



Data for Good

Corporate Initiatives to Improve Social and Economic Well-Being

By Kevin Petrie

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About the Author



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About Eckerson Group

[Eckerson Group](#) is a global research and consulting firm that helps organizations get more value from data. Our experts think critically, write clearly, and present persuasively about data analytics. They specialize in data strategy, data architecture, self-service analytics, master data management, data governance, and data science. Organizations rely on them to demystify data and analytics and develop business-driven strategies that harness the power of data. [Learn what Eckerson Group can do for you!](#)



About This Report

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Executive Summary

COVID-19 and other surprises of 2020 focused corporations and individuals anew on the question of how to share our shrinking world more responsibly. That, in turn, fanned the flames of the “Data for Good” movement. Data for Good includes corporate, nonprofit, and individual initiatives that use data management and analytics to address causes ranging from public health to social equity to the environment. Data for Good takes the form of volunteer consulting, community collaboration, data sharing, free products, and even custom software development. Data analytics vendors, data-savvy corporations, nonprofits, and data analytics professionals each contribute.

Corporations believe that Data for Good is good for business, with good reason. The rising generations of customers, employees, and investors base many of their decisions on social causes. You must embrace their causes to win their business. To get involved, data-savvy corporations and data analytics professionals should pursue creative ideas while enlisting executive support. They should choose their causes carefully and build a rigorous data analytics program to effect change. They should share data with strong governance practices, and create strong communities of multi-skilled contributors across organizations. Most of all, they should commit for the long term.

Good for Business

The jarring events of 2020 focused corporations and individuals anew on the question of how to share our shrinking world more responsibly. We have a collective interest in keeping our air clean, communities healthy, and children optimistic about the future. This thinking pushed the “Data for Good” movement to the forefront.

Data for Good includes corporate, nonprofit, and individual initiatives that use data management and analytics to address environmental and social causes of all kinds. Data for Good takes the form of volunteer consulting, community collaboration, data sharing, free products, and even custom software development. Notable initiatives span public COVID-19 dashboards, hackathons to model climate change, open data platforms for medical research, and a myriad of partnerships to help nonprofit organizations become more data driven.

Data for Good is a dynamic subset of environmental, social, and corporate governance. ESG specifically refers to the wide-ranging criteria by which many investors measure the sustainability and social impact of a corporation. More broadly, it refers to corporate, nonprofit, and individual activities that seek to advance social and economic well-being. You can view Data for Good as ESG activities that are centered on data and analytics.

Four distinct groups practice Data for Good:

1. **Data analytics vendors** contribute their software and employee expertise to various causes.
2. **Data-savvy corporations** such as Mastercard and Apple often support their ESG initiatives with sophisticated data analytics.
3. **Data for Good nonprofits**, such as [DataKind](#) and [Statistics Without Borders](#), apply data analytics to various causes and are growing in numbers.
4. **Data analytics professionals**—including Eckerson Group analysts—contribute their time and skills to nonprofits on an individual basis.

Corporations that engage in Data for Good seek multiple benefits. First is workforce productivity: millennial workers in particular reward cause-driven employers with extra hours, more creativity, and longer tenures. Data for Good initiatives can make customers more loyal and less likely to run to the competition. Corporations also like to create supportive communities whose members might become future employees, customers, and investors.

This report explores the evolution, driving forces, and examples of Data for Good. It distills guiding principles for data analytics leaders that seek to launch Data for Good initiatives, support existing ones, or contribute as individuals.

New Thinking

Visit the home pages of companies ranging from Google, to Ford, to McDonald's, and you'll find information about their commitments to climate change, racial justice, and college scholarships. Such companies believe and invest in the values of their teams and communities. These programs also represent good business, because customers, employees, and investors increasingly choose products, employers, and stocks based on their support for causes. To win their business, they need to embrace their causes. Evidence abounds on this point:

Customers. Fully 95% of consumers tell [BCG](#) they believe their personal actions can improve the environment, and about a third say that belief grew stronger in 2020. In addition, 38% of millennials—those 24- to 39-year-olds who comprise a fourth of the U.S. population—initiated or deepened relationships this year with companies that achieve a balance between doing good and making a profit, according to [Deloitte](#).

