A digital-first mindset is essential to today’s business. The acceleration of digital adoption means customers today have zero tolerance for anything less than a fast, seamless, and personalized experience. Enterprises must think beyond traditional approaches to data and analytics to remain competitive in today’s markets.

The good news? Companies no longer struggle with a lack of available data or analytics platforms. Employees are more empowered than ever to make data-driven decisions. But with this newfound responsibility often comes complexity, chaos, and confusion. With numerous sources of data available to the masses, everyone ends up with their own version of truth, leading teams to draw very different conclusions to the same problem. We are witnessing the crux of why so many enterprises struggle to advance in their digital transformation.

Even as individual teams have unfettered access to their own data, cross-company data sharing is at an all-time low. Data silos quickly take shape, and companies struggle to find common ground on how to prioritize. The issue isn’t necessarily the size of the business but the company’s approach to data democratization.

So what is the solution?

To break down those data silos and minimize organizational friction, enterprises need to build a single view of customer-centric truth that can be accessed by every member of the organization. Implementing methodologies such as continuous product design (CPD) enables companies to address these cultural barriers of pushback, complexity, and silos that slow them down. By connecting customer signals to every phase of the digital product lifecycle, teams learn faster, agree on priorities, and deliver products customers want.

I’m thrilled to introduce the latest report from Harvard Business Review Analytic Services, sponsored by Quantum Metric. It dives into the background and stories of continuous product design and chronicles how leading enterprises are improving their approach to digital-first in order to innovate ahead of customer expectations.

You’ll hear from digital leaders across a number of industries—from travel and retailers to insurance—that have implemented the continuous product design mindset and methodology in their own organizations, enabling them to align on priorities and build more customer-centric digital experiences.

Changing your approach to your digital transformation starts and ends with how your organization prioritizes customer needs. Let this report serve as a roadmap for learning and adopting the practices of continuous product design across your own teams. If you are looking for more on the methodology, consider getting yourself and your team certified at continuousproductdesign.com.
Aligning Your Entire Organization Around the Customer

As competition for customers intensifies, no major company should assume that yesterday’s digital experience will satisfy today’s (or tomorrow’s) consumer. High-profile digital native brands have made clear that the competitive edge belongs to those who focus obsessively on meeting customer needs and desires. And they gain this focus using real-time data—shared throughout the organization—to optimize the customer experience.

Companies in more traditional sectors—airlines, brick-and-mortar retailers, banks and financial services providers, or insurance companies—know the future is digital and have invested accordingly. Yet most of these companies, especially those born and shaped in a pre-digital era, have yet to transform themselves into truly digital enterprises.

“Legacy organizations are often blinded by outdated assumptions about their industry, customers, and competition. They think they can transform by following a top-down plan and a set of clear benchmarks,” says David L. Rogers, author of *The Digital Transformation Playbook* and faculty at Columbia Business School. Such companies must “learn to rethink and reimagine their business,” he says, “and be ready to experiment to learn what will work to drive growth in their digital future.”

Today, a company’s digital products—the app, kiosk, or website features that customers use to explore, consider, and buy—are as important as the products or services the company actually sells. The battle for a customer may be won or lost in seconds. According to a 2021 study by Baymard Institute, 18% of customers who abandoned their carts during checkout did so because the process was too slow, 17% because they couldn’t clearly see the order total up front, and 12% because the site had errors or crashed.¹
FIGURE 1

Prioritizing Customer Experience
More than half of respondents put customer experience in their top five business preferences. Which of the following business priorities are among your organization’s top five for the year ahead? [SELECT UP TO FIVE]

- Improve customer experience: 58%
- Increase efficiency/lower costs: 47%
- Increase revenue: 44%
- Increase innovation: 37%
- Increase organizational agility: 35%
- Increase market share: 31%
- Improve product/service quality: 29%
- Increase/enhance diversity and inclusion: 27%
- Launch new products/services: 26%
- Improve productivity: 25%
- Increase workforce flexibility: 24%
- Increase sustainability: 23%
- Improve employee experience: 22%
- Increase alignment with corporate purpose: 17%
- Improve time to market: 13%
- Expand to new geographies: 10%

Source: Harvard Business Review Analytic Services survey, December 2020

The need for speed is well understood. Investment in agile approaches and continuous development processes has enabled many organizations to create digital products faster. Yet speed, while essential, is not the only consideration.

