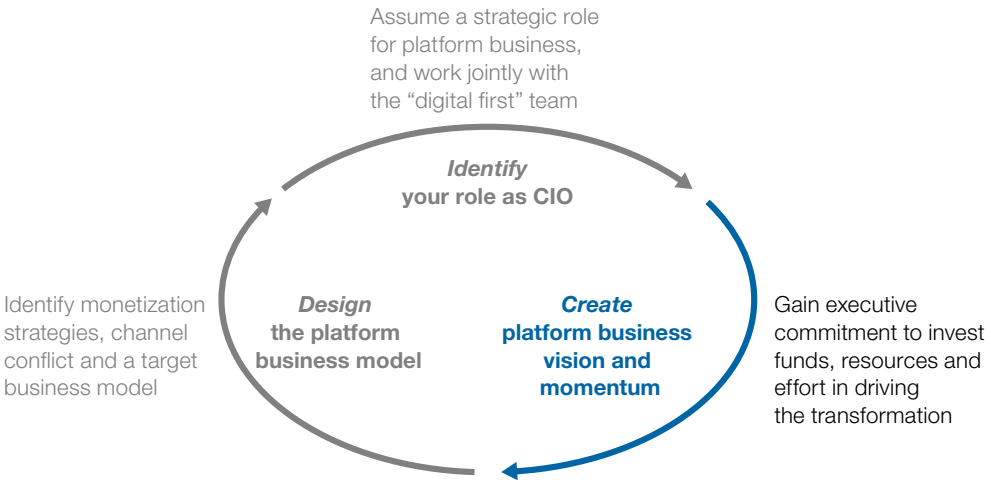
	Create platform business vision and momentum	Design a platform business model	Build the operating model for the platform business (covered in Part 3)
Board	Consulted	Consulted	Informed
CEO	Accountable	Consulted	Informed
CIO	Consulted	Informed	Responsible
CFO	Consulted	Consulted	Consulted
COO	Consulted	Consulted	Responsible or accountable
CMO	Consulted	Informed	Informed
Chief HR officer	Consulted	Informed	Consulted
Chief legal counsel	Consulted	Consulted	Accountable (for legal)
Chief strategy officer	Responsible	Consulted	Informed
Head of risk, regulation and compliance	Consulted	Consulted	Accountable (for risk, regulation and compliance)
Chief data officer	Consulted	Consulted	Consulted
Chief digital officer	Responsible	Responsible	Consulted

CIOs must be able to engage their audience — the CEO, stakeholders, board of directors, and business executives — to garner support for the transition to a platform business model. This can mean the difference between the success or failure of a platform business.

2. Create platform business vision and momentum

CIOs should have an inspiring game plan that incorporates the vision of the platform business model and generates momentum. Creating a platform business vision requires a careful step-by-step analysis of the issues involved and the critical components needed to resolve them.

How a CIO builds the foundation for a platform business



Initially, senior executives, boards and LOB executives often react with ambivalence to the concept of platform business, despite the high percentage of CEOs who want to become industry pioneers. Ambivalence can be traced to cultural barriers and resistance to change, but the root cause is usually lack of vision and unwillingness to disrupt the existing (i.e., known and comfortable) relationship with customers and stakeholders. CEO hesitance especially, often based on the business climate, can seriously impact the appetite for risk. A lag in revenue generation or in nonmonetary value creation — despite being anticipated by the platform business model — may only heighten ambivalence and even shut down any existing momentum.

Vision and momentum are so important because they get senior executives and the business to agree with the need for platform business and what it could look like for the enterprise. They also increase executive willingness to invest the money, resources and hard work required to drive the transformation. Bear in mind that lack of senior management buy-in has been shown to be the most significant factor in the failure of digital transformation initiatives, which include creation of a platform business (see "Digital Business Transformation: Turning the Digital Dream Into Reality" in Further Reading). A CIO can avoid this fate by taking four steps.

The four steps to creating platform business vision and momentum

Step 1: Create urgency

General examples of success may whet the appetites of senior leaders, but context-specific digital business information (e.g., what competitors are doing or how platform business could impact the enterprise based on highly relevant examples) is key to creating real urgency. This begins with identifying what competitors are doing with platform business.

For example, Tesco (see the case study in the Appendix) and Best Buy, a "big-box" U.S. electronics retailer, recognized the threat that the Amazon platform posed to their businesses. Today both companies have platforms. Similarly, some merchant acquirers (banks that processes credit card payments for retailers) are being pushed to build platforms by their largest customers, some of whom have threatened to move to platform business providers like Stripe or Braintree (the latter's transaction volume has grown 25 times after being acquired by PayPal, according to press reports). The figure opposite describes the four main types of platform business models.

The four types of platform business models

Platform business model	Description	Example
Matching	Platform matches providers with consumers.	Yard Club (U.S. company owned by Caterpillar, providing equipment rentals to contractors)
Creation	Platform enables business ecosystem partners to create new channel applications, products/services, business channels and business models.	John Deere (U.S. heavy machinery company)
Orchestration	Platform integrates/orchestrates business processes or the platforms of business ecosystem partners (e.g., supply chain partners and vendors).	Yard Club
Collaboration	Platform enables business model collaboration with internal/external business ecosystem partners.	X-Road (data exchange environment for e-Estonia)

In analyzing the competition, CIOs should not just focus on their traditional competitors. They should also include potential new market entrants. For example, the CIO at a healthcare provider could commission the competitive analysis to focus on other traditional healthcare providers and potential new market entrants like Apple HealthKit and UberHealth.

Large enterprises can be slow to change and could already face a high degree of competitive pressure from smaller, more agile startups. This is why it is important for enterprises to create a response to platform business now rather than five years from now. The figure on page 22 shows examples of enterprises that have already begun the platform business journey. CIOs should examine what is happening not only in their industry but also in others, given the increased blurring of industry boundaries.

