



**PERSONALLY, PURPOSEFULLY  
BUILDING WHAT'S NEXT**



FROM THE EDITOR

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PURPOSEFULLY  
BUILDING  
WHAT'S NEXT

**Each year when we publish this report, a trusted colleague or client challenges me with the honest question: *It's impossible to predict the future; so, why does working with trends matter?***

It's one of my favorite questions because it points to both our need for security and our uncertainty about the future. Every day, in business and in life, we are planning for a future we do not know, whether it's a challenging email demanding attention just as we're wrapping up for the day or an unexpected industry poised, suddenly, to disrupt our own.

*How do we do our best to plan for what lies ahead?* Trends are one answer. It's not just about reading or understanding them. It's identifying the personal and team actions that steer us to the future we anticipate or want to build together.

One of my favorite books of the moment is *Imaginable* by Jane McGonigal. She's a game designer and forecaster skilled at helping people prepare for what's to come.

In the book, McGonigal takes readers through a series of imagination exercises. First, thinking about the very near term, as near as tomorrow morning: imagine what woke you up, how you feel, what your morning routine will be, etc.

Thinking about those details on that time horizon may feel easy, but what about 10 years from now? Can you imagine what world you'll be waking up to, who you are, what surrounds you, what you will personally do next?

These imagination stretches force us to think about what *could be* instead of merely what we recognize or remember. They let us simulate not just possibilities but actions that we would take as individuals, teams and companies to thrive in those new realities.

Here's the exercise that most caught my attention—I recommend it as a team planning activity. Make a list of, say, five things that are true today. For example, email is a primary form of communication, private or centralized payers primarily pay for health expenses, electronic health records contain insights on individual health experiences, etc. Now make the opposite true. What would that world look like?

As one what-if example, McGonigal posits that in 2032 garbage and recycling services will be entirely obsolete. Composting can be collected but the government has realized that recycling never worked and the landfills are overflowing. They've instituted huge taxes on all non-compostable packaging and a potential country-wide cash bonus of \$10,000/person if waste is reduced by 80%.

What would you do in that future? You might find out by trying it for the next few days.

What choices would you make differently if you were personally preparing for that future?

What would you advise your team to do?

I'm intrigued, in part, because of how many unimagined futures we've embraced in the last few years—from children not going to school to huge interruptions in the supply chain. But it's more because of how McGonigal translates this call to future arms. She writes that we need to build urgent optimism, a resilient mindset founded in mental agility, realistic hope and a sense of future autonomy.

She encourages us to embrace the concept that anything can change the future, even—or especially—things that seem unlikely today. In imagining those potential futures, the idea of realistic hope matters because it focuses us on how to build that future and how to distinguish what excites us vs. what we entirely expect. Finally, the future autonomy is something we, and the people around us, can create for ourselves. How do we create and sustain agency to change and shape that future vs. being controlled by it?

If the year 2022 was a reset, emerging from the panic and crises of the pandemic, then 2023 is a year of renewal and re-imagining, where the senses are sharpened around what we need to learn. How do we start imagining this future and building the purposeful, personal impact we want to have on it?

**Well, you could abandon your trash can for a few days and imagine what you would do. Or, just dig into the trends here and imagine what we could do together.**

## Leigh Householder

EVP / Managing Director  
Technology and Data Science

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## 2023 Featured Trends

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## In this report, we explore 12 trends in three focus areas that will have great resonance in the year ahead:

### Technology Evolution



#### AI: Finally Fit for Purpose

New technologies grow through a cycle of promise to performance. 2023 is set to be a year of realization and value for artificial intelligence (AI) and machine learning.



#### The Data Effect

Across life sciences, all organizations are thinking about how technology and data affect both highly strategic and everyday decisions.



#### Data-Driven Local Market Models

Many life sciences leaders and innovators are leveraging local market models to engage complex markets where span of control, affiliations/influencers and treatment protocols are often changing.



#### Digital Transformation: Start, Stall, Restart

Did the urgent response to COVID-19 actively move digital transformation forward for life sciences? Or simply create an interesting learning lab for more purposeful change to come?

### Human Engagement



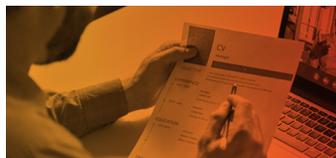
#### Care for the Front Line

From massive changes in workflow to patients more willing to challenge advice to new demands from administrators and governments alike, it's become harder for many to see medicine as the calling they might have once imagined.



#### A New Field for the Field Force

This year, the doors are continuing to swing open as some 73% (and climbing) of rep-to-physician interactions are happening in person.



#### Improved Sophistication in Retention

After two years of talking about a war for talent, healthcare businesses are re-energizing and embracing current and previous team members in new ways of work that are increasingly personal, purposeful and flexible.



#### Industry-Wide Push for Equitable Representation

Today, there is much broader agreement across industry, regulators, healthcare professionals (HCPs) and advocates that meaningful change is achievable and should be mandatory. When we speak of "the patient's voice," we mean *all* patients.

### Healthcare Advancement



#### Bold Trajectory for Medical Affairs Innovation

In an environment of increasing complexity, re-energized feedback loops and new technology capabilities, there is an urgent need to bridge the gaps between data, medical information exchange and strategy.



#### Fast Growth in "AgeTech"

We've reached some critical milestones in an era of technology that lets us watch over ourselves.



#### Prime Time for the Value Debate

2023 will be a catalytic year for discussions about value. From debates in the houses of government to innovations in the aisles of retailers, everyone is asking: What new models can both spur innovation and ensure access?



#### Outsourcing on the M&A Playing Field

For outsourcers, the thrill of partnering with a first molecule company nearly matches the glow of collaboration with large pharma leaders. A sense of personal mission animates the smallest biotechs, fueled by the dazzling potential to change lives.

A hand is shown in the foreground, pointing towards a complex digital interface. The interface is composed of several overlapping panels and layers. The top panel features a network diagram with nodes and connecting lines, alongside bar and line graphs. Below this, there are more charts, including a pie chart and a bar chart. The bottom right area is filled with a grid of circular icons representing various concepts like technology, communication, and business. The entire scene is bathed in a warm, orange-red glow, creating a sense of depth and focus on the digital elements.

# TECHNOLOGY EVOLUTION



AI: Finally Fit for Purpose

The Data Effect

Data-Driven Local Market Models

Digital Transformation: Start, Stall, Restart

# AI: FINALLY FIT FOR PURPOSE



New technologies grow through a cycle of promise to performance. That trajectory often begins with a frenzy of experimentation and then bifurcates as some users despair over failed initial use cases while others commit to ongoing iteration.

It turns out, the innovators who commit to AI with right-sized goals can ferry entire markets of users from skepticism to new definitions of value.



This year, AI is slowly but resolutely emerging from discouragement to value momentum and industry change. But program leaders must ensure their initiatives are right-sized and purposeful.

**Some of the early examples of leveraging AI for health were compelling. But in 2022, increasing scrutiny on the risk of algorithm bias, lack of consistency across pilots and unproven claims regarding cost efficiency continued to muddy the waters. Meanwhile, some of our most treasured objectives, such as bringing dazzling, new efficiencies to clinical trials, continued to beckon just over the horizon.**

Let's start with an early—and life-changing—success at Aravind Eye Hospital in Madurai, India. There, more than seven years ago, Google's health offshoot Verily helped solve a fundamental problem: creating access to treatment for diabetic retinopathy, a condition that can cause blindness if untreated.

The condition is common in India. That's true in much of the world, but treating it is even more of a challenge in a hospital that cares for nearly 2,000 people per day, in a country with only 11 eye doctors per 1 million people.

Verily AI researchers built a system that, in seconds, detects disease signals in medical scans.

To create it, researchers started with a human-led learning set, collecting over 100,000 images of human eyes that were then classified by expert ophthalmologists on likelihood of disease. That training set helped the algorithms find patterns and ultimately led to an operational system that could identify each stage of disease and keep learning over time.

The scale created for diabetic retinopathy screening has been repeated around the world, in trials in countries like Singapore and regulator-certified systems in Europe and the US. It's just one example of global collaborations using machine learning (ML) and image processing to detect cancer, stroke, heart disease and more.

This example embodies a key learning in AI as practiced in 2023-2025. Successful use cases must not work around or exclude human insights. To create viable systems, humans must ensure there is clean, well structured, well understood training data.

With overly ambitious AI implementations, we still get stuck in a world of one-step-forward, one-step-back. From early-stage cancer experiments co-created by some of the leading names in research and technology to initial iterations of first-line care triaging systems, the hype vs. reality drew a collective “meh” from many in our industry. In 2022, “meh” turned to “tell me more.”

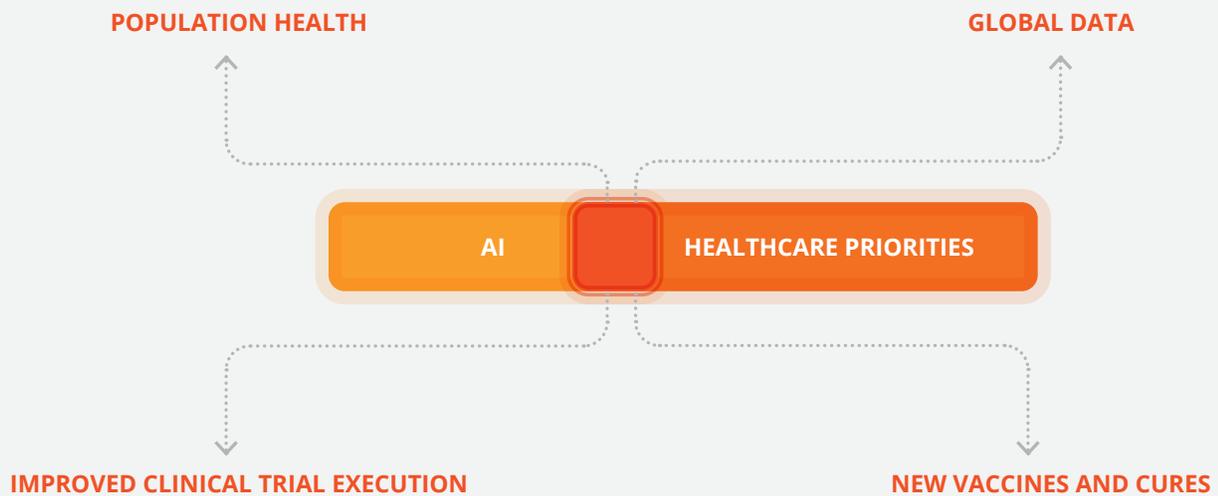
Consider just one 2022 milestone: the validation of an AI hospital alert for dangerous infections known as the Targeted Real-Time Early Warning System (TREWS). The algorithm is designed to help emergency department doctors identify and quickly treat patients most at risk of sepsis, a condition that affects 1.7 million patients in the United States each year and kills 350,000.

No one really knew how well the algorithm worked until last summer, when Johns Hopkins researchers published a definitive study involving more than half a million patients—the largest-ever assessment of this nature. They showed the ML algorithm significantly reduced patient mortality, improved scores in sequential organ failure assessments (SOFA) and reduced hospital stays among survivors.

Time and experience cycles have made ML models more sophisticated, built a deep bench of talent and uncovered the use cases where AI is most likely to intersect with healthcare priorities, including population health, global data analysis, clinical trial execution and new vaccines.

AI enables screenings at scale, as at Aravind Eye Hospital, but also ambient, machine-run tests seeking hidden signals of disease. Not too far out on the horizon, patients receiving elective surgery could automatically be prescribed scans based on unrelated symptoms flagged by algorithms. Similarly, cloud-connected sensors on a smart watch could routinely identify early signs of Parkinson’s disease.

With serious but treatable infectious diseases flowing across borders, AI is helping global leaders and healthcare groups model disease spread while uncovering elusive patterns in treatment and incidence.



A study sponsor or clinical research organization will feed data into an intelligent system whose purview spans every recent or relevant trial. The system is looking for patterns: Which sites outperform? What enrollment tactics work? Which investigators hit the mark? Finding the sites that deliver results on schedule and on budget will no longer be art, but science.

AI may be poised to transform basic and translational science. One example: DeepMind’s AlphaFold AI predicted the structure of nearly every protein on our planet. In each case, this is just a snapshot in time. Still, the 3D models and underlying research are being shared with scientists around the world, at no cost, and could help fuel drug discovery.