Companies also need a high degree of confidence in their ability to continuously design, test, and optimize digital products that customers will enjoy and find useful. And yet too often, disparate business and tech teams at some of the largest brands don’t agree on what matters to customers. This disagreement makes prioritization difficult and leads to further organizational barriers that slow agility down.

Leading organizations are learning from the success of those digital natives. Taking the agile/continuous development revolution a step further, they are using continuous product design, a methodology to gather key data on customer interactions, share insights in real time throughout the organization, and deliver a steady flow of digital enhancements and innovations that address customers’ frustrations and anticipate their needs and intentions. This methodology extends agile by enabling better cross-team alignment and improved customer signals, so organizations become more focused on building products that matter to customers.

This report examines the challenges that legacy companies face in shifting from top-down, process-driven decision making to a culture where individuals and teams are empowered with the insight to make decisions, learn from mistakes, and meet customers’ evolving demands. It also explores how a continuous product design methodology and supporting technology enable small but essential changes that lead to quantifiable business improvements.

Digital Transformation Is Often a Promise Unfulfilled

Business leaders understand that engaging and serving customers in the digital world is essential to success, and many see themselves as well along in the process. According to a December 2020 survey by Harvard Business Review Analytic Services, 58% of executives identified improving the customer experience as one of their top five business priorities. In the same report, 88% of executives described “a complete and consistent view of their customers across channels and platforms” as essential to their future success. And in a 2021 Celerity report on digital transformation, 64% of organizational leaders said their technology investments “have already led to gains in productivity.”

Despite such optimism, Columbia Business School’s Rogers, who frequently consults with major companies, says too many organizations that embark on digital transformation invest significant money “but are disappointed, even shocked, by the lack of results.” A 2021 report from Everest Group
concluded that some 68% of organizations engaged in digital transformation “have not realized the envisioned outcomes.”

Once launched with management’s blessing, projects cascade through various levels of the organization with all hands and resources dedicated to efficient execution of the goal. This “waterfall” approach worked well when companies had months or years to roll out a new product and customer expectations were set to slower rhythms. Yet with digital products, as teams push management-approved ideas inexorably to conclusion, the landscape is already shifting beneath their feet. Today’s dazzling app or website experiences are tomorrow’s ho-hummers. Customers frustrated by an unresponsive function at the point of purchase aren’t waiting around for a committee to debate and address the perfect fix—they’re already gone. “The only hope for legacy firms is to adopt new ways of working,” Rogers notes, “that are more iterative, agile, and adapt to customer needs through constant learning.”

Agile revolutionized the software industry by helping teams collaborate, create, and deliver products quickly. Yet as authors Rob Cross and Alia Crocker of Babson College and Heidi K. Gardner of Harvard Law School noted in a March-April 2021 Harvard Business Review article, “Wanting to be agile and being it are two different things.” Agile teams too often operate in silos, disconnected from the rest of the business, the authors wrote. That’s one reason that many projects “not only fail to meet their goals but also cause disruption within an organization.” The article goes on to state, “The main problem we uncovered: Traditional practices for framing, staffing, and executing agile projects are ineffective in companywide initiatives.”

Another challenge involves the ways data flows through an organization—or fails to. To anticipate customers’ needs and fire their imaginations, people who design, implement, and maintain digital products need all the information they can get. Yet in large organizations, those who gather data too often hoard it. Going back at least a century, “data was a filter by which communication was flowing from top to bottom,” says Didier Bonnet, professor of strategy and digital transformation at IMD Business School in Lausanne, Switzerland. “Passing on too much data was seen as a loss of power.”

That paradigm is changing as more leaders recognize how vital the flow of information is to staying competitive. Yet even when companies commit to spreading data throughout the organization, another vexing problem emerges: the lack of “a single version of the truth,” says Bonnet, who is also co-author of Leading Digital: Turning Technology into Business Transformation. Various departments generate their own data using their own platforms, producing numbers that are duplicative or that fail to align. When such teams are tasked with working together to solve a problem, he adds, “no surprise, there’s a lot of friction.”

