

The Culture of Data Leaders

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Catherine Poirier, Carina Cheng, Ellora Sarkar, Henry Silva, Tom Kudrle



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Introduction

Digital transformation has taken the spotlight in recent years, and this focus has come into sharper relief as organizations transition to virtual models. Companies are eager to adopt the latest technologies, apply advanced analytics, and leverage data to enhance performance and drive business success. While the technological elements necessary for successful digital transformation have been explored deeply, less attention has been paid to the cultural changes required to drive this evolution. In practice, many organizations find that the cultural elements of digital transformation are the most difficult to introduce and enforce.

Our research has shown a powerful correlation between a company's technological maturity or tech intensity and its business performance.¹ Our work surveyed over ~130 firms across major verticals, including manufacturing, financial services, healthcare, retail, and software. We categorized these firms on a spectrum ranging from digital "leaders" to "laggards" by evaluating them on 100+ characteristics characterizing their technology adoption (e.g., data platform architecture) and capabilities (e.g., support of citizen developers). We found that tech intensity impacts both 3-year revenue CAGR and 3-year total enterprise value CAGR, with digital leaders outperforming digital laggards on these measures and others.

As might be expected, many leading firms are digital natives who started from a clean technology slate. We found, however, that leaders were also often large traditional enterprises who had successfully digitally transformed. Laggard firms, in contrast, are characterized by legacy infrastructure and practices, and face a variety of challenges as they adapt to compete.

This paper aims to understand the cultural elements of these organizations. We present insights based on conversations with a subset of digital leaders and laggards, exploring the relationship between these firms' data cultures and their technological maturity. Our research finds that certain behaviors, values, and beliefs play a significant role in determining where a business is today on the digital transformation spectrum.

Specifically, we identify four key cultural themes differentiating companies with high and low tech intensity.

1. They adopt a growth mindset towards risk and continuous learning; they believe people and the organization itself can (and must) evolve over time and see data as critical in enabling this evolution
2. They leverage data to create a shared context that facilitates collaboration and decision-making and promotes transparency across the organization
3. They encourage and empower teams to examine data; there is a focus on setting realistic goals and using data to measure performance against metrics
4. They use common targets and objective measurements to align their organization, allowing increased autonomy for teams to pursue goals in creative ways

Broadly speaking, we also find that digital leaders go beyond the specific individual practices enumerated above. These firms recognize how critically important these cultural elements are and take active steps to drive these cultural tenets into the organization's daily operations.

¹See [Want a More Equitable Future? Empower Citizen Developers](#) for an initial review of the findings; additional details to be published later this year

Adopt a learning mindset

100% of digital leaders we spoke to indicate their firms have a growth mindset towards risk taking and continuous learning.

“We encourage taking risks and chances. Your success is based on how many experiments you can run.”

- Digital Leader

“We like to say we encourage risks, but when it comes down to it, they aren’t rewarded. If [not successful], they are penalized, even though we espouse this idea of risk takers.”

- Digital Laggard

Digital leaders are finely attuned to the speed with which their competitive landscapes are changing. In this context, a “risk averse” strategy is a non-starter; for these firms, sensible risks and deliberate experimentation are not luxuries that enable incremental success, but rather fundamental strategies to effectively compete. The digital leaders we spoke to consider themselves “learning organizations” and believe they must constantly adapt to avoid obsolescence. This mindset requires firms to place a high value on data: learning, improvement and sensible risks can only come through continuous feedback.

Digital leaders emphasize the importance of the learning value of experimentation. Even if a goal is not met after the completion of an experiment, the organization has gained knowledge about the market, product, or process that they can use for self-improvement. Digital leaders do recognize that some risks are too costly, and encourage effective design, planning, and opportunity assessment to maximize both the odds of success and the learning opportunities of their initiatives. Wherever possible, they leverage data to both design and assess such experiments.

Additionally, leaders recognize that the development of individuals is essential to long-term success. Investments in training may not always result in immediate (e.g., same quarter) payoffs. These investments are instead treated as more akin to R&D, where impact can be profound but takes longer to come to fruition. This approach to training is particularly true when teaching fundamental skills such as problem solving, statistics, and design thinking. Digital leaders make available and prioritize these skills in their learning programs, rather than focusing narrowly on skills directly related to project work.

