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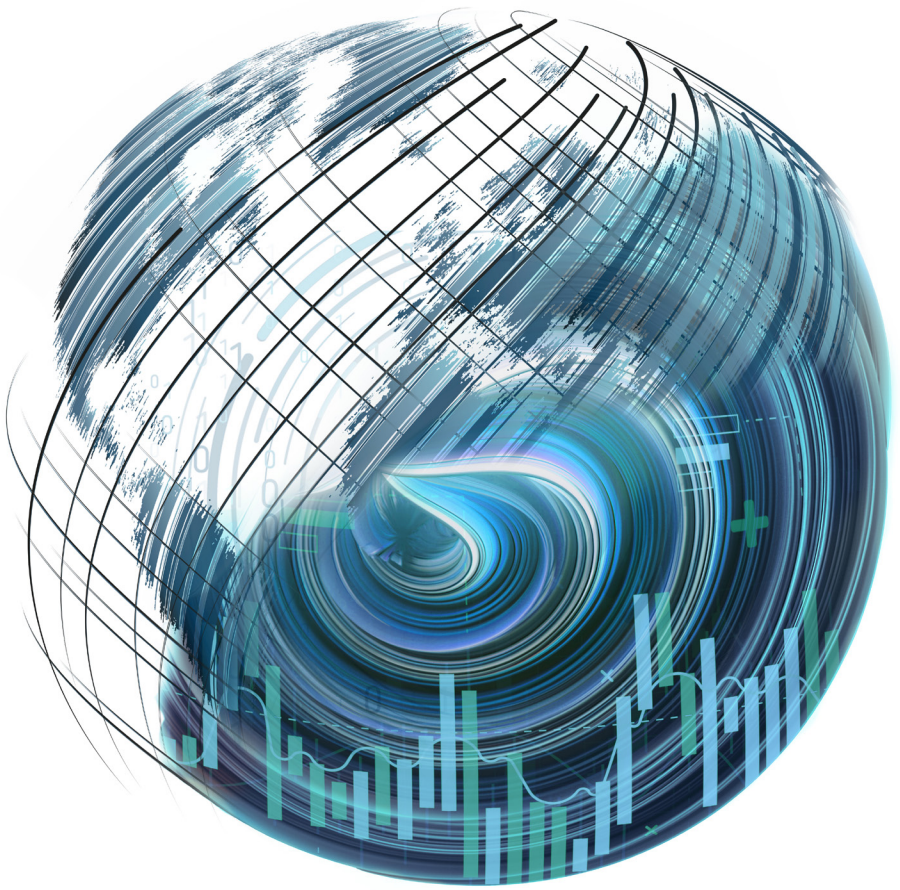


A Field Guide for Human Capital Decision Intelligence

Move from insights to meaningful action on your work, workforce, and workplace challenges

By Dan Roddy, David Mallon, and Marc Solow

Insights2Action™

Foreword

"We make work better for humans and humans better at work™." This is the aspiration that we created for the US Human Capital practice of Deloitte Consulting. It resonates with the leaders we engage with every day about their workforce, organization, and HR function. Like us, they believe that people are the enduring source of competitive advantage—regardless of the mission of their organizations. But the truth is it is far easier to talk about aspirational missions and goals than it is to deliver on them.

Disruptive forces are sharply changing how we live and work, creating an imperative for enterprises to rapidly adapt. Expectations for the ways in which enterprises should operate in business and in the world are shifting in both incremental and radical ways. Advanced digital technologies are challenging leaders to reinvent everything from where we work to the way we work—and frankly the work itself, too. And, through these trends of disruption, the accelerating pace of change adds another layer of complication.

This field guide will not solve these problems for you (if such a guide exists, I would be glad to hear about it!). However, it *will* show you and the leaders in your organization how to start seeking the best solutions for yourselves. It's about building the muscles needed to make sound, timely decisions on the human side of enterprise—the myriad of large and small choices about work, workplace, and workforce that leaders at every level are called upon to make.

Bolstering the decision intelligence of your organization is the best form of prevention against fear-driven choices—the kinds of decisions that can result when leaders are not confident in their ability to sense, analyze, and act in the face of uncertainty and risk. I believe this field guide can help your organization's leaders make decisions that make work better for humans and humans better at work—with beneficial, long-term impacts for workers, employers, and society.

I have worked closely with your guides—Dan Roddy, David Mallon, and Marc Solow—on the journey ahead for more than a decade now and have followed the evolution of their thinking about decision intelligence and the Sense-Analyze-Act model with growing appreciation and enthusiasm. All three have deep backgrounds in both human capital consulting and research and are key thought leaders in the Deloitte Consulting Analytics and Insights Solutions practice. But more importantly, they always strive to solve problems that matter, and that comes across in every aspect of this insightful, yet very practical, field guide.

As you read this, I hope you can take inspiration from this Nelson Mandela quote, as I do, when making decisions: ***"May your choices reflect your hopes, not your fears."***

Michael Stephan
US Human Capital Leader
Deloitte Consulting

Introduction

Everything in business comes down to people. Revenue generation, profitability, customer experience, innovation, and digital transformation. You name it, the people with whom you work play an instrumental role in it. That's why making work better for people and people better at work is a perennial opportunity for all leaders.

The ability to consistently make timely and sound decisions about work, workplace, and workforce is essential to organizational success, but it's also a formidable challenge. Many of the leaders with whom we work are committed to building a robust capacity for human capital decision intelligence into their organizations. Yet, our conversations with them and our research across industries reveal most are unhappy with their progress—overwhelmingly, they say leaders throughout their organizations do not have the information needed to make the best decisions possible on the human side of enterprise.

We are convinced that moving the needle—that is, actually making work better for people and people better at work—requires a new approach to taking and making people decisions. This field guide describes that approach and offers practical advice for developing and embedding it as a capability in your organization.

In **Section I**, we'll begin exploring this capability by describing the obstacles standing in the way of making good work, workplace, and workforce decisions. It isn't a pretty picture, and it could be temporarily demoralizing, especially since you are likely to see more than a few of these obstacles in your own organization. But until you have a clear understanding of the various ways in which decision-making can jump the track, you won't have the baseline needed to evaluate a better way.

We'll describe that better way—a new approach to human capital decision intelligence— before the close of the first

section. This approach is driven by a core process with three components: Sense, Analyze, and Act. It aims to provide leaders with the forward-looking insights and research-backed perspectives required to *sense* what matters; equip them with the evidence-based tools and practical guidance needed to *analyze* their options; and foster their ability to *act* on what they know—to reduce uncertainty and improve decision outcomes.

In **Section II**, we'll dive into the first component—Sense. This is where companies pick out the material signals emitting from internal and external events and the patterns relevant to work, workplace, and workforce. In the quest for decision intelligence, sensing requires a broadening of view and an intentional narrowing of focus. Leaders can't pay attention to everything, let alone solve for everything. Nevertheless, they must be able to pay attention to and solve for what matters most to their companies in a timely manner.

Toward this end, we'll define the three traits that enable companies to pick out the signals in our noisy world: external orientation, internal awareness, and focus. Then, we'll discuss guidelines for bolstering the sensing capacity of your organization: start from your company's desired outcomes; seek out forward-looking signals; and be expansive in data-sourcing, then, filter and frame data to boost the signal.

In **Section III**, we'll explore the second component—Analyze. This component of decision intelligence is the most human of activities; in essence, it is thinking. Analysis is how leaders decide what to do about an insight. It ensures they are figuring out how to solve work, workplace, and workforce problems that matter.

To help you achieve this, we'll define three traits that support analysis: problem definition, uncertainty and risk management, and choice selection. Then, we'll offer guidelines for building your organization's analytical prowess: a keen awareness of mental models and cognitive biases, the use of intentional frameworks and heuristics, and thinking in probabilities.

In **Section IV**, we'll complete the process with an examination of the final component—Act. Too often, organizations are unable to implement leaders' decisions about work, workplace, and workforce, because hurdles embedded in structure and culture (and in the ways in which decisions and performance are evaluated) cannot be overcome. This component provides the missing connection between deciding and doing. It is the endgame of decision intelligence.

To help you win in the endgame, we'll examine the traits that define the ability to successfully implement decisions on the human side of enterprise: a bias for action, the ability to influence, and the willingness to accept accountability.

Then, we'll offer guidelines for transforming insights into effective and timely action: clarifying decision rights and governance; building the conditions for action into decisions; and activating decision implementation and execution with data.

"No technology, ever, can embody the passion of purpose that motivates us to embark on an adventure"

Before you begin the journey to bolstering human capital decision intelligence of your organization, we would like to offer a final thought. Powerful and sophisticated technologies, like artificial intelligence and machine learning, are instrumental supports, enablers, and augmenters of decision intelligence, but they will never replace human decision-makers.

The hero in what Joseph Campbell labelled the "Hero's Journey" will always be human. No technology can ever embody the passion of purpose that motivates us to embark on an adventure; win a hard-fought victory over our limitations; and return home again, transformed, to create the stories that guide the next generation. No technology can muster the competencies of curiosity, creativity, and critical thinking, and even more importantly, the values of empathy, courage, and love, that are needed to make work better for humans and humans better at work.

These qualities and traits—which you and all leaders in your organization can bring to human capital decision intelligence—are irreplaceable.