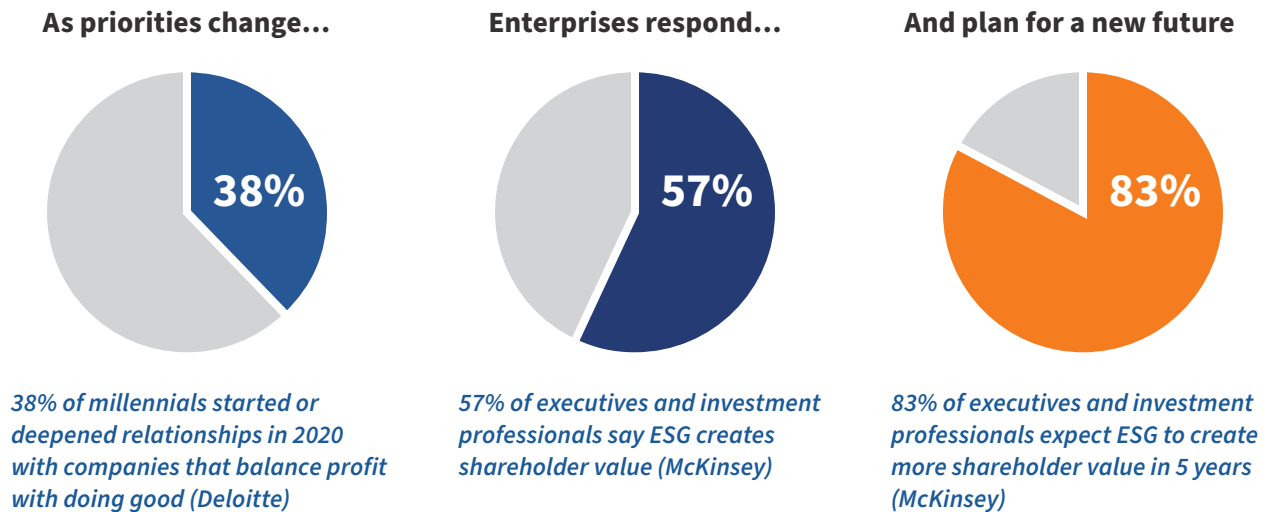
Employees. Millennials, now half the global workforce, don't just want large bank accounts and houses. They want employers that invest in social and economic well-being for their workforces, communities, and planet. One-third of millennials say they have [quit companies](#) because they lacked a sustainability plan.

Investors. As of 2019, 75% of global retail and institutional investors applied ESG principles to more than one-quarter of their portfolios, up from 48% one year earlier, according to [Deloitte](#). Most S&P 500 companies now publicly measure their performance against these standards.

Business leaders get the message, and they recognize the need for new thinking if they are to meet their financial goals. In a remarkable shift from years past, 57% of executives and investment professionals now believe ESG creates shareholder value, and 83% expect it to create more shareholder value in five years versus today. These survey findings come from [McKinsey](#), which also asserts that these initiatives [create value](#) via top-line growth, cost reduction, regulatory compliance, productivity, and smarter long-run investments.

Figure 1 summarizes the evidence for how new priorities drive new corporate thinking.

Figure 1. New Thinking in New Times



This new corporate thinking dovetails with the popularity of “stakeholder theory,” which asserts that corporations exist to do more than generate profit for shareholders. The Business Roundtable of U.S. CEOs, who collectively represent \$7 trillion in revenue, [last year endorsed this theory](#) by stating corporations serve “all stakeholders—customers, employees, suppliers, communities, and shareholders.” Those stakeholders champion causes such as health, racial and gender equality, economic opportunity, and the environment—all of which benefit from data analytics. “You cannot talk to any CEO these days that doesn’t say stakeholder expectations are growing,” says Kriss Deiglmeier, Chief of Social Impact at Splunk. “For any company to be successful over the next 20 years, you have to think of how you’re operating in society with this stakeholder framework.”

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Kriss Deiglmeier, Chief of Social Impact, Splunk

Evolution of Data for Good

The Data for Good movement first gained traction about a decade ago, when data analytics vendors started sharing free software, consulting, and training with nonprofit organizations. This felt natural to their employees, many of whom already contributed their expertise to open source software or other tech community projects. Groups such as [DataKind.org](https://datakind.org) arose to match volunteer data scientists with nonprofits in need of analytics assistance. Larger governmental and non-government organizations awoke to the potential of data analytics, and started asking data analytics vendors for help.

COVID-19 turned the Data for Good movement into an explosion. The White House, Microsoft, Google, Georgetown University, and the [Chan Zuckerberg Initiative](#)¹ published tens of thousands of medical articles and invited experts worldwide to analyze them with tools such as natural language processing. Dozens of data analytics vendors published COVID-19 heat maps and dashboards to help citizens understand the health risks of their communities. They dedicated hackathons to COVID response, helped shuttered businesses go virtual, and trained unemployed workers on new data skills. The George Floyd tragedy and its aftermath sparked a similar burst of Data for Good innovation that focused on racial justice.