## Era of rapid new pathways for life sciences

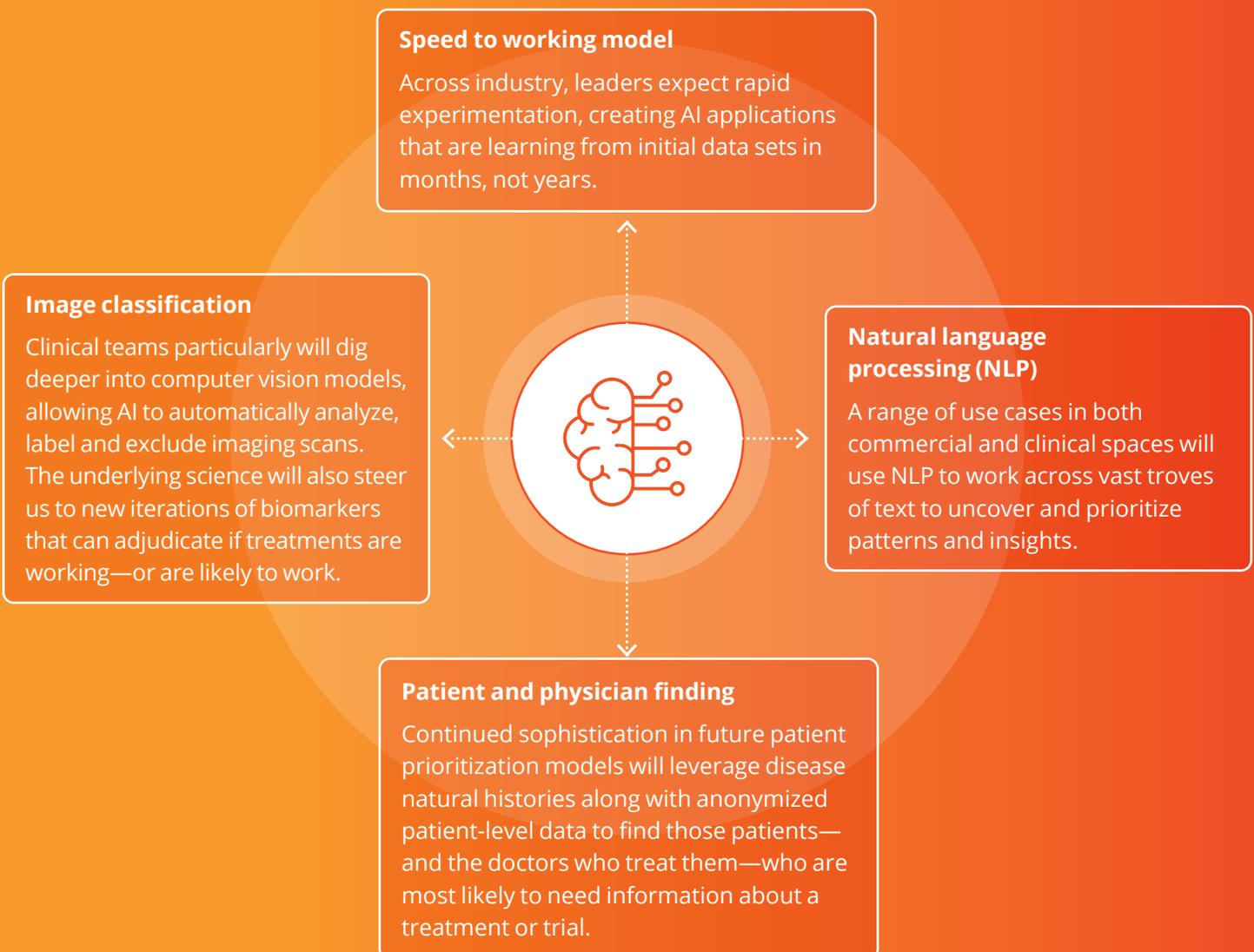
AI, at appropriate scale, has passed a threshold for impact on industry as well as medical practice.

For life sciences leaders, barriers to leveraging AI were often the time investment and (un)certainty of impact.

Today, companies are taking a more agile approach to AI, some running hundreds of experiments per year in rapid 12-week sprints and others committing to scaling and training machine learning models against one or two critical functions, with strong ROI models in each.

For the foreseeable future, AI will be a collaborative venture in which human experts leverage the most sophisticated tools. In short, getting the best of what machines can do, combined with the best humans have to offer.

Watch for these themes in how life sciences make the best use of AI:





## Predictive modeling for disease progression

Aided by AI, medicine is making strides in predicting the severity of illnesses and the trajectory of diagnoses in a population. COVID-19 brought this capability into focus with advancements like the PAIN score, a standardized method for predicting progression from mild-to-moderate COVID-19 to severe disease. The methodology was developed in China by following hundreds of patients over the course of the disease.

Multiple sclerosis also is an intriguing use case. In one study comparing the ability of human clinicians and ML to predict disease progression, algorithms trained on integrated neuroimaging data achieved a clinical accuracy rate of 85.7%, compared with 70% for human raters.



# SANDBOX

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## Protecting Society from AI Perils

How do we shelter citizens from risks raised by AI systems that are essentially versions 1.0? Unclear—but there are hopeful signs. In late 2022, the White House unveiled an AI Bill of Rights to address harms such as AI-mediated wrongful arrests, algorithm biases and other perils. The bill is not comprehensive. *MIT Technology Review* called it "an enthusiastic recommendation." But maybe it's a step toward a safer future.

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# THE DATA EFFECT



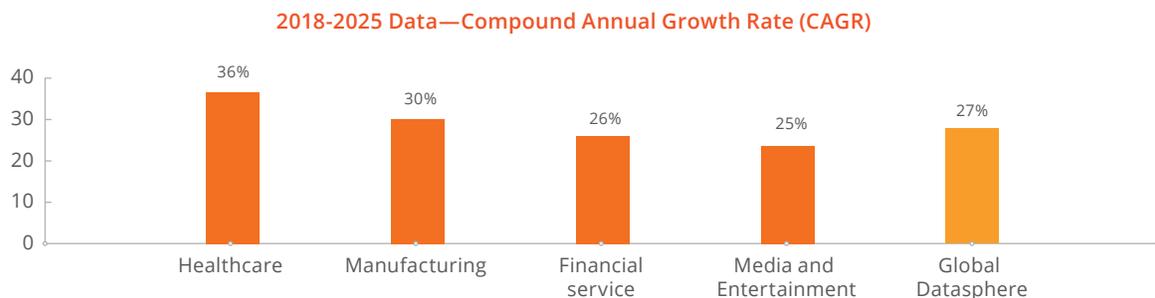
Technology and data are affecting human health and healthcare in ways we never imagined—not least, highlighting the hazards of privacy infringement and helping industry avoid exactly that. 2023 sets the stage for even more high-utility change.

Across life sciences, all organizations are thinking about how technology and data affect both highly strategic and everyday decisions. We have become purposefully

dependent on data-driven insight and are rapidly fostering maturity in combining and unifying data to build certainty and value.

## Data impacting life sciences is primarily growing across three categories

You've likely seen the headline numbers: 30% of the world's data volume is healthcare data. By 2025, the compound growth rate will be 36%, meaning data will be doubling every two years.



Source: Coughlin et al Internal Medicine Journal article "Looking to tomorrow's healthcare today: a participatory health perspective." IDC White Paper, Doc# US 44413318, November 2018. The Digitization of the World - From Edge to Core."

Within that outsized growth are three core types of healthcare data, each impacting life sciences in important ways:



Increasingly these categories can be combined to see across the massive ecosystems of healthcare experience with tokenized, anonymized data.

Tokenization is a critical part of the data economy thanks to its power to protect patient privacy. For each patient, tokenization lets us understand a full healthcare journey, not just medical history but healthcare interactions, with zero or minimal exposure of personal information.

Led by Datavant and other companies, tokenization substitutes any sensitive or personal information with a non-sensitive equivalent (the token). Whether it replaces a family name or a national provider identifier (NPI) code for covered providers, the token has no exploitable meaning or value. It's simply a marker for matching disparate data sets anonymously.

**Where do we go from here:**

Futurists have long been watching the coming boom in person-generated data. We predict 2023 and 2024 will be trend-defining years for this shift.

Person-generated health data (PGHD) are experiences collected primarily by people and their devices rather

than manually collected by HCPs. It's a real-world expression of health.

PGHD could include a reading from a connected blood pressure cuff or scale, physical activity trackers on a phone or watch, self-reported check-ins on a mental healthcare screener and more. Soon it will have the potential to be tracked across smarter and smaller devices that fit seamlessly into our lives.

The impact of this growing body of data will be visibility. While most healthcare data is now collected by an HCP asking a question and recording it, something more holistic and complete is coming into view.

Evidation, a provider of health apps that also helps clients understand the data streams, puts the emphasis on what we see vs. what remains hidden. Today when we talk about real-world data and real-world evidence (RWD and RWE), it's mostly about episodic data. You come into the office and are seen for one moment in time.

But 99.9% of the data about people just living their lives have been invisible. Continuous passive collection of PGHD could revolutionize many aspects of healthcare and elevate the quality and scope of scientific endeavors.



## New imperative: act before interruption

As leaders push for acceleration at every stage of clinical and commercial development, the goals for acting on data are changing from evaluating what happened to acting ahead of interruptions. From brute force and manual tasks to automation and efficiency.

For many organizations, data are cut at different points of time coming from different systems and considering different assumptions and rules.

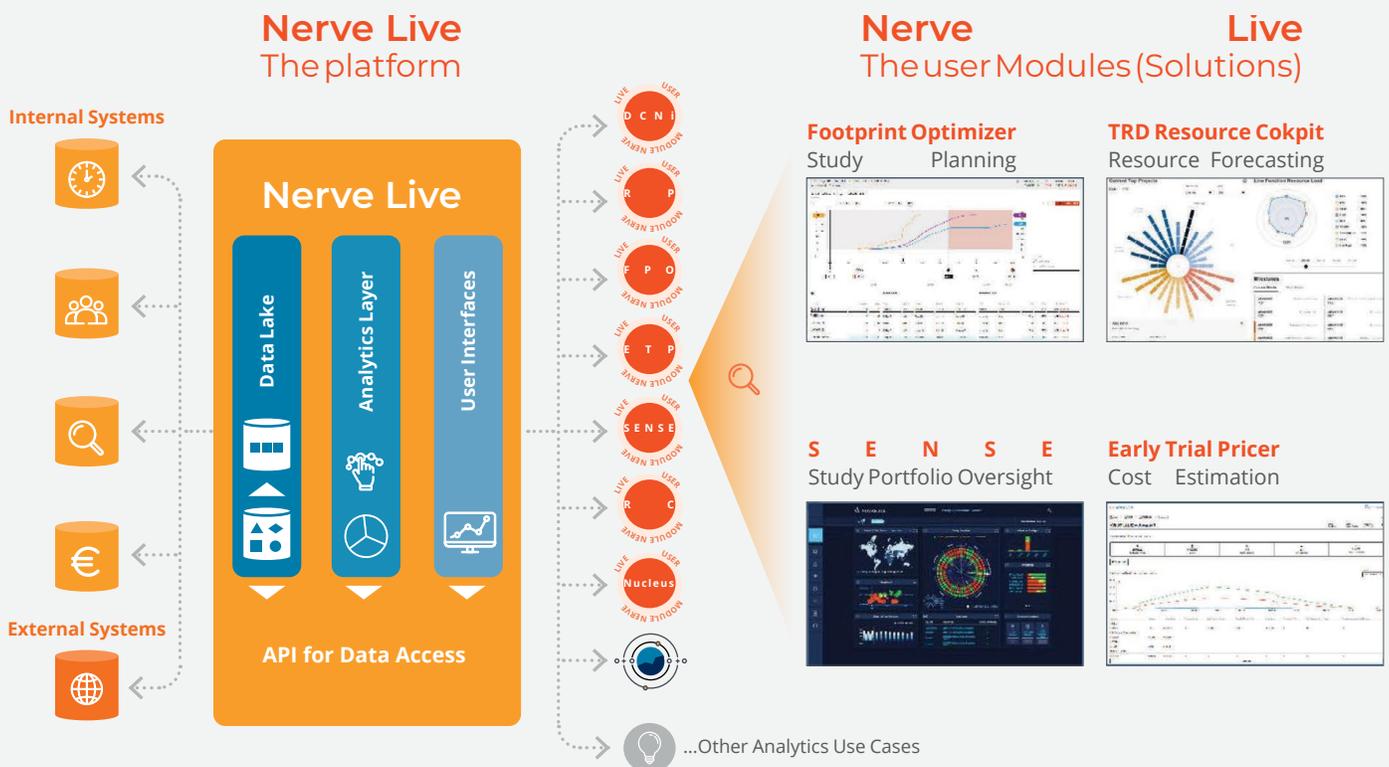
The complexity makes it difficult to pick up early, actionable signals that a problem is arising, something that might challenge a clinical milestone or commercial goal.