Companies we characterize as digital laggards, in contrast, prioritize short-term efforts to address immediate imperatives, often showing a focus on optimizing existing initiatives. On-the-job training emphasizes a narrow range of topic areas designed for “as-is” job requirements and near-term payoff. These organizations do not emphasize continuous learning and development, instead perpetuating a culture where risks are discouraged and training is transactional. In our conversations, we noted this risk aversion was often accompanied by a lack of trust in the organization: both in the skills of its employees, and in leadership to successfully drive and maintain such a learning environment.

This is not to imply that developing a learning mindset is smooth sailing, even for digital leaders. Respondents at leading firms sometimes acknowledged a struggle to balance risk-taking with the failures that can follow. In other cases, we heard that while organizational leadership wholly bought into driving a learning mindset, practical realities kept forcing them to prioritize a more short-term approach to meet deadlines and customer expectations. Instilling a learning mindset is a cultural shift that requires deliberate effort and practice over time, and for none of the digital leaders we spoke to was it a “light switch” change.

Create shared context through data

“Decisions are often not made by one person, rather, they’re made with the whole group. For example, the finance team would run scenarios...and there would be feedback from the CEO on that. Each of these parties brings some data to the table in the decision-making process. So, all these data are looked at by everyone. Everyone has a chance to voice concerns, or to show if there are any negatives.”

- Digital Leader

“I wish we could say we are data-driven in decision making, but unfortunately we have too many executives and not everyone has the same value for data. For example, I can describe to them what the data say, but they have a lot of experience, and they would rather trust their intuition.”

- Digital Laggard

Digital leaders strongly believe in transparency when it comes to data and decision making within the organization. At leading organizations, relevant and clearly-understood data enable smart and innovative decisions, placing the focus on making data widely available and establishing a shared organizational context. This environment is accomplished not only via infrastructure but also via cultural norms: in our conversations with leaders, there was an underlying assumption that sharing data between teams and departments is necessary for collaboration and problem solving. Therefore, data privileges are not inherently restricted by role or responsibility, and data-hoarding behaviors are strongly discouraged. We also observe a belief among digital leaders that data enable good ideas to come from anywhere in the organization. Individuals, backed by data, can and do influence key decisions up through the most senior levels of the firm. For more mature enterprises we spoke to, developing this mindset required active evangelism from leadership (and at several companies, respondents reported significant changes occurred only after turnover at the executive level).

At the same time, digital leader firms recognize that data need to be handled with care; appropriate controls are put in place to ensure data are properly governed and protected (e.g., for customer privacy or ethical reasons). These controls, with clear rationale for their usage, increase rather than hinder use and sharing of data. Employees feel empowered to access data knowing that restrictions will prevent any accidental misuse.

Employees at digital laggard organizations, in contrast, typically keep data close to the vest, with data and rationale for decision-making shared only on a “need-to-know” basis. In these organizations data are often hoarded as a source of power: if no one can dispute the numbers, no one can argue with the decisions. This also perpetuates—and is exacerbated by—“shadow IT” groups in organizations, where data are stored in departmental silos rather than a centralized data store.

Digital laggards often favor business judgment and a “culture of genius” over data-driven decisions, where decisions are accepted based on the expertise and tenure of individuals. Data, when used, often justify decisions already made by leadership, and are not interrogated more deeply. We heard two primary causes for this. First, some respondents referenced entrenched leadership accustomed to making decisions based on business judgement. Other organizations recognized the importance of data in decision-making, but were limited by a lack of resources to enable such decision-making. These tendencies perpetuated cultures where power dynamics, rather than a common understanding of information, are central to the decision-making process.

Even at digital leaders, we did find evidence of uneven levels of maturity within organizations. Some respondents suggested that certain functions didn’t require the same level of data literacy, indicating that a shared vision of the importance of data may still be imperfect, even at leading organizations.

Measure everything

80% of digital leaders indicated their firms conduct some level of 360-degree reviews during performance evaluations, while only 17% of digital laggards said the same.