The elusive promise of decision intelligence

Section I

Organizations everywhere are standing on the threshold of a new era in decision-making. A global mining company uses data captured from the work itself to sense changes in worker skills needed over time, inform workforce development investments, and guide individual employee career choices. A logistics company anticipates truck repair needs, ensuring people and parts are at the ready. A consumer products company uses real-time visualizations of their distribution channels to identify the root causes of customer service issues within minutes and assign resources to solve them. A high-tech company tracks the markers of company culture across a virtual workforce, ensuring their "secret sauce" isn't diluted by distance.

The technological enablers needed to consistently deliver actionable insights to leaders at all levels of the organization are at hand. They promise to support a new decision intelligence—to help leaders make sound and timely decisions—from the strategic-level choices made in the C-suite to the myriad tactical choices made by supervisors and teams every day.

So here companies stand, with a newfound capability for making better work, workplace, and workforce decisions within their reach and yet, just beyond their grasp. In Deloitte's 2020 Global Human Capital Trends survey, conducted a few months before the onset of the COVID-19 pandemic, a mere 3% of nearly 9,000 respondents—only 3 in 100 globally—told us they had all the information needed to make people decisions.[1] The situation hasn't improved in the COVID-19 context. If anything, people issues are murkier—and the ability to respond to them more urgent—today than before the pandemic struck. Witness the many business headlines featuring managerial missteps, even among the world's most sophisticated companies. For most, the decision intelligence necessary to align and optimize work, workplace, and workforce in pursuit of mission and strategy remains at best an unfulfilled promise.

"Tech-enablers promise to support a new decision intelligence—to help leaders make sound and timely decisions."

The disconnect between the means of decision intelligence, such as data and sophisticated analytics, and the motivation and ability to wield them in a coherent, consistent manner across an organization is a serious challenge. In a world moving ever faster, employee and corporate performance are at stake, and financial results along with them. The success—and sometimes, the survival—of many companies hinges on their ability to navigate in what John Seely Brown, former cochair of Deloitte's Center for the Edge, calls a "whitewater world."[2] To do this, leaders must be able to continuously and quickly identify and respond to internal and external challenges and opportunities arising at the intersection of the workforce, the workplace, and work itself.

What, then, is holding companies back? In this section, we will introduce ways to cross this threshold. We will start by surfacing the primary obstacles that can stand in the way of making consistently sound people decisions across a business, including the natures of our world, our all-to-human minds, and the structures and cultures of our organizations. We will then suggest actionable steps to realize the promise of decision intelligence—a capability that can enable leaders across your company to *sense* the events that matter on the ever-shifting ground at the intersection of work, workplace, and workforce; *analyze* their decision alternatives; and *act* on the best choices available to them (see "Reframing decision intelligence").

Obstacles to sensing what matters

What makes decision making—especially related to people—so hard? The reasons are many. Let's start this discussion by focusing our attention on attention. Before a decision can be made, there is the matter of *what* decision? What issues are worthy of question? Where and why? Leaders can often miss the most critical questions because of where and how they focus their attention. This makes it difficult for leaders to identify the trends, events, and preferences that affect the human side of enterprise—that is, to discover what is happening that matters most to their situations and companies. This first set of obstacles includes noise, complexity, and human nature itself.

Reframing decision intelligence

Decision intelligence is a relatively nascent field. Many of its early participants and proponents define it in context of technology. From this perspective, it is the application of new cognitive technologies such as artificial intelligence and machine-learning to decision-making. However, we believe this view is far too limited, and it can contribute to the difficulties companies encounter when they seek to realize the promise of better decision-making. That's because while technology is a necessary enabler of decision intelligence, it is not sufficient in and of itself to create decision intelligence. It's time to expand the frame.

First, let's recognize that, while decision intelligence is an emerging discipline, it builds upon the full breadth of the human experience of decisions, including philosophy, economics, behavioral economics, psychology, and sociology, as well as science, technology, engineering, and mathematics. It's the intersection of the humanities and applied sciences aimed at improving how people think.

Second, let's pursue decision intelligence as an emerging organizational capability that can enable companies to make smarter and faster decisions at scale. Technology is one of a set of essential enablers, which also includes the knowledge, skills, and beliefs of people and the support of business and functional leaders.

"The challenge is picking out the signal in the noise. The signal is the truth"

Nate Silver

Noise: The world is a noisy place. But what in its ever-louder cacophony should leaders listen to? Events, trends, movements, projects, conversations, actions, interactions, creation, and destruction: such is the cadence of an organization. The moments continuously occur and disappear as time passes. All that is left for us is the exhaust—in the form of an always expanding and never-ending stream of data. It wasn't long ago that one of the biggest data challenges facing companies was how to obtain it. Now, there is so much data that it can be difficult to grasp its sheer volume, let alone ferret out the insights hidden within it that are relevant to your company: How much is 2.5 quintillion bytes of data per day, anyway?[3]

Noise complicates the ability to monitor what is happening inside and outside the organization and to identify *which* trends, events, and other moments will impact work, workplace, and workforce in time to act. The challenge is picking out the *signal in the noise*. "The signal is the truth," writes Nate Silver, statistician and founder of the FiveThirtyEight website. "The noise is what distracts us from the truth."[4]

Complexity: Companies are operating in a chaotic world of fast-paced change. Conditions are changing rapidly, and the relationship between cause and effect is often only apparent after the fact. There is a near-constant need for coordination of everyone involved on both actions taken and—importantly—on the underlying intentions and assumptions behind those actions. Consider the HR department that, in January 2020, after months of work, launched an analytics-based dashboard capable of predicting employee turnover. Two months later, pandemic lockdowns began, work went remote, and the factors driving turnover radically changed. The model behind the dashboard needed to be updated, as well as how the dashboard was used and by whom. A few months later, as the lockdowns started to end, the Great Resignation began, and the factors driving turnover changed again.[5] Ultimately, the underlying assumptions and the model needed updating.

Fast-paced change and complexity go hand in hand: The faster the change, the more disruption in the underlying data. The more disruption in the data, the more vulnerable the assumptions underlying your models, the models themselves, the insights that they produce, and the decisions leaders make based on those insights. This is why the perspectives and models and analytics cannot be static—they need to be maintained and upgraded as conditions change.

Human nature: The third obstacle to sensing what matters is the predilection of leaders—and human beings in general—to come to decisions and act too quickly. Herbert Simon called this tendency *satisficing*, a portmanteau of *satisfy* and *suffice*. "Stated otherwise," Simon said on accepting the Noble Prize in Economics in 1978, "decision-makers can satisfice either by finding optimum solutions for a simplified world or by finding satisfactory solutions for a more realistic world."[6] In both cases, satisficing is part of how leaders can move quickly and responsively—and is a cause of why leaders might cut short the process of sensing what matters to their companies prematurely. Thus, the decisions leaders make and actions they take may not accurately reflect the realities they face.

Obstacles to analyzing decision choices

When leaders are able to figure out where they should be paying attention, a second set of obstacles rise up to block the path to making decisions on the human side of enterprise. These obstacles, which include data traps, hypothesis errors, and cognitive biases, make it difficult to analyze situations, surface underlying relationships between moves and outcomes, and develop effective responses.

Data traps. Data can mislead decision-makers when they aren't clear about when and how to use it. "First, there's an infinite amount of data, and which data you choose to pay attention to biases results," explain professors Chris Bingham and Rory McDonald. "Second, data is, by definition, dated. It describes the past, not the future—and is therefore less revealing about what could be. No data is infallible, yet data fallibility is often overlooked in pursuit of quantitative order."[7]

Consider the online real estate company that believed its expertise at applying artificial intelligence to real estate search and advertising and its access to vast amounts of related market data would give it an advantage as a buyer and reseller of houses. The macroperspective on the housing market in each locale provided by its "big data" analyses was just that: one perspective. The company didn't pay enough attention to broader economic trends or to the local, house-by-house context. As a result, it exited the reselling business and

recorded a loss of several hundred million dollars.[8] This doesn't mean data should be ignored, but it does mean the choices we make about what data to use are at least as important as the content of the data. And no single set or source of data should always be the sole basis for analysis and decision-making.

Most pernicious of all, data is often—consciously or unconsciously—twisted to support a predetermined choice versus informing it. As Mark Twain was fond of saying, "There are three kinds of lies: lies, damn lies, and statistics. Data is helpful—often, essential. But leaders need to cultivate a healthy understanding of what it can and cannot do, where it comes from, and—perhaps most importantly—why they want it in the first place. Cassie Kozyrkov, head of decision intelligence at Google, asserts that the best decision-makers are honest about the role that data will play in their decisions. They "call their shots," identifying their default decision *before* engaging with any data.[9]

Hypothesis errors. Even when leaders recognize and avoid cognitive biases, they can be subject to traps in hypothesis formulation and proofs that can waylay analysis. The first trap is drawing the wrong insight or conclusion from information. In statistics, this is called a *Type 1 error* and it involves a false positive; that is, finding a significant relationship within data when one doesn't actually exist. The second is failing to draw the right conclusion. This is known as a *Type 2 error* in statistics; that is, not finding a significant relationship when one exists. The third error is trying to prove an irrelevant hypothesis. This is a *Type 3 error*, which Cassie Kozyrkov describes as "using all the right math to answer the wrong question."[10]

Cognitive biases. Leaders, like all of us, are subject to a host of cognitive biases that can skew their decision-making: Wikipedia lists more than 200 of them.[11] Amos Tversky and Daniel Kahneman, who were inspired by Herbert Simon and pioneered the discipline of behavioral economics, formalized the notion of cognitive biases in the 1970s. In doing so, they poked holes in the assumption that managerial decision-making was entirely rational in the economic sense. Instead, they showed there are consistent and unconscious flaws in human judgement, like the tendency to interpret information based on preconceived ideas (i.e., confirmation bias), that stand in the way of sound analysis and decisions.

