Four myths about building a software business

As nontechnology companies turn to software-based business models for growth, they will need to avoid common misconceptions.
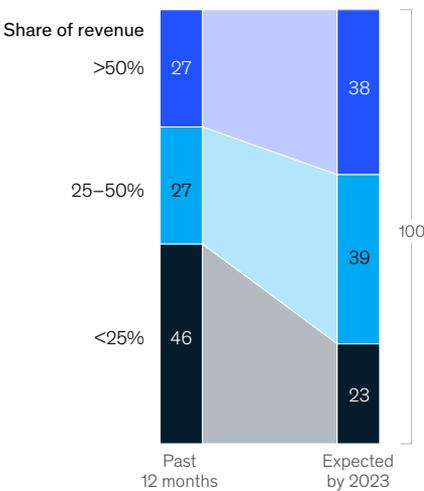
by Aaron Aboagye, Ani Mukkavilli, and Jeremy Schneider

These days, it seems that nearly everybody wants to be a software company. Maybe because all things digital have leaped forward during the pandemic, many companies now expect software products and digital solutions to contribute to sales directly or to underpin the competitive advantage of their business models.

Exhibit 1

Many industrials are aiming for a dramatic shift to digital software and services by 2023.

Impact of digital solutions on company's overall revenues, % of respondents[1]

Share of revenue

>50%

25–50%

<25%

Past 12 months

Expected by 2023

[1]Questions asked of 308 executives: Over the past 12 months, what was the impact of digital solutions on your company's overall revenue (by percentage)? What share of sales from software and digital solutions do you expect to be recurring by 2023?
Source: McKinsey Global Advanced Industries Survey, January 2020

Among industrial companies, for example, some 38 percent say that they aspire to generate 50 percent or more of revenues within the next three years from digital technologies and services. That's more than 40 percent higher than the number achieving that level today (Exhibit 1).

The attraction is obvious: the value that leading companies have captured by shifting to digital business models. Moreover, nearly two-thirds of companies expect that the digitization of their core businesses will be (or already is) essential to remaining economically viable. Only about 8 percent of companies believe that their current business models will remain viable if they don't digitize. But making the shift to digital requires not only upgrading your IT and tech infrastructure, but also transforming your entire business model through creating, or even becoming, a software business (in whole or part), scaling a software offering, or using software as the core your competitive advantage.

Exhibit 2

If done right, shifting to digital business models can unlock significant value.

Value gained by shifting to digital business models (examples)[1]

BlackRock	Deere	Goldman Sachs	Robert Bosch	RXR Realty
>$900 million	**222%**	**>$5 billion**	**37%**	**2×**
in revenue	total returns to shareholders delivered in 5 years	in loans extended 2 years after product launch	growth in Internet of Things (IoT) sales in 2019	retention rate for tenants vs industry average during pilot
Released Aladdin, an internal risk- and portfolio-management solution, to asset managers and investors. The solution has become a leading offering in its market	Launched software business JDLink—subscription-based web platform engineered around customer pain points in maintenance—to help farmers boost crop performance and profits: • Expanded into fleet optimization and farm operations • Enabled farmers to share field and equipment data to optimize operations	Released consumer-lending product Marcus in 2016 to tap into a $1 trillion digital-lending market: • Targeted new customer segments • Reinvented category • Established scalable platform for future growth • Became one of the fastest-growing consumer-lending products in history	• Funded Security and Safety Things in 2018 to build software-based ecosystem, including app store for developers and systems integrators • Created Bosch IoT suite to connect IoT-hardware offerings and central platform, providing monitoring and analytics solutions for improving operational efficiency	Launched RXO Home app to enhance customer experience and establish additional top-line revenues by enabling customers to request cleaning services, manage deliveries, submit maintenance requests, and chat virtually with on-site concierge teams

[1]Software is a significant driver of performance outcomes in conjunction with other factors.

But while getting software into the core of your business model—or launching entirely new software businesses—might seem an obvious play in the current business environment, that doesn't mean it will be easy. In reality, there are few successful cases of nonsoftware companies building software businesses (Exhibit 2) and many notable failures, including from otherwise high-performing companies. Of the approximately $500 billion in total global software revenues in the year 2019, nonsoftware natives captured only 20 percent. Nontechnology players, for their part, brought in only 6 percent (Exhibit 3).

Having seen the journey with many companies, we can tell you this—it's easy for even the best to go about it all wrong. In fact, there are four common misconceptions that can send companies down the wrong path, often irrecoverably (Exhibit 4).

## Misconception 1: It's an engineering transformation

Becoming more software focused requires a holistic transformation of the business and its operating model. For nontechnology companies, that includes elevating product leadership, creating more rapidly adaptive processes for budgeting and planning, establishing an empowered and distinctive culture, and shifting organizational structure. Here, we focus on product management and the operating model.

Some people might think that it's software engineers who make software companies successful. But the truth is that product management, and the product organization, play as large a role, distinct from engineering. Grasping this point may require revising your

Exhibit 3

Nontech companies struggle to capture the software market.