Novartis was an early leader in this signal-based space. Like many other study sponsors, they were managing clinical trials by sorting through pyramids of spreadsheets

to obtain the country, region and global status of each program. The analysis could be powerful, but there was no opportunity for early intervention against risk.

An advanced analytics platform called Nerve Live has changed the way Novartis consumes data. As described in a journal article by Novartis CEO Vas Narasimhan and Luca A. Finelli, the platform developer, Nerve Live breaks down data silos to create continuous access to a united view of each trial.

Nerve Live focuses on operational data—project management, finance, quality, trial management and drug manufacturing data, etc.—that fuel the development process. It ingests disparate data, cleans and links it, and then leverages ML algorithms to look for patterns and actionable insights.



## Data's secret superpower: value creator

In such examples we see how data access improves workflows and speeds interventions. But similar changes are sweeping across all leading organizations.

Simply put, data transformation creates something virtually all stakeholders recognize as *value*.

This interesting take comes from two professors at Harvard University who analyzed 23,000 non-tech companies across a variety of sectors.

They tabulated how often senior leadership teams use the words *technology*, *digital* or *data* in their public statements, filings, earnings call, etc. They wanted to know to what extent each company prioritizes

technology adoption and advancement in their core strategy.

**Between the companies that prioritized technology and those that didn't, there was a significant value differential. In their own words, they found:**

- "Valuations of [non-tech] firms that go digital are 7% to 21% higher than peers."
- "Digital [non-tech] firms receive 30%-90% higher returns per dollar of incremental earnings."
- "Notably, we find that non-tech firms ... with a tech executive among the top-5 senior executives perform better than firms without such executives by 60% return-on-assets."





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## Fast Track, Slow Proof

The FDA's accelerated approval pathway has improved the treatment of diseases as diverse as cancer and COVID-19. But the pathway has come under intense scrutiny, which will continue in 2023. Agencies are asking: Where are the follow-up studies sponsors promised? Payers wonder why they are asked to cover drugs when proof of efficacy is years out on the horizon? Meanwhile, the number of drugs requiring long-term follow-up studies has increased dramatically, calling for new approaches to engaging participants in studies in order to ease patient burden and reduce attrition.

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**DATA-DRIVEN**

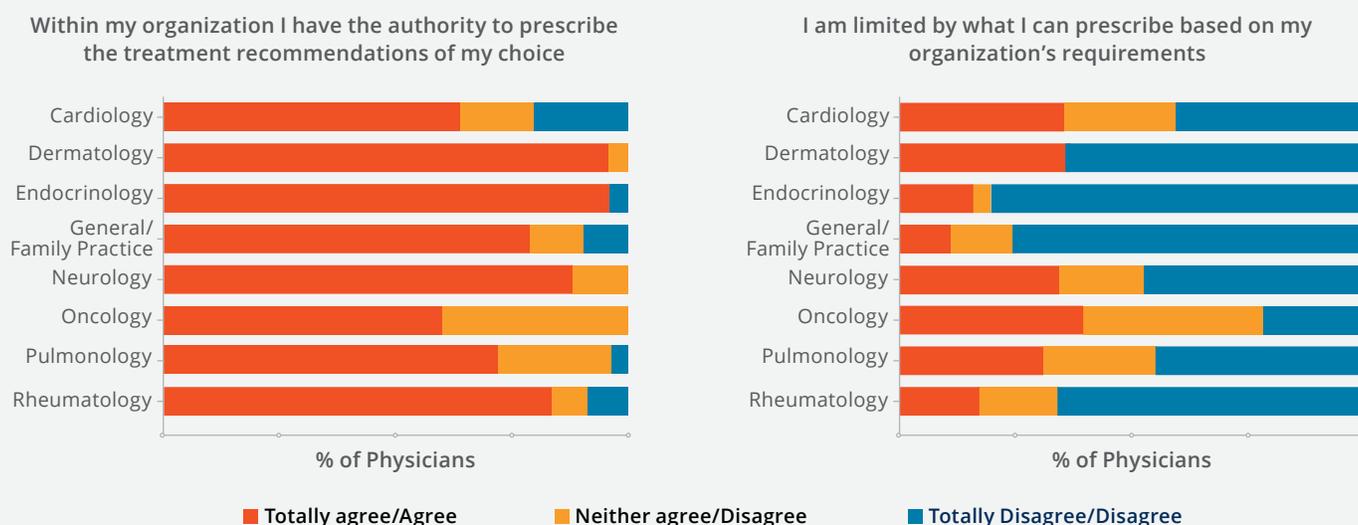
LOCAL MARKET  
MODELS

Genentech was a first mover as life sciences shifted to engage with interconnected health system customers. Their local healthcare ecosystem approach was built around commercial and medical partners focusing on ways to support how care is delivered in individual communities around the country.

The local teams work with healthcare systems on things like outcomes, experience, population health, cost reduction and, most importantly, alignment across the multiple stakeholders involved in decisions about care.

Many life sciences leaders and innovators are leveraging similar models to engage complex local markets where span of control, affiliations/influencers and treatment protocols are often changing.

### Autonomy and authority vary widely across systems and categories



Syneos Health Customer Benchmarking Survey, May 2021 N=225

2023 will see significant opportunities to create relevance and value by leveraging local market teams in an overall commercial strategy.

- **Navigation:** understanding how to prioritize, segment and profile the types of integrated accounts serving patients and HCPs affiliated within each key account
- **Value:** increasing the value of referrals from primary care to specialists and centers of excellence
- **Relevance:** optimizing the customer-facing deployment mix, tailoring customer communications and access strategies, and improving that resource allocation over time

But for many commercial organizations, specific strategies to navigate and engage these systems are less clear:

- **Architecture:** Each healthcare system is multidimensional and unique, often changing rapidly through acquisitions, policy changes and affiliations.
- **Alignment:** As many of the companies with local market models launch more sophisticated specialty, oncology and rare disease products, they're challenged to bring decision-makers into alignment across a patient's care. Often it means struggling to pull through a payer approval or determine how a system protocol can be routinely used in the daily workflow.
- **Accountability:** Many teams strive to identify the best metrics to guide their performance as they work above brand, aligning themselves with the D-suite. Increasingly, they take on new focus areas like working with systems on the social determinants of health.

**As these models continue to launch and mature, we're predicting shifts in upfront data modeling as well as account planning, total influencer mix, and even recruitment paths for top talent.**

Data will continue to evolve in the local market model. No longer will it be simply about account prioritization—although that will continue to be important. Data will also help profile each professional based on skills and achievements including decision-making power, level of peer influence, role in the referral pathway, etc.

Depending on the treatment or trial, that upfront data may go even further, uncovering areas where population outcomes are inconsistent with peer communities; finding doctors who treat patient populations that meet unique criteria for diversity, co-morbidities or other unique attributes; and mapping which relationships and connections seem to matter the most.

Account planning will increasingly leverage that data along with human experience to build a multidimensional understanding of each system. They'll start with opening hypotheses and call plans, then continue to curate attributes and connections to map a fuller view of connectivity and influence.

**Cross-community sharing will gain prominence in this process: *for each type of system, which questions, which connections mattered most?***

For systems with low access, some local market teams will have the option to launch or test digital campaigns to understand how that channel might connect conversations or influence change.

The understanding of influence may not stop at the system door(s). We expect to see more local market teams branch out from healthcare systems to local employers, particularly during benefit decision-making, to meet their greater demands and expectations for understanding clinical value.

Finally, as local market and key account manager (KAM) teams grow and evolve, the traditional titles and roles of highly networked senior talent may also evolve. Data-driven insight, system archetypes and guided networking will make it possible to diversify the talent mix, bringing in account managers with proven abilities to present ideas, discuss a budget impact model and answer an unmet need.



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## The Growing Resurgence of Branding in Medicine

Personality, quality, distinctiveness. What's not to like about branding? In 2023, communications specialists are redoubling their efforts in the pharmaceutical space both for commercial products and clinical trials. Biosimilar products are receiving much of the renewed attention. Overwhelming evidence of efficacy and lower prices are table stakes; physician and patient preference is harder to earn. Branding and storytelling are helping individual biosimilars stand out, while in the clinical space, branding has become instrumental in making research opportunities repeatable and memorable. Well branded trials are earning more conversations among advocates and HCPs alike. This trend may accelerate in 2023 as branding goliaths Walmart, Walgreens and CVS compete more aggressively in the business of recruiting clinical trial subjects for biopharmaceutical companies.

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# DIGITAL TRANSFORMATION: START, STALL, RESTART

No question, the last few years accelerated digital transformation across life sciences. The change was driven by shifts in both efforts and effects: efforts to protect people from COVID, and the effects those changes had on longer-term expectations for speed, ease and choice.

During the pandemic, roadmaps that spanned 5-7 years were quickly pulled forward to build technology capabilities and human confidence. Experiences were reimagined within relatively agile partner ecosystems.

**Did the urgent response actively move digital transformation forward for life sciences? Or simply create an interesting learning lab for more purposeful change to come?**

In 2023, two themes will drive continued transformation: employee empowerment and the persistence of agility.

Let's start with where we are today.

Industry benchmarks suggest that life sciences overall is in the early to middle stages of digital transformation maturity.

Centralized data science groups generate insights and agile development teams come together for pilots.

Platforms and application programming interfaces exist but scalability and true embeddedness in the business are elusive.

Some leaders are breaking out to the next stages of growth with business ownership of technology applications, real-time integrated data and insight, and advanced ML models.

There is significant executive urgency to drive these investments, but many players feel they are in fast-follower mode rather than being initial drivers of change. In a recent survey of 150 biopharmaceutical leaders, 77% said their company thinks of digital innovation in the context of competitive differentiation but half expressed the "fast follower" mentality. Of that subset, 80% want their organizations to be more aggressive in adoption and transformation.

### The barriers to rapid change are familiar:



#### Meeting impact expectations

Transformation has always been one of the greatest challenges in business. It's become more acute over the last three years with ambitions high and longitudinal while return on results is expected on much shorter time horizons. Teams struggle to balance the future state with achievable short-term goals.



#### Acting with agility

Challenges in governance and process can make it difficult for teams to move quickly to understand the potential of new models and new technologies. Consequential decisions land on the desk too fast for many leaders to keep up.



#### Achieving scale

Big gaps remain between leadership alignment/successful experimentation and scale to the edge of the organization. While enablers and adopters are prominent in many organizations, they are rarely enough to foster true organic change.

**Some of the challenges surface in the survey above. Intransigent, unsolved issues included the need for dedicated funding (59%), better digital innovation strategy (49%), and the right talent to scale (47%).**



## The role of employee empowerment in 2023

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Workforce enablement is the next frontier of digital transformation. More organizations will be talking about how to break down the silos around innovation and give data and technology to the broader business. The scale of change needed can't be created by a bullpen of even the best data scientists; it needs the adoption and adaption of every aspect of the business to truly drive transformation.

In 2019, International Data Corporation (IDC) predicted industry-specific digital transformation efforts would drive innovation at historically unprecedented rates. Such use cases would spur development and use of 500 million cloud-based digital apps and services—equal to the number developed over the last 40 years. Imagine that being accomplished by small, determined groups entirely on their own? To get to “next,” global corporations need larger, embedded groups with a greater variety of experiences and perspectives. And to the greatest extent possible, individuals must be technologically empowered.

That takes us back to the Novartis example shared in The Data Effect trend, where the trajectory toward digital transformation is clear. They hired the right people and

tools to lay the groundwork: cloud infrastructure, data platforms, data scientists, AI specialists.

But even as the technical capability grew, adoption by the business was slow. There were occasional breakout pilots with early adopter business partners, but no radical difference in how the business operated.