Types of platform business models by industry

	Matching	Creation	Orchestration	Collaboration
Banking	Commonwealth Bank of Australia piappbank.com.au/AppGrid/appCatalogue.htm	Barclays Accelerator (U.K.) developer.barclays.com/static/landing/landing.html	Silicon Valley Bank (U.S.) svb.com	Open Bank Project (Germany) openbankproject.com
Education	EdX (U.S.) edx.org	Udemy (U.S.) udemy.com		HarvardX (U.S.) harvardx.harvard.edu
Government	NHS Jobs (U.K.) england.nhs.uk/digitaltechnology/info-revolution/interoperability/open-api	Land Transport Authority (Singapore) mytransport.sg/content/mytransport/home/dataMall.html	Altin (Norway) altinn.no/en	X-Road (Estonia) e-estonia.com/component/x-road
Healthcare	UberHealth (U.S.) uberhealth.co	HealthKit (U.S.) developer.apple.com/healthkit	PokitDok (U.S.) pokitdok.com	Philips (U.S.) usa.philips.com/healthcare/innovation/about-health-suite
Insurance			American Family Insurance/Nest (U.S.) apps.amfam.com/amitforms/nest/index.html#/landing	
Manufacturing	Yard Club (U.S.) yardclub.com	John Deere (U.S.) developer.deere.com	GE Digital (U.S.) ge.com/digital/predix	Uptake (U.S.) uptake.com
Retail	Tesco (U.K.) ifttt.com/tesco	Best Buy (U.S.) developer.bestbuy.com	Tesco (U.K.) ifttt.com/tesco	
Utilities	FlexiblePower (Netherlands) flexiblepower.github.io		LichtBlick(Germany) lichtblick.com/product.html	

Step 2: Gain executive involvement and commitment

We have yet to see large-scale transformations succeed when digital business leaders have not had the explicit support of top management. CIOs should take care not to progress into design prior to securing top-level commitment. After gaining the support of senior executives to transition to a platform business, a CIO must then gain their commitment to see the project through to the end.

To create momentum, senior executives cannot merely admire a platform business; they must ensure the transformation necessary for the enterprise to participate in it (see "Digital Business Transformation: Turning the Digital Dream Into Reality" in Further Reading). The figure below presents activities through which CIOs create momentum.

Activities that create momentum for platform businesses

Activity	Description
Identify platform champions.	Platform champions are advocates of platform business. They continually work with senior executives, LOB and IT leaders, and others to evangelize the benefits of platforms and explain how the enterprise is mitigating the risks.
Enable board-level interactions with platform businesses.	Arrange on-site visits to, or virtual collaboration with, platform businesses. Consider a mix of traditional enterprises (e.g., Caterpillar), startups (e.g., Avvo, which helps people find lawyers) and established but digitally born platform businesses (e.g., Amazon). Prepare to discuss with board members the differences in the economic models of these companies; mitigate their concerns but be frank with them. Explain that you are looking at opportunities within the current business capability portfolio — that you don't want to uproot everything they now know and support.
Run facilitated sessions.	Run a series of facilitated sessions with senior executives and business leaders to build a high-level understanding of the disruptive potential of platform businesses. The content and structure of the sessions should answer three main questions: – What is platform business and why does it matter? – How can platform business impact the industry? – What are the options for responding to the emergence of platform business? Create momentum using a "carrot and stick." Show new monetization opportunities, and reward small, well-defined demonstration projects. Demonstrate that new market entrants are much more nimble and agile, that they are invading the industry with platforms, and that network effects can help them gain traction quickly and dominate your market.
Pick a place to start.	Allow external partners to provide capabilities you don't have in-house, avoiding the temptation to try to do it all yourself. Find enthusiastic partners, letting the market direct you and give you feedback. Give your business ecosystem partners space to play in, or they won't stay with you. Realize that a platform business is not an internal game. It is all about being open to new partners, and even considering people in your organization who fall outside your usual ring of control.
Start small.	Do not try to anticipate everything ahead of time and build a whole system. This is especially important for companies with the resources to do in-depth studies and significant engineering (nice to have, but they eat up time to market). Pick a small pilot project and execute, without over-engineering it. Resist the temptation to do a before/after model and gap analysis. Agile enterprise architecture is required.

"Our platform is based on APIs. We created API champions to help generate momentum for the platform. These are people who really understand and are passionate about the business value of APIs, and how a platform can create new value for our bank. Our API champions share the platform story over and over again."
Ron Kersic, Enterprise Architect, Office of Experience Design, ING Bank

"They are very receptive to pushback and feedback. When they get pushback, they step back and figure out how to address it. Then they go back to the stakeholder and explain how the platform will deal with their concern. API champions have been a critical success factor for the platform's success."
Rob van den Elzen, Head of IT Innovation, ING Bank

"We normally do one visit to Silicon Valley a year and try to interact with some of the more interesting startups there. Of course we talk to Google and Uber and the like, but also to some of the newest players."
Álvaro de Nicolás, CTO, Hotelbeds Group

Step 3: Create a platform business vision

A platform business vision is what the enterprise could look like in the future if it leverages a platform business model and business ecosystems to create value in new ways (see "Create an Industry Vision for Digital Business" in Further Reading). Examples of platform business visions from our research follow:

- Develop financial APIs to fuel innovative businesses — BBVA.
- Power the modern digital industrial businesses that drive the global economy — GE Digital.
- Enable faculty members to build and create open online learning experiences, reuse online learning on the university campus, and enable groundbreaking research in online pedagogies — HarvardX.

Working with the digital business leadership team, CIOs can use the following activities to create a platform business vision (for other ideas, see "Igniting Creativity Everywhere: Easy Techniques for Exceptional Outcomes" in Further Reading):

- Workshop: Create teams of three to five people. Give every team three index cards, each with a different company name. The first company is in an asset-heavy industry, the second is in service, the third is digitally born. The team comes up with a one-sentence vision describing what each company could do working with the other two. At the end, a team shares its visions with the other workshop teams.

– Internal hackathon: The goal of this hackathon is to create several platform business visions. Form teams of three: one C-level executive, one IT leader, one LOB leader. Each team brainstorms and presents a platform business vision to the hackathon. Participants vote for the most compelling visions. The visions selected to go forward may incorporate elements of other visions. The winners of the hackathon present their platform business visions to the executive committee. The committee questions and challenges the presenters. If more than one vision is compelling, up to three visions can be developed further, perhaps all through the prototype phase.