“End goals are all aspirational. It’s part of an implicit understanding that you won’t get to achieve part of your goals – or even 20%. We know you won’t achieve it...it’s really hard for us to create measured goals...so we default to qualitative measurement and look at the short-term effort and things that the team actually got done.”

- Digital Laggard

Digital leaders encourage employees to collect and examine as much data as possible, both to inform objectives and to measure progress. They do not shy away from using detailed metrics to define success and believe that realistic but ambitious goals must be grounded in meaningful and measurable data.

There is an expectation of employees at leading organizations to continuously track progress toward project goals as well as individual performance goals. Formal evaluation processes are based on data-driven metrics and complemented with 360-degree reviews. The result is a culture that encourages individuals to evolve and adapt efforts based on as much input as possible, rather than one focused narrowly on evaluations from “above”.

This focus on measurement might conjure an image of a rigid workplace, where employees are constrained to “follow the data”. However, we observe the opposite: the focus on measurement gives teams flexibility and autonomy in achieving their goals. In fact, the increased structure through clear data-driven goals creates an environment where innovation, experimentation, and risk-taking are encouraged; employees can progress towards goals in creative ways. Interestingly, digital natives we spoke to treated this flexible, risk-taking approach as a given. It was in our conversations with more traditional organizations who transformed into digital leaders where respondents actively highlighted this as a notable change from before.

The challenge for digital laggards is in setting goals that are realistic and well understood. In our conversations, we found that digital laggards understand the importance of goal-setting; however, they set aspirational goals that are insufficiently grounded in data and that employees believe are impossible to achieve. Faced with such objectives, employees shy away from measurement, anticipating that it will show them falling short of expectations. This leads to a “best effort” approach, unguided by real-time feedback from data.

The failure to employ data and quantitative metrics causes digital laggards to instead focus primarily on adherence to process. These firms develop complex, yet qualitative, practices that they use to prove effort in place of objective measurements of success. Deviation from these practices is discouraged, as benefits from doing so are difficult to measure or justify. Respondents at laggards organizations reflected how this approach stifles innovation, as it disempowers employees to adapt their approaches to the problems at hand.



Data culture leaders experience structured goals and metrics yet flexibility in process; there exists a tradeoff between “the what” and “the how”.

Connect data and metrics to align the organization

“The company will set out [its] plan for [the] year. Then that trickles down through the organization. It all clearly stacks up to each other... Everyone can view everyone else's [goals]... it creates an open line of communication [across teams].”

- Digital Leader

“I wish [I understood how my team's goals fit into the larger company's goals]. When we get goals from the CEO, they are so abstract. I cannot understand how to connect my goals with the overall goals. If I tried long and hard, I wouldn't be able to connect the dots.”

- Digital Laggard

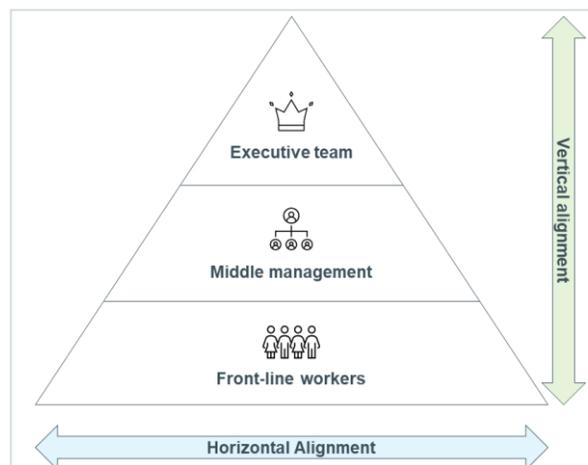
Finally, digital leaders use data-driven objectives as coordinating functions across different levels of their organization. These objectives are developed via a methodology transparent to all, and they clearly align to the organization's strategy. Teams and employees can articulate how their specific objectives contribute to their company's overall objectives; this empowers teams to operate with a common purpose, or “North Star” vision. For digital leaders, a well-aligned set of goals creates a shared vision for the entire organization, channeling innovation and creativity at the individual level towards ultimate firm success.