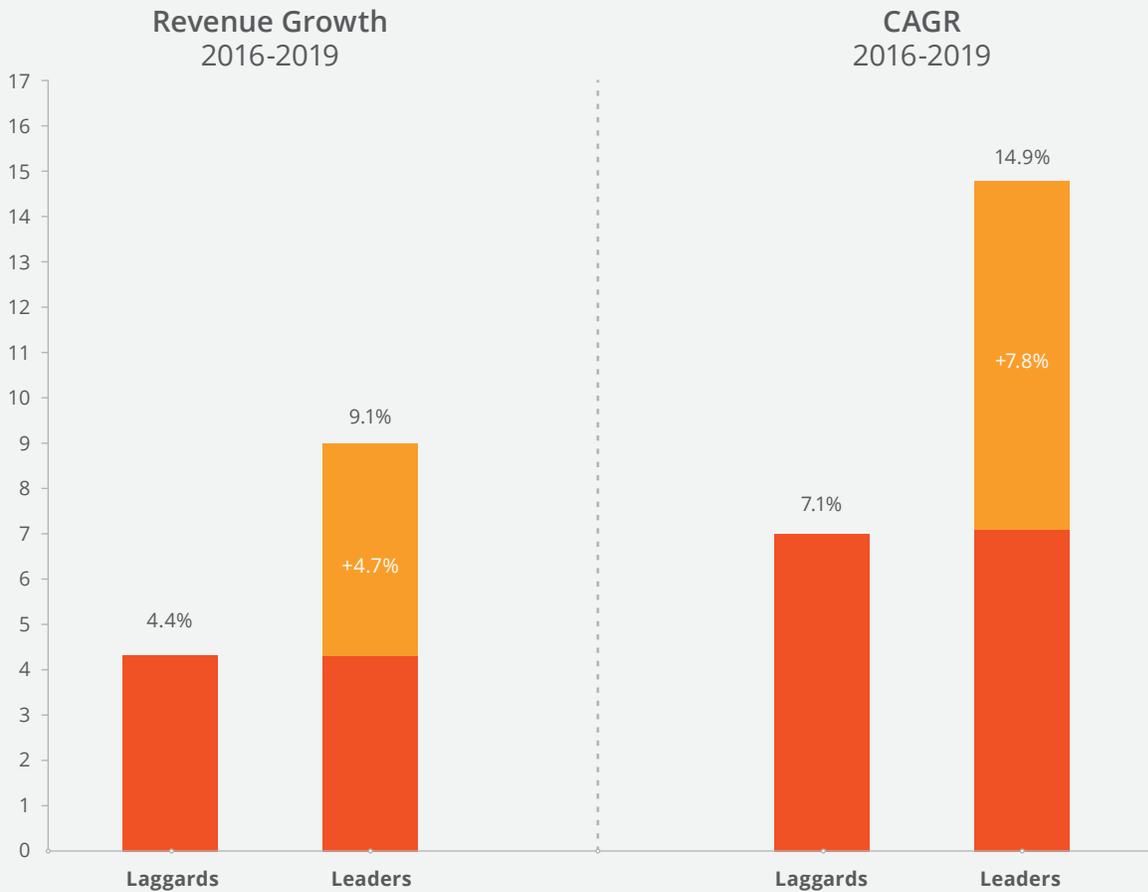
That changed when Novartis started partnering data scientists with business leaders to co-create around what was needed: namely, leveraging technology to achieve greater efficiency. Today, Novartis is actively training front-line employees to use data and encouraging teams to adopt agile ways of work.

Their goal: enable anyone in the organization to identify and act on a data-driven opportunity.

Microsoft and Harvard's Digital Initiative recently teamed up to study the effect of “tech intensity” when employees actively use it for innovation and performance, with use cases ranging from Novartis to Unilever, Fidelity and Starbucks. The drivers of transformation, they found, are deep within these leading organizations, not siloed or sidelined at the edges.

## Digital Transformation Pays Off

The Harvard-Microsoft research looked at 150 companies in a range of industries and found that revenue growth and compound annual growth rate among the leaders (the top quartile) in tech intensity were more than double that of the laggards (the bottom quartile).



Source: <https://hbr.org/2022/05/democratizing-transformation>

## Persistence of agility post-pandemic

One of the threats to transformation in the post-pandemic era is a palpable decrease in the urgency to change. To continue the momentum, organizations are focused on two critical drivers:

- **Close ties to business performance:** models that demonstrate the multiplier effect of every dollar spent on transformation in terms of time, outcomes and value
- **Continual experimentation backlog:** the enormity of possibility requires prioritization

Many executive leadership teams are working closely with front-line clinical and commercial teams to understand what learnings are most needed next.

### Key areas of investigation in 2023 will include:

- Diversity models in clinical trial recruitment
- Precision patient recruitment
- Behavioral science and persistence motivators
- Digital monitoring and engagement with connected devices
- Real-time data exchanges
- Natural language processing and image recognition models
- 1:1 healthcare professional engagement
- Dynamic call lists for the commercial field





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## A Crisper View of the CRISPR Era

CRISPR, the gene editing technology that captured imaginations, won Nobel Prizes and spurred innovations, is now entering practical medicine. The technology was used to develop a treatment for beta thalassemia and sickle cell disease (SCD) and is now moving through trials. Vertex, in collaboration with CRISPR Therapeutics, is testing an SCD treatment that may reduce the need for blood transfusions as well as the incidence of life-threatening medical events. Further out on the horizon, Harvard biologist David Liu's new venture, Prime Medicine, aims to replace today's sometimes-risky CRISPR approaches with safer, more nimble gene editing programs. Liu's initial targets may include SCD, Friedreich's ataxia, cystic fibrosis and conditions of the liver, eyes and ears.

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A photograph of a woman in a white lab coat and glasses on the left, and a man in a dark suit on the right, both smiling and engaged in conversation. They are standing in a modern building with a glass railing in the background. The entire image has a warm, orange-red color overlay.

# HUMAN ENGAGEMENT



Care for the Front Line

A New Field for the Field Force

Improved Sophistication in Retention

Industry-Wide Push for Equitable Representation

A photograph of a healthcare worker in scrubs and gloves adjusting a hairnet on another person's head. The scene is bathed in a warm, orange-red light, creating a sense of care and attention. The worker's hands are visible, one holding the hairnet and the other holding a small object, possibly a hairpin or a tool. The background is blurred, showing what appears to be a clinical setting with a window and some equipment.

CARE FOR THE  
**FRONT LINE**

The last few years—but really, the last few decades—have been incredibly difficult for medical professionals. From massive changes in workflow, to patients more willing to challenge advice, to new demands from administrators and governments, shifts in the work environment have made it harder for HCPs to see medicine as the calling they once imagined.

As we've been reporting for years, burnout is rampant in medicine. Even more so following the physical and emotional weight of the pandemic.

What comes next has an even greater potential to capture the imaginations of a whole new generation of healthcare workers: a rapidly advancing future of health technology that is nothing short of world-changing.

**This year represents an important reset—a chance to reinspire HCPs and create the flexible choices they need for life, work and mental health.**

## A reset for nurses

For nurses, the burnout driven by the last few years of long hours, constant uncertainty and masked separation from colleagues and patients left many fed up with the working conditions assigned to them and ready to make their own way.

A recent survey found that 34% of nurses expected to leave their roles by the end of 2022. Many (44%) named burnout and high stress as reasons for leaving the field. Dissatisfaction with benefits and pay took that second spot at 27%.

Now, nurses are actively creating their own career paths. The last two years saw the heyday of the traveling nurse. As COVID-19 traversed national borders in waves, the need for staffing varied across geographies. Nurses who could do so traveled to areas of greatest need and benefited from the moves in many ways. Financially, some were able to triple their salaries and earn other benefits in housing and support. Emotionally, they had the opportunity to reset and learn about new hospital cultures and teams.

### Reasons for leaving the field





This year may be different. Hospitals are ramping up permanent hiring and many lack the resources to permanently extend flex talent. Many nurses will continue moving to new hospitals, and new opportunities, but others are competing in a new market: telehealth.

Though funding for telehealth ventures plummeted in 2022, observers remain bullish as the sector addresses profound, unrelenting societal needs. As financing improves, demands for nursing talent will be a critical part of the equation.

**If cleared to move forward, Amazon's expansive One Medical home care ambitions and CVS/Aetna's new Signify acquisition will both signal optimism and opportunities in this space and in associated nursing services.**

Telehealth also offers nurses new branches in their career paths, like chronic care management (CareHarmony) or remote patient monitoring (Circadia Health). But it will continue to be an intensely competitive space throughout 2023. While hospitals searching for local talent are quick to make offers, telehealth companies and crossover businesses backed by Amazon, CVS and others can be choosy amidst a glut of candidates looking to remake their careers and lives.

For nurses working in traditional care models, the buzz is about quiet quitting, as suggested by news features on the phenomenon in *The Wall Street Journal* and on TikTok.

**Quiet quitting is a kind of reset among young professionals who reject the appeal of going above and beyond in their careers. They don't want to leave their roles. But they crave time to focus on things outside of work.**

## New ideas and directions for retention

In a recent report, the US Surgeon General labeled healthcare burnout a nationwide crisis. The report projects a shortage of more than 3 million essential healthcare workers and 140,000 physicians in the next 10 years.

Inspiring a new generation of professional is certainly top of mind, but so is the care and retention of current HCPs. In 2023, we'll see novel approaches for tending to their mental, financial and professional health.

One example: New York's Health Care and Mental Hygiene Worker Bonus Program. It pairs \$1.3 billion for recruitment and retention bonuses with a longer-term goal of growing the state's healthcare workforce by 20% by 2028. Individual hospitals and systems have adopted rolling "hero pay" and appreciation bonuses along with other efforts.

Some programs are focused on small but important ways to care for these individuals' mental health.

FirstNet, the high-speed communications platform built with AT&T for first responders, brings therapy dogs to care for and comfort teams in times of crisis.

While this may sound like an outlier move, the program recognized that first responders experience unusually high rates of mental health issues, including depression, PTSD and anxiety. The cuddly, well-trained therapy dogs have a positive impact on coping, recovery and morale.

Dogs won't meet every need. More typically, large healthcare systems are looking to technology and new training to reinspire a workforce plagued by "click fatigue."

Athenahealth is working within its electronic health records (EHR) system to set specialty-specific or even person-specific workflows. One Medical aims to reduce tasks with natural language processing to route EHR requests to the best-fit expert. The early results show 40% fewer tasks in the queue for providers.

## Will innovation inspire a next generation of HCPs?

The rate of change in healthcare is accelerating. To rebuild the pipeline of new doctors and nurses, we'll need radical shifts in the possibilities for care while improving the human experience.

Looking ahead, we are again at a moonshot moment: the chance to do something once deemed impossible. Peter H. Diamandis, founder and chairman of the X Prize Foundation, famously said, "I don't think the Space Station is innovative. Going to the moon was innovative because we had no idea how to do it."



**Inspiring a new generation of professional is certainly top of mind, but so is the care and retention of current HCPs. In 2023, we'll see novel approaches for tending to their mental, financial and professional health.**



## Healthcare advancements on the horizon

The challenge today is inspiring the next generation of HCPs while managing a multitude of related tasks with no obvious solution. Here's the powerful role science and technology can play:





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## Episodic Future Thinking (EFT)

The proliferation in telehealth experiences is rekindling interest in EFT for remote and self-managed health. That may include anything from losing weight to fighting depression to managing drug addiction. In short, EFT is our ability to manage our own futures through exercises in imagination, helping us commit to changes in what we're doing today to make a possible future more likely. Some scientists call it pre-experiencing the future. Ongoing studies are investigating various ramifications—risks as well as benefits. Perhaps envisioning happy moments in the future, at regular intervals, might help people who struggle with addiction get past stressful events that can trigger drug use. Studies along these lines will likely provide answers in 2023 and beyond.

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# A NEW FIELD FOR THE FIELD FORCE

Imagine you're someone entirely energized by spending time with people, yet you're trapped on the other side of a closed door looking into a video screen or yet another text message. Year after year.

Are we imagining HCPs or field teams in this scenario? Maybe both.

This year, in some domains, the doors continue to swing open as 73% of rep-to-physician interactions happen in person. Even in categories where patients are immunocompromised, such as oncology, in-person visits are ranging up to 69% at leading institutions.

In a recent report on omnichannel field engagement, Veeva, a cloud-computing life sciences innovator,

notes that rates of in-person interactions vary across geographies, with the United Kingdom lagging and Asia Pacific leading. But around the world, the upward trend seems to hold.

**This is not a back-to-business-as-usual trend. Instead, it's a new chapter in how field teams engage HCPs. Entering 2023, we're looking at big changes in value expectations, automation and modern segmentation/targeting.**

## The value-based visit

Even as doors open, expectations for engagement have changed. Prescribers and practice partners are resistant to repetitious promotion and reminder details. Instead, they're looking for new information, second-level conversations, or service and connections.

This shift is due, in part, to the change in immediacy that telehealth created for practices. The minute-by-minute scheduling of time became critically important to maintaining patient relationships. Today, watching that

clock and the minute-by-minute investment of time is a tenet of how the practice works.

