While retooling to compete in a digital world is a major challenge, there’s a lot to learn from the companies getting it right.

By James Anderson and Laura Polasek
Companies responding to digital disruption inevitably focus on speed first.

They make changes quickly where it matters most—launching apps, forming Agile squads, deploying new analytics, and testing innovative digital business models. The primary objective is to stay one step ahead of the change.

Yet after an initial phase of success, these promising digital transformation initiatives too often lose momentum. On the way to scale and lasting impact, they run aground on legacy issues such as aging technology infrastructure, mismatched operating models, old ways of working, or cultures resistant to change.

This shows up in our annual survey of more than 1,200 business leaders around the world.

Three years ago, when we asked respondents to prioritize what it takes to establish digital leadership, their answers boiled down to making faster decisions and executing quickly to create differentiated offerings. Today, there is a growing realization that speed on its own isn’t enough. While moving quickly to differentiate remains essential, capturing the full value of digital transformation involves scaling a company’s best initiatives across the organization for broad impact. That typically requires retooling the technology architecture while also building digital fluency and capabilities throughout the organization (see Figure 1).

Figure 1: While digital transformations have historically focused on speed, scale is rising as an imperative

Top 10 drivers of digital leadership

<table>
<thead>
<tr>
<th>2018</th>
<th>2019</th>
<th>2021</th>
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<tbody>
<tr>
<td>Fast decisions</td>
<td>Fast decisions</td>
<td>Fast decisions</td>
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<tr>
<td>Execute plans with speed</td>
<td>Tech architecture</td>
<td>Differentiate products/services</td>
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<td>Differentiate products/services</td>
<td>Move to scale from experiment</td>
<td>Move to scale from experiment</td>
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<tr>
<td>Measure progress vs. competition</td>
<td>Measure progress vs. competition</td>
<td>Measure progress vs. competition</td>
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<tr>
<td>IT operates at speed</td>
<td>IT operates at speed</td>
<td>IT operates at speed</td>
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<tr>
<td>Clear vision</td>
<td>Clear vision</td>
<td>Clear vision</td>
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<tr>
<td>New economic models</td>
<td>New economic models</td>
<td>New economic models</td>
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<tr>
<td>Improved customer engagement</td>
<td>Improved customer engagement</td>
<td>Improved customer engagement</td>
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<td>Fund digital</td>
<td>Fund digital</td>
<td>Fund digital</td>
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<tr>
<td>Right people, skills, positions</td>
<td>Right people, skills, positions</td>
<td>Right people, skills, positions</td>
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<tr>
<td></td>
<td>Digital operations</td>
<td>Digital operations</td>
</tr>
</tbody>
</table>

Note: Drivers determined by Random Forest Regression
Source: Bain Digital Insights Survey—December 2018, December 2019, and March 2021 (N= nearly 1,200 for each year)
Four Winning Patterns of Digital Transformation

The advantage that digital disrupters such as Amazon or Tesla have over incumbent companies is that they were built for purpose. Not only is their underlying tech infrastructure tailored specifically to their digital ambition but so is the way they operate, how they make decisions, and the way they use technology in their everyday approach to business.

Many incumbent companies have done a remarkable job of mobilizing to fight back against these disrupters through rapid deployment of new digital services and tweaks to their operating models. But they can only go so far before they run into the old ways of doing things—namely, a spaghetti tangle of legacy enterprise systems; a complex, siloed bureaucracy that slows decision making; and a cultural divide between IT and business operations.

Competing in a digital world ultimately means transforming both hard capabilities (the tech stack) and soft capabilities (the operating model) to create a business environment in which change can take root at scale and strategy is fully enabled by digital technology. Yet that presents a fundamental risk: How do you avoid disrupting your business just when you can least afford it?

Leadership teams undertaking digital transformation are starting to figure that out. Companies have enough experience at this point that they are seeing creative ways to build new bridges to the future without creating traffic jams in the legacy business. Looking at the most effective efforts, we’ve identified four patterns of digital transformation that allow companies to rebuild and compete at the same time (see Figure 2).