“2020 has been a year like no other,” JoAnn Stonier, chief data officer at Mastercard, told the MIT CDOIQ Symposium in August. “Who knew that we were going to experience so much change, so much sorrow, and also so much need for data?” Mastercard led a collaborative data-sharing effort with academic institutions and government organizations to respond to COVID. Mastercard and the Rockefeller Foundation also used their data.org platform to launch an [Inclusive Growth and Recovery Challenge](#), inviting data science ideas to drive economic recovery from the COVID shock.

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JoAnn Stonier, CDO, Mastercard

Tech companies in particular have valuable data, models, and frameworks to contribute. Facebook offers open “disaster maps” to assist humanitarian efforts, such as helping teams like [NetHope](#) find and connect with people fleeing the Fuego volcano in Guatemala. “Information to make hard decisions is now just as important as many of the other forms of aid that we’ve put in place,” says John Crowley, NetHope’s director of information management and crisis informatics. NetHope helps nonprofits improve their operations with technology.

¹ Led by Facebook CEO Mark Zuckerberg and his wife Priscilla Chan, the Chan Zuckerberg Initiative contributes funding, technology, and advocacy to causes that span education, justice/equal opportunity, and disease research.

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Customers take notice of such efforts. About 60% of millennials say they plan to buy more products and services from large businesses that took care of their workforces and positively affected society during the pandemic ([Deloitte](#)). The events of 2020 might influence personal decisions over the coming decade more profoundly than 9/11 and the Great Recession.

What Good Looks Like

Four distinct groups practice Data for Good, often in ways that help one another. These include data analytics vendors, data-savvy corporations, Data for Good nonprofits, and individual data analytics professionals.

Data Analytics Vendors

Many data analytics vendors offer specialized software and expertise to advance their causes with open data and analytics. Their beneficiaries include nonprofits, charities, local governments, national policy planners, non-governmental organizations, educators, and various disadvantaged populations. They use this assistance to formulate rudimentary data analytics programs, or in some cases leapfrog to bleeding-edge artificial intelligence (AI) solutions. Here are a few examples:

- [Qlik.org](#) offers software grants to a wide range of nonprofits, and partners with groups such as the United Nations and Nature Conservancy to advance sustainability causes. Qlik and the C40 Cities Climate Leadership Group hosted two “Datathons” this year to devise data analytics solutions that make cities more resilient to virus outbreaks and climate change.
- [Splunk for Good](#) commits to donating \$100 million in software, training, support, and education to various nonprofits and educational groups over 10 years. Compassion International, for example, uses Splunk software to screen applications and more rapidly secure trusted sponsors for impoverished children.
- [TIBCO4Good](#) and Microsoft collaborate on a “Missing Maps” effort to digitally chart less-understood, weather-vulnerable areas such as regions of Indonesia, in order to better prepare for future natural disasters. In addition, TIBCO, Singapore Management University and the nonprofit “She Loves Data” run a global “Back on Your Feet” program to equip jobseekers with data analytics skills.
- Inspired by a successful project to help African governments measure clean-water strategies, DataRobot runs an [AI for Good](#) program that helps nonprofits solve thorny problems using its data science platform.

- The [SAP Social Sabbatical](#) program deploys teams on pro bono projects to foster “digital inclusion” and assist nonprofits, for example by refining their reporting processes. An SAP team recently helped the Learning Disability Society [standardize on a new customer data management platform](#).
- [Domo for Good](#) pairs its customers and employees with nonprofits on data projects, for which it provides complimentary use of Domo’s unified data platform. Unilever, for example, joined Domo for Good to track donations and deliveries for its \$20 million COVID-19 relief program.
- [Alteryx for Good](#) provides free data analytics courses to students, educators, nonprofits, and job seekers impacted by COVID-19.

These efforts derive from a combination of grassroots community efforts, creative employee ideas, mid-level volunteer campaigns, and C-level mandates.

Data-Savvy Corporations

Data-savvy corporations, who encompass a broad swath of the Fortune 2000, practice Data for Good by using their mature data analytics programs to support ESG. Sometimes this boils down to being a good citizen of the planet. Apple, for example, [aims to achieve carbon neutrality](#) with its operations and supply chains by 2030, a commitment that requires mature analytics to be credible. Apple’s Environmental Progress report details its plans to reduce emissions by 75% and remove carbon from the remaining 25%.