"If you scratch the surface, every business is going to be a high-tech business. There aren't any sectors that will escape the force of data, analytics and platform business models that will transform the entire sector. John Deere has been trying to turn the tractor into a data-gathering system and allow others to get access to the data to improve the utilization of the land and equipment, and to predict yields based on characteristics of the soil. You can take something as ancient as agriculture and turn it into something as high-tech as imaginable — the tractor being a roving, data-gathering machine with a whole new repository of information for improving basic operations, and combining pieces into new products and services that we don't even know about yet. If agriculture can do it, it can be done in almost any field. If underwear can do it, pick a sector of the economy that can't."
Professor Geoffrey Parker, Thayer School of Engineering at Dartmouth College, and Co-author of "Platform Revolution"

Users (e.g., farmers in the scenario above) will often resist changing their habits and ways of working. Part of disruption is a willingness to transform the relationship with your customers in a way that creates even more value for them. Otherwise you risk a lopsided value equation where the user loses control. In the above scenario, farmers couldn't repair their tractors as easily, and they would be breaking the terms and conditions of the new John Deere contract. CIOs creating a platform business vision should consider such factors.

Step 4: Secure enterprisewide ownership and funding

Platform business is a journey, not a destination. Despite this, many CIOs will be asked to create time-to-market and cost-to-market estimates to secure funding. The figure on page 26 provides time and cost estimates for bringing a narrowly defined platform business (whether internal, private or public) to market. Total time from inception to launch can be two to five years. Time to scale after the platform is launched is usually three to seven years.

Time-to-market and cost-to-market estimates for creating a platform business

	Time to market	Cost to market	Comments
Create platform business vision and momentum.			Create a shared vision that excites people within the culture. This phase can last six to 12 months, though in some enterprises it can take years if the executive committee is not on board. The process must continue throughout the launch of a platform business.
Design a platform business model.			LOBs will be concerned about channel conflict and cannibalization of existing revenue. This phase can last six to 12 months.
Build a platform operating model.			75% of the time and cost to get to market can be dealing with regulators. This phase can last 12 months (for a small part of an enterprise) to three years.
Achieve market scale after the platform is launched.			Achieving market scale is the longest, costliest and most difficult aspect of launching a platform, because it takes time to match supply and demand. Airbnb, Caterpillar/Yard Club and Uber are examples. This phase can last three to seven years.

"Justifying the investment involved simplifying the landscape to reduce the cost, and making the platform and data work to create value. We did a lot of work upfront on what we were trying to achieve. We built our framework and said, 'Here's the framework we are using, these are the pieces we will try and do, and this is the time frame we will try and deliver the framework within.' We committed to come back with a business case for each of the pieces we were building. This meant that every time we were in front of the finance folks, we went all the way down into what the maintenance needs were. We emphasized that this project was not just a piece of technology, but rather something that created value in all kinds of different ways."
CIO, MiningCo

"At Tesco, we aim to serve our shoppers a little better every day. Building the API platform has enabled our teams to focus on building great experiences for our customers with a quicker time to value."
Mike Yorwerth, Chief Architect and Senior Engineering Director, Tesco

"The time and cost to market for a platform really depend on scale. For example, what's the volume of transactions? What's the risk of failure? For one project we worked on, we needed to hire someone from the FBI to figure out how to do fraud detection."

Professor Geoffrey Parker, Thayer School of Engineering at Dartmouth College, and Co-author of "Platform Revolution"

Deliverables and outcomes

As we've seen, analyzing market competition and gaining industry insights are key components of creating momentum and determining how a platform business model will impact the enterprise. This means that CIOs should provide three main deliverables as part of creating platform business vision and momentum:

- Competitive analysis of the platform business vision of competitors and potential new market entrants
- Competitive analysis of the platform business model of competitors and potential new market entrants (see step 1 on pages 20 and 21)
- A platform business vision for the enterprise (see figure below)

Components of a platform business vision

Concept	What the platform business vision looks like
Capabilities	What capabilities the enterprise needs to become a platform business (culture, talent, bimodal IT, governance, etc.)
Assets	What assets the enterprise needs to become a platform business (technology, etc.)
Research	How platform business will develop and change in the enterprise's industry

Source: "Industry Vision: Turning Your Business Into a Platform."

As we've also seen, CIOs should strive for the following outcomes as part of creating platform business vision and momentum:

- Gain CxO and board-of-director backing for platform business. Without commitment from the very highest levels of the enterprise, platform business initiatives will fail.

– Create urgency by showing how platform business is invading the industry.

– Secure enterprisewide engagement and funding.

– Get approval to start a small pilot. The purpose here is simply to drive digital business, not to strictly define it or immediately transform the enterprise. Focus on being a platform business evangelist — creating top-level commitment of resources so that you can proceed to the design phase.

CIOs who can create platform business vision and momentum accept accountability and exhibit true leadership qualities. Not all CIOs can lead these efforts, but all should be involved to the greatest extent possible.

The CIO's role and responsibilities

With respect to the RACI matrix (see pages 17 and 18, and "Role and Responsibility Charting" in Further Reading), we recommend that CIOs become either accountable or responsible for creating platform business vision and momentum. Again, not every CIO has been able to step into either of these types of C-level leadership. The RACI model below describes the different levels of leadership possible for a CIO.

The different levels of CIO leadership

Create platform business vision and momentum	
If the CIO is Responsible	CIO enables executive committee visits to digitally born companies; runs workshops and hackathons focused on platform business; commissions a competitive analysis of visions and business models for platform business.
If the CIO is Accountable	CIO creates and proposes a platform business vision to the "digital first" team.
If the CIO is Consulted	CIO explains the benefits and risks of platform business.
If the CIO is Informed	CIO tries to be more proactive by offering to help design the platform business model and build the operating model.