Leaders, like all of us, are subject to a host of cognitive biases that can skew their decision-making.

Ⓐ Obstacles to acting in a timely manner

The third set of obstacles that stands in the way of decision intelligence affects *decision-taking*: that is, the willingness and ability of leaders to commit to and implement the best work, workplace, and workforce choices. These obstacles to decision intelligence include organizational barriers, flawed decision processes, and the tyranny of operational benchmarks.

Organizational barriers. Obstacles to acting effectively on work, workplace, and workforce decisions typically come in two flavors: structural and cultural. The hierarchical structures of most companies can slow decision-making and response times. Even when organizational structures are flatter and power to make decisions is distributed more widely, obstacles like opaque decision rights and incentive systems that discourage risk can inhibit timely and preferential action.

Dysfunctional organizational cultures can have a similarly negative affect on decision-taking that may threaten the status quo or entail even the smallest degree of career risk. Fear in any form, as pointed out by W. Edwards Deming and, more recently, by Amy Edmondson, is a particularly powerful obstacle to action, and both strongly advised eradicating it whenever and wherever it pops up in companies.[12]

Flawed decision evaluation. The tendency of companies to judge decisions by their outcomes is a major flaw in the way they evaluate decision-makers and a substantial obstacle to effective decision-taking and accountability. It's called outcome bias and was first studied by University of Pennsylvania professors Jonathan Baron and John Hersey.[13] Judging decisions on outcomes is often a mistake because there are many factors affecting outcomes that are unknowable to decision-makers, especially in the VUCA (volatility, uncertainty, complexity, and ambiguity) environments in which most companies operate today. This kind of Monday-morning quarterbacking can inhibit the willingness of leaders to make and take decisions as well as assume accountability for them. Decisions are moments in time, best evaluated against what was known at that moment.

The tyranny of operational benchmarks. The misuse of operational benchmarks is a third obstacle to decision-taking. As data potentially relevant to the context of a decision, they can be useful source for identifying trends and recognizing patterns. However, far too often, they are a source of organizational confusion as to the effective use of data in the best circumstances—and a decoy to avoid decisions in the worst.

Some deciders avoid the hard work of making an informed, effective decision by simply looking for the "above average" choice as compared to competitors. Take the manufacturer that set its overall budget for employee development based on an average of its competitors—mistakenly believing that investors would punish outliers. That's not being data-driven; that's an abdication of the responsibility to make and take a decision. An effective alternative use would have been to use benchmarks to compare the relative cost to internally develop workers with hard-to-find skills versus hiring in the market and roll that analysis up into a budget that delivered on the organization's overall workforce and business strategies.

Let's also acknowledge that it can be hard to get accurate benchmarks; comparisons are rarely apples-to-apples because individual company contexts and timeframes always vary. Benchmarks have their place as a valuable source of competitive and market intelligence, but if used improperly, they can hold back performance and even become an excuse for inaction.

⚠ Overcoming the obstacles to decision intelligence

We have established the scope of the challenge facing leaders as they seek to bolster the decision-making prowess of their organizations. They are rarely dealing with just one or two of these obstacles. And just as often, what is required is a change in the mindset, in structure, and in culture, as it is the implementation of new tools or capabilities. Like the mythological Hydra, you can chop down one of the obstacles, but it's likely that two more will pop up somewhere else.

Instead of struggling to overcome the obstacles one at a time, companies should seek more than a comprehensive solution: The best path forward is to build a comprehensive capability, one that boosts the level of decision-making while neutralizing the obstacles that stand in the way.

This entails a commitment to a different way of being as an organization—one that embraces and supports decision intelligence.

This decision-intelligence capability should equip leaders at all levels with the means to make informed work, workforce, and workplace decisions, including the ability to:

- ***Sense what matters most:*** Identifying problems and opportunities that have the potential to affect the human side of enterprise on a timely and ongoing basis.
- ***Analyze their choices:*** Defining the problems and opportunities in the context of work, workplace, and workforce, zeroing in on the pivotal issues, and assessing responses in a way that accommodates uncertainty and risk.
- ***Act successfully on their best choices:*** Taking decisions that are most likely to achieve the best outcomes and implementing them in an effective and timely manner.

This continuous and self-reinforcing cycle of Sense, Analyze, and Act is the core process of a decision-intelligence capability (see "Decision intelligence and DEI"). Organizations with such a well-honed capability provide their decision-makers with access to on-demand, forward-looking insights and research-backed perspectives on the issues emerging at the heart of human capital and industry (Sense). They equip their leaders with evidence-based tools and practical guidance to cut through noise and to bring meaning, purpose, and clarity to their people- and work-related strategies (Analyze). And they empower their leaders to make timely, relevant choices in service of the outcomes critical for the business and its people (Act). In the sections ahead, we'll delve deeper into what it takes to activate each of the three components of decision intelligence.

Decision intelligence and diversity, equity, and inclusion (DEI)

To get a sense of how the process of Sense, Analyze, and Act can play out, consider how Deloitte's leaders approached their response to the tragic events and racial upheavals of 2020.

The background. Like many large global companies, Deloitte has been striving to improve DEI within our workforce for decades. It has been 40 years since Deloitte first used its intern program to help minority candidates gain access to the business world. In the 1990s, Deloitte's leaders sharpened the organization's focus on the retention and advancement of a workforce that was racially, ethnically, and gender diverse, and later, broadened our diversity efforts to include abilities, LGBTQIA+, veteran status, and nationality. These efforts enabled Deloitte to deliver several "firsts" in its industry: the first woman chair in 2003, the first Hispanic CEO in 2011, and the first woman CEO among the Big Four accounting firms in 2015.[14]

Making sense of disruption. Sensing usually starts with the identification of potential disruptive events, with the help of analytics to pinpoint the ripples of change that can grow into waves of disruption. In 2020, however, the ripples were more like a tsunami as tragic events, including the deaths of Black people at the hands of police and the outsized toll of COVID-19 on Black Americans, unleashed a global wave of activism.

Accordingly, Deloitte's sensing effort jumped forward to try to fully understand the impact of these events on our professionals. Our leaders approached this by having open, honest conversations with employees and listening to their stories. These conversations provided a human-centric lens for developing an empathic understanding (an essential element in design thinking) of the impact of 2020's events on our professionals. It also made clear their expectations regarding DEI transparency and their desire for an expansion of our efforts.

This combination of awareness of external events and an empathic understanding of those most impacted by them lies at the heart of sensing. It also directed Deloitte's attention to equity as the issue that most concerned our professionals.

Analyzing the current state and the opportunities ahead. Data and analytics supported Deloitte's analysis of equity within the company. Our leaders dug into the data to better understand where the company stood against its DEI goals and to identify a desired future state given an elevated understanding of the importance of equity.

Then, to get from the current state to the future state, our leaders formulated and tested a set of options. Effective analysis requires the ability to conduct a comprehensive review of an organization's current state, using both quantitative and qualitative data. Additionally, it requires being able to use data and analytics to identify your organization's biggest areas of opportunity and help chart a measurable path forward.

Acting for maximum impact. On the basis of their analysis, Deloitte's leaders created a new, expanded DEI organization and appointed a senior-level officer to lead it. A broad set of DEI goals—including mandated actions in recruitment, advancement, retention, leadership and education, community building, mental health, and aspirational wellbeing—were adopted. New DEI targets were set as well, including increasing:

- The number of Black and Hispanic/Latinx professionals in our US workforce by 50% by 2025
- The overall racial and ethnic diversity of our US workforce to 48%
- The representation of racially and ethnically diverse US Partners, Principals, and Managing Directors (PPMDs) to 25% by 2025
- Female representation in our US workforce to 45% and the number of female U.S. PPMDs by 25% by 2025

These goals are a work in progress, but the 2021 Deloitte Diversity, Equity, and Inclusion (DEI) Transparency Report publicly lays out our commitments to our people, and our leaders have assumed accountability for achieving them.[15]

Sensing what really matters

Section II

A produce distributor starts using self-driving trucks to provide delivery services across Texas. A French aerospace manufacturer announces it expects to build 39,000 new-generation aircraft between now and 2040. Two medical doctors in the United Kingdom launch the first all plant-based approach to healthcare. University researchers in Israel successfully teach six goldfish how to drive a car.

Every minute of every day is packed with events like these that seem on first glance to be irrelevant or unrelated, and yet could affect how work is done in your company—where, when, and how does it. Some of these events barely produce a ripple in the corporate consciousness, like the first reported case of a new virus. Others instantaneously generate a tidal wave of change, like the constantly shifting landscape of mandatory stay-at-home orders, social-distancing protocols, mask-mandates, and vaccination requirements put in place over the past two years by governments at every level.

The endless flood of events big and small represents a major challenge for leaders. In the face of all the noise and complexity in the world, as well as the human tendency to jump too quickly to conclusions about whatever is going on, leaders must be able to pick out what matters to the human side of the enterprise. Without clarity as to what matters, leaders' work, workplace, and workforce decisions may not generate meaningful impact on their organization's strategic goals and performance. Moreover, if their choices about what matters are not informed by the right information, the most sophisticated analytics and all the execution prowess in the world may be misdirected.

The need to identify what to pay attention to on the human side of the enterprise is not restricted to external events. It also encompasses everything happening inside the company. A timely example is the so-called "Great Resignation." More employees are leaving jobs. Companies are capturing an overwhelming amount of often-conflicting data from current and prospective employees as to why and what they really want. But preferences seem to be constantly shifting, and different workforce segments may want contradictory things. What should your company pay attention to? How can leaders make decisions that are informed and differentiated for reasons important to the goals and values of the organization? The larger the company, the task of sensing what is happening inside it seems to be more difficult.