Shifting expectations are changing the design of some field teams to be more local and account based (see the Data Driven Local Market Models trend) but it's also giving individual field members the opportunity to build more expert and valued relationships with integrated office teams that move them away from social conversation and deeper into service and education.

## The new access challenge: the inbox

The expectation for quality isn't just in person, it's also in the inbox.

An increasing number of individual HCPs as well as entire practices and systems are opting out of inbox communications from life sciences partners.

The dramatic shift to email communications in the past few years was driven both by pandemic measures and

a growing commitment to next-best-action triggers. The long-held industry motivation to maximize reach and frequency was essentially delivered in one channel vs. across many.

The inbox-first approach added to the crescendo of push notifications and email dings that were already overwhelming HCPs. With a dramatic increase in messages from patients, colleagues, healthcare systems, life sciences partners and more, the channel became unsustainable.

In 2023, the most effective use of email will be less, not more. A recent study found that inbox fatigue sets in quickly. Engagement rates dip when promotional emails are sent more than once a week. In net, the report found that the most effective pacing of email for HCPs is four to six weeks apart.

In addition to timing and relevance, we expect to see pharmaceutical leaders more consistently leveraging ambient digital media. Simple hyper-targeted, high-relevance banner and contextual ads create the opportunity for HCPs to explore what's next on their own time and terms rather than negotiating the crowded inbox.

Many of these types of micro engagements will also create the opportunity for scaled up message testing to improve inbox communications.

## A reset on targeting: segmentation and recency

Rapid change and renewal are the watchwords for biopharma in 2023. Expect smaller markets for new drugs, necessitating more—and more rapid—drug development. At the same time, we'll see greater fragmentation in markets of all sizes. Patterns of influence will further shift as hospitals, payers, integrated delivery networks (IDNs) and other interested parties exert power over how physicians treat conditions and utilize medicines.

The pharmaceutical industry is responding to these changing dynamics in multiple ways. A significant focus over the next three years will be evolution in the accounts prioritized for field team contact. Look for

a shift from identifying priorities based on volume of total patients to uncovering physicians and systems predisposed to use the new therapy.

Commercial teams will rely more heavily on new, robust claims data sets, data science and predictive modeling to enable the company to “peer through” the market opacity and identify physicians and patients who will benefit from a product as well as have access to it.

Today, we are at another inflection point with regard to the availability of that data. It will enable a clear path to the four now-critical elements of deployment prioritization:



### Selection

Narrowing the list of all possible prescribers to a shorter list of those most likely to respond to promotion based on a range of individual, patient and system attributes



### Mapping

Understanding the referral and influence relationships among prioritized accounts or prescribers as well as the interconnected relationships within practices



### Ranking

Optimizing the allocation of promotional spending among the short-listed targets (both personal call frequencies and digital ad impressions)



### Clustering

Grouping physicians by similar traits to inform messaging or other engagement parameters. Geography, specialty and setting are the most frequent ones, but they also could include attitudes, current prescribing behavior, relationships with patients, and dominant competitors



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## Mental Health Is Primary Care

The last several years have given us an even stronger understanding of the importance of treating mental health conditions as a core part of total care. Integrating mental or behavioral health with primary care is a strong focus of governments and HCPs alike. The impact mental health challenges have on both quality and cost of care is only now truly being calculated. Telehealth and consumer-paid services are making mental healthcare more accessible, but primary care integration is seen as a linchpin for progress.

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# IMPROVED SOPHISTICATION IN RETENTION



After two years of talking about a war for talent, we've moved to a conversation about reenergizing and embracing both current and previous team members in new ways of work that are increasingly personal, purposeful and flexible. In 2023, organizations across industry have become more refined in how they think about creating work people actually love. Let's start there.

## Designing for the individual

A common sentiment shared across analysts and experts in 2022 was simply: *Work isn't working for us.*

Many workers came out of the worst of the pandemic, looked around at the landscape of possibilities—from returning to suits and commutes, to continuing to work from kitchen tables—and didn't see the aspirational future they'd been waiting for.

ADP Research Institute (ADPRI) has consistently tallied job satisfaction numbers below 20%. In a typical year, only 18% of respondents were fully engaged at work, 17% felt highly resilient at work and 14% trusted their senior leaders and team leader.

ADPRI continued that research recently with a sample of 50,000 workers from around the world. When they benchmarked the clearest predictors of retention, performance, engagement, resilience and inclusion, the top response among respondents wasn't pay or work location. It was work that energized them. The team identified these three questions as the most important:

- Was I excited to work every day last week?
- Did I have a chance to use my strengths every day?
- At work do I get a chance to do what I'm good at and something I love?

**Interestingly, these criteria aren't just about satisfaction; they're about performance, indicators of the ability to perform cognitive tasks faster, be more open to new information and deliver more effectiveness in a role. As the study designers described it, "You're on fire without the burnout."**

Leaders are increasingly taking these clues to design work around individual strengths. A critical number in 2023 will be 20%. That water mark was calculated by Mayo Clinic to understand how to combat burnout in doctors and nurses.

They found that if less than 20% of your work includes things you love to do, you're more likely to experience both the physical and mental health aspects of burnout. Interestingly, in terms of a water mark: 20% is very much the high-water line. Loving more than 20% of your job doesn't substantially change resilience.

### The year of the boomerang

**2022 began a trend we'll see ramp up further, faster in 2023: the great resumption. Past taboos about returning to a previous employer after resigning have been largely replaced with an industry-wide empathy for what individuals have shouldered in the last several years of massive disruption and an appreciation for what alumni can bring back to an organization.**

The headwinds to retention have been blustery. Resignations in the US alone were stuck at over 4 million per month for well over a year. But a combination of good faith and world change are bringing many back. A recent survey by Workplace Institute found that 15% of employees have returned to a former employer and 40% would consider applying to a previous company. That number is even higher for millennial workers at 46%.

Circumstances could change. No one can precisely foresee the impact on labor as governments around the world battle inflation in coming months. The consequences in some regions could be deep and devastating.

But if we assume economic recovery in 2023, the new focus may be bringing previous employees back effectively and routinely. The good news: We've already learned a lot about laying the groundwork for exited employees to return—from active offboarding to alumni follow-up.

In healthcare, people who do return tend to be more satisfied and committed. Importantly, they also offer

perspective for managers and leaders on why people are leaving and what inspired them to return. They know the organization and can rapidly ramp up, learning what's changed and building on what they previously experienced.

But there are nuances to a successful re-entry. Early leaders have found that purposeful onboarding is key. Returning employees will need immersion just as a net-new employee would. Understanding why the employee left once is also important. What can you do together to address concerns and set expectations for great second act?

## Planning for changing expectations

Executive teams and talent leaders are actively building cultures and organizations around how employees increasingly want to work.

Citrix, a cloud computing and virtualization company, keys into the future knowledge workers want to build with their employers. Through its Talent Accelerator, part of a program called Work 2035, Citrix researched

global work patterns to understand both how work needs to (and will) change, and how technology can boost performance in this changing environment.

Its research included a survey with over 2,000 knowledge workers and 500 HR leaders in large, established corporations and mid-market businesses.

They found two key themes to build on:

### Flexible expectations

- Some 88% of people expect flexibility in terms of hours and location. They also expect to work with geographically diverse teams (83%). The “no matter where you live” model sits more strongly with employees than it does with HR leaders. Only 66% of HR leaders support the same complete flexibility.
- Optimizing teamwork and culture across the geographic spread is also a significant focus and trend coming into 2023. Line managers and team leaders are looking for more ways to build empathy and connectivity among people who share more Zoom calls than they do coffee breaks.
- 2023 may not be kind to a back-to-office mindset. The Citrix survey suggests that 76% of workers will prioritize family and personal interests over proximity to work and 83% predict colleagues will leave urban centers and create new work hubs in rural areas.

### Productivity reset

- The second big finding is about value. Employees want to know that productivity is measured in impact, not volume. This shift is as much about trust as it is about true measurement: Do teams have the autonomy they need to do the right thing vs. the easy-to-calculate-and-track metric?
- Roughly half of HR directors are on the same page. They said the overall organization would be more productive if employees felt that their employer/senior management team trusted them to get the job done without monitoring their progress.



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## The Next Generation of CRAs

The history of clinical research associate staffing has hinged on narrow expertise—years of experience and specific therapeutic category experience. In a very tight job market, new kinds of ingenuity are needed to keep clinical trials on target. New training programs are bringing nurses, biologists, retail pharmacies and fresh college graduates to the clinical research field. These programs are focused on developing strategic, agile talent and technology that can deliver right-sized impact within a complete trial team.

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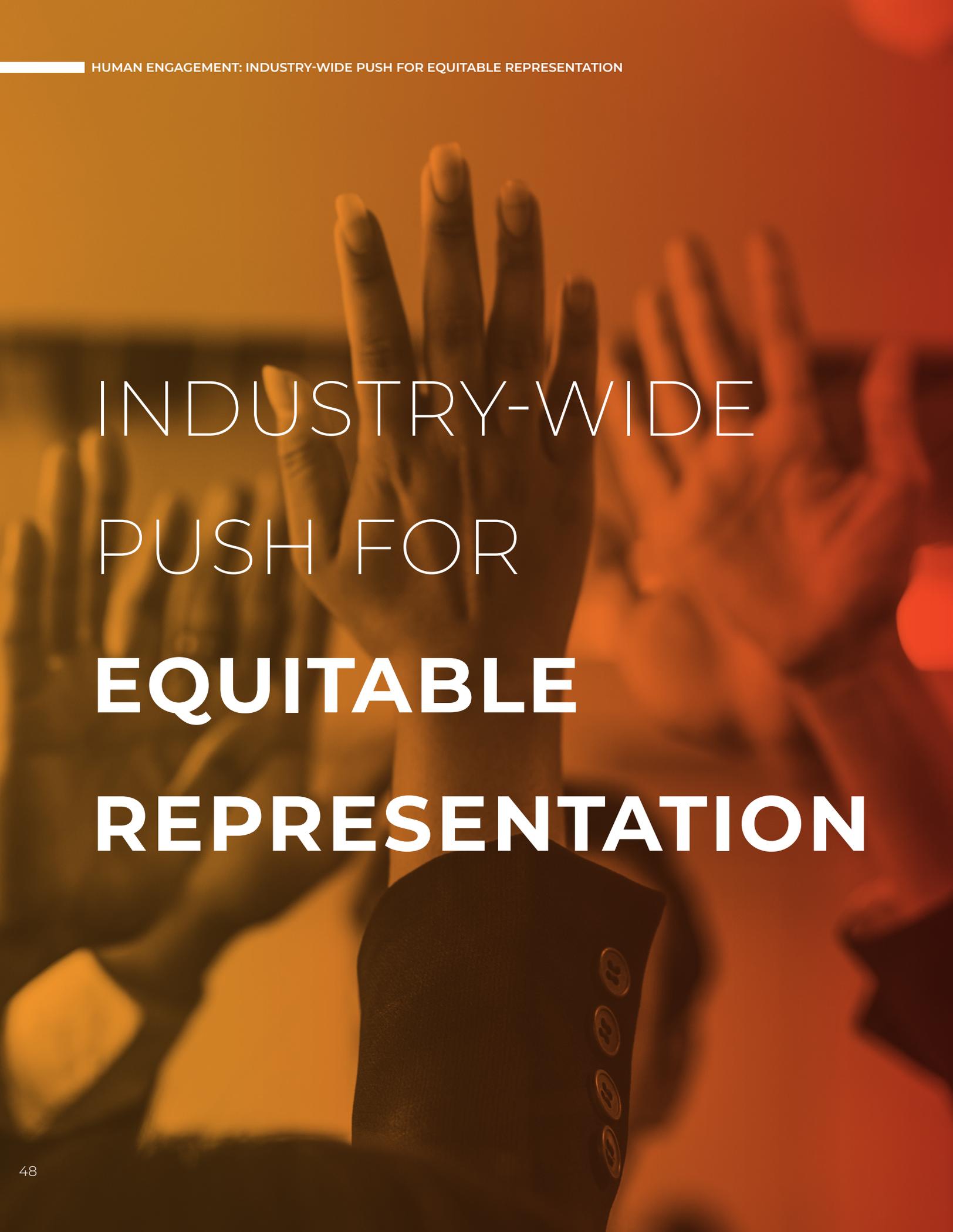
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INDUSTRY-WIDE  
PUSH FOR  
**EQUITABLE  
REPRESENTATION**

Twenty-five years ago. That’s a timeline familiar to many of us. It was 25 years ago that the US Food and Drug Administration (FDA) first issued guidance related to racial and ethnic groups that were underrepresented in clinical trials (“Demographic Rule” Regulation in 21 CFR).

