


Bridging the Data Divide

A person is shown in profile, looking down at a handheld device. They are sitting on a mossy rock next to a stream. On the rock, there is a laptop, a tablet, and some laboratory glassware, including a test tube with blue liquid and a graduated cylinder. The background shows a natural setting with rocks and plants.

Mobilizing data and the tech ecosystem
for everyone



Technologies are not deterministic. We can harness their potential for the common good, and we have an obligation to do so.

Antonio Guterres, Secretary-General of the UN,
[Technology and Innovation Report 2021](#)

The Digital Divide is a concept coined in the 1990s and refers to the gap between those who have access to the internet, computers, skills and services in the digital age and those who do not. Over the past 20 years, we have made progress on closing the digital divide due to efforts by innovators, governments, activists and others to raise awareness and take action toward addressing technological disparity — from efforts such as [EducationSuperHighway](#) to [satellite-powered internet access](#). But there's more to do.

Technology has moved by leaps and bounds, with data emerging as the new powerhouse currency driving insights, decision-making and, ultimately, a knowledge advantage. In this new [Data Age](#), data is produced, consumed and stored at a dizzying pace. The world has witnessed ten-fold growth in total zettabytes of data since 2013, and it's set to [double by 2025](#).

This is evident in how intrinsic data has become in our daily lives thanks to mobile and smart devices, wearables and ubiquitous connectivity. Organizations are mining, collecting, storing and securing more data to take advantage of this new gold. But while the mountains of data are being leveraged at breakneck speed commensurate with the growth, they're not being leveraged to the benefit of everyone. Instead, we are witnessing the next iteration of the stark divide between the “haves” and “have-nots” with the emergence of the “Data Divide.”

Despite data advances and their resulting benefits, we continue to see global inequities for critical issues such as climate change, healthcare, human rights and poverty. And it's become clear that it's not just for lack of access to technology, but also lack of data literacy

and application. Collective progress is lagging due to a steadily broadening chasm between those who have access to data along with the knowledge, financial resources and skills to leverage and develop strategies from it, and those who do not.

While data strategies have benefited the commercial sector, the public sector and nonprofits lag in education, tools and talent to even access the data around them. Individuals in underserved communities in most cases aren't even at the starting line of a new world driven by data.

The good news is that, while an urgent problem, it's still early in its evolution. Thus, the choices we make now can change the trajectory of the growing data divide. In the spirit of turning data into doing, Splunk wants to make sure that data is accessible to everyone. We want to create an ecosystem that ensures that data is key in how we share technology and build up communities. Technology has no overall purpose on its own; human choices and actions drive its effects. And that is what we need to change — for all of us — at an individual, organizational and systemic level.

What is the Data Divide?

More than access and use of data, **the Data Divide highlights the disparity between the expanding use of data to create commercial value, and the comparatively weak use of data to solve social and environmental challenges.** In a complex world, data represents both the biggest opportunity and the biggest threat to businesses, governments and, frankly, to humanity. This duality can be seen across the major issues of our time: from climate change to income inequality to structural racial and gender inequity to the COVID-19 pandemic. The Data Age has enabled us to better quantify the scope and magnitude of these challenges, and to recognize their interdependencies — but it has also revealed overall shortcomings. Specifically, the poor and under-resourced data state in organizations working to solve these problems. We just need to look at our capabilities in response to the COVID-19 crisis as an example of the ramifications of the Data Divide.

The COVID-19 testing work from the biohub out of the Chan Zuckerberg Initiative at University of California San Francisco (UCSF) is a telling reality. The biohub built a lab for COVID-19 testing in eight days. The lab could produce COVID-19 test results in 24 hours, and they offered its services for free to county public health offices across California. Sadly, the flow of data was hindered because public health offices were using fax machines to send and receive test results. Moreover, the fax machines were so old they could not handle receiving the test results from UCSF and the only solution was to buy more fax machines. Timely testing and tracing — both key interventions to prevent the spread of COVID-19 — were severely hindered by lack of resources to act upon critical data. While the virus moved at a breakneck speed, our ability to use data as a core ingredient to solve the pandemic moved at a snail's pace.