Companies with tens of thousands of employees and global value chains generate huge amounts of internal data and information, and they collect even more external data—from their customers, markets, and the communities in which they operate. All of it harbors the kinds of insights on which decision intelligence depends. The challenge lies in identifying and harvesting those insights.

So how can companies pick out the material signals that are indicative of internal and external events and the patterns that are relevant to work, workplace, and workforce? The answer is the first component of a decision intelligence capability: *Sense.*

> ***Sense* defined**
> *The word* sense *has a variety of meanings, but for the purposes of decision intelligence, its most relevant definition is as an action verb meaning "to obtain a clear idea of." Obtaining a clear idea of what is happening in an ever-changing world—and whether and how it relates to work, workplace, and workforce— is the foundation of decision intelligence on the human side of enterprise.*

In the quest for decision intelligence, sensing entails two actions that initially can seem contradictory: a broadening of view and an intentional narrowing of focus. The former action helps leaders see more of what is going on in the world—leaders cannot identify and address what matters if they cannot see, interpret, and contextualize it. The latter action helps leaders pick what's most relevant out of what they see. Leaders can't pay attention to everything, let alone solve for everything. Yet, they must be able to pay attention to and solve for what matters most to their companies in a timely manner—the world is not waiting for them.

Three traits define a company capable of sensing events and patterns that affect the human side of enterprise: external orientation, internal awareness, and focus.

External orientation. A company with an external orientation is predisposed to casting its gaze beyond its four walls. Such a company is curious and humble by nature; it has a culture of learning; it does not believe that it has a special monopoly on knowledge or expertise; and is always looking for ways to learn and improve.[16] From the marketing services company that mines public company reporting for innovative workforce ideas to the pharmaceutical company that encourages leaders to take nonprofit externships to the consumer goods company that regularly commissions external sources for product innovation, all these companies have the organizational version of what Stanford psychologist Carol Dweck labeled a *growth mindset*.[17] External sensing comes in various forms, through partnering, collaboration, and proprietary research.

Companies with an external orientation are well positioned to acquire social capital, the rising importance of which we highlighted in the 2018 Deloitte Global Human Capital Trends study. Social capital—as reflected in the quality of the relationships that companies create and nurture with their workers, customers, communities, and society at large—has joined financial and physical capital as an essential measure of business performance and value. In a telling manifestation of this trend, almost two-thirds of executives rated "inclusive growth" as one of their top-three strategic concerns, more than three times as many as those who cited "shareholder value" as a concern. We pegged this trend as the rise of the *social enterprise*.[18]

The social enterprise recognizes that the organization is not an island. It is a member of the broader networks of industry, community, and society. It's success and vitality are not independent of the success and vitality of these wider circles. Accordingly, a social enterprise invests in and pays close attention to those networks.

This kind of external sensing is enabled by a continuous effort in real time. It includes monitoring and understanding context, not just data points. Understanding the context of events reveals the underlying story. It can elevate decision intelligence by sensing events that will produce an impact on work, workplace, and workforce—sometimes before employees and other stakeholders are fully aware of what is happening and ideally in time to frame responses and act. That produce distributor is reducing costs and increasing reliability. Are its competitors paying attention? That French aerospace company has decades of supply chain purchases in its future. Are suppliers building capacity now? And that plant-based medical service may have a lead on anticipating future consumer demand for plant-based-food alternatives. Will new entrants to that market be ready? It's all about where and how leaders are paying attention.

External signals worth watching

The external signals that provide leaders with the external views essential to sensing include those emanating from a company's surrounding environment and the ecosystem of stakeholders and competitors with which it shares that environment.[58] These can include:

- *Industry.* A group of companies with similar, primary business activities and means of producing value.
- *Geopolitical landscape.* Governmental and / or geographical factors that affect an organization and its purpose, strategies, workforces, customers, suppliers, and access to resources.
- *Society / community.* The expectation for organizations to identify, maintain, and contribute to programs, policies, and movements that better humanity—noted by the rise of the social enterprise.
- *Innovation / disruption.* Changes from technological advances that influence the way we work. Disruption is commonplace in a competitive environment that contains uncertainty.
- *Regulation.* The legal and regulatory frameworks of the countries and locales in which organizations operate.
- *Globalization.* The interdependence of the world's economies, cultures, and populations. Globalization is accelerating due to advances in transportation and technology.
- *Access to capital & resources.* The financial assets and tangible factors involved in production. Organizations combine capital with labor (resources), the work of individuals, and tangible materials to create value.
- *Stakeholders.* The interconnected, external actors with and for which the organization creates value, such as its customers, investors, workforces, partners, regulators, communities, and societies.
- *Ecosystems.* Dynamic and coevolving communities of diverse actors that create and capture new value through both collaboration and competition.

Internal awareness. "Know thyself" is an aphorism as relevant today as it was 2,500 years ago, when the Greek philosopher Socrates discussed it with his pupils. For the purposes of decision intelligence, knowing thyself means being aware of and seeking to truly understand what is happening inside your company. Internally aware organizations tend to have strong learning cultures.[19] They recognize the value of reflection—learning from both successes and failures. They are open to and encouraging of asking questions by individuals from all parts and at all levels. And leaders in these organizations encourage everyone to share when plans or efforts are not successful, and—importantly—they can hear this "bad news" when it is directed their way.

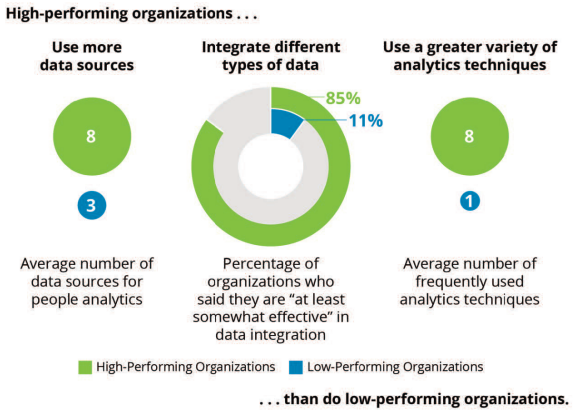
For the purpose of decision intelligence, knowing thyself means being aware of and seeking to truly understand what is happening inside your company.

Internal awareness provides leaders with the ability to process the events that are occurring and patterns that are emerging within the work and workforce. As with a well-developed external orientation, data points alone are not enough for this job. Nor is the ubiquitous annual employee satisfaction survey. High levels of decision intelligence are supported by a sensing ability that extends across the entire workforce. This ability is activated through data collection channels and sources, enabled by data integration and analysis, and leveraged continually in real time.

When properly developed, internal awareness is granular. It's akin to an ongoing conversation, in which traditional listening mechanisms, like pulse checks, are complemented with forums and other spaces for open, honest conversations between leaders and employees.

A fully-fledged internal awareness requires a variety of active and passive listening channels and data sources. Active channels include tools such as employee surveys, anonymous feedback platforms, and pulse surveys. Passive channels include social media, the digital exhaust from collaboration and communication tools, and Web scraping. Our research finds that high-performing companies collect data from multiple listening channels and other data sources (e.g., HR and other business systems)—in sum leveraging more than twice as many data sources as low-performing organizations (see Exhibit X).[20] This combination of multiple data sources, coupled with greater data integration effectiveness and the application of a wider variety of analytical techniques, helps leaders at high-performing organizations avoid the problems that can occur when people policies are made in a unilateral manner or without a nuanced understanding of a situation.

Exhibit X: Data collection, integration, and analysis



Witness the employee controversies that have accompanied the postpandemic workplace policies at some large companies. Some people want to work fulltime from home; some want to work fulltime in the office and others want something in between. When one size doesn't fit all, internal awareness can provide leaders with the sufficient and sophisticated context they need to make sound people decisions. It gives them a holistic view of sentiments, norms, and behaviors within the workforce. It helps them understand what is happening in the corporate culture and pinpoint emerging risks and opportunities on the human side of enterprise.

Focus. The third trait that typifies a capability for sensing is the one that helps leaders pick the signal out of the noise. This trait stresses the *situational* awareness needed to put external and internal awareness into context. The leader and the organization are fundamentally observant *and* are committed to strengthening that muscle through an investment of time, energy, and financial resources.

Focus is embedded in the first two steps in the OODA (Observe, Orient, Decide, Act) Loop, which was developed by U.S. Air Force Colonel John Boyd to help fighter pilots make decisions in chaotic or complex conditions situations. The first step, "Observe" is aimed at seeing the situation as clearly as possible; the second step, "Orient" is aimed at ensuring you understand how the situation relates to you (no mean feat given the cognitive biases we discussed earlier).[21]

Focus enables leaders to discern which events and patterns out of all the external and internal data and information a company is collecting matters most to the human side of enterprise. Thus, it can enable leaders to determine where they should be directing their attention and resources.

Like the gathering of external and internal information, focus is an ongoing process conducted in real time. Events don't occur in a vacuum, and neither do the preferences of employees and other stakeholders. As their perceptions of value change, so do their preferences.

