

## **InDi - Transparency International**

*“Coming together is a beginning,  
staying together is progress,  
and working together is success.”  
Henry Ford*

### **Building a Better World Together: Reducing the Global Impact of Corruption Through Corporate Data Analytics Collaboration**

**Recent anti-corruption research shows that when companies collaborate to share data-driven insights and information about third-party payments and high-risk transactions, they have a 25% greater chance of predicting improper payments than when each company’s model is performed in isolation. Integrity Distributed is a nonprofit data-sharing consortium led out of MIT working to bring corporations together to fight global corruption through technology.**

#### **CHALLENGES WITH DETECTING CORRUPTION IN ORGANIZATIONS**

Most companies work hard to detect and prevent fraud and corruption. Still, it can be challenging for businesses to identify behaviors that create unacceptable risk, or worse yet, cross the line — particularly where employees are determined to commit a crime and take steps to conceal their behavior. Global organizations are using data analytics to identify and monitor corruption and bribery risks for their organizations and by partners with whom the organization conducts business. A critical factor when evaluating compliance programs involves determining if compliance and control personnel have sufficient access to relevant data sources. Can they access information to implement timely monitoring, policy testing and controls evaluation? As the U.S. Department of Justice (DOJ) indicates, this is even more critical in a regulatory environment that increasingly requires monitoring amid the ever-

expanding availability of new data sources. For example, this is true not just during third party due diligence activities, but “throughout the lifespan of the third-party relationship”.<sup>1</sup>

Corruption often tends to flourish where multiple corporate actors compete in opaque markets in a race to the bottom, often leaving victims unaware of any wrongdoing occurring across multiple organizations. Against that backdrop, one should not attack corruption alone in organizational silos, but rather encourage transparency across organizations and industry sectors, sharing insights, risk profiles and third-party attributes that describe a potentially improper or corrupt payment.

Even so, this approach raises numerous challenges. First, detecting signs of fraud from “noise” across uneven and sometimes unreliable data sets is tough. Even the most sophisticated organizations tend to only have access to reliable data related to their own vendors and customers, which is just a fraction of the global marketplace. Second, it can be difficult to create a transparent anti-fraud framework while also preserving the required privacy, security and anonymity necessary for organizations to maintain their competitive edge. After all, it makes little sense to trade a corruption problem for a competition or privacy one. A third challenge is to create a collaborative framework that is cost effective. Technologies tend to succeed only when their new users do not have to risk significant resources on a “bet” that it will work. Lastly, contributing members in any collaborative effort need to trust each other. It is important that participants are confident that each member is

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<sup>1</sup> DOJ. - See “Evaluation of Corporate Compliance Programs [Updated June 2020],” U.S. Department of Justice, Criminal Division)

acting in good faith in terms of how they apply insights as well as how they translate such results into action.

As discussed below, overcoming those challenges is worth the effort: by securely and anonymously sharing profiles of risk, corporations yield an increase in the amount of potential fraud and corruption identified in their corporate ecosystem. To that end collaborative initiatives, such as data-sharing consortiums, can be a valuable resource to organizations in the fight against fraud and corruption.

## **THE IMPACT OF CORRUPTION**

Corruption-related misconduct causes massive economic and humanitarian loss, impacting transportation, telecommunication, healthcare, sanitation, energy, schools, and more – all vital to growth, social welfare and a healthy thriving society – and disproportionately impacts poorer and marginalized citizens. According to some estimates, we suffer between \$3.6 and \$4.5 trillion in economic loss from global corruption – approximately 5% of global GDP.<sup>2</sup>

Some interesting examples:

- One in five people worldwide report having paid a bribe to access a public service.<sup>3</sup>
- 4 in 10 European citizens believe corruption has risen in their country over the past three years (2020 – 2023) and describe it as widespread.<sup>4</sup>

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<sup>2</sup> *Andrew Liang* [Costing Corruption and Efficiency Losses from Weak PFM Systems](#), International Monetary Fund Public Financial Management Blog, April 3, 2023; [Corruption Statistics](#), Transparency International UK.

<sup>3</sup> [International Anti-Corruption Day – 9 December 2023](#), United Nations.

<sup>4</sup> [The Commission's 2023 surveys on corruption show growing skepticism among Europeans](#), European Commission, Directorate-General for Migration and Home Affairs, July 5, 2023.