If left unaddressed, the Data Divide threatens to continue to exacerbate these issues. So what's fueling this divide?

Key barriers fueling the growing chasm include:

- **Access.** Data itself might be uncaptured or inaccessible.
- **Capability.** There's a dearth of financial resources, data/technical talent and knowledge for using the power of data.
- **Investment choice.** Too often in all sectors, organizations don't prioritize investing resources to use data to solve social and environmental problems.
- **Lack of actionable solutions.** Few real-world solutions that can be scaled, replicated and demonstrate the power of data for social benefit.

The Data Divide spans sectors, organizations, individuals and communities — and not for a shortage of data but for a shortage of focus beyond “productivity, efficiency and innovation.” But it doesn't have to be that way. There are interventions, new ways of working and strategies for overcoming the Data Divide.

Where we stand today

Climate change. Growing income inequality. Structural racial and gender inequity. A global pandemic. Any one of these issues could be a generation-defining challenge — and in 2021, we find ourselves confronting all of them simultaneously. While most of these challenges are not new, data has helped us to better name and quantify their scope and magnitude.

But how much are we doing with that data? Who has access? Who is enacting change?

The private sector is far ahead of the public and nonprofit sectors in using and deploying data. An [IBM study](#) found that 67% of nonprofits surveyed lack expertise in the use of data analytics for their work. They need financial support, relevant products and expert guidance to effectively overcome the Data Divide. The same goes for underserved individuals, communities and developing countries. The risks are too high to ignore, especially at the global inflection point in which we find ourselves today.

Risks of the Data Divide

Across sectors

Globally, businesses have tremendous advantages over governments and civil society organizations, as they have long focused their financial and intellectual efforts to harness data to inform business performance. This asymmetry could widen the gap, since it privileges those with access to costly resources and technologies. Businesses that have been reaping the benefits of data will continue to do so while leaving other organizations behind. If we do not tackle this sector divide with urgency, the chasm will become ever more challenging to bridge over time.

At the organizational level

Within organizations, the incentives to uncover and use data for social and environmental benefit often does not provide an ROI equal to market requirements. This is most common in the private sector. For example, reducing friction in supply chains often produces an ROI that is easy to see in a short time horizon. Reducing the environmental impact of supply chains, in contrast, often has a less direct company ROI and necessitates a longer time horizon. As a result,

businesses often deprioritize investing in solving social and environmental issues due to competing resources. If we continue to leave data solutions for social and environmental change under-invested, we are leaving viable solutions off the table.

Individual Data Divide

The ability to read, work with, analyze and argue with data is vital. Data competency is critical to unlocking mindshare and information to solve some of the world's most pressing issues and ensure a skilled, competent and inclusive talent pool ready to enter the Data Age. Unfortunately, a [National Skills Coalition study](#) revealed that a startling 50% of Black workers in the U.S. have limited or no digital skills. That number jumps to 57% among Latinx workers. As the Data Age continues, this skill gap will likely increase without active intervention. Bridging the Data Divide with a focus on marginalized communities is a path to reduce societal inequities.

National Data Divide

Like the steam engine and electricity transformed all aspects of societies and economies, so will data. Data can improve social and economic outcomes if used methodically to optimize and validate new systems, technologies, policies and more. Developing countries already lack tools and resources to access and use big data and will likely fall behind as the Data Age accelerates. These are the same countries already facing some of the greatest challenges: food insecurity, exposure to climate risks, limited healthcare systems, lower rates of electrification and digital access, etc. Investing in and empowering countries to use data to address their social and environmental challenges increases their likelihood of success.

Building data-driven solutions

Bridging the Data Divide means encouraging problem solvers from all sectors to harness the power of data for positive social and environmental impact. This is the moment to act and bring attention to the issue while leading the way to accessible, transformational solutions across tools, talent and financial resources.