And while organizations frequently cite the need to collaborate across departmental silos, that’s “easy to put in a mission statement, but then you actually have to pull it off,” says Amy C. Edmondson, Novartis Professor of Leadership and Management at Harvard Business School. The challenge is as old as the human tendency to subdivide into “us against them” factions, Edmondson says. “I’m an engineer, and you’re in marketing. The things that you value and the things that you do, and the jargon you speak, leave me confused or worse—annoyed. People take for granted the ‘rightness’ of the way their own departments think and act.”

From Agile to Continuous Product Design

The idea of creating digital products with greater speed, agility, and effectiveness is not new. Seventeen software developers 20 years ago gathered at a ski resort in Utah to hammer out the Agile Manifesto, a sort of Magna Carta for those seeking to reduce cumbersome documentation and processes governing much of software development. A new term, “DevOps,” signaled a higher level of cooperation between software developers and IT operations, and continuous delivery enabled software engineers to make ongoing tweaks and adjustments to products under development, ensuring faster delivery and higher quality. Yet continuous delivery is still about helping those software developers and IT professionals design, build, and finish products. With too much focus on the mechanics of developing and releasing products quickly, the customer is often left behind, leaving many product organizations as “feature factories,” failing to understand and empathize with customer needs.

Continuous product design extends the agile revolution by marrying software engineering to real-world, real-time
Putting customers at the center of the continuous product design equation helps companies stay focused on what matters most, says Michael Spiteri, global head of transformation and innovation at HSBC Life and Insurance Partnerships.

Insights on customer behavior. Continuous product design platforms enable companies to see how their digital products are being used, what customers love, where the pain points are, and what to prioritize next. Connected to a company’s own computing via the cloud, such platforms enable teams to uncover opportunities at scale, gleaning macro data on millions of people as they course through apps and websites, or to follow the journey of a single customer searching, comparing prices, managing their account, or signing up for a new offer. More importantly, when such platforms are ingrained throughout the organization, those closest to the customer in specific areas—from service to operations to logistics—can design experiences that meaningfully solve customer problems and satisfy their desires. In that sense, continuous product design represents a new, customer-centric mindset and a methodology for breaking down data silos and collaborating on a single version of truth.

Putting customers at the center of the continuous product design equation helps companies stay focused on what matters most, says Michael Spiteri, global head of transformation and innovation for HSBC Life and Insurance Partnerships, based in Hong Kong. Digital transformation under this scenario means making customer interactions more human.

“We’re trying to build empathy with customers by demonstrating that we understand where they are in their life journey,” Spiteri says, “and we can only do that if we make it personal and relevant.” The company’s “HSBC Life Well+” proposition incentivizes participants to stay healthy by walking 9,000 steps a day and meeting exercise goals on an app. As part of a continuous product philosophy, the proposition was recently expanded to include personalized information and rewards related to physical, mental, and financial health, and a real-time, app-based “health score” reflects the user’s exercise, nutrition, and sleep patterns.

To ensure the goals of supporting customers’ health and enhancing long-term relationships, the “product has to be developed with the customer in mind,” Spiteri says. The digital experience must be warm, friendly, helpful, intuitive, and reliable. Therefore, HSBC Life uses a continuous product design approach to ensure that when participants use the Well+ program, the experience is helpful and positive and only improves over time.

Detailed analytics and insight into customer behavior will enable the team at HSBC to detect and correct small problems before they become big ones, to maintain a seamless experience for customers, and to gain insight into the experiences customers find particularly useful—helping inform and guide the creation of next-generation digital products. Using customer data to drive better and faster product decisions and show what customers value most and where customer frustration lies, asserts Spiteri, “is the thing that I think will separate organizations that create long-term customer value from those that don’t.”