- 124 countries are stagnant in their efforts to combat corruption.<sup>5</sup>

Corruption often thrives during times of crisis, particularly when institutions and oversight are weak or their focus diverted, and public trust is low. Indeed, exacerbated by the global pandemic and conflict in Eastern Europe and Gaza, the world's economies continue to be stretched and government services overwhelmed. In addition, nationalism is reportedly expanding and rising globally<sup>6</sup> and where governments utilize nationalist rhetoric to stay in power, experts believe the public sector is more corrupt.<sup>7</sup> Global inflation has not fully abated and only more recently has our supply / demand balance begun to stabilize. At the same time, governments are issuing debt at a higher rate; for example, the US alone will issue \$4T in 2024 bonds - \$1T more than in 2023. Collectively, these conditions expose cracks in our most critical global industries serving the most basic of human needs – access and support for critical infrastructure, healthcare, the environment, our global supply chain, technology, and defense to name just a few, allowing opportunity for corruption to thrive.

To better appreciate corruption's impact, let us look closer at two areas with heightened focus in our world today: healthcare and the environment.

**Healthcare.** Transparency International estimates that of the \$7.5 trillion spent globally on healthcare each year, \$500 billion (nearly 7%) is lost to corruption across all five dimensions of the healthcare ecosystem: equity, quality, responsiveness, efficiency, and

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<sup>5</sup> [International Anti-Corruption Day – 9 December 2023](#), United Nations.

<sup>6</sup> *Mike Allen* [Hard-right politics grow across the globe](#), Axios, September 18, 2023

<sup>7</sup> For example, there are “three ways that nationalism can foster the abuse of power. Politicians may whip up nationalist passions to win office or hang on to it. By granting their kin or cronies influence, they may attempt to capture the state. And by branding critics as traitors, they may erode the checks and balances that prevent the looting of public funds.” *Abhijit Banerjee* [How cynical leaders are whipping up nationalism to win and abuse power](#), The Economist, August 21, 2023.

resilience. This represents more than what we need (~\$370 billion) to provide every citizen on the planet with access to healthcare.<sup>8</sup> Corruption in healthcare “kills an estimated 140,000 children a year, fuels the global rise in antimicrobial resistance, hinders the fight against HIV/AIDS and has hampered the ability to respond to COVID-19.”<sup>9</sup> Countries with high levels of corruption spend less on healthcare as a percentage of GDP and experience poor health-related outcomes: higher infant and child mortality rates, lower life expectancy and immunization rates, and higher rates of antibiotic resistance.<sup>10</sup>

As governments injected additional funding into healthcare systems to cope with the global pandemic and further increased spending is projected,<sup>11</sup> these large outflows of money need oversight, transparency, and monitoring through analytics running at scale from governments and private actors to ensure funds are not lost to corruption.

**Environment.** Corruption encourages the over-exploitation of forests, fisheries, and farmlands without considering the long-term impact this exploitation has on livelihoods and the sustainability of the environment. Similarly, corruption negatively impacts water supplies, natural resources, and hazardous waste management.

For example, the World Bank estimates corruption increases the cost of water infrastructure by as much as 40% - this equates to an additional \$12 billion a year needed to

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<sup>8</sup> [Corruption Statistics](#), Transparency International UK.

<sup>9</sup> [Why Corruption Matters](#), Transparency International UK.

<sup>10</sup> *Emily H. Glynn* [Corruption in the health sector: A problem in need of a systems-thinking approach](#), *Frontiers*, August 24, 2022.

<sup>11</sup> *E.g.*, Between 2022-2031 the average growth in US national healthcare expenditures (5.4%) is projected to outpace that of average GDP growth (4.6%) resulting in an increase from 18.3% percent in 2021 to 19.6% in 2031 of GDP. [NHE Fact Sheet](#), Centers for Medicare and Medicaid Services. <sup>12</sup> *Jeroen Vos* [Fighting Corruption in the Water Sector: Methods, Tools and Good Practices](#), United Nations Development Programme, October 2011.

provide worldwide safe drinking water and sanitation.<sup>12</sup> In individual households, corruption is estimated to increase the price of obtaining a water connection by as much as 30%.<sup>13</sup>

The now familiar Brazilian Car Wash Scandal implicated several Amazon mega-dams, including \$24 million paid in bribes relating to the Belo Monte dam and a guilty verdict against a construction consortium executive for corruption and money laundering. Constructing just one dam displaced and increased the vulnerability of indigenous and local people as it dried up the Xingu River, flooded islands and lagoons, killed fish, extinguished some of the world's most diverse habitats such as croplands and rainforests (include 175 miles of the Amazon), and produced more yearly greenhouse gases than Sao Paulo, Brazil's largest city.<sup>14</sup>