R = Responsible: Individuals who complete the task (i.e., the "doers" responsible for action/implementation).
A = Accountable: The individual who is ultimately in control, with yes/no decision-making power.
C = Consulted: Individuals who are consulted before a final decision or action (i.e., their input is required to move forward).
I = Informed: Individuals who need to be informed after a decision is made.

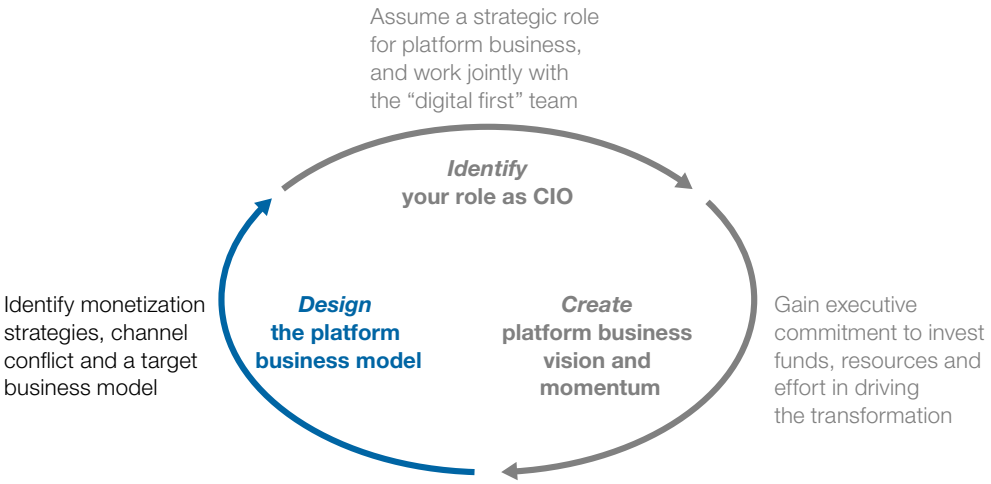
Note: RACI model definitions adapted from "Role and Responsibility Charting."

Once platform business vision and momentum have been established, the CIO becomes a key agent in the design of the platform business model.

3. Design a platform business model

CIOs are ideally positioned to help the "digital first" team and other C-level executives create, build and design the platform business model, which can transform how the business creates value. CIOs understand the contribution that each organizational area brings to shaping the model. More important, they can foster a team approach to success.

How a CIO builds the foundation for a platform business



Business model change is at the heart of digital business. Platform business changes value creation as follows:

– *Traditional business* relies on inside-out value creation, without using a platform.

– *Platform business* relies on a combination of inside-out value creation, co-creation with business ecosystems, and outside-in value creation enabled by the platform.

As defined in section 1, a platform business model is a design that consummates matches among providers and consumers (both also referred to as users) and/or facilitates the creation and/or exchange of goods, services and social currency, so that all participants are able to capture value. It is critical to platform business success that CIOs create a team that can collaborate across organizational lines in designing the platform business model.

The four steps to designing a platform business model

Step 1: Create a "digital first" team

CIOs should create a "digital first" team for platform business consisting of C-level executives, LOB leadership and IT leadership. This team will design and build the platform business model.

The "digital first" team will need to sustain momentum so that an LOB can take platform business ownership, even though there will be channel conflict. Early adopters of platform business confirm that creating momentum is a constant process requiring effort across the entire enterprise. It does not end after funding has been granted to design the business model.

In terms of bimodal IT, the "digital first" team should operate in Mode 2. Bimodal IT is a collection of principles, capabilities, methods, behaviors and approaches that enable an enterprise to differentiate the normal from the abnormal, the evolution from the revolution, the continual improvement from the disruptive innovation — managing Mode 1 and Mode 2 differently but coherently (see "Deliver on the Promise of Bimodal" in Further Reading). In platform business, where the requirements are not well understood in advance, exploratory Mode 2 will help a CIO design a business model more quickly than traditional Mode 1, which focuses on predictability and has a goal of stability.

The critical success factors for the "digital first" team include the following, adapted from "The New Leadership Team for Digital Technology" (see Further Reading):

Shared goals and leadership. The CIO and other business executives lead collaboratively, sharing their goals for platform business initiatives.

CIO business credibility. Throughout the enterprise, the CIO is viewed as a business leader and a champion of platform business goals and capabilities.

Consensual architecture. The enterprise architecture of information and technology integration has collective buy-in, ensuring seamless and consistent deployment of platform business initiatives.

Pervasive technology literacy. The enterprise works on building technology and platform business literacy — in the entire leadership team and across the enterprise.

Embedded IT experts. IT experts with an understanding of platform business and a can-do approach have been installed throughout the C-suite, business and IT.

"With a platform, the business, rather than the IT department or vendor, owns the outcome. The business is then able to leverage data and algorithms from the platform to create new business models or efficiencies."
CIO, MiningCo

Step 2: Identify monetization strategies

The CIO can help the "digital first" team deliver a cohesive monetization strategy, since he or she knows how to access critical data. Creating a monetization strategy is one of the more challenging aspects of platform business. Getting this right is particularly important, given that the CFO is less supportive of digital business transformation than other C-level executives (see "The 2017 CIO Agenda: Seize the Digital Ecosystem Opportunity" in Further Reading). Professor Geoffrey Parker of Thayer School of Engineering at Dartmouth College, and co-author of "Platform Revolution" (see Further Reading), describes the CIO's important role in helping the "digital first" team create a monetization strategy:

"The role of the CIO here is essential because the CIO knows the data and has it. Monetize as simply as possible, as transparently as possible, and in a way that doesn't drive people off the platform. Don't try to monetize every touchpoint with every user. Reduce friction. For example, Airbnb has built in artificial intelligence to make suggestions for pricing. You can price higher if you don't want as much business. If you depend on the cash flow, you might price under the expected median to get the payoff. That's a way of reducing friction."

The goal is to identify how a platform business will create value and make money for the enterprise (see "Winning in the Platform Game, Part 1" in Further Reading). In the early stages of platform deployment, monetization may come primarily from incremental revenue, and from new digital revenue from products/services created or exchanged through the platform. Over time, the platform owner may be able to charge for things like API calls, compute time, and licensing and maintenance — all part of reselling the platform to others (as Fidor Bank's TecS recently did with Telefonica).