Likewise, Seera Group, which was formed 40 years ago and is today the largest travel company serving the Middle East, is using customer-focused continuous product design to enhance loyalty and maintain an edge in its industry. The process hasn’t been easy. The Saudi Arabian company’s early, fitful steps toward digital transformation resembled a “features factory,” says Ronnie Varghese, the company’s vice president of digital product, describing all the customer-facing tools its tech teams put into its applications and websites. Tech teams dutifully built digital products mandated by leadership or by what other travel companies were doing. The resulting customer experience, however, didn’t always translate into new business. “Teams were churning out a lot of features, but we weren’t seeing a lot of improvements in conversion rate,” Varghese says.

Today, the company has turned such processes around, with customers’ wants, needs, and problems informing and driving every decision. “We can watch our customers use our products and see where they’re actually struggling,” he says. “And there are a ton of analytics to let us know when multiple customers might be having the same problem.”

Putting the Focus on Continuous Optimization

For HSBC Life, Seera Group, and other companies, the key to continuous product design is the first word of the phrase. Each improvement to the customer experience represents not a whole new initiative lumbering through development but part of an ongoing series of quick, cost-effective, tactical adjustments that make digital interaction better and better.
Consider, for example, Seera Group’s airfare calendar, built to help customers of its consumer travel brands. Almosafer and tajawal, find the best ticket prices without having to shop each individual airline site. Given the industry’s complex and ever-shifting fare structure, building a timely calendar capable of showing every fare for every airline and route was a monumental undertaking. So, disappointment was palpable when that digital product launched to a lukewarm reception, with many customers dropping off before booking.

Prior to continuous product design, the company might have written it off as an expensive failure and moved on to the next big project. Instead, using analytics, Seera Group discovered that the vast majority of drop-offs involved customers seeking less-traveled routes. For efficiency, the calendar had been designed so that specific flights and fare options appeared only after various users had searched for those routes and times. Thus, heavily trafficked routes revealed numerous choices, while the others often appeared empty—not because options didn’t exist but because fewer previous visitors had searched. Follow-up interviews revealed customers seeing few routes at first glance assumed the options were limited and left before exploring further. The solution, prepopulating the calendar with a full array of options, increased conversion rates by 30% and helped the fare calendar live up to its promise.

Another crucial component of continuous product design is testability. For example, customers being directed to Seera by a travel aggregator site were dropping off at a much higher rate than those who came directly to Seera on their own. A closer look revealed the aggregator site was steering customers directly to a page asking them to provide personal information before they had seen a summary of their travel plans. To test whether that was, indeed, causing the drop-offs, Varghese’s team split the aggregator traffic into two groups, one arriving as usual at the information collection page, and the other arriving at the earlier page where a customer could see a summary of their plans. Among the latter group, “instantly, we saw a massive uplift in the number of customers who kept moving forward in their conversion,” Varghese says. With that confirmation, he adds, “we just shifted all of our traffic into that new flow.”

**Innovating at Speed with Confidence**

One dangerous response when it comes to digital transformation is one always based on speed. Projects launched hastily based on hunches or guesswork rather than quantifiable data usually fail—only affirming the cautionary voices that argue for circumspection and delay. Thus, speed requires an essential partner: confidence.

Mariana Fonseca, vice president for ecommerce for Virgin Voyages, a cruise line launched in 2021 as part of Sir Richard Branson’s Virgin Group, says both qualities—speed and confidence—are of the essence when app or website issues arise. For customers (“sailors,” in the Virgin vernacular), the “dream” starts when they first explore the app and start planning a trip. “Booking has to be amazing and seamless,” she says. “And the way they dream and look at what we have to offer, and get inspired to sail with us, has to be epic, as well.”

With the bar at that level, no problem can be left to fester. The company’s continuous product design platform generates customer data and insights that are instantaneous, reliable, and specific. Its technology lets the organization relive and empathize with a bad customer experience, then quantify how many others went through the same thing and how much those failings are costing the business. When Fonseca and her colleagues saw people clicking away at a functionless design feature they mistook for a button (with some leaving the site in frustration), instant replay enabled the team to identify the cause, factor in the potential cost in lost revenue if the problem were unaddressed, and enact a fix—all with a level of speed and confidence that would have been impossible just a few years ago. Back then, companies might learn of digital glitches only through a drop in revenue, a call center report showing an uptick in complaints, or a swell of angry social media posts, Fonseca says, adding, “Now, I don’t have to wait a couple of weeks for those things to bubble up.”