Share of $500 billion global software revenue by primary business of parent company,[1] %

Software or internet services **80**	
IT services **9**	IT hardware **6**
	All other industries **6**
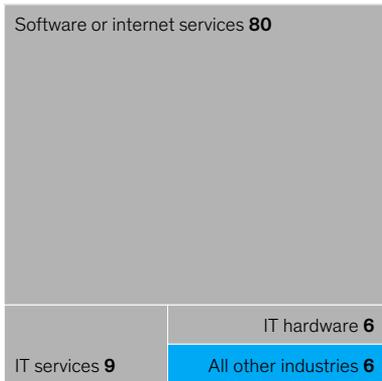
[1]Figures do not sum to 100%, because of rounding.

notion of what product managers do. In the past, and in most industrial companies, product managers focus mostly on execution and on-time delivery of engineering products. Because of data's growing importance, and companies' ever-increasing focus on customers and design, today's product managers have to play a broader role, bringing business and customer knowledge together with technical knowledge to make trade-offs and orchestrating cross-functional teams to ensure alignment between diverse functions—especially marketing and engineering. You can think of product managers as the "mini-CEO" for a given product. It's no accident that many software and tech company CEOs (such as Sunshine Contacts' Marissa Mayer, Microsoft's Satya Nadella, and Alphabet's Sundar Pichai) come from product-management backgrounds.

A faster cadence is at the heart of the necessary operating model for companies transitioning toward software. McKinsey research shows that digital leaders follow a faster rhythm when carrying out and repeating certain critical practices.[1] These practices fall into two categories: continuous actions (such as bringing data into your test-and-learn program) and more intermittent ones (such as reallocating talent). Together, these generate powerful performance-based adjustments and realignments of resources behind cascading quarterly priorities. With regard to software, this operating model requires allocating resources more quickly; more strongly empowering your technical leadership and vision; deepening product-management capabilities (as discussed earlier); encouraging rapid product iteration and refinement; and putting in place the culture, tools, and practices that help unleash the velocity and full potential of software talent.

Misconception 2: Hire a few leaders and repurpose your IT talent

Nontechnology companies looking to boost their software businesses often try to combine with their own repurposed IT talent a handful of hires from Amazon, Facebook, Google, Microsoft, or other leading tech companies.

These nontech companies are right about one thing—they need a lot of digital talent if they are to shift successfully toward a software model. Our analysis found that automotive companies, for example, for which software will continue to become an ever greater percentage of their product "content," will need roughly four times more software-focused talent than they have now (Exhibit 5).

But here's the problem. When it comes to top performers, your company competes with the leading tech firms, especially if you're hiring in Silicon Valley or another global technology hub. This is a competition you are likely to lose. Instead, you risk overpaying for lower-performing talent and struggling to retain it.

---

[1]Jacques Bughin, Tanguy Catlin, and Laura LaBerge, "The drumbeat of digital: How winning teams play," *McKinsey Quarterly*, June 27, 2019, McKinsey.com.

Exhibit 4

Four myths about building a software business can lead companies astray.

	Myth	Reality
1	Transitioning to digital is an engineering transformation	A digital transition is a business-model transformation across all parts of the business (eg, product, go to market, supply chain, organization, operating model, culture); product management matters most
2	A company should hire a few senior executives from top tech companies to lead its repurposed IT talent in software-business building	Because nontech companies can't compete with leading tech companies for the best talent in top-tier markets, they risk overpaying for lower performers and struggling to retain them; better option is to become a top-choice employer in a lower-tier market instead
3	Building scale for a new software business should happen through continued acquisition of small players	Making a >$1 billion anchor deal before making smaller acquisitions creates 5× higher returns than only pursuing smaller acquisitions does
4	A company can rely on its existing sales force and customer relationships when launching a new software business	Going to market for software products usually requires a parallel go-to-market approach—coordinated with an existing sales force

Combining these middling performers with your own repurposed IT people simply doubles down on your difficulty. IT talent is valuable. But the skill set and experience of most IT professionals is different from the skills you will need for software product engineering and product management. Yes, you can retrain some of these IT folks. But that won't quickly or automatically turn them into commercial-software developers.