With urgency, the world is working to accelerate ways to reduce and reverse the impact of climate change and preservation of our planet – all likely to lead to increased private, NGO, and government spending aimed at many of the most corrupt countries in the world according to the Corruption Perception Index.<sup>15</sup>

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Consistently – and effectively – leaders at the United Nations, OECD, Transparency International, the World Bank, and in administrations around the world call on governments

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<sup>12</sup> Jeroen Vos [Fighting Corruption in the Water Sector: Methods, Tools and Good Practices](#), United Nations Development Programme, October 2011.

<sup>13</sup> Matthew Jenkins [The impact of corruption on access to safe water and sanitation for people living in poverty](#), Transparency International U4 Resource Centre, July 4, 2017.

<sup>14</sup> [Grand Corruption and the SDGs: Belo Monte and the devastating impact of corruption in the Amazon](#), Transparency International<sup>16</sup> See e.g., <https://www.businessatoecd.org/policy/anti-corruption-committee>

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to embed technology solutions intended to root out corruption and they ride the wave of digital transformation sweeping the world's procurement systems. Through these organizations and others, governments have banded together to share information, knowledge, and in many cases, data. More than ever, governments believe that through partnership, anti-corruption efforts will thrive.

At the same time, technologies and innovations housed in corporations around the world deliver important – and additive – anti-corruption insights. Thus far, corporations have forged partnerships built on knowledge sharing and best practices – and opt into efforts such as the OECD's Working Group on Bribery, forming part of the OECD Anti-Corruption Committee.<sup>16</sup> In the face of well-reasoned and well-meaning concerns about competition, trade secrets, privilege, privacy, and internal risk management, corporations' approach true data sharing with reticence and caution.

In 2022, a not-for-profit organization stemming out of MIT named *Integrity Distributed*, or "InDi", was formed to take anti-corruption a step further by asking: what if corporations could securely, anonymously, and privately share data driven insights, particularly around profiles of corrupt or improper payment activities, that collectively improve how we identify and address corruption? What if we could create a corporate collective that works together to address these concerns and bring corporate corruption data together in a secure, yet federated model? Using machine learning, generative AI and the collective knowledge of the participants, could such a consortium open a more powerful door to fighting global corruption?

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<sup>16</sup> See e.g., <https://www.businessatoecd.org/policy/anti-corruption-committee>

The answer is yes.

## **HOW IT WORKS**

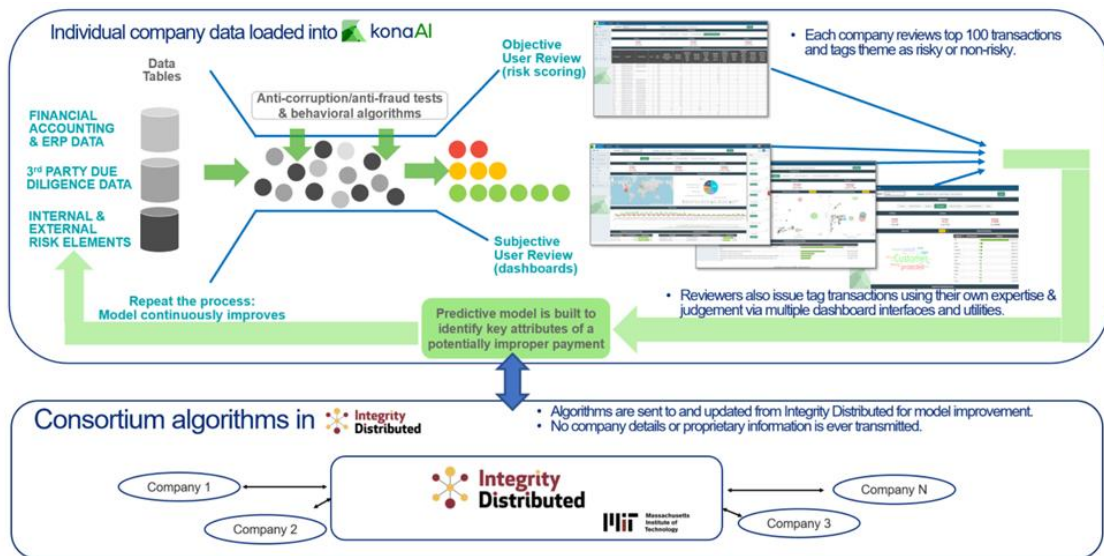
The vision of the InDi's team is to demonstrate that organizations, all over the world, can contribute their anti-fraud and anticorruption intelligence in a secure, anonymous information-sharing consortium model. The above-referenced platform allows organizations to train anti-corruption algorithms that detect patterns of fraud and corruption in transactional (e.g., third-party payments) data in their respective industries. Those algorithms (but not the underlying data) are contributed to the consortium, enhancing the collective intelligence of the "super-algorithm" in a secure platform. The process is iterative and collaborative, feeding data-driven algorithms for optimal performance. As more data and algorithms are contributed, artificial intelligence learns and improves at a rate much faster than would be possible at any single company. Through this model of collaboration and data analytics, all of the participating organizations benefit, and the learning is continual throughout the integrity distributed network.