The need for confident, real-time response only increases now that Virgin Voyages, after more than a year of delay related to Covid-19, launched its first cruises in August 2021. The company was designed to be digital-first, Fonseca says, meaning that even on board a ship, sailors will receive updates, make dinner reservations, or sign up for shows through their app rather than dropping by the restaurant or phoning the concierge. With digital products as a central part of the actual cruise, Fonseca says, continuous product design will be essential not just to quickly addressing problems before they potentially mar sailors’ voyages but also to suggesting...
new innovations to make each digital and physical experience as close to perfect as possible.

Covid-19, of course, pushed companies to innovate quickly and decisively in response to challenges they could not have imagined. Through its 1,700-plus physical stores, a mainstay feature in big cities and rural towns across Canada, Canadian Tire Corp. Ltd. is a leading retailer not just of tires and automotive products but also hardware, housewares, and outdoor gear, among other things. With the pandemic, website-generated sales jumped from 5,000 per day to more than 100,000 overnight, says John Koryl, president of CTC Digital, the group charged with overseeing the company’s digital transformation. Within a week of mandatory store closings, the company launched its first-ever curbside pickup service.

With stores reopened, Koryl and his teams are working at top speed to adapt to a retail world forever changed. For Canadian Tire Corp., digital transformation involves not so much shifting from physical customer experiences to digital ones but using continuous product design to monitor and improve a vast network of touchpoints where the physical and digital intersect. Remarkably, while 70% to 80% of customers start their interactions on a website or app, “Eighty-plus percent still consummate the transaction in the store,” Koryl says.

Customers have shown they love the ability to order online and pick up the same day at their favorite store, so that pandemic-born service is here to stay. But they also want the option of home delivery or to wander the store using their in-store app to guide them to the right aisle for the dishwasher pods and to let them know how much “Canadian Tire Money” they have left to spend through the loyalty program.

At every turn, a continuous product design platform, often paired with customer surveys, is helping the company refine and improve existing services and create new ones—whether offering customers more seamless payment options or additional delivery options. “There’s nothing like solving a problem when you can put your feet directly in the shoes of that customer,” Koryl says. The ongoing questions are “How do we make it one percent better? How do we eliminate the biggest problem our customers had yesterday?”

For home goods retailer Bed Bath & Beyond, the pandemic spurred its transformation from being a “multichannel” retailer—with separate and distinct digital and in-store operations—to “omnichannel”—in which customers move seamlessly between digital and in-store experiences in whatever ways work best for them. In Bed Bath & Beyond’s first quarter of fiscal 2021, nearly a third (31%) of its digital sales were fulfilled by physical stores through services such as curbside delivery, in-store pickup, and same-day delivery, says Rafeh Masood, chief digital officer and interim chief brand officer. The omnichannel approach represents not just an effective pandemic response but also a blueprint for a future competing effectively with the largest digital native retailers, Masood says.

That transformation has required streamlining and improving the customer experience at every level, using continuous product design to detect and address problems and opportunities. “We used to have a checkout process on our website that was seven steps long. We reduced that to three steps and have addressed over 300 customer experience opportunities,” Masood says. “We have removed a lot of friction and made the process simpler and easier.”

Such improvements have required a new way of customer-centric, digital-first thinking across the company and supported by top management, Masood says. “We moved away from pipeline and project thinking, where you’re focused on one project at a time, with a start and end date, to more about platform and product thinking, where we’re continuously evolving the experiences to meet the needs of our customers.”