The Great Resignation provides a prime example of the need for a well-honed capability to focus. During the lockdowns of 2020, many employees of companies that switched to remote work were grateful. In some cases, employee satisfaction and productivity rose. However, as leaders at many companies belatedly realized, when the lockdowns ended and employees faced the uncertain prospect of returning to the workplace, a radical change occurred. Suddenly, employee sentiment made a U-turn, and people began leaving their jobs at much higher rates than normal. Job satisfaction and retention plummeted, and burnout levels rose precipitously.[22] In a February 2021 global Harvard Business Review study , 89% of workers said that their work life was getting worse, 85% said that their wellbeing declined, and 56% said that their job demands had increased. Workers are reconsidering everything from who they want to work for—with 40% of the global workforce considering leaving their employer this year—to the role they expect employers to play in supporting their purpose and values.[23]

As employee sentiment shifted rapidly and in potentially contradictory ways, leaders needed to not just keep up with sifting data. They needed an ability to quickly find the underlying threads tying this often disparate and disconnected data together. They needed timely, curated insights that drew their attention to where critical choices could and should be made. The aim here is not simply to follow trends: the decisions leaders make on the human side of enterprise should not change with the seasons, like fashions in clothing. Rather, it is to understand what is happening and how it relates to a sustainable workforce strategy.[24]

This is a moment in which new technologies and new uses of data are very much part of the decision intelligence story. New digital and cognitive technologies, including social listening tools, enterprise search platforms, nature language processing (NLP), artificial intelligence (AI) and machine learning (ML) are all part of how organizations can now mine for attention-focusing insights at the speed and scale of today's marketplace.

Guidelines for sensing

As leaders consider how their companies can create a solid foundation for decision intelligence and nurture sensing, they should keep three guidelines in mind:

Start from your company's desired outcomes. In a world overflowing with data and other information, leaders need a North Star in the search for insight. This doesn't mean they should restrict the flow of information or direct it in a fixed manner. Instead, they should always keep the outcomes being sought—at the corporate, business unit, and department levels—at the forefront of their sensing and decision intelligence efforts.[25]

Consider the regional clinical care provider that had to shift the focus of its care from volume to value in response to longer lifespans, technological improvements, rising costs, and better-informed patients with higher expectations. This meant maximizing results, or patient outcomes, in relation to money spent. This care provider used data and information to implement a new clinical model powered by a defined people strategy. They took a systematic, highly-communicative approach—the success of which in founded in a clear road-map that includes both operational (e.g., clinical decision making, patient outcomes) and workforce signals (e.g., perception of meaningful work, evidence-based career development milestones, team autonomy) to monitor along the way.

As this example shows, there is no substitute for intention in the pursuit of insight. Leaders should clearly define their ends—that is, the ultimate goals of the decisions they are making about work, workplace, and workforce—and then let those goals dictate the journey to insight. They should keep their heads up and their eyes on the outcomes they are pursuing to continually orient and reorient their search for insight.

Seek out forward-looking signals. Despite the flood of data inundating the business world, many companies are dying of thirst for the information necessary to develop actionable work, workplace, and workforce insights. For many companies, the source of this contradictory situation is rooted in the data traps we described in the last section. Leaders tend to assign too much weight to the most current data they have in hand. When it comes to people decisions, this tends to create an undue reliance on historical activity data. It also leads to an undue reliance on more easily obtained quantitative data and a neglect of qualitative data that is more challenging to capture and interpret.

The current state of workforce data collection in companies is indicative of these problems. In Deloitte's 2020 Global Human Capital Trends survey, 83% of respondents said their companies collect workforce data. Yet only 11% of the respondents told us their companies produce this information in real time, and almost half (43%) said they produce it only on an ad hoc basis or not at all. Moreover, most companies are collecting only easily captured transactional data, such as headcount, turnover, salary costs, and workforce composition. These companies are least likely to collect data on employer brand, new workforce initiatives, and the status of reskilling. In other words, the workforce data collection efforts of most companies are focused more on low-hanging operational metrics relevant to now and less so on strategic questions likely to be more important to their future success.[26]

To activate a fully-fledged prowess for sensing, don't fall into the trap of collecting only the demographic and process-related data already likely to be found in a human resources information system (HRIS, or sometimes human resources management system, HRMS). Data that can produce insights supportive of foresight, strategy development, and planning and creativity are also needed. Our survey found leaders whose companies collect such data are about twice as likely to say they are effective at anticipating both internal and external changes that will affect their workforces as those who don't.

To surface these forward-looking signals, the previously mentioned focus on outcomes will help. Focusing on outcomes encourages greater ambition in the kinds of questions we ask—and therefore the data / signals we seek. Leaders should ask strategic questions aimed at navigating the future of work more effectively. These kinds of questions lead to the data collection that yields insights aimed at meeting uncertainty head-on and informing action (see "Better questions lead to better insights").

Better questions lead to better insights

FIGURE 3

Asking different questions can help leaders anticipate future needs and risks

What organizations should be asking	What they can gain from the answers
Workforce footprint: How many workers provide direct or indirect services to our organization?	As more work is being done in nontraditional ways, organizations should look beyond employees and contractors to gain a full view of the workforce. Some organizations today struggle to provide even a credible number of total full-time employees, which will shift from being a nuisance to a critical risk as workforce composition becomes more complex.
Workforce social contract: How does our organization treat its employees, contractors, and service providers of every type?	Anyone who is connected to an organization can have an impact on its organizational and employment brand. Gathering data to understand issues around fairness and equity can help leaders be deliberate about how every segment of the workforce is being treated.
Retention drivers: Which workers are at risk of leaving, and why?	Worker exits have traditionally been analyzed on a person-by-person basis through exit surveys or similar mechanisms. Looking at trends across workers, and asking them questions *before* they leave, can help identify broader issues that may not only drive attrition but could hurt a company's brand if not proactively managed.
Job evolution: How often are jobs changing, which ones, and to what degree?	The pace and scale of changes to jobs across the organization is one way to understand how fully technology is being integrated into work. If jobs are not changing significantly, then it is possible that new technology is not being used, or if it is, that jobs are not being reconfigured to take full advantage of it.
Future workforce readiness: How ready is our workforce to perform the work of the future? What are our capability, experience, and skill gaps, and how are we going to close them?	Finding metrics to gauge future workforce readiness can help leaders articulate what the work of the future will look like and what mix of skills will be needed to do it. This can help organizations develop possible strategies around alternative talent models, short- and long-term learning spend, and the thoughtful redesign of work to pursue better outcomes.
Future leader readiness: What new trends, challenges, and scenarios are leaders being prepared for? How many of our leaders have the attributes required to succeed?	Traditional succession planning processes tend to assume that future leadership roles and organizational structures will stay static. Looking instead at metrics that evaluate future leaders' agility and adaptability can help organizations measure their readiness for multiple possible futures.
Change ability and agility: Are workers and leaders able to quickly and effectively adapt to constant change?	Organizations, leaders, teams, and workers need the ability and the mindset to manage constant change. This is a shift from moving from one steady state to another steady state, to adopting approaches for dynamic and ongoing change.
Internal talent market health: How healthy is our internal talent market?	Just as with external talent, viewing internal talent as a market can suggest leading indicators of organizational adaptability, collaboration, and agility. Organizations with healthier internal talent markets will likely be better positioned to weather uncertainty than organizations that rely too heavily on external talent sources.
Talent ecosystem health: How much capability can we access across our broader ecosystem?	Ecosystems provide avenues to hard-to-find capabilities. Leaders who understand how their organizations are collaborating with vendors and other key ecosystem partners can evaluate how effectively the organization taps into capabilities across the ecosystem in noncompetitive ways.
Meaningful diversity: Are workers from diverse communities in a position to wield influence in the organization?	Organizations often fail to understand whether they are diverse in word or in actual practice. Metrics that show the extent to which diverse workers are in a position to exert both formal and informal influence can provide a clear answer—as well as illuminate whether diversity is really creating competitive advantage through the embrace of diversity of thought.
Culture risk sensing: What signals are we seeing that point to outliers in worker behaviors and norms?	Most organizations can identify and address events that stem from bad worker behavior, but few monitor their worker base for signals that point to deeper root causes. With better information, organizations can move toward diagnosing and addressing the root causes of bad behavior, reducing the risk of repeat challenges.
Human capital brand: How is our culture, workforce, and leadership being portrayed externally?	Today, data is readily available from sources outside the organization to provide a view into what is happening inside. Leaders who track this external data to help diagnose potential issues can help shape a positive human capital brand for the organization.

Source: Deloitte analysis.

Be expansive in data sourcing. . . To surface the insights that can answer forward-looking questions about work, workforce, and workplace, companies should consider tapping into Big Data, an enterprise context that can be composed of a diverse set of structured and unstructured data from across a variety of internal and external sources.

A major grocery chain offers an example of how raw data can be used. It analyzed active job postings from a variety of online sources to monitor changing labor-demand patterns in its sector. The chain used this information to develop a plan for responding to pandemic-induced business fluctuations.

Some organizations are looking to data lakes—including human capital data—as a way to stage and prepare data for analytics and insights. This data can come from a host of areas, such as social media sites, email servers, and market data vendors. By leveraging the combination of data from multiple sources, organizations have an opportunity to derive better insight and evaluate scenarios and options as part of their decision-making process.

. . . then, filter and frame data to boost the signal. As Nassim Taleb, author of *Antifragile* and *The Black Swan* warns, "The more frequently you look at data, the more noise you are disproportionally likely to get... hence the higher the noise to signal ratio. And there is a confusion, that is not psychological at all, but inherent in the data itself."[27] Continuously focusing on any one measure can cause us to lose sight of our broader world for want of intoxicating detail. This is why the questions of how and why we choose to filter and frame our views are so important—and should be managed with care and intentionality.