To create the models for the consortium, approximately a dozen participating Fortune 500, global companies extracted relevant third-party payments data from their enterprise resource planning systems (such as SAP or Oracle procure-to-pay systems) and loaded the information into a consistent unified data model (or UDM) developed by KonaAI, a third-party anti-corruption and compliance software company. On a company-by-company basis, payment risks were risk-scored, first by the model and across an extensive library of tests and behavioral algorithms. Each company's representative and/or its outside counsel reviewed the highest-risk transactions. Using an approach that originated in e-discovery



known as technology assisted review, the team created a predictive model for each company designed to proactively identify a potentially improper payment based on the attributes of each transaction.

Finally, the development team combined each company’s model into one “super-model,” using a neural-network statistical model to retain and share insights while protecting data privacy and anonymity. The Figure below illustrates how company-specific data was maintained and analyzed, with insights and algorithms being shared in a secure manner. This collaborative partnership is what forms the consortium — the Kona AI platform was simply the technology used to house the consortium concept and run the algorithms.



With this initial cohort of companies, the first results of the InDi’s research has indicated that the predictive value of identifying a potentially improper payment is 25% greater when companies collaborate compared to results when each company’s model is utilized in isolation.

## **THE VISION GOING FORWARD**

Formed in June 2022, the consortium described above is still in an early stage of development. However, it is gaining a tremendous amount of interest and support from mid-to-large global organizations and governments.

Based on these early results (potentially reducing corruption by 25% or more), it has been demonstrated that corporations working as a collective will be more powerful – and present more opportunity to make a global impact in fighting corruption – than when acting alone. Now imagine what each of these corporations could do to advance new innovations such as healthcare initiatives, protecting our rainforests, building out green energy, lifting up marginalized communities, investing in access to education, and so much more. The possibilities – and impact – are limitless when corrupt payments can be eliminated.

### **ABOUT THE AUTHORS:**

**Jeannine Lemker** is a University of Washington School of Law Assistant Professor, Director of the Entrepreneurial Law Clinic, and Co-Director for the law school's Global Business Law Institute. Prior to joining the faculty, Jeannine was a Managing Director at Major, Lindsey & Africa. She spent 10 years as a senior member of Meta and Microsoft's Compliance and Ethics programs, leading diverse teams who designed and landed culture and controls programs and strategies, data analytics programs, enterprise risk management, emerging regulatory compliance risk management, ESG / human rights, and corporate compliance programs. In her first ten years of practice, Jeannine was a white-collar criminal defense attorney at Cadwalader, Wickersham & Taft LLP. She is a Board member of Integrity Distributed, an MIT affiliated non-profit seeking to democratize compliance analytics, an advisor to Ethena, a women-led start-up revolutionizing corporate training, and member of several athletic organization non-profit Boards. She holds a JD from Georgetown University Law Center and a BA from George Washington University.

**Vincent M. Walden, CFE, CPA**, is CEO of Kona AI, a global, AI-driven software company focused on anti-fraud, anti-corruption and compliance risks. He specializes in forensic data analytics, corporate compliance and white-collar crime. Recognized as CFE of the Year in 2022 by the Association of Certified Fraud Examiners, Mr. Walden has over 25 years of professional anti-fraud and forensic technology experience focused on providing leading technology innovations on both proactive compliance programs and reactive investigations to Fortune 500 companies. He welcomes your feedback and ideas. Contact Walden at [vwalden@konaai.com](mailto:vwalden@konaai.com).