The following range of options exists (going from lower to higher monetization opportunities over the next three years — also see figure below):

Revenue per X — measuring and managing revenue per unit, where the unit can be: lifetime value of customers using the platform vs. customers who don't; transactions; or business partners that use an algorithm or data

API calls — charging on a per-API-call basis, though most platforms are unable to charge per API call until relatively high volume is achieved, which usually takes months or sometimes years

Faster time to revenue — measuring time to revenue with vs. without the platform (the former can be faster)

Licensing — licensing the platform as a software solution

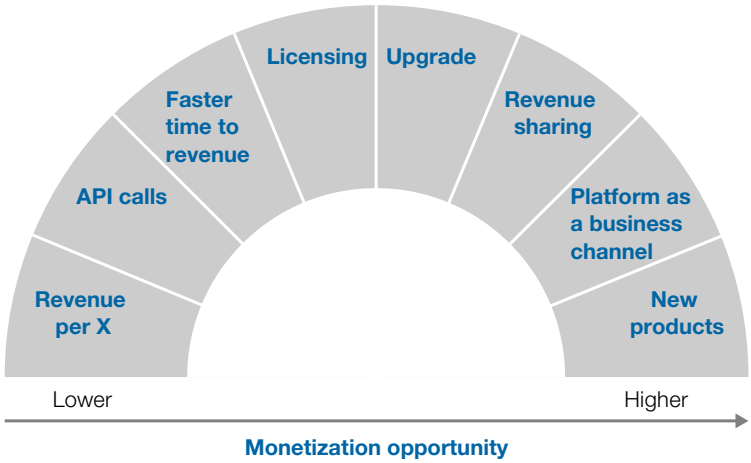
Upgrade — using the platform to upgrade the customer to a higher level of service

Revenue sharing — enabling business ecosystem partners to sell products/services/content from your platform and take a revenue share

Platform as a business channel — using the platform as a new business channel (e.g., making a product or service consumable through APIs)

New products — using the platform to create and deliver new types of revenue-generating digital products

Monetization opportunities for the next three years



CIOs should use data to continue to update and modify the monetization of the platform. CTO Álvaro de Nicolás explains why this could be advantageous for Hotelbeds Group:

"I think as a result we'll start to see that we don't treat all the clients and all the suppliers equally, which has been the trend in the industry. We're going to start differentiating the ones that actually make more money for us, and give them different service than the rest."

CIOs in some industries, such as agriculture, will need to help their enterprise balance data collection with the risk of alienating customers. Does the data collected truly help customers in ways they can measure?

For governmental organizations, creating nonmonetary value often takes precedence over monetization. For example, the Global Alliance for Vaccines and Immunization (Gavi) is a platform business focused on improving access to new and underused vaccines for children in the world's poorest countries. Historically, manufacturers have not understood how much vaccine was needed to meet global demand, leading to oversupply or undersupply. With little or no aggregator of demand in place, prices in developing countries were high or unaffordable. Chief Knowledge Officer David Nix explains Gavi's approach:

"Our platform provides a line of sight for manufacturers so they can optimize manufacturing at a price point countries can afford. Gavi also provides a line of sight for countries that need vaccines. Countries come to us and apply for funding to support vaccine programs. The bottom line is that Gavi brings together countries, funding and manufacturers to drive successful immunization programs."

The platform does create monetary benefits for both manufacturers and countries, but the primary focus is nonmonetary value: improving access to new and underused vaccines for children.

Some early adopters have found that cost savings from a platform become a source of funding for it later. "What we have seen over time is that the platform generates efficiencies that help fund the build-out of the platform," says Mike Yorwerth, chief architect and senior engineering director at Tesco, a U.K. retail group.

Step 3: Identify channel conflict, but let it flourish

Despite the best intentions of the C-suite, the transition to digital business will generate continual tension between digital change and traditional stability, between the new and old ways (see "Digital to the Core: Remastering Leadership for Your Industry, Your Enterprise, and Yourself" in Further Reading). The main role of the CIO is to prepare people for the consequences of platform business, which will inevitably involve channel conflict, and mitigate the impact (see figure on page 34). The most effective way to mitigate channel conflict is to measure its impact and tie compensation to improving these metrics.

How to handle channel conflict

Some examples of alternative key performance metrics used to assess platform business success are as follows (see "Disruption and the Digital Value of Business — the Rise of Digital Economics" in Further Reading):

– Number of successful transactions

– Number of providers and consumers (are they shrinking, stable or growing?)

– Balance of providers vs. consumers by geography

– Churn rate (and does it matter if there is churn?)

– Number of new products created

"You have to be aware of the channel conflict that is coming. The offerings on a platform solution tend to be at a lower price point. For example, in life insurance it costs thousands of dollars to conclude a successful pitch. Yet the productivity is low, the agents don't make that much money and it's expensive to pay them for landing the business. If this switches over to the platform, then someone loses. This is channel conflict that needs to be managed. CIOs need to say, 'If we don't do it to ourselves, someone else will come in and do it to us.' They then need to make recommendations on incentives. For example, tying 50% of compensation to platform sales."
Professor Geoffrey Parker, Thayer School of Engineering at Dartmouth College, and Co-author of "Platform Revolution"

In many ways, CIOs and enterprises cannot just manage channel conflict. The best approach is not to try to prevent it, which will prove nearly impossible in most situations. Heads of traditional channels will always fight for their turf to protect their jobs. We therefore advise that CIOs embrace channel conflict. If it exists, this means the enterprise is pursuing new business models and creating value in new ways through the use of platforms and business ecosystems. This is at the core of platform business.

No enterprise that is serious about business model transformation can succeed by compromising its platform business models. The most successful CIOs will quarantine the new business models from the old (through Mode 2 of bimodal IT), waiting to see whether the new can eclipse the old. Psychology also plays a key role. The CIO must be smart about accommodating the different personalities and approaches of peers. In short, a successful CIO knows how to prevent any channel conflict from influencing the creation of a platform business model.