Filters and frames help organizations enrich their internal analytics with Big Data to create additional and more valuable insights. The more intentional companies can be about what they are looking for, the more relevant the insights produced by their sensing efforts will be.

Trend lines are one way of framing data. They can tell a company whether there is a pattern in the data and, if so, whether that pattern represents a linear, exponential, or cyclical progression. This can help companies assess and anticipate possible futures and time horizons—and act accordingly. Filters are like sieves. They can enable companies to sift through data and locate information relevant to its concerns—reducing the noise and boost signal-to-noise ratios in vast quantities of data.[28]

The larger the data sources are, the greater the potential for so-called weak signals—to get lost or ignored. In addition to framing and filtering, companies need the means to pick up on these signals and determine whether they represent disruptive and formative events.

Wharton School professors Paul Schoemaker and George Day define a weak signal as "a seemingly random or disconnected piece of information that at first appears to be background noise but can be recognized as part of a significant pattern by viewing it through a different frame or connecting it with other pieces of information."[29] They said weak signals can be bolstered by plucking them up and enlisting assistance to interpret them. Distributing weak signals to the local level, where decision-makers are more likely to recognize their import, is one way to do this. Another solution is tapping extended networks composed of partners, suppliers, and customers to help make sense of weak signals.

Cognitive collaboration makes good sense

Cognitive technologies (e.g., NOP, AI, ML) can help organizations meet the challenge of processing overwhelming amounts of data and the need for effective, real-time filters and frames in the sensing process. They can extend and accelerate what leaders sense and see. But they can also perpetuate and accentuate blind spots and biases if not deployed carefully. So, companies need to be thoughtful about how these technologies are implemented and improved upon over time.

Most respondents to Deloitte's 2020 Global Human Capital Trends survey said they view AI mainly as a substitute for human labor—rather than as a way to augment or collaborate with human capabilities. However, this view may be slowly starting to change. Executives responding to the 2021 Deloitte Global Human Capital Trends survey recognized the use of technology and people is not an "either-or" choice but a "both-and" partnership.[57]

The collaboration tools that made remote and virtual work possible during COVID-19 can support sensing by connecting people across organizational and ecosystem boundaries. For instance, one of the world's leading pharmaceutical companies used collaboration technologies to pull together hundreds of scientists from across therapeutic areas—respiratory, cardiology, and oncology, among others. This enabled the real-time partnership and data-sharing needed to make accelerate its efforts to develop vaccines and other therapeutics.

Cognitive technologies can enhance human judgment. For example, the insurance industry is experimenting with AI and predictive modeling to evolve the traditional underwriter role. As policy application processing moves closer to the point of sale, AI can provide data-driven suggestions that increase underwriters' ability to make informed decisions about risk. These "exponential underwriters" don't have to become tech experts or data scientists to use and benefit from the technology. They only need to understand how and when to leverage AI-assisted solutions to accomplish the work more effectively, fulfilling their role in the human-machine collaboration.

Cognitive technologies also can improve people's ability to surface and capture insights. One example comes from a company that helps to facilitate live, online focus groups at scale using an AI-enabled platform. The platform doesn't simply record responses, it also prompts participants to vote on which responses from other anonymous participants they agree with the most. Its algorithms then automatically calculate and rank responses based on group popularity, allowing for a clear view into participants' ideas unclouded by factors such as bias and individual personality differences. Not only does this deliver insights faster, but it also improves the quality of the insights.

Sensing what is happening inside and outside the company is a necessary first step that can provide a solid foundation for a mature decision intelligence capability. But it is only the first step. The insights generated by sensing must be honed and analyzed before leaders can confidently and effectively act on them. Let's turn to that subject now.

Bridging the gap between insight and action

Section III

In 1975, an electrical engineer named Steve Sasson at Eastman Kodak cobbled together the first self-contained digital camera. It used no film, no paper, and no chemicals—just a digital image Sasson was able to record on a cassette tape and play back on a television screen.

The 24-year-old demonstrated the camera to executives throughout the company. "They were convinced that no one would ever want to look at their pictures on a television set," he recalled. "Print had been with us for over 100 years, no one was complaining about prints, they were very inexpensive, and so why would anyone want to look at their picture on a television set?"[30]

Kodak indulged Sasson, though, and the company patented his camera—eventually earning billions of dollars from it as other companies entered the market for digital photography, which slowly emerged over the next 20 years. But Kodak didn't capitalize on its leadership position in digital technology or the photography industry. In 2009, Sasson was awarded the National Medal of Technology and Innovation by President Obama, and his camera landed in the Smithsonian's National Museum of American History. In 2012, Eastman Kodak filed for bankruptcy.[31]

Kodak's decisions around this matter are often presented as a cautionary tale from the annals of innovation, but the story is about decision-making, too. The decisions Kodak's leaders made when confronted by a new and potentially disruptive technology helped ensure the company did not make the leap from insight to action in a timely manner. It's not simply that Kodak was ignoring signals or caught up in biases. More fundamentally, the company's leaders may not have asked the right questions—nor were they fully cognizant of how they were framing the questions they were asking.

The second component of a corporate capability for decision intelligence concerns the ability of leaders to think like researchers: responding to what they sense, asking the right questions, testing ideas, and avoiding biases and data traps on the way to making sound decisions about work, workplace, and workforce issues.

If, at the beginning of a study, leaders assume a workforce attrition problem is due to wages, that assumption can steer the research away from potentially impactful factors like wellbeing and culture. A hypothesis for improving a company's learning and development program that lacks a clear definition will likely lead to unclear results. For example, a company that makes a compensation decision based on falling sales numbers, when those numbers are simply settled into their average, may be taking an action that is unnecessary, if not harmful.

This component of decision intelligence is where leaders answer questions such as: *How do we think about our world? What questions are we asking? How do we frame those questions? Through what lenses will we interpret the signals that we sense? And what logical pathways will we follow as we look for meaning in those signals?* All of this work can be summed up in a word: *analyze*.

> ***Analyze* defined**
> Analyze may sound like something data scientists do, but it is the most human of activities. In essence, it is thinking. In the context of decision intelligence on the human side of enterprise, analysis is how leaders decide what to do about an insight. It can help ensure leaders are figuring out how to solve work, workplace, and workforce problems that matter.

Analysis is the bridge between sensing and acting. In Analyze, leaders filter and make meaning out of what they have discovered in Sense and apply thought processes to use that meaning to inform Action. It is the transformation of insight into action. This is not research for research's sake or even more content to tax the already overwhelmed attention capacity of leaders—properly structured analysis can provide a path to an evidence-based course of action that can address the business question at hand.

As in sensing, many of the technologies that power decision intelligence provide essential support in the process of analyzing and formulating actions. But when executives tell us they are struggling to capture the promised benefits of technologies, it is often because they have mistaken the tools of analysis for analysis itself. All the benefits of technology notwithstanding, it is leaders who make work, workplace, and workforce decisions—all the time, every day.

The ability of leaders to successfully analyze insights and make sound work, workplace, and workforce decisions depends on a keen awareness of their own assumptions and the effectiveness of their mechanisms (such as governance forums) for testing - and when necessary, mitigating - those assumptions, on their ability to frame the issues, and even on the choice of words they use to tell stories they believe matter.

The more thoughtfully leaders approach how they think about work, workplace, and workforce decisions, the higher the quality of their thinking, the resulting conclusions, and their decisions. A leader with emotional intelligence, humility, and empathy will be able to make a company policy decision on remote work, for example, that weighs the outcomes and how they impact all stakeholders.

Three traits define the ability to analyze decisions that affect the human side of enterprise: problem definition, uncertainty, and choice selection.

Problem definition. It's highly unlikely Albert Einstein ever said, "If I had an hour to solve a problem and my life depended on the solution, I would spend the first 55 minutes determining the proper question to ask."[32] But that doesn't mean there is not an important kernel of truth in the idea.

The quest for good decisions starts with defining the problem. The ways in which leaders define a problem—that is, how they frame it—also defines what and how they sense and their solution space. In creating this frame, they limit the range of solutions and, thus, their decision outcomes. Consider a leadership team that is grappling with the need to bolster workforce innovation. The way in which team members define the problem (e.g., a lack of motivation, an incomplete understanding of the company's strategic imperatives, missing skills, misaligned incentives) can drastically change how the team envisions the solution space. Reframing the definition of the problem can offer a new, and possibly enlarged, solution space and, often, better choices.[33]

Once expert decision-makers have a viable problem definition, they maintain a strong focus on it throughout the analysis process. Without that continuing focus, they know they can become so enamored with their solutions that they can end up with solutions to problems that don't exist. This was the basis for Clayton Christensen's theory of disruptive innovation: He argued incumbent companies tend to innovate faster than their customers' needs evolve, creating overly sophisticated and expensive products and opening their markets to new competitors.[34]

A clear problem definition enables leaders to identify what Peter Drucker called the "boundary conditions" for their decisions. Boundary conditions are the decision's specifications—its objectives, its minimum goals, and the conditions it must address. "Everyone can make the wrong decision. In fact, everyone will sometimes make a wrong decision," wrote Drucker. "But no executive needs to make a decision which, on the face of it, seems to make sense but, in reality, falls short of satisfying the boundary conditions."[35]

Uncertainty and risk. The second trait of a well-developed analysis process is the capacity to understand the uncertainty and risk involved in decision outcomes and to reach useful accommodations with them. This skill can enable leaders to assess and quantify risk and attempt to monitor, detect, and mitigate (or at least, bound) uncertainty. In a time when people decisions often entail a willingness to gamble, leaders should understand the extent of their bets.