Data-savvy corporations also use Data for Good to effect broader community change. Mastercard teamed up with Conservation International and the World Resources Institute on the [Priceless Planet Coalition](#), which enlists merchants, banks, cities, and customers in an effort to plant 100 million trees by 2025. They’re working on a mobile app that will help consumers measure the carbon footprint of their individual purchases.

Goldman Sachs helps investors make environmentally conscious choices with its latest “[Carbonomics](#)” study, in which it analyzes the “green engine of economic recovery” and measures the contributions of 100 technological innovations to the global economic cost of achieving net-zero carbon emissions. Goldman Sachs published this 40-page equity research report free of charge on its website. Investors can use it to assess environmentally focused technologies as well as better understand the environmental impact reports of publicly traded companies.

Data for Good Nonprofits

A number of innovative nonprofits also now focus on Data for Good, typically to match expert volunteers with various causes. Their projects often use advanced techniques and algorithms to help some of the world’s most disadvantaged populations. DataKind, for example, [deployed 22 data science practitioners](#) over a year to improve healthcare services in Africa via population risk modeling, data quality assessments, health worker training, and digitization

of health records. [Statistics Without Borders](#) assembled volunteers to [improve emergency and trauma care in Syria](#) by modernizing data collection and increasing data quality for the 118 partners that comprise the Syrian Health Cluster network.

Data for Good nonprofits address a diverse range of causes and geographies. The [Solve for Good platform](#), for example, recruits volunteers for organizations such as UNICEF, the Child Poverty Action Lab, and the Food Bank of Northern Nevada. They need assistance with air pollution analysis, neighborhood eviction risk analysis, and supply chain analytics for food donations. Such platforms foster collaboration on a variety of specialized use cases across the globe.

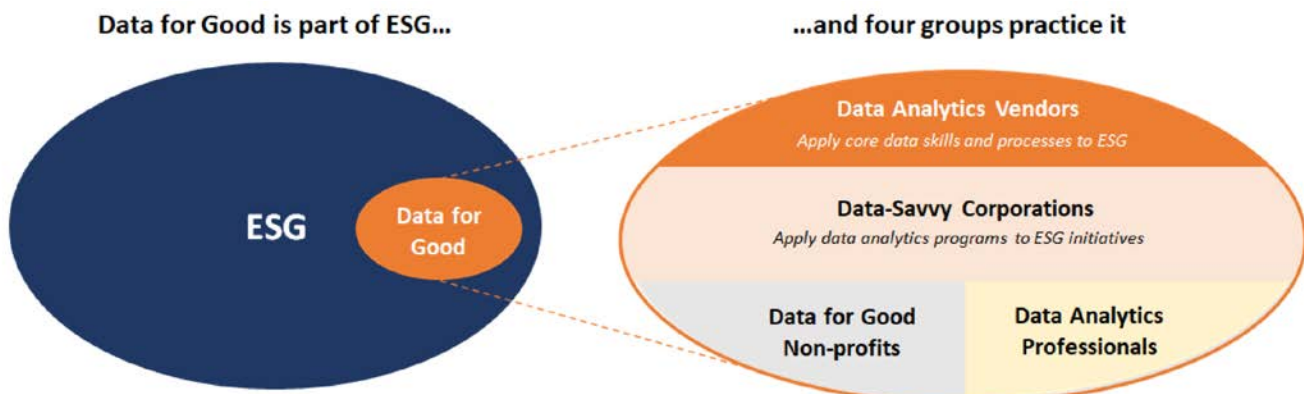
Data Analytics Professionals

An increasing number of data analytics professionals also contribute time and money to nonprofits. They find their nonprofit projects through platforms such as DataKind or their own networks. For example, Wayne Eckerson, president of Eckerson Group, is helping [The Community Builders](#) build a data strategy to support its mission. This nonprofit real estate developer owns or manages more than 11,000 apartments for families and seniors, and invests in local businesses to strengthen neighborhoods.

Data analytics professionals also devise Data for Good strategies, often with the endorsement of their employers. Junta Nakai, head of the financial services practice at Databricks, teams with his colleague and Databricks Technical Director Antoine Amend to create and evangelize cause-driven AI models. They help investors assess the sustainability of their portfolio companies by summarizing ESG reports with natural language processing, scoring initiatives with graph analytics, and then calculating those companies' market risk—all using Databricks notebooks. Junta and Antoine also help measure the synergies of sustainability and operational resilience. For example, logistics companies that optimize their supply chains' carbon footprint with geospatial data tracking can use the same frameworks to predict and respond to operational shocks.