Despite this and other agency guidance and clear documentation of the toll disparities take on society, medical care and research, there’s been too little progress to date.

Jump ahead to 2022. The FDA draft guidance published in April along with other government efforts are generating urgency and momentum toward more diverse participation in clinical trials.

One development to watch: Mounting stakeholder engagement with RWE may finally provide greater clarity on how different populations respond to treatment in research contexts, in clinics and in settings that combine both modalities. That includes prospective clinical trials with a focus on RWE.

**By revealing patient experiences in real life, RWE can enable better understanding of health inequities in technology and assessment. And, with more such data, society can devise better policies to address health disparities.**

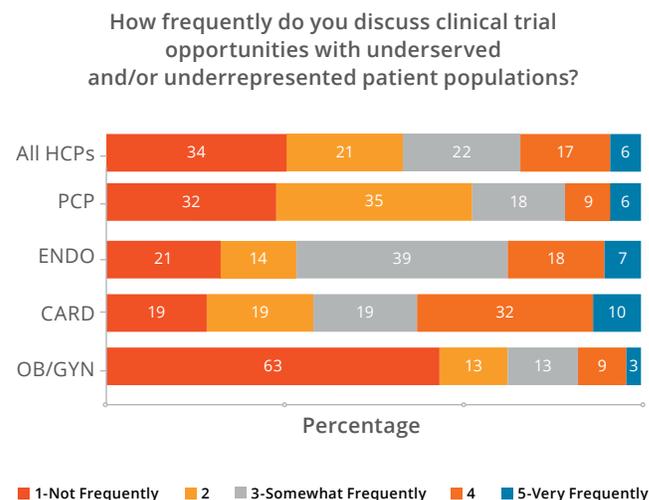
Where are the remaining barriers to equitable clinical research? First, today’s conversations around trial participation do not sufficiently take stock of the social determinants of health—a set of intersecting conditions including patient environment and socioeconomic status that can profoundly affect ability or willingness to participate in trials.

This is particularly a challenge in minority and economically disadvantaged communities. Consider, for example, the costs of medical assessments at the heart of clinical research. These batteries of tests throughout a study are not always free or covered by insurance—and even when they are, access to health plans in the US is rarely equitable.

**The onus is on research sponsors to show they are working effectively, not just to reduce patient-facing study costs, but to support social programs that address the social determinants of health.**

There is a second, related set of obstacles on the upward path to clinical trial diversity. Some of the most powerful tools and strategies to re-balance trial participation, including advanced technology and wider use of social channels for recruitment, may unintentionally thwart the goals of diverse representation.

It begins with physicians discussing research opportunities, whether in person or remotely via telehealth. Unfortunately, patients in minority groups often miss out on these conversations. In a recent HCP survey by AnswerSuite, a Syneos Health company, 34% of HCPs said they infrequently broached such opportunities with members of underserved groups:





In 2023, many hopes are riding on personal monitoring and fitness tools that can help “decentralize” trials, bringing them closer to patients’ homes and reducing burdens such as transportation and childcare costs.

However, technology only helps if disadvantaged groups have equal access to the technology, which is hardly ever the case. Moreover, the migration to decentralized clinical trials (DCTs) carries certain risks, such as interrupting existing relationships between patients and clinicians in hospitals or presuming that patients in diverse communities will want to be treated where they live.

**Lack of diversity among medical teams that lead research programs is a barrier to recruitment of diverse trial subjects. But sponsors who recognize this barrier and strive to train more investigators from diverse backgrounds can win trust.**

Without doubt, there is broader consensus today among regulators, HCPs and advocates that advancing goals of diversity should be mandatory. It’s also achievable, as long as we understand and conscientiously tackle the obstacles.

The following trends are shaping both conversations with the FDA and internal priorities and initiatives in industry.

## Key trends in equitable representation strategies coming into 2023:



### Moving From *Should* to *Must*

- The development and implementation of a trial enrollment plan centered around increasing diversity for phase II-IV trials is no longer a consideration for industry, it's an expectation.
- For sponsors, this is a new standard way to work.
- For FDA and other regulators, this is an opportunity to require diversity plans from sponsors applying for public funding through the National Institutes of Health (NIH) and other agencies or to be considered for expedited review.



### Creating Disparity Action Plans

- Insight into how specific disparities (e.g., access to prior treatments, genetic screening) impact participants from various diverse backgrounds is more frequently guiding the development of trial design.
- For sponsors, acting on insights provides a framework to build additional decentralized or clinical elements into trial design to maximize enrollment and ongoing participation. But sponsors must be savvy about decentralization's risks. Moving trials away from hospitals can cleave hard-won relationships between providers and patients in diverse communities. Moreover, not all households will welcome clinicians into their homes—especially if investigators or their surrogates look nothing like the patients they seek to engage in research.
- For regulators, disparity action plans could be fashioned as a direct requirement in each proposed plan.



### Setting Clear Goals

- Defining trial enrollment goals in 2023 is about both the what and the why: That means clarity around specific enrollment metrics and the details on why they were selected, and an understanding of what it takes for health systems to engage local communities.
- For sponsors, this creates an opportunity to clearly define how those goals will be met and measured.
- For regulators, it opens new conversations on performance against population understanding.



### Going Beyond Enrollment to Retention

- Up to 40% of participants drop out before completing a trial, a data point prompting important conversations about how to ensure that trials not only enroll the right representative mix of patients but also maintain engagement through the trial.
- For sponsors, it's a wake-up call that each participant must feel valued, comfortable and ready to continue.
- For regulators, attrition or completion rates can aid understanding how well a treatment is likely to serve diverse populations.



### Systematically Removing (Relevant) Barriers

- As decentralized and virtual trials are adopted more widely, sponsors are striving to remove roadblocks to diverse participation. Partly, it's about easing the burdens of travel, childcare and language barriers. But sponsors also must ensure that costs for trial-related assessments are covered for people with little or no health insurance.
- Fostering trust requires understanding the lives and needs of each patient segment. Hybrid decentralized trials creates choice in how participants are able to engage.
- For regulators, awareness of barriers and cascading learnings across industry is the fulcrum for meaningful change.



### Leveraging Data to Understand Influencers

- In 2023, recruiting doesn't stop at registry lists or direct-to-patient tactics. Instead, there's a renewed focus on understanding the critical relationships that guide healthcare decision-making.
- For sponsors, that means leveraging novel data to identify the physicians who treat relevant patient groups and working to build awareness and education amongst those practices to inspire 1:1 conversations about a trial.
- For regulators, data may increasingly be expected to show the sources of influence, including the overall diversity profile of sites selected.



# SANDBOX

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## Payer Initiatives in RWE

Numerous panels and posters at the 2022 annual meeting of the American Society of Clinical Oncology (ASCO) highlighted broadening interest in real-world evidence. Payers are looking more closely as well. They hope RWE will shed light on how medicines perform in real-world settings, and perhaps illuminate hidden costs associated with adverse events and other factors. Some payers have begun producing their own publication-grade research showing how a treatment's value proposition is affected when outcomes vary across different racial or ethnic groups. What remains unclear is whether such research can bear meaningful results without aggressive, society-wide efforts to close persistent gaps in insurance coverage.

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A group of people in a meeting room, with a woman pointing at a whiteboard covered in sticky notes. The scene is lit with a warm, orange-red glow. The text "HEALTHCARE ADVANCEMENT" is overlaid in large, white, bold, sans-serif font.

# HEALTHCARE ADVANCEMENT



Bold Trajectory for Medical Affairs Innovation

Fast Growth in “AgeTech”

Prime Time for the Value Debate

Outsourcing on the M&A Playing Field



# BOLD TRAJECTORY FOR MEDICAL AFFAIRS INNOVATION

The year ahead will be an ambitious one for Medical Affairs teams. Historically, this function was born from a commercial need to interact with industry stakeholders in a deeper scientific dialogue. That hasn't changed, but the role has evolved quickly against the backdrop of the pandemic.

In today's complex healthcare environment, where demonstrating real-world utility beyond regulatory approval is the hallmark of success, Medical Affairs leaders have moved from disease and product specialists to curators and catalysts of outcomes-focused information.

The teams have broader, earlier and more strategic engagements with stakeholders across the product life cycle—from early clinical development all the way through patent expiration.

**The next step will be establishing Medical Affairs in the C-suite, empowered as an effective strategic partner to the broader organization.**

The push toward a C-suite role for Medical Affairs plays out against landscape shifts that can't be ignored. These include:

- The importance of value-based data for clinical differentiation and economic end results
- Growing emphasis on RWE as a key component in value demonstration
- The need for earlier and broader stakeholder education—meaning advocacy groups and payer bodies as well as key opinion leaders (KOLs)

- Increasing complexity and cost of specialized therapies including cell and gene therapies—all requiring technical expertise and nuanced data
- Closer HCP/payer interactions
- Intense market competition demanding early, meaningful product differentiation

The traditional corporate structure can't easily address these intersecting demands. Too often, the organization chart is bristling with competing clinical and commercial priorities, strategic misalignment, budget constraints and suboptimal resourcing.

**With a seat at the table where decisions are made, Medical Affairs can represent the collective voice of all external stakeholders, including physicians, KOLs, payers, policymakers, and diverse patient communities who, until now, have lacked representation in the C-suite.**

Importantly, amidst competing R&D and commercial priorities, Medical Affairs can mediate as the only function supporting products throughout the product life cycle.



**The teams have broader, earlier and more strategic engagements with stakeholders across the product life cycle—from early clinical development all the way through patent expiration.**



## Trending toward complexity

To visualize this last point, consider the growing demands for evidence from decision-making stakeholders (patients and caregivers as well as regulators, payers and providers) that falls outside the purview of traditional regulatory and clinical efficacy data.

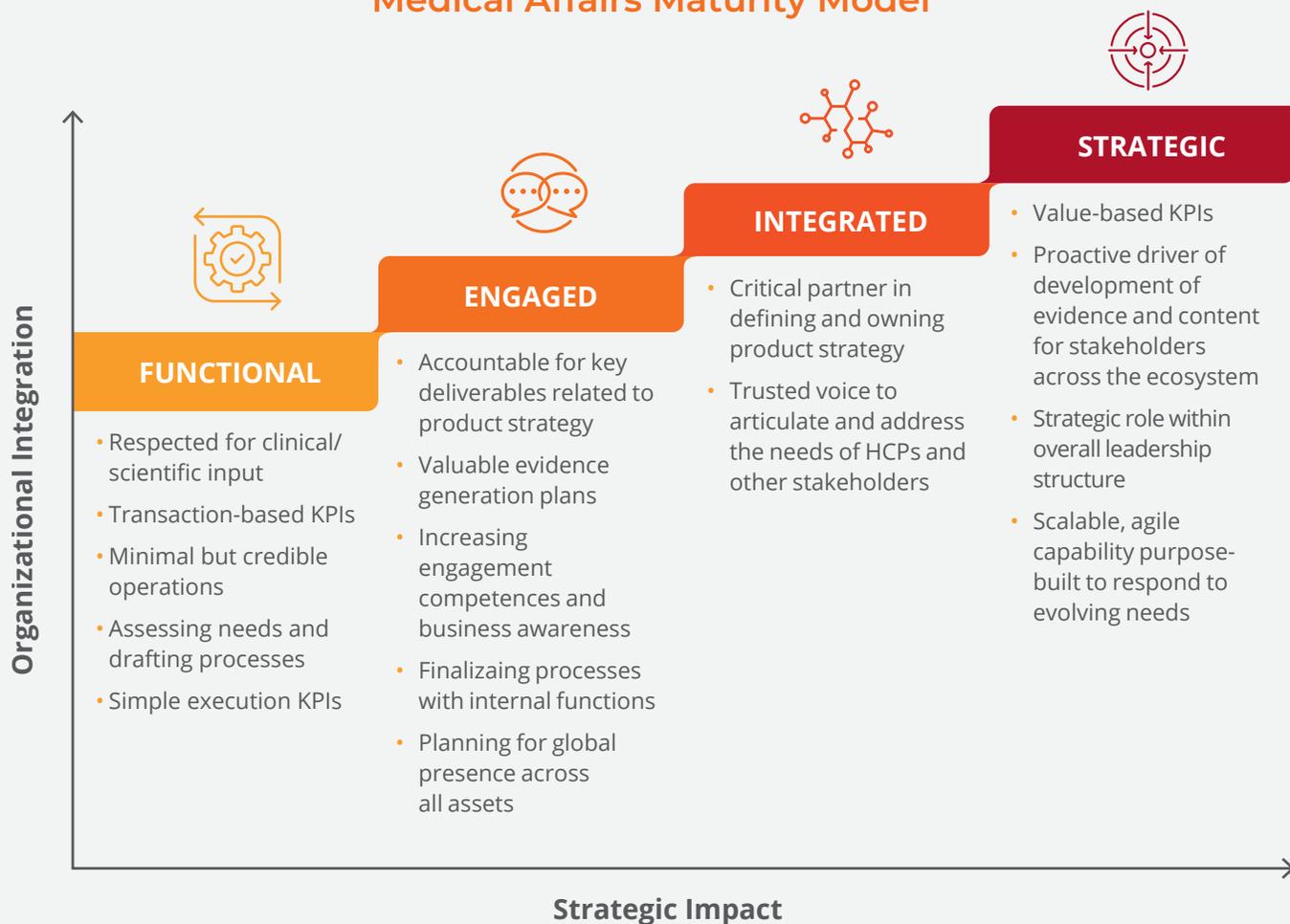
The demands may include RWD analysis, health economics and outcomes research (HEOR), non-registrational trials and more. The complexities tied to cataloguing and benchmarking against additional endpoints and running real-world utilization assessments runs the risk of disrupting clinical operations and negatively impacting trial completion and approval deadlines. Medical Affairs can help.