Uncertainty and risk are often conflated, but they aren't the same thing. Risk refers to the chance of a specific outcome, a probability that can be quantified. Uncertainty, as Nate Silver defines it, "is 'risk that is hard to measure.' When you don't know how likely a specific outcome might be, you are dealing with uncertainty."[36]

Discriminating between uncertainty and risk enables leaders to identify when they must rely on their judgement and intuition (in uncertainty) and when they should seek to quantify the chances of a successful decision (in risk).

Choice selection. The third trait in analysis is the ability to choose among decisions and pick out those most likely to achieve the desired outcomes. This is where applying the right quantitative methods and data science can help leaders draw conclusions about the relationships between possible moves and intended outcomes.

Statistically rigorous research—used appropriately—can enable leaders to test hypotheses and choose among them. Savvy decision-makers know how to use statistics to inform their decision options.[37]

For example, we rely on quantitative methods (i.e., factor analysis) to validate the maturity models that underlie Deloitte's High-Impact HR research. These tools enable us to correlate the capabilities of companies in people analytics, performance management, organization design, and other areas to the outcomes those companies produce. Only then do we recommend actions. Statistical analysis reveals reliable paths to improved outcomes. It does the same thing for leaders who are choosing among options when making decisions on the human side of enterprise.[38]

Guidelines for analyzing

As leaders consider how to help their companies nurture analysis and create the bridge between sensing and action, they should keep the following guidelines in mind.

Be aware of mental models and cognitive biases. Like all human beings, leaders lean on mental models to facilitate their understanding of the world. These models allow them to comprehend and deal with complexity. Moreover, the models shape what leaders see and their thoughts about what they see—including the decisions they make on the human side of enterprise.

It's unlikely, for example, that Kodak's leaders willfully ignored the implications of Sasson's digital camera. After all, they were highly experienced and skilled executives who had risen to the top of a nearly 100-year-old company that was ranked 32 on the Fortune 500 and employed more than 100,000 people.[39] It's more likely their mental models of the photography industry and markets made the prospect of the clunky contraption (*shown above*) radically changing either one seem very farfetched.

Cognitive biases go hand in hand with mental models. For instance, *confirmation bias* (the tendency to selectively search for or interpret information in a way that confirms one's preconceptions or hypotheses) and *gambler's fallacy*, (the tendency to think future probabilities are changed by past events, when in reality they are unchanged) might have affected the judgement of Kodak's executives.[40]

Neither mental models nor cognitive biases (which are, in essence, heuristics aimed at making decisions more efficiently) are bad things *per se*. The problem is they become so deeply entrenched in the human mind that leaders are often unaware of them and, as a result, make flawed people decisions. Chris Argyris, a pioneer in the discipline of organization development, defined this as Model 1 reasoning, which he found leads to defensive routines that further stymie decision-making in companies.[41]

The question leaders should consider before they begin analyzing their decision options on the human side of enterprise is: *What assumptions and biases are bracketing my going-in perspective, perhaps in less-than-helpful ways?*

Create intentional frameworks and heuristics. The flip side of the decision coin is the use of *intentional* frameworks and heuristics to understand the relationships between insights, decision choices, and the outcomes a company desires on the human side of enterprise. Intentional frameworks and heuristics are critical tools with which to approach decisions in sound and informed ways.

Companies have long used frameworks to give shape to decision-making. SWOT (strengths, weaknesses, opportunities, and threats) analysis, for example, is a framework used to evaluate a company's competitive position and make strategic decisions.

Frameworks can help organizations to stay on top of all the complex variables in this new world of work. They serve as reference models, that can be tailored for the organization's unique workforce profile and business priorities. They can help leaders answer questions such as, "*What work should be automated, and what can be handled best by gig or contract workers?"* and *"In a new world of hybrid work, what can be done virtually versus at a specific location?*"

Think in probabilities. Finally, when analyzing decisions, leaders should think in scenarios and probabilities, not certainties. No one can try to understand and predict the future, but leaders can predict the likelihood of different events occurring and make their best choices based on those probabilities.

The ability to think in probabilities and continuously learn when presented with new information is supported by tools such as Bayesian thinking.[42] Bayes' theorem, named for the English minister who first stated it in the 1750s, calculates probabilities based on past events and adjusts probabilities as conditions change. Two hundred and fifty years later, the applications of Bayes' theorem have become increasingly sophisticated and provide the underpinnings of probabilistic machine-learning techniques and risk assessment as well as many other estimation approaches. They also provide leaders with the ability to calculate probabilities and choose between work, workplace, and workforce decisions.

A key to making sound decisions based on probabilities is to be realistic about the prospects of any event occurring. This requires that leaders understand they cannot imagine every possible scenario and, thus, the probabilities they are working with don't reflect everything that may happen. It also requires that leaders recognize there is some possibility that their probability estimates are wrong. Leaders, like all humans, can potentially overestimate their guesses—and tend to reduce probability to certainty. This overconfidence raises the chances they may inflate the accuracy of their probabilistic estimates.

Analyzing a company's work, workplace, and workforce decisions establishes the connection between sensing and action. It is the second leg in the journey from insight to action and an essential component in an organizational capability for decision intelligence. But, as with sensing, if leaders stop here, all their efforts at bolstering decision intelligence may not yield intended results. The act of decision-taking—with intentionality and timing—matters. Let's turn to that subject—the final component of decision intelligence—now.

Effective action in an ever-changing world

Section IV

In Jeff Bezos's 2020 letter to Amazon shareholders, he announced he would lead two major workforce initiatives in his transition to executive chairman. "We are going to be Earth's Best Employer and Earth's Safest Place to Work," he wrote.

The fact that Bezos addressed workforce issues in his annual letter wasn't surprising. The company was experiencing a high number of workplace injuries in its distribution centers and was already making moves to enhance employee safety. As Bezos explained, Amazon had studied the injuries its employees had sustained and found that about 40% of them were musculoskeletal disorders (MSD), such as strains, sprains, and repetitive stress conditions.

To reduce such injuries, the company hired thousands of safety professionals. It created the WorkingWell program to show employees how to avoid injuries and developed automated staffing schedules that use algorithms to rotate employees into jobs that use different muscle-tendon groups. "Our increased attention to early MSD prevention is already achieving results," reported Bezos. "From 2019 to 2020, overall MSDs decreased by 32%, and MSDs resulting in time away from work decreased by more than half."[43] In 2021, he added, Amazon would invest $300 million in programs and technologies aimed at bolstering employee safety.

In short, Amazon did what Amazon is famous for doing. The company used data to generate insights about workplace injuries, determined how it could prevent the largest category of injuries, and implemented preventive measures.

As at Amazon, company leaders are always making work, workplace, and workforce decisions. But in too many companies, hurdles are embedded in structure and culture and in the ways in which decisions and performance are evaluated—which stand in the way of action. As a result, deciding to do something is not the same thing as getting it done. The missing connection between deciding and doing can be summed up in a word: *act*.

***Act* defined**

Act is the third and final component of decision intelligence on the human side of enterprise. It is the process of decision-*taking*, that is, acting on a decision in a timely and effective manner. The ability to act successfully is the endgame of decision intelligence.

This moment is marked by, as Google's Cassie Kozyrkov put it, "an irreversible commitment of resources."[44]

People-related decisions happen every day and they are increasing in volume and complexity. Ultimately, the need to quickly pivot and set out in new directions depends on the ability to act upon decisions generated from real-time work, workplace, and workforce insights. Leaders should constantly reassess and reimagine their work, workforce, and workplace strategies. Once they've sensed and analyzed their way to the best decisions about what to do next, they should pursue meaningful action toward new outcomes.

Three traits define the ability to successfully implement decisions on the human side of enterprise: a bias for action, the ability to influence, and the willingness to accept accountability.

A bias for action. Acting effectively in the context of rapidly evolving and interrelated disruptions depends on the organization's ability to avoid analysis paralysis. This requires a bias to action—a willingness to fail fast and fail forward—and is rooted in the ability to unite the efforts of people and successfully execute plans.

Unsurprisingly, Amazon lists "Bias for Action" in its leadership principles: "Speed matters in business. Many decisions and actions are reversible and do not need extensive study. We value calculated risk-taking."[45] This harkens back the need to think probabilistically in environments of risk and uncertainty. In such an environment, most decisions are tests or experiments in and of themselves. As results occur and

new data is captured, decisions are adjusted, and new bets are made. As long as leaders are as clear as they can be regarding where the risks and uncertainties lie within the bets they are making and can keep their eyes open to signals that prove or disprove their hypotheses (stated clearly in advance), they can quickly adjust as needed. Again, this is leaders thinking—and acting—like researchers.

A bias for action is a cultural trait, but like all cultural traits, it is supported and nurtured by structure, policy, and process. The distribution of authority is one of these mechanisms. The authority to implement enterprise-level and strategic decisions should rest with top management, but in the day-to-day course of business, the implementation authority for myriad work, workplace, and workforce decisions can be closer to where they directly affect operations: effectively, in the hands of supervisors and team members. Empowering frontline workers to make decisions can pay off in greater agility and responsiveness.[46] One music streaming company has an autonomous work environment in which teams building products can decide what and how to build and with whom to partner to make the product operable throughout the service. Though the system includes feedback channels and coaches, no managers impede their decisions.

Influencing. Leaders get things done through others, so their ability to influence is key to their ability to successfully implement decisions. They should first seek to understand the roles others across the organization play in the implementation of decisions. Then, they should align everyone involved on a course of action and inspire and incentivize them to act.