Some are leading the charge. Imperial College Business School partnered with the [Gandhi Centre for Inclusive Innovation](#); they've undertaken air pollution in London

with analyses of live traffic via 900 Transport of London jam cameras. Fellows in the Data Science for Social Good initiative in partnership with the University of Chicago have also used "data science to develop better ambulance routes, to ensure the most vulnerable people get medical assistance as quickly as possible," [according](#) to Dean Francisco Velasco. "Others looked at providing personalized interventions and job recommendations to the long-term unemployed, taking into account contextual information about the individuals' desires and restrictions, as well as their socioeconomic context."

In Tanzania, the government supplemented household survey data issued once a decade with call detail record data to improve timeliness and accuracy for combating poverty. Household surveys are used globally to gather data on living standards, consumption and income, and are the basis for determining government expenditures to combat poverty. Adding [satellite imagery data to the household survey data](#), Tanzania was able to increase the resolution of their poverty picture eightfold, going from 20 regions to 169 districts.

Private and public sectors must work together to take on the Data Divide, involving those who are equipped with technology and data, and those who want to learn. The opportunity for awareness and action falls on companies like ours to build trust and validate the value in bridging the chasm.

The Splunk commitment

At Splunk, we've already started.

Through the [Splunk Pledge](#), we've committed to donating over \$100 million in software licenses, training and support to nonprofit organizations and educational institutions around the globe to foster data literacy and action. We're multiplying impact by putting the right tools and resources into the hands of players who are solving the world's biggest problems. For example, Splunk leveraged its technology at speed to build dashboards for [COVID-19](#) and the [U.S. election](#), and helped nonprofits like the [USS Midway Museum](#) maintain safety and security during the pandemic via our product donation program. We empower our employees to support the Splunk Pledge, providing 40 hours of volunteer time off to engage in community service.

In addition, Splunk has a social impact fund of \$50 million, focused on accelerating growth of companies that are using data to drive positive social impact. We select and grow the most promising, commercially viable and actionable data-driven solutions through financial investment, as well as strategic support. One of our first investments, [Zonehaven](#), uses a cloud-native approach that helps communities understand, minimize and respond to wildfire risk.

We also support our customers in their impact journey by turning complexity into insights. In the Netherlands, Splunk is driving data-driven justice and shorter response times to IT incidents through live analytics for [de Rechtspraak](#), the Dutch Court System; we are powering [Care.com](#)'s marketplace for vetted caregivers across 20 countries; and we are helping the [UK's Derbyshire Fire & Rescue](#) save money and lives by maximizing data.

Our journey is just beginning, and we're committed to expanding our work through our new Global Impact mission: "Bridge the Data Divide to find actionable solutions for humanity's greatest challenges."

Where to next?

Tackling the Data Divide is a long-term problem that requires a long-term commitment and global collaboration across business, civil society and government. We are still in the early days of our relationship with data and our understanding of the Data Divide. Therefore, it is imperative to start this journey and invest in research that deepens our analysis of the Data Divide, informs the understanding of the root causes, uncovers viable approaches to solve the divide and provides pathways for implementing solutions.

Splunk is committed to leading the field in research and dissemination of data to ensure the impacts and solutions are understood and applied. As a leading data company, we have the opportunity to build an ecosystem of partners and collaborators to tackle this critical problem now. Our customers and partners exist in all sectors across the world, and by working in partnerships, we can mobilize our collective talent as well as financial and technical solutions to enact positive outcomes.

Ultimately, data is an asset that unlocks knowledge and makes us smarter. That knowledge translates into the power to discover solutions, make better decisions and drive meaningful outcomes. Therefore, we must empower everyone equitably — from nonprofits to governments to business — to harness the power of data for positive social and environmental impact. It's about real-world solutions that can be reliably replicated while fueling growth and innovation for the betterment of humanity. Data is only as meaningful as the positive change it can bring. Join us — so that everyone can thrive in the data age.

Contact us at socialimpact@splunk.com with questions or to partner with us on bridging the Data Divide.