Figure 2 illustrates the four groups that practice Data for Good.

Figure 2. Data for Good Practitioners



Compassion International Serves Children with Splunk for Good

[Compassion International](#) recruits and connects sponsors with impoverished children through 8,000 Christian church communities in 25 countries. Their sponsorship program provides economic, educational, medical, and wellness support to more than two million children per year. Compassion stands out among non-profits because it has developed bleeding-edge technology to address a less visible need: safety from child predators.

Jonathan Wagner, senior monitoring specialist, and John Edom, IT principal, noticed a few years ago that some sponsor applicants to Compassion exhibited troubling behavior. True to their profession, Wagner and Edom decided to analyze the problem. They used the Splunk Machine Learning Toolkit to develop a custom model they call “Protect All the Children,” or PATCh, and partnered with Brian Cusick, Senior Solutions Engineer at Splunk, to operationalize it.

“This is a heartfelt mission,” says Cusick, who guided them through the integration and implementation process as part of Splunk’s Data for Good program.

PATCh uses the Splunk data platform to normalize and search communications between sponsors and children, including emails, and even digital images of handwritten letters. The PATCh statistical model then scores content to identify anomalies such as provocative language. It correlates these findings with database records of convicted sex offenders to identify risky names or addresses.

Compassion investigates all these “flags” using reports generated by Splunk, then shuts down accounts and notifies law enforcement where appropriate. It works: they now screen sponsor applicants in minutes rather than a month—and they stop bad actors.

Edom, Wagner, and Cusick aim to serve a larger community. They have engaged dozens of child-focused non-profits to evangelize the need for child safety and train them on PATCh. Wagner continues to refine the model, for example, to secure Personally Identifiable Information (PII) for third-party usage and to improve its ability to read handwriting with optical character recognition.

Compassion’s initiative offers three lessons for Data for Good practitioners of all types.

- **Anyone can innovate.** While many nonprofits have immature data analytics programs, they can borrow new tools and learn from cutting-edge peers like Compassion.
- **Data for Good is an educational opportunity.** Edom, Wagner, and Cusick continue to gain new skills and knowledge as they adapt PATCh to serve various non-profits.
- **Think big.** This team believes they serve all children. Their mindset, coupled with a scalable analytics tool, increases their global impact.

Perhaps the greatest lesson is the motivating power of service. Compassion is laser-focused on creating a global support network for children. “It’s an honor to serve them,” says Edom.

Getting Started for Good

Data for Good programs often have distinct technical requirements. Environmental stewardship, for example, requires different skills, processes, and reporting than tackling extreme poverty. However, programs share common risks, trade-offs, and opportunities. The following guiding principles can help data-savvy corporations and data analytics professionals in particular navigate their Data for Good journeys. These principles derive from the experiences of data analytics vendors and Data for Good nonprofits.

Nurture grassroots efforts within the corporation. Data analytics vendors agree that Data for Good ideas often start when a hand shoots up in the back of the room during a town hall meeting. Suppose we offered a new tool to our local communities? Suppose we hosted a hackathon with customers and academics, applying our software to urban planning problems like rising seas? Such ideas arise only in corporate environments that ask for them. SAP encourages employees to create and act on their own ideas. “Our employees can run the activities they are passionate about,” says Eva Klingbeil, corporate social responsibility manager at SAP. “Every employee has the opportunity to kickstart their project right away” using a central project platform.

Secure executive sponsorship. Chandler McCann, general manager and data science practice lead at DataRobot, emailed DataRobot CEO Jeremy Achin an update on his Global Water Challenge project as he flew back from meetings with government officials in Sierra Leone last year. “Jeremy wrote back to me, ‘What if we had a team doing this instead of you? How could we change the world? Tell me how you want to do that,’” recalls McCann. He launched the AI for Good program shortly thereafter. Although few CEOs are quite so proactive, you should have confidence that your Data for Good idea will find a receptive audience among executives. Their support can help you recruit more volunteers, harness more resources, and generate a higher social impact.

Build the right data analytics program. As with a profit-focused initiative, apply rigor and discipline to data management and analytics. Compassion International serves a global network of more than 2 million children and 8,000 church partners that depends on enterprise-class data integration, processing, and analytics. The applications, processes, servers, and databases generate about 1.5 million events each day. “Data is critical to our mission,” says Jonathan Wagner, senior monitoring specialist at Compassion. Standardized data processes help Compassion screen sponsors, track donor gifts, and report on financial metrics.