In terms of decision intelligence in the human side of enterprise, influencing others includes what Tom Davenport, the President's Distinguished Professor of Information Technology and Management at Babson College, calls the "marketing of insights." Davenport says communicating the "impact [of insights] may be achieved by affecting a particular decision, or by affecting the firm as a whole through improvements in financial or operational processes."[47] Selling the insights on which a decision is based helps sell the decision, which, in turn, can give impetus to implementing the decision.

Accountability. A strong culture of accountability is another fundamental trait that supports decision-taking on the human side of enterprise. Companies should establish strong, transparent accountability for decision implementation. To achieve this, leaders should consider and answer questions such as:

- Who is the primary owner of the decision's outcomes?
- How—using what measures—will these outcomes be evaluated?
- Where and when will progress against these outcomes be evaluated?
- To what degree and with whom will the answers to these questions be shared within the organization?

The aim of strong, transparent accountability is not to assign blame for decisions that have gone wrong. Rather, transparent and clear accountability, complete with agreed-upon outcomes and measures, can make it easier for an organization to review and better learn from both failures and successes. This a trait of the learning cultures we discussed in **Section II**, and the value of such transparency and reflection is backed by our research on organizational learning cultures: Organizations with greater clarity about both the identity of its decision-makers and the outcomes of the decisions made are better able to harvest invaluable wisdom from both success and failure, which can lead to better results.[48]

To encourage a strong sense of accountability, companies should avoid outcomes bias (as discussed in **Section I**)—judging leaders for the way they reach and implement decisions, not for the outcomes of those decisions. Organizations with poor decision rights and accountability may rely solely on benchmarks to weigh outcomes and evaluate decisions in a less than rigorous fashion—both of which may serve to negatively reinforce poor decision rights and accountability. Organizations with a healthy approached to evaluating decisions know outcomes are frequently subject to forces outside the ken and control of leaders. They know that what they can and should control are processes of decision-making and decision-taking (sensing, analyzing, and acting).

"The impact of insights may be achieved by affecting a particular decision, or by affecting the firm as a whole through improvements in financial or operational processes." — Tom Davenport

Guidelines for action

As leaders consider how their companies can foster decision-taking and transform insights into effective and timely action, they should keep the following guidelines in mind.

Clarify decision rights and governance. A surprising number of organizations lack clarity about who is responsible for making and taking decisions and how the decision-making process should proceed. Decision rights can provide this clarity by answering three questions:

- Who are the individuals or groups empowered to make decisions?
- What decisions should be made?
- How do operating processes and tools help support decision-making?

Achieving clarity about the who, what, when, and how of decision-making doesn't happen by accident. Our research finds companies with high organization design maturity proactively address decision rights and governance by deliberately establishing the structures and practices needed to enable decision-making empowerment, influence, and transparency, often prioritizing these elements over even defining the business's daily workflows and functions.[49]

Decision rights aren't rules. Decision rights enable judgment; rules sidestep it. Netflix CEO Reed Hastings tells the story of an executive who was infuriated by a travel policy that refused to reimburse him for a $12 taxi fare. The travel expense refusal wasn't a decision made by an individual at the company. It was a rule that absolved any travel account manager from the responsibility of exercising judgment—and there was no one empowered to override it.[50]

Clear design rights and governance become especially important when teams and other groups are charged with making and taking decisions. Group decision-making can be desirable in that it brings multiple perspectives to the table, which can improve decision quality. But when unhelpful competition and dissent arise, group decision-making can slow the process and sabotage decision quality and outcomes.

Establishing a clear, common mission for the group can help counter this risk, allowing the group to reach decisions more quickly and less contentiously. To do this, the group should have a charter that articulates its mission, with the full endorsement of the organization's senior leadership team. The organization should also establish individual and team incentives for the group that support the common mission.

Build the conditions for action into decisions. Peter Drucker pegs converting decisions into action as an essential element in effective decision-taking. "A decision will not become effective unless the action commitments have been built into it from the start," he explains. "In fact, no decision has been made unless carrying it out in specific steps has become someone's work assignment and responsibility. Until then, it is only a good intention."[51]

Drucker says converting decisions into action required answering the following questions:

- Who should know of this decision?
- What action should be taken?
- Who will take it?
- What does the action have to be so the people who have to do it can do it?

The last question is particularly important to effective action. Keeping people aligned as decisions are implemented is an essential element in success implementations, but it can become increasingly challenging as the complexity of the operating environment grows—a situation common in more and more companies. "When an organization is operating in a *simple* environment, things are moving kind of slowly. You don't need to coordinate that much, because things don't happen that fast, and it's pretty straightforward," explains General Stanley McChrystal. "The problem with rapid change in the environment is the impact it has on the rate of internal coordination or synchronization: how often you have to get your organization coordinated."[52]

Organizations with a healthy approached to evaluating decisions know that outcomes are frequently subject to forces outside the ken and control of leaders.

McChrystal faced this challenge as the head of Joint Special Operations Command (JSOC) in Iraq in 2003 by establishing what he calls a "shared consciousness" throughout his command. "The theory is that you are dealing with rational, smart people, and that, given the right information, they will get pretty close to the right answer—if they have all the information, and if their interests are aligned. So, you have to align people's interests," says McChrystal, who now advises company executives. This alignment can allow people to work autonomously, yet in a coordinated manner, toward shared goals.

Activate with data. Just as data informs sensing and analyzing, it can also activate decision implementation and execution. Our research shows high-performing organizations leverage data as a key element in their operating models and in the performance of work.[53]

Consider performance management. High-performing companies use data to generate real-time, actionable insights that are embedded in work itself, giving individuals and teams more ownership over their performance and development. Rather than making performance management a separate process, it becomes part of everyday work. Supporting technologies are no longer standalone talent systems; they're connected through everyday tools like email, collaboration platforms, and sales and project management applications.[54]

These tools focus on seamlessly embedding insights about goal accomplishment, behavioral feedback, and development steps into work. Team leaders, managers, and peers can receive automatic feedback requests based on frequent interactions in their calendars. Decision-makers can evaluate promotion suggestions from tools that analyze data on performance, time in role, flight risk, and team feedback. Coaches can improve the way they deliver feedback through applications that check for unintended bias in written language.[55]

The goal here is to become what Deloitte calls an insight-driven organization (IDO). An IDO embeds sensing, analysis, and action into its decision-making—every day, at every level of leadership.[56]

Act completes our description of the three components of decision intelligence on the human side of enterprise. But it isn't the end of the story. Sense, Analyze, and Act is a self-reinforcing loop. It is a circular process of figuring out what is happening in the world and how it affects work, workplace, and workforce, deciding what to do about it, and then doing it—over and over. With each revolution, companies move forward and begin the process again. This capability is essential to the success of companies in an ever-changing world.

Conclusion

The journey to making work better for humans and humans better at work is a perpetual one. In recent years, as data and analytics have come to the fore, it has begun to focus more intently on decision-making. These days, the use of data and analytics to make better decisions on the human side of enterprise are an important strategic objective in virtually every business case we see. Clearly, this is a realistic and achievable objective, but just as clearly, the ultimate objective of making better work, workplace, and workforce decisions remains unrealized or under-realized. Why?

If we've done our job well, you now know the answer to that question. Too often, organizations fall into the trap of believing that investing in technology is the silver bullet that can deliver solutions to leaders across HR and the business. Unfortunately, they quickly discover technology is just one ingredient in the recipe for decision intelligence.

This was confirmed in late 2020, when we refreshed our research on High-Impact People Analytics. Our latest study revealed 82% of the more than 300 respondents' organizations reside in the bottom half of our four-stage maturity curve— that is, in the early stages of their people analytics journey. It also found seven factors unique to the 18% of organizations that reside in the upper half of the maturity curve. The factor with the lowest correlation to high levels of people analytics maturity: technology. The factors most correlated to high levels of maturity: a data-driven culture and developing data proficiency. These findings underscore the importance of the human element in decision intelligence.

Leaders need a fully developed capability to translate the vision of human capital decision intelligence into reality. This capability enables them to trust, access and integrate data to make sense of the world; to extract, analyze, and model it in the never-ending hunt for insight and solutions; and then, of course, to act effectively on their best choices.

This capability has the power to transform leaders into better decision-makers. Max Bazerman at Harvard Business School and Don Moore at UC Berkeley's Haas School of Business calls such a leader an "investigator-in-chief." That title squares with our sense of the kind of leaders organizations need now. Today's leaders need to be explorers, translators, and provocateurs—exploring the unknown, translating the complex into actionable insight, and inspiring further investigation and ultimately change.

This is less a function of technical skill, experience, and competency than it is a mindset of insatiable curiosity and humility. Curiosity and humility are two sides of the same coin. In psychology circles, insatiable curiosity is referred to as a questing disposition. A leader characterized by curiosity is driven to know why things are as they are and understands that the questions often matter more than the answers. Humility is on the other side of the coin. No matter how much they may know—or how expert they become—humble leaders know there is always more to learn. Every interaction is an opportunity to grow. Their knowledge is not an end in and of itself; it is a means of individual and organizational growth.

We, too, aspire to adopt a mindset of insatiable curiosity and humility and to equip our clients to see their world with greater clarity and approach issues with ever-greater refinement and alignment. This is why Sense, Analyze, and Act—the process of human capital decision intelligence—is so important. It is also why we intend this field guide to be a living document we can revise and add to as we work to build your human capital design intelligence and learn and grow through our interactions along the way.

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