Step 4: Design a platform business model

We've seen that monetization and channel conflict inform the platform business model. The next step is for CIOs to work with the "digital first" team to design the platform business model. The Gartner Business Model Framework can be used to design the platform business (see "Winning in the Platform Game, Part 1" in Further Reading — page 21). The business model "canvas" (see figure below) can also be a useful framework for creating a platform business model.

Platform business model "canvas"

Platform business model elements	Description
Customer segments	An enterprise serves one or more buyer and supplier segments through a platform business.
Value proposition	The value proposition aims to solve the problems and/or satisfy the needs of customers, consumers and providers.
Channels	The value proposition is presented to customers through the platform's channels.
Customer/consumer/provider relationships	Customer/consumer/provider relationships are established and maintained on every side of the platform.
Revenue streams	Presenting the value proposition to customers, consumers and providers generates revenue streams.
Key resources	These assets are needed to deliver the platform business model elements.
Key activities	These are the most important activities a company engages in to operate the business (e.g., supply chain management is a key activity of manufacturers).
Key partners	Some activities are executed by business ecosystem partners through the platform.
Cost structure	The cost structure, often lower for platform business than for other types of business models, depends on the platform business model elements.

Source: Adapted from "Business Model Generation."

Deliverables and outcomes

For successful outcomes, CIOs need appropriate design tools. We've discussed the monetization strategy (see pages 31 to 33). CIOs need two other deliverables as part of designing a platform business model. The tool below is for identifying sources of business channel conflict; the tool opposite highlights differences between the traditional and platform business models of certain companies.

Tool: Identifying potential sources of channel conflict

Potential sources of channel conflict	Potential degree of conflict	Description	How to mitigate the conflict
Pricing	●	Platform business often reduces pricing, sometimes nearly to zero.	Identify a pricing structure that balances benefits for customers, business ecosystems and the enterprise. Revenue and profit from a platform/business ecosystem may overtake traditional revenue after months or years. Create new digital products and revenue sources that help make up for the loss in existing product revenue.
Product line P&L	●	Lower pricing can dramatically reduce product line P&L.	Align P&L compensation with the platform business monetization strategy.
Accounts	◕	Some accounts may be served by new capabilities from a business ecosystem partner that complements direct sales.	Align the compensation structure of sales with the platform business monetization strategy.
Territories	◔	Lack of clarity about the role of business ecosystems in the enterprise's sales territories increases the likelihood of channel conflict.	Map out the roles that business ecosystem partners will play. Create clear rules of engagement and SLAs with respect to business ecosystems.
Rules of engagement	◔	Lack of clear rules increases the likelihood of channel conflict.	Create clear SLAs for business ecosystem partners — no contract, no access to the platform. Include clauses that give the enterprise access to source code or other capabilities from business ecosystem partners in the event they violate the SLA (e.g., illegal activity, poor support).

Low ○ ◔ ◑ ◕ ● High

Tool: Differences between traditional and platform business models (With examples from the manufacturing/consumer packaged goods industries)

Business model elements	Traditional business model	Platform business model	Platform business example
Customer segments	B2C, B2B	B2C, B2B, C2C, C2B	Yard Club
Value proposition	Price, quality	Price, quality; ability to meet "long tail" of customer needs, turn a product into a service, etc.	Boeing
Channels	Store/physical location, web, customer site	Store/physical location, web, customer site, APIs, labs, platform	Yard Club
Customer relationships	Direct, indirect	Direct, indirect, C2C	FirstBuild
Revenue streams	Revenue from finished goods	Revenue from finished goods, lab rentals, prototype manufacturing, patent pools, revenue sharing, fees, commissions, licensing/maintenance of the platform	GE Oil & Gas
Key resources	Employees, suppliers, consulting firms, agencies, peer forums	Employees, suppliers, consulting firms, agencies, peer forums, individuals, partners, startups	CoLaborator (Bayer)
Key activities	Creating finished goods, securing patents	Creating finished goods, securing patents, lab rentals, prototype manufacturing, software licensing, other opportunities	University of Pittsburgh Applied Research Center (U-PARC)
Key partners	Vendors, suppliers, consulting firms, agencies	Vendors, suppliers, consulting firms, agencies, individuals, partners, customers, startups/incubators	CoLaborator (Bayer)
Cost structure	Cost-driven; IT builds/deploys new capabilities	Cost-driven, value-driven, IT enables others to build new capabilities	FirstBuild

B2B = business-to-business; B2C = business-to-consumer
C2B = consumer-to-business; C2C = consumer-to-consumer

Source: Adapted from "Business Model Generation."

To summarize, the CIO should achieve the following outcomes as part of designing the platform business model:

– Identify how competitors are using platforms to change their business models.

– Identify how other industries are using platforms to change their business models.

– Gain consensus on a target business model for platform business.

– Identify channel conflict. Mitigate it on the one hand, let it flourish on the other (because it is inevitable and will actually spur new ideas and creative solutions not in the original platform business model).

– Gain commitment and funding to pursue the platform operating model that will enable the new business model.

Role of the CIO

Because the CIO's role involves not only designing the model, but also securing funding and motivating teams to do their jobs, we recommend that, in terms of the RACI matrix, CIOs be either accountable or responsible for creating platform business vision and momentum. Again, not every CIO has been able to step into either of these types of C-level leadership. The RACI model below shows the different levels of leadership possible for a CIO.

Role of the CIO in designing a platform business model

Design the platform business model	
If the CIO is Responsible	CIO works with the "digital first" team to identify the target business model.
If the CIO is Accountable	CIO assigns a working group to identify the target business model.
If the CIO is Consulted	CIO explains how platforms can enable new business models, and offers to help.
If the CIO is Informed	CIO offers to help design a new business model when informed that platform business is occurring (using EA resources, data scientists, etc.).