To get the talent you need, consider the road less traveled. Some of the leading software-focused private equity firms, for example, take the bulk of the people in their operating companies out of Silicon Valley (without necessarily moving the operating companies' headquarters) and use rigorous, proprietary screening practices to relocate them in tier-two or tier-three markets instead, where they then source any further talent they need. These firms believe that their companies are better off being a top-choice employer in a lower-tier market than being a less desirable employer in a top one. For that reason, second- or third-tier regions may prove your own best bet for attracting the talent you need.
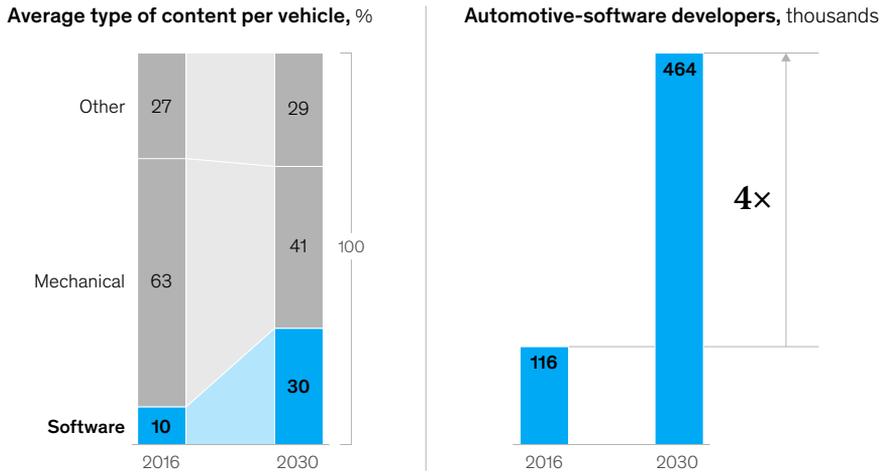
Finally, consider the role of organizational culture. Software companies are far from homogenous in their cultural styles, values, and norms. One company we know attracts an almost fanatical commitment from its employees as part of its mission to transform the industry in which it competes. Another company we know leans more toward work–life balance in a warm and supportive organizational environment. Both are successful with their approaches. Since there is no one-size-fits-all culture, don't try to become an ersatz version of, say, Amazon or Google but instead embrace your own mission, purpose, and cultural strengths to build a software culture that fits who you are. Then the people you attract will prove the best fit with your company and its way of getting things done.

Misconception 3: Build scale through continued acquisition of small players

In many businesses, consistent acquisition of small players is one proven way to improve company performance and typically has stronger performance outcomes than large deals do. In the case of a nonsoftware company buying software assets, however, this approach is not nearly as effective.

Exhibit 5

The growth of software in vehicles will drive a fourfold increase in demand for automotive-software developers globally by 2030.

Average type of content per vehicle, %

	2016	2030
Other	27	29
Mechanical	63	41
Software	10	30

100

Automotive-software developers, thousands

2016	2030
116	464

4×

McKinsey analysis of about two thousand M&A transactions, large and small, showed that the uplift in total returns to shareholders (TRS) is small for nondigital companies making a series of smaller acquisitions of digital companies. But for digital companies that do the same, the uplift in excess TRS is nearly four times that of nondigital companies.

Why should that be the case? Because a series of smaller digital acquisitions often creates difficulties integrating the newly purchased companies. Not only do the acquired companies differ from the culture of the acquirer (as you would expect), they usually differ dramatically from one another. It thus becomes difficult to stitch these companies together to form a new digital operating model. A scan of the automotive supplier landscape reveals several examples of players that have made a string of acquisitions but have struggled to realize significant software revenue.

Better to focus your attention on an anchor digital acquisition as an early step. In fact, nondigital companies create more value when they buy larger digital companies (defined here as deals greater than $1 billion in value). Once the bigger purchase has been integrated, and your own organizational culture is a bit more digitally adjusted, then you may be in a better position to begin acquiring further assets. This combination—one big purchase followed by a series of smaller ones—typically drives returns that are about five times higher than pursuing many small acquisitions without having first done a bigger one.

Misconception 4: Relying on your existing sales-force and customer relationships

No doubt you are rightly confident in your sales force and its strong relationships with customers. And leveraging existing customer relationships is one of the important starting-point advantages for companies as they look to build or scale digital businesses. It's only natural, then, that you might look to your current sales force to sell software

or other new digital offerings. But selling software is different from selling most other products. For one thing, it requires technical chops and often deeper vertical expertise. Your existing sales force may not fully understand the software that they will be trying to sell and might lack the expertise that they will need to win customer confidence.

Moreover, the initial deal size for software will be small relative to your core business—a disincentive that often means that the existing sales force will largely ignore it. And the buyers in your customer organization are very likely to be different people from the ones who buy your current product line—they are typically more senior, for one thing.

All of these factors make your current sales force a problematic way to go to market. Alternatives include overlaying a set of specialists that your existing sales force would call in to the sales process when relevant. But too often, these specialists don't get pulled in frequently enough by salespeople who might, understandably, want to be the single point of contact for their customers. More and more companies are finding that they need to turn to a parallel go-to-market approach—coordinated with their existing sales force where necessary but with a lot of autonomy, too.

—————————

Jumping into the software game is becoming essential for a wide cross-section of companies, whether or not they have thought of themselves as technology companies in the past. They won't be the first to try to make the transition. Avoiding the four pitfalls described here can help them manage the journey more smoothly. Q

Aaron Aboagye is a partner in McKinsey's New Jersey office, **Ani Mukkavilli** is a consultant in the Sydney office, and **Jeremy Schneider** is a senior partner in the New York office.