Find the right cause. Your company needs a credible cause that wins the hearts and minds of its stakeholders by mapping to their core values. Mastercard knows its young, upwardly mobile customers want to measure the carbon impact of their purchases. The data analytics vendors profiled earlier know their stakeholders are always looking for new problems to solve with innovative software. Embrace causes that strike a centrist tone and avoid divisive political viewpoints. Emphasize the common values for your stakeholders.

Assemble—and govern—open data ecosystems. The COVID-19 collaboration among corporations, government officials, and academic institutions provided a “stress test for data governance,” according to Mastercard CDO JoAnn Stonier. “When there are so many players in an ecosystem trying to solve the problem, it became very difficult to do the normal governance process.” And yet governance is more critical than ever to safeguard data quality and privacy. Stonier recommends establishing common privacy measures, security protocols, and processes across organizations, so they can participate in a “consistent ecosystem.”

Build communities and communicate. Solve for Good published 25 webinars, ranging from three-minute use case summaries to 30- or 60-minute best practices tutorials, from June to September 2020 in its [Solve Summer Academy](#) on YouTube. The more you communicate, staying flexible to the style and availability of your contributors, the broader the net you cast. Large corporations now actively seek out and sponsor Data for Good communities—especially the ones that make themselves visible.

Don’t underestimate what you can contribute. Data scientists aren’t the only stars of the Data for Good show. Many of the roughly 1,500 volunteer members of Statistics Without Borders offer expertise in economics, public health, survey research, and business administration rather than analytics. As operations director Smita Skrivanek pointed out at their annual meeting in August: “There is a lot to do that does not necessarily involve statistics.” Although most of the Statistics Without Borders members have three to five years of professional experience, contributors range from students to retirees.

Make a long-term commitment. Your Data for Good initiative should have the same time horizon as the cause and values it represents. Measure investments and results along the way, but keep in mind that well-crafted Data for Good initiatives will consistently reinforce the same message to stakeholders year after year.

What's Next?

Data for Good appears to have legs for several reasons. Young customers, workers, and investors commit to causes—public health, social equity, and the environment—when they buy their products, apply for jobs, and plan for retirement. Generations do typically grow more conservative as they age, as evidenced by the Baby Boomers. But rising environmental concerns in particular seem likely to fuel a long-term commitment to social and economic well-being. As long as that remains true, corporations will support causes to win their business. And the data analytics community will contribute because our industry loves to prove that technology makes the world a better place.

To get involved as a data-savvy corporation or data analytics professional, look to the examples set by data analytics vendors and Data for Good nonprofits. Invite and offer grassroots ideas about how to share your expertise with the community, and refine those ideas to win executive sponsorship. Build Data for Good programs that apply enterprise-class principles of data modernization and governance, both for your organization and the broader community. Evangelize the cause and your contributions, and settle in for the long term.

About Eckerson Group



Wayne Eckerson, a globally-known author, speaker, and consultant, formed [Eckerson Group](#) to help organizations get more value from data and analytics. His goal is to provide organizations with expert guidance during every step of their data and analytics journey.

Today, Eckerson Group helps organizations in three ways:

- **Our thought leaders** publish practical, compelling content that keeps data analytics leaders abreast of the latest trends, techniques, and tools in the field.
- **Our consultants** listen carefully, think deeply, and craft tailored solutions that translate business requirements into compelling strategies and solutions.
- **Our advisors provide** one-on-one coaching and mentoring to data leaders and help software vendors develop go-to-market strategies.



Eckerson Group is a global research and consulting firm that focuses solely on data and analytics. Our experts specialize in data governance, self-service analytics, data architecture, data science, data management, and business intelligence.

Our clients say we are hard-working, insightful, and humble. It all stems from our love of data and our desire to help organizations turn insights into action. We are a family of continuous learners, interpreting the world of data and analytics for you.

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About the Sponsor

Splunk Inc. (NASDAQ: SPLK) turns data into doing with the Data-to-Everything Platform. Splunk technology is designed to investigate, monitor, analyze, and act on data at any scale, from any source over any time period. The Data-to-Everything platform removes the barriers between data and action, so our customers—regardless of size or business—have the freedom to deliver meaningful outcomes across their entire organization. Our unique approach to data has empowered companies to improve service levels, reduce operations costs, mitigate risk, enhance DevOps collaboration, and create new product and service offerings.

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