R = Responsible: Individuals who complete the task (i.e., the "doers" responsible for action/implementation).
A = Accountable: The individual who is ultimately in control, with yes/no decision-making power.
C = Consulted: Individuals who are consulted before a final decision or action (i.e., their input is required to move forward).
I = Informed: Individuals who need to be informed after a decision is made.

Note: RACI model definitions adapted from "Role and Responsibility Charting."

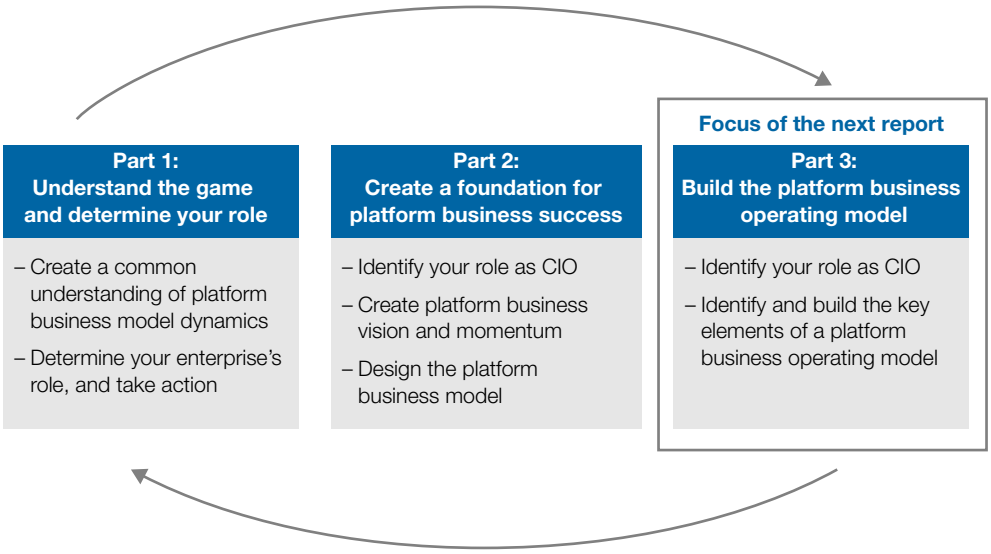
"I needed to spend a good amount of time educating the business about platform business dynamics. What are the barriers? How do we integrate with the new players or the clients? I spoke to sales about going to see Google, so we could learn how to work with them. I also explained to sales that they should have someone who understands the algorithms. Sales will depend on algorithms not only for the commercial rate we provide, but also for the commission rate, availability, etc. I wanted to make sure they understood why all this is important."
Álvaro de Nicolás, CTO, Hotelbeds Group

Conclusion

Platform business is a way for an enterprise to be an industry pioneer, and many CEOs indicate a desire to be just that. Not every enterprise needs to become a platform business, but all enterprises need to prepare a response to platform business. CIOs have a unique role to play in helping their enterprise create a foundation for platform business. They can be integral in fashioning the platform business vision, and more important, in generating excitement around the process, and sustained momentum. Because of their deep understanding of technology, CIOs can also help design platform business models. Few other executives have this expertise. If a CIO is not yet a C-level visionary leader, platform business is an opportunity to begin to step into this role.

"Winning in the Platform Game, Part 3," scheduled for publication in 2017, will focus on how to build a platform operating model (see figure below).

Focus of "Winning in the Platform Game, Part 3"



Appendix: Case Studies

A platform at MiningCo that is “owned” by the business

MiningCo, a company that wishes to remain anonymous, is a producer of iron, copper and uranium. The multibillion-dollar company also has energy interests.

MiningCo has a large fleet of trucks, trains, drills and other equipment. To improve their products, some equipment suppliers have pushed their platforms for collecting and analyzing data with algorithms, according to the CIO. However, the suppliers have treated data as proprietary, so if it is available at all, it is expensive to use for certain operations, such as using drill tension data for blast material calculations. Moreover, MiningCo has not always received timely maintenance information from suppliers, and supplier platforms are basically incompatible.

“We were spending time trying to integrate things that don’t really work well together,” says the CIO.

Creating an internal platform

Instead of waiting for suppliers to integrate their data, MiningCo has created a platform to manage the platforms of its business ecosystem partners. The platform collects and analyzes about 1.7 million data points per second for automated decision making and reporting.

“Thinking in terms of a platform,” explains the CIO, “allowed us to tackle collecting the data. It also enables companies like us to become producers of data that we otherwise might not have either collected or made available.” He adds that a platform approach to matching providers and consumers can accelerate equipment automation, improve the consistency of data and enhance performance.

The CIO and his team created a framework based on layers, such as control, operations, data, manufacturing and enterprise — with an integration platform at the top. Then they adopted a data-centric approach to making the data work for users such as technicians and data scientists. “We did not think of our users as A, B and C but rather as, say, ‘George the maintenance guy,’” says the CIO. “We thought of the people who are trying to solve a problem, and what they really need from us to do that.”

To validate their approach, the CIO and his team created a proof of concept. He explains:

“Justifying the investment involved simplifying the landscape to reduce the cost, and making the platform and data work to create value. We did a lot of work upfront on what we were trying to achieve. We built our framework and said, ‘Here’s the framework we are using, these are the pieces we will try and do, and this is the time frame we will try and deliver the framework within.’ We committed to come back with a business case for each of the pieces we were building. This meant that every time we were in front of the finance folks, we went all the way down into what the maintenance needs were. We emphasized that this project was not just a piece of technology, but rather something that created value in all kinds of different ways.”

As MiningCo adds ecosystem partners, the CIO plans to ramp up the internal platform by the end of the year — from 1.7 million to 2.5 million pieces of data collected, stored and delivered per second. He sees the platform as providing great value. “With a platform, the business, rather than the IT department or vendor, owns the outcome,” the CIO concludes. “The business is then able to leverage data and algorithms from the platform to create new business models or efficiencies.”

Based on an interview with, and material from, the CIO, MiningCo, April 2016.