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Pattern No. 1: Laying down the digital foundations

The first pattern involves companies that are under pressure to develop new digital capabilities and are essentially starting from scratch. The threat is clear and evolving steadily but has yet to produce a burning platform for change. Many industrial companies find themselves in this situation.

Large manufacturers, for instance, have long used technologies such as robotics to automate and optimize the production process. But the industrial application of data and analytics is evolving into a new basis of competition. Companies are using advanced analytics and predictive models to
Figure 2: Four winning patterns of digital transformation

<table>
<thead>
<tr>
<th>Typical company situation</th>
<th>Transformation strategy</th>
<th>Common industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laying down the digital foundations</td>
<td>Build a lean tech and data infrastructure around one or a few use cases</td>
<td>Manufacturing, pharmaceuticals</td>
</tr>
<tr>
<td>Integrating a fragmented digital landscape</td>
<td>Rationalize scattered tech landscape to allow for scaling</td>
<td>Consumer products</td>
</tr>
<tr>
<td>Digital transformation front to back</td>
<td>Prioritize front-end initiatives, and gradually modernize the back end</td>
<td>Banking, telecommunications</td>
</tr>
<tr>
<td>Launching a new digital attacker</td>
<td>Break each initiative into modularized components, and deploy Agile</td>
<td>Banking, telecommunications, retail</td>
</tr>
</tbody>
</table>

Source: Bain & Company

improve everything from supply chain management to maintenance and service. Implementing a new digital infrastructure requires an entirely new set of foundational capabilities, particularly around sensors and analytics used to collect and interpret relevant information across the company.

For one global auto company, starting from scratch meant that it was unburdened by a tangle of legacy tech infrastructure. But getting proficient in collecting the right data and building predictive models amounted to a major investment in technology and capabilities. At the same time, the company had to adopt new ways of working and change the way it made decisions. Adding to the challenge was the lack of a clear and immediate competitive threat that could galvanize the organization around the need to change quickly.

The automaker’s answer was to start small and build steadily. It launched a set of highly specific initiatives to gather data that could be fed into predictive models. It rapidly built prototype solutions that could prove out the investment and provide a clear demonstration of how powerfully the models could improve decision making. A predictive system targeting rework and maintenance, for instance, produced 90% improvement in performance and cut costs significantly. As pull for the solutions increased internally, the company began to scale both the new solutions and new ways of working that were critical to getting full potential from the investment. Step-by-step, it built both a new tech infrastructure and a new operating model to take advantage of it.
Four Winning Patterns of Digital Transformation

Pattern No. 2: Integrating a fragmented digital landscape

Companies that fall into this next pattern suffer from digital fragmentation—that is, they have no shortage of digital projects bubbling up across the company, but they lack the ability to prioritize the most promising initiatives and scale them across the organization.

This is common among global consumer goods companies with legacy IT systems that vary from one geography or function to another. While they may be doing lots of innovative things locally to serve customers, mismatched technology makes it difficult for the entire company to learn from those ideas and deploy them.

One global retailer found itself in this position several years ago when it recognized that the future of fashion retailing was in providing customers with a personalized omnichannel experience that seamlessly combined physical stores and digital channels. Making that work would mean changes to both the company’s technology infrastructure and its operating model.

On the tech side, the company needed to create a unified IT platform for capturing, scrubbing, and storing consumer data from across the web. A common data reservoir would let all parts of the organization, from merchandizing to finance, tap into the data to better understand customers and anticipate what they want in terms of personalization. Taking full advantage of these new capabilities, however, also required a shift in management structure. Rather than try to develop initiatives ad hoc, the retailer created a data and analytics center of excellence that could prioritize the best ideas emerging from around the business and enhance them using sophisticated machine learning and statistical models. That led to scalable solutions that could generate impact on a corporate scale.