Empowering People to Speak and Be Wrong

Even superlative technology can’t drive the type of change companies need if the culture doesn’t support it. In a February 2021 Harvard Business Review Analytic Services survey, 84% of executives cite having the right culture as a key “pillar” of digital transformation. FIGURE 2

To flatten hierarchies and encourage bold, customer-based thinking, companies must reexamine and, if necessary, revise cultures in which “the overwhelming, even if sometimes

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Three Pillars of Digital Transformation

Culture, processes, and technology form the triumvirate

How important is each of the following to the successful digital transformation efforts of your organization? [RESPONDENTS WHO SAY THE PILLAR IS MODERATELY IMPORTANT TO EXTREMELY IMPORTANT]

- **84%** Having the right culture in place
- **82%** Having the right processes in place
- **79%** Having the right technology in place
- **89%** Having a combination of all of the above in place

Source: Harvard Business Review Analytic Services survey, February 2021
Instead of fearing reprisals for challenging a superior’s opinion or for venturing a spontaneous idea, people must feel empowered to speak out and make decisions that could turn out to be wrong.

Companies adapting and thriving in a time of rapid change emphasize “psychological safety,” Edmondson suggests. Individuals must take responsibility for their actions and accept the possibility that an idea may be (respectfully) shot down, says Edmondson, who is also author of *The Fearless Organization: Creating Psychological Safety in the Workplace for Learning, Innovation, and Growth*. The key is that what gets shot down is the idea, not the person. People who feel psychologically safe are more willing to leave the comfort of their specific department and engage in “teaming,” she explains.

At Virgin Voyages, meetings to discuss the quality of sailors’ digital experiences may include representatives from the different parts of the organization responsible for user experience, IT, sales and marketing, the contact center (fielding customer calls), operations, and other business functions. Each participant in such meetings comes armed with specific priorities and interests. Minimizing friction starts by acknowledging that such conversations between different parts of the organization are challenging, the company’s Fonseca says, especially when exploring a problem. “Nobody wants their baby called ‘ugly,’” she adds.

The company’s continuous product design platform serves as “a fabulous collaboration tool,” Fonseca says. Shared data and transparency help eliminate defensiveness and territorialism, since nobody’s arguing over who owns the truth. Instant calculations show annualized savings opportunities, or costs in terms of “abandoned cart value,” which describes the potential revenue at stake when customers fill up their shopping carts only to drop off before completing the purchase. Such insights help the group prioritize which issues to address and in which order.

Fonseca recalls a recent alert Virgin Voyages received about how customers trying to book voyages were repeating a task multiple times only to receive the same error message—a classic annoyance for any digital customer. While the error rate initially suggested a tech glitch, a collaborative analysis involving IT and Fonseca’s user experience group revealed the feature was technically sound, indicating that, more likely, users found the navigation confusing. The solution involved gentler and clearer messages to steer customers away from the problem and to improve the user experience.

Considering that digital transformation is about becoming faster, Canadian Tire Corp.’s Koryl offers some guidance that may seem counterintuitive: patience. In companies with long histories and cherished traditions, the value of sharing data throughout the organization and continuously improving the digital experience will resonate more strongly with some people than others, he says.

In the retail world, “you have to have patience with your store teams, your merchant teams,” says Koryl. “They’re not laggards and behind. They’re just really busy with their day job.” Digital transformation leaders must enable organization-wide collaboration and align teams and priorities with a shared and customer-centric view of all their digital initiatives. “How do we make it so that we can bring and find little beachheads where we can share additional knowledge to make their life easier?” Koryl asks.

**Best Practices for Continuous Improvement and Innovation**

Digital transformation is at best spotty without leaders championing its cause and projecting clear goals for success, IMD’s Bonnet stresses. “I still see people doing digital transformation because it’s fashionable, to be honest,” he adds. “You end up with random acts of digital.” To empower others to act, those at the very top of the organization must establish and communicate clear digital goals and objectives.

“We’ve known for a while that the impediment to doing this transformation at scale and at speed is actually people,” Bonnet says. “So, caring about your employees, retraining them, skilling them, and spending time explaining what you’re trying to do, in their terms, is absolutely essential.”

A digital strategy, says Koryl, must be guided by an overarching corporate strategy addressing the following question: “What do you want to be for your customer?” Canadian Tire Corp.’s need to counter the rise of digital-only
“You have to love learning, adapting, and growing as a digital team for this to work,” says John Koryl, president of CTC Digital.

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