Tesco develops a global API platform to enhance the customer experience and improve supply chain operations

Tesco is a leading U.K. food retailer, with 330,000 "colleagues" (i.e., employees); 50 million customer transactions per week; 16 million active Clubcard customers; and 1,387 large stores in the U.K., the rest of Europe, and Asia. Tesco PLC, which includes Tesco Bank and Tesco Mobile, had 2016 sales of £48.4 billion (US$60.56 billion).

Realigning operations to become a platform business

Tesco runs its retail business on platforms that support the core business and internal and external customer-facing services. "We've reorganized to align to the functions that the business understands," says Mike Yorwerth, chief architect and senior engineering director.

The result is essentially a global platform. "Tesco's supply chain is global," says Yorwerth. "That's where it really benefits from the power of the platform. It's greater than the sum of its parts." As part of the transformation, the company embarked on an SOA-based journey to make retail operations — customer, product, stock and location — work together.

According to Yorwerth, Tesco first identified 40 nouns that are the fundamental domains of retail — customer, product, price, stock, order, etc. — and prioritized them for an end-to-end customer journey. The company then turned each of the top 10 into a business service, with a set of APIs and associated business logic and data.

“We organized ourselves around the 10 domains,” explains Yorwerth. “We worked through our existing applications, aligned them to the domains and created single responsibilities for teams. This simplified accountabilities, reduced handoffs and will ultimately increase speed of delivery.” Each of the services has a set of business KPIs, and teams work in an agile way to improve the KPIs with every release.

Many events are streamed out of the global API platform, integration that allows easy access to operational data. “It breaks down product silos and enables you to do things you could never do before,” says Yorwerth.

The platform starts to fund itself

One of the key benefits of the API platform to Tesco is reuse. Initially the company spent 10% to 15% of its technology capital budget on building the platform. When the platform started generating efficiencies, Tesco could use these funds to continue building the platform. Yorwerth explains: “Before the API platform, website developers had to build an end-to-end stack — UI, logic, data and integration. Now the website developers can focus on making customer experiences better every day with the core business logic and data provided by the platform.”

Yorwerth notes that Tesco has realized many other benefits. In-store colleagues can now check stock and deliveries via their mobile phones, rather than relying on a dedicated handheld device. In addition, an algorithm has been developed to boost the efficiency of in-store picking using product location data exposed by the platform. Lastly, grocery and general merchandise products can now be delivered using the same customer delivery van, thanks to a general-purpose set of transport APIs provided by the platform.

Based on an interview with, and material from, Mike Yorwerth, chief architect and senior engineering director, Tesco, October 2016.

Further Reading

Gartner Executive Programs reports

"The 2017 CIO Agenda: Seize the Digital Ecosystem Opportunity," 2016 No. 7, G00317427; Rowsell-Jones, A. et al.

"Winning in the Platform Game, Part 1: Understand the Game and Determine Your Role," 2016 No. 6, G00315503; Weldon, L. et al.

"Igniting Creativity Everywhere: Easy Techniques for Exceptional Outcomes," 2016 No. 1, G00297385; Fenn, J. and Mesaglio, M.

"Digital Business Transformation: Turning the Digital Dream Into Reality," 2015 No. 10, G00292285; Nielsen, T. and Meehan, P.

"Building the Digital Platform: The 2016 CIO Agenda," 2015 No. 9, G00292133; Aron, D., Waller, G. and Weldon, L.

"Orchestrating the Digital Team," 2015 No. 7, G00290126; Gabrys, E. and Nunno, T.

"The New Leadership Team for Digital Technology," 2015 No. 4, G00278272; Roberts, J. and Mahoney, J.

Core research

"Three Styles of Digital Business Platforms," 12 October 2016, G00317581; Moyer, K. and Burton, B.

"Disruption and the Digital Value of Business — the Rise of Digital Economics," 26 September 2016, G00315015; Judah, S.

"Survey Analysis: Trends and Practices in Organizing for Digital Business and Bimodal IT," 14 September 2016, G00303503; Mok, L. and Berry, D.

"Your IoT Future Is Visible in the Mining Industry Today," 1 August 2016, G00309079; Robertson, B. and Steenstrup, K.

"Building a Digital Business Technology Platform," 8 June 2016, G00297286; LeHong, H. et al.

"Industry Vision: Turning Your Business Into a Platform," 9 May 2016, G00304018; Moyer, K. and Malinverno, P.

"Create an Industry Vision for Digital Business," 11 April 2016, G00295615; Lopez, J.

"2016 CEO Survey: The Year of Digital Tenacity," 5 April 2016, G00296113; Raskino, M.

"Deliver on the Promise of Bimodal," 18 February 2016, G00299685; Mingay, S. and Mesaglio, M.

Books

Parker, G., Van Alstyne, M. and Choudary, S., "Platform Revolution: How Networked Markets Are Transforming the Economy — and How to Make Them Work for You," New York, NY: W.W. Norton & Company, 2016

Osterwalder, A. et al., "Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers," Hoboken, NJ: John Wiley & Sons, 2010

Raskino, M. and Waller, G., "Digital to the Core: Remastering Leadership for Your Industry, Your Enterprise, and Yourself," Brookline, MA: Bibliomotion, 2015

Articles

"101 Principles of Enterprise Architecture," Simplicable, 27 June 2016; Mar, A.

"Facebook's Rules for Experimenting on You," MIT Technology Review, 15 June 2016; Orcutt, M.

"Walmart to Test Food Delivery With Uber and Lyft," BBC News, 3 June 2016 www.bbc.com/news/business-36443107

"An Incumbent's Guide to Digital Disruption," McKinsey Quarterly, May 2016; Bradley, C. and O'Toole, C.

"Pipelines, Platforms and the New Rules of Strategy," Harvard Business Review, April 2016; Van Alstyne, M., Parker, G. and Choudary, S.

"The Battle Is for the Customer Interface," TechCrunch, 3 March 2015; Goodwin, T.

"The Art of Corporate Endurance," Harvard Business Review, 2 April 2014; Knight, E.

Website

"Role and Responsibility Charting," Smith, M. and Erwin, J., California Inland Empire Chapter, Project Management Institute
pmicie.org/images/downloads/raci_r_web3_1.pdf

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