Increasingly, it falls to Medical Affairs to produce the critical datasets leveraged by payers and patient organizations to inform product utilization and coverage decisions. These activities must not be conducted in parallel, but rather in partnership with ongoing research programs. The ideal model is clinical and medical teams together developing an integrated evidence generation (IEG) strategy that considers the competitive market landscape, timeline and budget expectations.



The new model is an actively evolving and empowered Medical Affairs function—one that is seeing more impact with each strategic step:

### Medical Affairs Maturity Model



As Medical Affairs teams take on new responsibilities and challenges in 2023 and 2024, industry leaders have set up much-needed talent management and training tracks. Eisai, for example, created Eisai Medical Affairs College, which focuses on four “schools of knowledge.” As described by Kirk Shepard, Eisai’s chief medical officer and head of Global Medical Affairs, the disciplines include data and clinical science, general business acumen, leadership skills and region-by-region expertise. The need for Medical Affairs input and strategic counsel on RWD programs will continue to grow, especially in

the area of rare diseases. Here, Medical Affairs will go beyond the efforts of clinicians to collect hypotheses and evidence from patients and caregivers that warrant further vetting and investigation. Registries will support this effort but so will the important relationships Medical Affairs holds with influencers and clinicians.

Changes in permissions and governance stretch across these evolutions, but they are all part of the concerted effort we expect to see in 2023 to elevate the role of Medical Affairs in life sciences organizations.





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## Global Healthcare in Place

A question industry will probe in 2022: How will the rapid, global shift to "healthcare in place" affect Medical Affairs as HCPs routinely integrate telehealth, telemonitoring and remote care into their whole-person care plans? Over the next three years in the US, as many as 40% of healthcare providers will shift 20% of hospital beds into the home. Expenses linked to home care will likely rise as much as 73% by 2028. Fueled by necessity during the pandemic and aided by rapid home-health technology, this homeward migration is gathering momentum across the planet. In Malaysia, Qmed delivers telehealth directly to workplaces via kiosks acting as mini clinics. Health Pod and Docty offer similar services in India. When care models change so radically, C-suite conversations must adapt with comparable agility and commitment.

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# FAST GROWTH IN "AGETECH"

We’ve reached a critical milestone in an era when we are able to watch over ourselves as we age. To describe the biological and silicon-based capabilities that enable this moment, many are using the term AgeTech.

Diagnostics, digital tools and unique collaborations are rapidly advancing to address some of the greatest challenges of aging, including health, housing, safety, transportation and social connectivity.

In the US, the longevity economy includes jobs, services and products that support longer, more satisfying lives. It’s valued at \$8.6 trillion and jumps to \$22 trillion globally.

AgeTech is a critical enabler of the mix, focused on digital tools and platforms that can be used by and with older adults.

**This industry is booming in part because the greatest barrier to effectively slowing aging or improving the experience of later-in-life living is the sheer size and rapid growth of the addressable population.**

According to the World Health Organization, most people alive today can expect to live into their 60s and beyond, and every country in the world is seeing growth in the percentage of their populations who are 60+.

The change trajectory will continue to be fast and steep. As we near 2030, 1 in 6 people globally will be over 60 (1.4 billion people, ~1.5x the population count in that cohort in 2020). Jump ahead to 2050 and the number doubles, while those 80 years old or more will triple to 426 million).

This change isn’t a crisis, it’s merely change. The high-income countries that went first (like Japan, where 30% of the population is already over 60) have learned lessons for what’s needed now that low- and middle-income countries have entered the shift.



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## AgeTech is a great accelerator of independence and invention

As generations move through technology trends and stages of life, many are asking: What if older users are the future of smart technology?

Current iterations of common technologies—from smartphones to TikTok—were developed by young people for young people. It shows in the easy adoptability and adaption by that critical audience.

In many categories, though, the first user is an older user. So it's critical that the first experience be a good one: easy, accessible, valuable.

In 2023, we'll see more and more innovators focus on this initial user mindset, evolving their companies and design processes to include older people in the early development process.

Intuition Robotics (creators of social robot ElliQ) illustrates the dichotomy, frequently comparing the different roles products play at different stages of life. Innovations targeted to younger audiences—like Apple's Siri and Amazon's Alexa—were purpose-built to cut

through clutter for that age group and remove friction from fast-moving lives.

**ElliQ is built with and for older people living alone, often with less structured lives. It's built around companionship not speed, with features optimized for empathy as much as utility.**

In addition to co-designing feature sets with users, leaders are thinking about design and experience. Many in the AgeTech space got their start designing medical products, like hearing aids or walkers. This is a next big leap, as they take that technological understanding and bring it to beautiful things people are happy to carry with them or have in their homes. Will these shifts finally bring us to the end of tennis balls on the feet of walkers?



**In addition to co-designing feature sets with users, leaders are thinking about design and experience. Many in the AgeTech space got their start designing medical products, like hearing aids or walkers.**



## AgeTech is much more than robots ...

At the core of AgeTech is the pursuit of useful tools and services that help people living longer lives have meaningful choices in housing, safety, transportation and companionship.

For some that means starting a new business with a platform like GetSetUp, an accelerator just for older adults. For others it means feeling safe at home with fall detection on classic tools like Alexa or a radar-based alternative like EchoCare. Still others just need a little help getting to an appointment or picking up supplies; for that, Onward takes ride sharing and slows it down with services and training tailored to an older customer set.

The market will continue to change quickly coming into 2023.

Check the news on AgeTech any given month and you'll see 30 or more recent deals in the AgeTech space, from “unicorns” winning funding for a value-based startup (CareBridge); to new funding rounds for a headset that uses light and sound to help people with cognitive decline (Cognito Therapeutics); to seed funding for a connected community platform that helps people break out of cycles of isolation and spend time at live events (Hank).



**For others it means feeling safe at home with fall detection on classic tools like Alexa or a radar-based alternative like EchoCare.**



## Will the evolving longevity market require new thinking on aging?

We're ahead of you on that, Silicon Valley might reply—heartily echoed by leading pharmaceutical companies. Google parent Alphabet, with partners such as AbbVie, has poured upward of \$1 billion into a venture, Calico Life Sciences, that aims to conquer diseases of aging. Calico is co-founded and helmed by none other than Arthur Levinson, one-time CEO and chairman of Genentech and chairman of Apple.

Whatever strides are made by Big Tech/Big Pharma's anti-aging alliances, a hot topic in 2023 and 2024 will be changing the definitions of life stage. As people live and work longer, traditional expectations for childhood vs.

adulthood, youth vs. middle age, aging vs. elderly are all changing with them.

Although societal and business models will be up for debate in years to come, Avivah Wittenberg-Cox, CEO of 20-first, a global “balance” consultancy, suggests one that may resonate for AgeTech. It divides the new longer life into “five quarters.”

“There are many theories of adult development, but they lean to the complicated,” says Wittenberg-Cox. “If we are going to live to 100, it's time we get a better grip of what to expect—and how to navigate—longer lives. And how we move through the different phases of those lives.”

## The Five-Quarter Model



### Q1 – GROW (age 0-24)

Traditional childhood is certainly well researched, but with ever-more-intricate social mosaics, those boundaries have been pushed and challenged, creating longer periods of learning and development.



### Q2 – ACHIEVE (age 25-49)

This building period is centered around independence, relationships and careers. It's when people are most driven to prove themselves, but it's also where they start making health and wellness choices that will shape everything to come. While not AgeTech at its purest, this is the moment when proactive diagnostics and person-generated data become a defining choice.



### Q3 – BECOMING (age 50-74)

While 50 may once have marked the threshold of old age, for many today it's anything but. This new stage in longer life trajectories is increasingly healthy, active and engaged. Transitions in life, work and health will be the norm.



### Q4 – HARVESTING (age 75-100)

Wittenberg-Cox noted that "we are profoundly imprinted by how our parents aged—and died. Our generation does not have many models of aspirational aging." In the world of AgeTech, this changing life stage is focused on embracing life, individuality and relationships with confidence and intention.



### Q5 – BONUS TIME

Perhaps the name says it all.



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## Translational Technologies Transform Medicine

Ralph Weissleder, MD, PhD, Harvard Medical School professor and director of the Center for Systems Biology at the Massachusetts General Hospital, notes that technology advances in medicine often originate in chemistry, materials science, math, computation and other hard sciences. Here are six technologies he believes will shape the future:

- Advances in cell, gene and immune engineering to replace defective genes or cells
- Tissue cultures (“avatars”) to enable deep multiplexed and spatiotemporal analyses in primary patient samples
- Industrial biotechnology, metabolic engineering and system, and synthetic biology tools aimed at scaled-up antibody and RNA production
- Minimally invasive interventions via devices, robotics and imaging
- More sensitive biosensors to support temporal monitoring
- Advances in computation and analysis to support diagnostics, imaging, connectedness and telehealth

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# PRIME TIME FOR THE VALUE DEBATE

2023 is set to be a catalytic year for discussions about value. From debates in the houses of government to innovations in the aisles of retailers, everyone is asking: What new models can we adopt to both spur innovation and ensure access?

Although healthcare markets are becoming more consumer driven around the world, the US is the prime example of citizen-paid medicine.

According to the most recent number, per capita US healthcare spending is \$12,531 annually. Caring for those patients and families are 13% of the country's workers whose efforts amount to one-fifth of the US GDP.

While pharmaceuticals are a small part of that equation (<10%) they are one of the most present in people's day-to-day lives and thus a strong focal point for transparency and change.

**In its most confrontational form, the value debate erupts in outraged petitions to the White House from patient advocacy groups demanding the US president use "march-in" prerogatives to lower prices of expensive medicines.**

In one long-festering protest, petitions urge the president to forcibly lower the price of a cancer drug that costs six times as much in the US as in Japan. This is the militant edge of the great value debate—but it's just one window into the roiling storm of healthcare's costs, benefits and profits.

## Radical price transparency from health insurers and providers

In the summer of 2022, new federal rules mandating that insurers share their negotiated prices on drugs and procedures went into effect, causing a cascade of massive data dumps revealing what insurers pay for thousands upon thousands of treatments and procedures.

That data will make it possible for employers, advocates and policy-makers to have a much clearer view into the total cost of treatment. But not just yet. Today the data is just data. Rows and rows of it. Even the most user-friendly of insurer transparency websites can take—

by their own calculations—up to five minutes for the page to load. When it does, there are 45,000 entries listed by name or the plan or employer and year. That's bound to remind some users of the *pshhhkkkkkkrrrrka* sound and speed of the dial-up internet days.

2023 is set to be the year that information becomes actionable and usable as data scientists turn the dumps into insights and patterns. It's also possible—if not highly predicted—that similar information will become available from hospitals.

## After all, data is not just about health insurance

On Oct 6, 2022, a day journalists dubbed “data liberation day,” federal rules went into effect requiring all healthcare organizations to provide patients with full digital access to all their health records. While many thorny technical issues remain, including the very definitions of health data, the new rules enacted under the 21st Century Cures Act mandate that each of us can

see all relevant information, wherever it is gathered or stored, and decide who to share it with.

**Private firms are stepping into the fray to decode the data, which is expected to be in the 1- to 3-petabyte range of total data. One petabyte is roughly 500 billion pages of printed text.**

## Low-cost ventures changing the landscape

From Mark Cuban to Jeff Bezos, Walmart to GoodRx, leaders and leading companies are experimenting with a host of ways to discount pricing on prescription drugs.