Implementing objectives across the organization does not mean simply mandating OKRs (Objectives and Key Results) from leadership, as this approach can quickly become an organizational burden. Teams and employees need to buy in to targets and understand how those targets build toward the company's goals, which is often done through a combined top-down, bottom-up process, creating a sense of unity and alignment.

Even at digital leaders, however, we heard examples of companies struggling to balance between leveraging data to set goals and bogging down decisions in exhaustive analysis. Respondents at times were frustrated that simple decisions (e.g., fixing a poorly-placed button on the mobile app) required significant overhead and data instrumentation.

Digital laggards, in contrast, often struggle with the basic elements of goal-setting: company priorities typically reflect only high-level outcomes, with often tenuous connection to an overall strategy or explanation of how teams contribute to these outcomes. Consequently, employees at these firms deprioritize poorly-understood objectives, causing companywide misalignment in driving toward strategic goals. The tendency toward a “culture of genius” at these organizations, as described earlier, exacerbates this problem. Individuals believe they know what is best for the organization and focus their efforts there, even if this does not fit into the broader strategy.

The impact of data culture on a firm's organizational alignment can be visualized as a pyramid, where the top of the pyramid consists of a company's leadership and the bottom comprises its front-line workers (see below). Adopting a data-driven culture aligns a company both vertically and horizontally. The use of data-driven metrics and objectives enables better understanding of how individuals and groups align with overall company goals (vertical alignment). Common data models and transparent access enable teams to collaborate efficiently and reduce the tax that often thwarts inter-functional teaming in larger organizations (horizontal alignment).



Data culture can align an organization both horizontally and vertically

Culture as digital transformation agent

Our conversations with digital leaders reveal common practices highlighted above: adopting a learning mindset, providing transparent access to data, relying on clear metrics to track progress, and using these metrics to align the organization. Spanning all these, digital leaders emphasize the data culture itself as a centerpiece of their business.

This emphasis enables culture to play a key coordinating function for employee efforts. For digital leader firms, culture is the mechanism used to align beliefs, espoused values, and day-to-day actions. To be successful, these different elements of the culture need to be consistent and reinforcing.

At digital leaders, the behaviors of employees reflect and reinforce the stated company values, and these in turn are driven by the core beliefs of leadership. We observed this behavior at both digital natives and successfully transformed enterprises with decades of operating experience. Employees at these organizations understand how an organization expects them to act, and why. Digital laggards, on the other hand, show misalignment between what is formally espoused and on-the-ground behavior. This persists despite a clear and consistent recognition in conversations with digital laggards that a data-driven culture is important. In these trailing organizations, entrenched habits, lack of individual skills, and insufficient top-down focus thwart efforts to align behavior with ambitions.

This is not to say that digital laggards are doomed to stall in their digital transformation journey. As discussed above, we found multiple examples of current digital leaders who had transformed (or were in the process of transforming) their cultures. Digital leaders themselves also referenced areas of tension or areas of potential improvement in their own internal cultures, demonstrating the need to continue growing and adapting culturally for mature organizations.

Throughout our work, we found that technologically mature firms—whether digital natives or successfully transformed traditional firms—not only enjoy an advantage in tangible business outcomes, but also show distinct differences in their approach to their data culture. Establishing beliefs around the value of learning, risk-taking, transparency, and measurement, reflecting them in company values, and incorporating them in day-to-day practices are all key to a strong data culture and successful digital transformation. Our findings indicate that organizations who are eager to evolve must find a way to not only articulate and implement these principles, but transform their core beliefs about who their people are and what they are capable of.

About Keystone Strategy

Keystone Strategy is an innovative economic, technology and strategic advisory consulting firm with locations in Boston, New York, San Francisco, and the Seattle area. The firm brings an uncommon approach to deliver transformative ideas for tech clients, global law firms, and Fortune 500 companies facing complex and often not-yet solved business challenges. Keystone brings an interdisciplinary approach leveraging the intersection of economics, technology, and business strategy.

For more information about Keystone Strategy and this work, contact tkudrle@keystonestrategy.com