**Pattern No. 3: Digital transformation front to back**

The third pattern also confronts the legacy conundrum in the core business, but the problem in this case is different. Rather than a fragmented IT architecture, these companies have years of accumulated systems that were built on top of each other as the business evolved. The resulting tangle of tech infrastructure ends up being inefficient and inflexible, slowing down the company’s reaction time.

This was the issue several years ago, when a large telecom operator recognized that it couldn’t keep up with rivals that were much faster at rolling out new price plans and tariffs. The competition was capable of launching quick, targeted pricing experiments to learn what worked with various demographic groups and then quickly double down on the winners. But the company’s complex legacy systems required it to code each change into the back end by hand, which limited its ability to quickly counter price moves or launch its own salvos to learn what might stick.

Aggressively tearing up the tech stack to start fresh ran the real risk of creating major disruption in the core business, so it launched a modular approach that allowed it to continue innovating on the front end while selectively rebuilding on the back end. The tech team essentially isolated the new front-end pricing systems from the legacy architecture and then built an application programming interface between the two, allowing communication where it was necessary but keeping everything else separate. That bought time to evaluate and modernize the back end as necessary, one module at a time. Managers threw out the parts that weren’t adding value, isolated the legacy systems that did work, and rebuilt or replaced the rest to match the new needs of the business. The result? The company cut time to market for new price plans by 75% and decreased the cost of those changes by 80%.
Pattern No. 4: Launching a new digital attacker

Sometimes, the magnitude and pace of disruption in an industry require more change than an incumbent company can support. Its size, complexity, or resistance to change might prevent it from moving fast enough to remain competitive. Increasingly, the answer is to launch an entirely new business to attack opportunities that the core business cannot. This can be a bold bet that involves substantial risk. But it’s probably no riskier than hunkering down behind the moat and hoping that incremental improvement will be enough to fend off insurgent competitors.

A digital attacker is both an offensive and a defensive bet. On offense, it allows companies to enter a new market with a tailored, lightweight solution that is free of legacy baggage. On defense, it gives the company a fresh value proposition to attract new customers within its existing market—for instance, aiming at millennials, students, and young professionals to build the customer base of the future.

Consider the choice made by one traditional retail bank. While there was nothing immediately wrong with its core business—catering to affluent customers with complex financial needs—the client base was aging, raising questions about the bank’s ability to compete in the future. Retooling the core operation to attract a younger clientele would not only be disruptive but it would also take too long. Instead, leadership decided to launch an entirely new online bank with a separate brand built to appeal to a tech-savvy customer.

The project required substantial investment in a modern cloud-based technology infrastructure. The bank had to commission a mobile-only user experience powered by state-of-the-art payment systems and frictionless customer journeys. But within 12 months, the mother ship had hatched a digital competitor with a cost base that was approximately 70% lower than the traditional operation. And in addition to tapping a new set of customers that it can cultivate with more sophisticated financial services over time, the new platform became an invaluable engine of innovation. It offered a test bed for next-generation banking technologies that eventually could be imported into the core operation.

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Finding your way to boldness

These four patterns, of course, can’t capture the myriad risks and challenges companies face as they contemplate how best to transform themselves to compete in a digital world. They are meant as broad archetypes that highlight the interplay of practical realities that any transformation journey entails, especially during a time of accelerated disruption. They encourage corporate leaders to consider two critical factors.

- What is the nature and immediacy of the digital disruption our industry is likely to face?
- What must change within our technology stack and operating model to enable the company to move fast enough to keep pace?

We find that there's a tendency to underestimate on both scores: Disruption is probably happening faster than you think, and the challenge of transforming a company to remain competitive is probably harder than you expect. That tendency too often leads to incrementalism or a strategy of launching small digital initiatives that ultimately fail to move the needle.

The companies that fall into our four patterns recognize that any successful digital transformation depends on a balancing act—namely, the ability to scale meaningful change without disrupting the core. Every company finds its own path, but all winning digital transformations share one thing in common: a willingness to be bold.
Four Winning Patterns of Digital Transformation
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