The 2022 launch of billionaire Mark Cuban’s Cost Plus Drug Company (MCCPDC) followed Amazon Pharmacy as a source of lower-cost medications. MCCPDC (a lot of letters even for our industry) focuses on generic drugs and negotiates directly with manufacturers.

**One analysis suggested that Medicare could save upwards of \$4 billion per year either buying directly from MCCPDC or following a similar negotiating model.**

Walmart, Alibaba and Costco offer similar discount drug programs, and GoodRx—a longtime discount leader—is now expanding to direct prescribing and fulfillment. Amazon will be competing not only with its own

pharmacy but with a growing portfolio of in-person care options, assuming completion of its One Medical acquisition.

What will 2023 hold in store? Keep an eye out for Amazon Clinic and additional rollouts of Amazon Pharmacy within Blue Cross / Blue Shield and other insurance plans. Also, look for novel ways that manufacturers will create low-cost membership programs and warranty therapy performance that matches clinical trial or real-world data. Further down the road, in 2026, the newly enacted Inflation Reduction Act will require the US government to start negotiating lower prices on drugs covered by Medicare Part B and Part D—that is, assuming the measure isn’t tied head-to-toe in litigation or eliminated entirely as the winds in Congress shift.



**What will 2023 hold in store? Look for additional rollouts of Amazon Pharmacy within Blue Cross / Blue Shield and other insurance plans.**





## Shifting copay financial burden

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New rules with the Centers for Medicare & Medicaid Services (CMS) are set to increase patient out-of-pocket costs in 2023, potentially thwarting the impact of patient assistance programs.

Life sciences companies often offer copay offsets to reduce out-of-pocket costs for patients. Large pharmacy benefit managers (PBMs) introduced copay accumulator programs designed to prevent any assistance for counting toward a patient's deductible or total out-of-pocket expense.

**As of fall 2022, 14 states had banned copay accumulators, further entangling measures and countermeasures in litigation—and with little hope of resolution in 2023. The only certainty is continued friction among healthcare stakeholders competing to define and control biopharma's value proposition.**

In the past, biopharmaceutical companies bringing valuable new medicines to market could count on a groundswell of patient and advocacy support to sway reluctant regulators. 2022 showed us the calculation is more complicated. Advocacy groups that supported a much-discussed amyotrophic lateral sclerosis (ALS) medicine through regulatory hearings changed their tune and bitterly criticized the manufacturer the instant it announced a six-figure price tag. Look for activist work by advocacy and political leaders to open new and sometimes head-turning conversations in the year ahead.



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## Disruption in Diabetes

Insulin prices continue to be up for debate and public scrutiny. Look for more pressure to reduce prices in coming months. Laws in California and New York will go into effect to reduce out-of-pocket costs. Meanwhile, pharmaceutical and device innovators will look at other paths to reducing the total burden of disease. A "bionic pancreas" has already proven more effective than conventional therapies in regulating blood glucose for people with type 1 diabetes. This is just the beginning of a long-heralded revolution in tissue engineering.

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# OUTSOURCING ON THE M&A PLAYING FIELD

For providers of outsourcing services, the thrill of partnering with a first-molecule company nearly matches the glow of collaboration with large pharma leaders. That's because a sense of personal mission often animates the smallest of biotechs, fueled by great potential to change lives for patients and sometimes for the innovators themselves.

To first-molecule companies, finding outsourcing partners who can support them across the full product development life cycle is attractive—especially when initial public offerings, M&A and other financing options may be on pause.

That was the case for much of 2022. In the first 10 months, biopharmaceutical M&A was down year-to-year. Major deals were on hold or off the table, and just one major player, Pfizer, accounted for more than half of total deal value.

In 2023, more large pharmaceutical companies with plenty of cash and some major assets coming off patent may be back in a deal-making mode. Expect them to keep an eye on later stage de-risked targets in oncology, neurology and rare diseases. Also drawing plenty of attention will be cell and gene therapies, mRNA interventions, gene editing platforms and other advances.

**For resource-strapped startups on the leading edge of drug discovery, M&A isn't the only—or necessarily the best—evolutionary path forward. As these small players grow and advance in 2023 and beyond, many will rely more heavily on outsourcing to maintain flexibility.**

### Extending the runway

In the startup world, the cash runway is how many months you have, at the current burn rate, before funds run out. In challenging times, the goal is to extend the runway by conserving capital, and above all, show some results. As the executive team stretches the runway from 12 to 24 months they must ask: What is the model?

The simultaneous launch of a product and a company requires versatility. That's why many choose to outsource their first commercial build to maintain adaptability. From a contract sales force to quick-start medical or managed market teams, those flex resources let them explore the market without long-term investments.

**Startups and first molecule companies turn to outsourcing for the cycles of experience. As they set strategic objectives and detailed logistics plans, they want to know what worked, what didn't and how to build on the experience of similar innovators.**



**The simultaneous launch of a product and a company requires versatility. That's why many choose to outsource their first commercial build to maintain adaptability.**



## The five decisions

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In an outsourced startup model, leaders typically count on making five decisions with confidence:

**1****Go-to-market model**

The range of strategies from consumer-paid to payer-advantaged is vast. Increasingly, innovators are digging deep into the full range of commercialization options, including new-to-category channels and at-launch partnerships. The right outsourcing partner can provide wise counsel.

**2****Decision-making metrics**

With fewer resources than multi-drug companies, first-molecule companies need to be able to make and communicate decisions with minimal data quickly and effectively. In 2023, we'll see more and more innovators lean on partners for help connecting all data to a small number of critical business decisions. This alignment lets them consistently connect with board and front-line stakeholders about what is critical to scale or change to meet overall business objectives.

**3****Commercial staffing**

One of the most consistent uses of outsourcing is simply the Day 1 staffing of a commercial team. Critical in that strategy, beyond flexibility, is calculating the number and caliber of professionals on the team vs. cost at every level of impact and skill set.

Partners who have built similar field teams hundreds of times, priced similar drugs multiple times in recent years and developed similar copay plans, etc., add a level of mentorship that may be key to a successful launch.

**4****Target influencers and customers**

Increased sophistication in data makes it possible to understand exactly which HCPs are most likely to impact the uptake of a new therapy either by direct prescribing or influence/referral networks. Key to a fast-launch commercial plan is understanding that initial outreach list and consistently updating it in a dynamic model, applying the most advanced technology on the way. Few small startups can—or should—build industry-grade data and analytics entirely on their own.

**5****Acquisition strategy**

For many innovator companies, development is the core competency. Science and discovery are where their passion lies. Often outsourcing keeps options open in terms of acquisition, as few costs are hard or fixed. But equally important, the ideal outsource service supplier is a partner trusted to help build value strategies that best position the innovator for future research and discovery.







# SANDBOX

To software developers, the sandbox is a place to experiment and explore untested changes to code. For children it's a place to play. In Trends 2023, the sandbox lies somewhere between "maybe" and "we wish." Everyone's invited to come play in the sand.

## Supply Chain Rally

In late 2022, benchmarks of global supply chain pressure moved in a positive direction. If it proves sustainable, this shift has implications for product and material shortages affecting all healthcare innovators, from first-molecule startups to Big 10 pharma and device makers. Painful shortages in raw materials and components will no doubt persist. But in late 2022, in shipping and finance circles, the word "normal" crept back into supply chain forecasts. In tandem, sophisticated new tracking infrastructure meant that more patients were getting the exact treatments their physicians prescribed. Improvements include the US Drug Supply Chain Security Act, introducing electronic tracking to thwart counterfeits, anti-tampering measures under Europe's ongoing False Medical Directive and new rules on digital traceability in Brazil.

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# EXERCISES TO APPLY TRENDS WITH **FUTURE FOCUS**

The most useful part of this report is literally how you use it. These five exercises will enable you and your team to turn interest/provocation into action that **will fuel the future of your organization.**

These imagination stretches force us to think about what could be instead of merely what we recognize or remember. They let us simulate not just possibilities but actions that we would take as individuals, teams and companies to thrive in those **new realities.**

## **1** Urgent Optimism

This exercise, outlined in the introduction to this report, is focused on the idea of urgent optimism. In short, if you had to act immediately to tackle an obstacle or imagine a future truth, what would you do to ensure success?

Start with setting an expectation for a future truth. How might the world or market be different a year from now? What do we accept as true today that could be entirely different on a short-term horizon? Then, how do you act to support your critical stakeholders and achieve advantage?

**Some questions to ground you and your team:**

- First, what might change?
- Then, what would you need to do as a company to respond?
- Importantly, what do you do as a team?
- More importantly, what do you do as an individual?

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## 2 Tear Apart the Book

One of the most fun parts of an annual trends report is deciding what resonated with you. As you read, tear out/print/save the pages that are most relevant to your work in the year ahead.

As you imagine what's next, consider a few critical questions that could shape your work. Questions are an incredible way to understand trends.

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## 3 Question Burst

The exercise was inspired by Hal Gregersen, senior lecturer in Leadership and Innovation at MIT. One day, he was running a brainstorming session with his class that he said felt like “like wading through oatmeal.” They’d discussed the issue at hand but weren’t getting to new ideas and the energy level for innovation was waning. So he shifted the focus. He said, “Let’s forget about finding answers for today and just come up with some new questions we could be asking about this problem.” He asked the class to do one thing—simply generate questions.

In the spirit of Gregersen, I ask you to do the same: **generate questions.**

This incredibly valuable exercise energizes thinking, helps to prioritize what we need to know to move forward and even challenges basic assumptions that may be limiting thinking. Here are some questions to get your team started with their own questioning:

- Which two to three trends most reflect the future you want to be part of building?
- What questions do you have about that trend? Give yourself or your team just 3-4 minutes to rapidly brainstorm those. There are no wrong questions.
- What are 10 prioritized questions you have to get there faster? And who can answer them?

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## 4 Stakeholder Visioning

Pick a critical audience—CRAs, HCPs, patients, some other ascending stakeholder group you think will be critical in the years to come. Imagine how their work environment, their personal aspirations, individual relationships, etc., are changing. How do you plan for a solution set that supports them where they are now?

Here are two possible exercises to explore that. Mapping frictions works very well in a collaborative/team environment. Writing an Amazon-style memo helps give you and your top leaders the ability to collect and concentrate individual knowledge.

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## 5 Mapping Frictions

Friction is simply resistance: an experience that makes it harder to achieve a goal or move forward in a process. In the consumer world, friction might stop a stakeholder from recommending or using a product, feeling successful with that product or recognizing value in it.

In healthcare, you can imagine frictions holding people back from being screened for a trial or working with colleagues in a new way or engaging in a new channel.

**There are three distinct types of frictions:**

- **Emotional:** barriers that create tension resulting in negative feelings (e.g., I don't know what to do)
- **Social:** barriers that push more responsibility onto a stakeholder, conflict with that person's sense of self or create feelings of isolation (for example, "I can't possibly do this")
- **Functional:** utilitarian obstacles that slow or prevent customers from accomplishing a task (e.g., another way would be easier)

Think about something you want your customer to do (for example, attend a hybrid conference). Then build two lists:

**What frictions exist  
(emotional, social, functional)?**

**How might we make things smoother  
(solutions, tips, supporters)?**

- Working from a white board or other shared space, map how their work and life will be different three years from now
- Brainstorm specific services and support that will be relevant to that change



## Methodology

The annual Trends report from Syneos Health represents the knowledge and experience of hundreds of leaders and experts who work on the front lines of healthcare, as well as original research with industry, patients, payers and providers. Drawing on interviews, research and assets published on our Insights Hub, we've been able to distill a future-facing look at the challenges and opportunities ahead.

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### About the Syneos Health Insights Hub

The Syneos Health Insights Hub generates future-focused, actionable insights to help biopharmaceutical companies better execute and succeed in a constantly evolving environment. Driven by dynamic research, our perspectives are informed by a product development mindset, focused on real answers to customer challenges to help guide decision-making and accelerate performance.

### About Syneos Health

Syneos Health® (Nasdaq:SYNH) is the only fully integrated biopharmaceutical solutions organization purpose-built to accelerate customer success. We lead with a product development mindset, strategically integrating clinical development, medical affairs and commercial capabilities to address modern market realities. Together we share insights, use the latest technologies and apply advanced business practices to speed our customers' delivery of important therapies to patients. We support a diverse, equitable and inclusive culture. To learn more about how we are **Shortening the distance from lab to life**®, visit [syneoshealth.com](https://syneoshealth.com) or [subscribe to our podcast](#).

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