



Social Risk Business Case

SUBMITTED BY

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“Social Risk analysis fills the void that exists where Business Intelligence, Security, Public Relations and Corporate Social Responsibility intersect.”

1 Overview

ENODO Global’s Business Case is designed to:

- Act as a primer for those unfamiliar with [Social Risk](#), its impact on core business functions, and the limitations of current risk analysis techniques
- Describe the theory and mechanics behind ENODO’s ability to understand, measure, forecast, and mitigate Social Risk
- Demonstrate how ENODO provides real-time awareness and predictive analysis that empowers clients to shape the future
- Deliver a case study to quantify the benefits of ENODO’s products and services based on an representative, large-scale oil and gas project

ENODO fills a critical gap in existing risk portfolios by addressing Social Risk. ENODO’s Social Risk analysis provides real-time intelligence and predictive analysis to: improve investment decision-making, enhance existing security protocols, deliver an additional layer of analysis, and safeguard against reputational risk. ENODO services result in increased profitability for business operations by reducing the likelihood of Social Risk, while maximizing Social Impact.



Figure 1. Social Risk Graphic

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“Social Risk is the primary source of disruption today and the greatest threat to public and private sector organizations across the globe.”

2 Social Risk Introduction

2.1 What is Social Risk?

Social Risk is defined as “Exposure to adverse consequences stemming from population-based activities and negative public sentiment.” It is the result of unresolved ethnic, political, and economic grievances shared and exacerbated by modern communications and information technologies. Social Risk emanates from populations and manifests in the form of protests, strikes, litigation, sabotage, sudden policy shifts, petty crimes, organized criminal activities, public relations crises, advertising mishaps, online activism, terrorism and more.

2.2 What is Social Risk Analysis?

Social Risk analysis fills a gap in risk mitigation strategies where Business Intelligence (BI), Security, Public Relations (PR) and Corporate Social Responsibility (CSR) shortcomings intersect. It is a new approach that can synthesize large amounts of data to help businesses proactively prevent Social Risks from becoming events. It has direct and indirect impacts on operations, costs, and profitability. Moreover, it empowers leaders to make better decisions, identify mispriced investments, reduce unexpected operating expenses, and prevent lower productivity, project delays, and even violence, which are all real-world manifestations of Social Risk.

2.3 Current Situation

2.3.1 A Gap in Existing Risk Mitigation Strategies

Existing risk mitigation strategies produce initiatives that are reactive, costly, and often exacerbate tensions between businesses and the communities where they operate. They are often employed on an ad hoc basis, not integrated across an organization’s business model, and rarely take advantage of opportunities to be mutually supportive, which leaves organizations susceptible to the negative impacts of Social Risk events. Most importantly, they lack a repeatable process for comparability across an organization’s operations, consistent mechanisms to understand and integrate input from populations, and ability to quantify the effectiveness of risk mitigation activities.

Business intelligence (BI) is typically driven by broad geopolitical factors with an emphasis on formal institutions and regional “experts”. Standard BI tools are ill equipped to analyze large amounts of information continuously generated by news outlets and social media. Security measures focus on protecting a company’s assets and personnel, create physical and psychological barriers that frustrate efforts to establish stakeholder relations or resolve conflict

through negotiation, and fail to adapt to dynamic environments. Public relations (PR) campaigns are highly reactive and often rely on communications strategies that fail to shape opinions or resonate with the target audience. Corporate social responsibility (CSR) initiatives often overlook local grievances and basic needs when designing and implementing community development projects.

“Leaders have a fiduciary responsibility to protect their organizations from risks to their operations.”

2.3.2 Social Risk: A Hidden Driver of Increased Costs

In today’s inter-connected world, businesses are regularly exposed to Social Risks that emanate from populations. It is the result of unresolved ethnic, political, and economic grievances, which are shared through modern communication and information technologies. Social Risk manifests daily around the world and ranges from negative public sentiment, protests, strikes, and litigation to looting, sabotage, and terrorism. It heightens uncertainty, environmental challenges, and reputational concerns and impacts legal, default, and regulatory risks. Social Risk increases costs directly through events that delay or stop production and indirectly by requiring measures to manage these events.

Social Risk is a greater risk to a project’s bottom-line than operational, technical, and financial breakdowns. A Harvard Kennedy School study of the global mining sector estimated that project delays result in a net present value loss of \$20 million per week for projects with a \$3-5 billion capital expenditure.¹ Although extractive industry firms have been exposed to Social Risk for decades, other industries are beginning to share similar experiences. Figure 2 illustrates the diversity of Social Risk factors that multinational corporations face. Some global businesses are attempting to mitigate the negative actions of populist movements by localizing production. However, as firms localize their supply chains, they confront a broader array of Social Risk variables that continue to increase in variety and magnitude.

¹ Harvard Kennedy School report, “Costs of Company-Community Conflict in the Extractive Sector”, 2014.

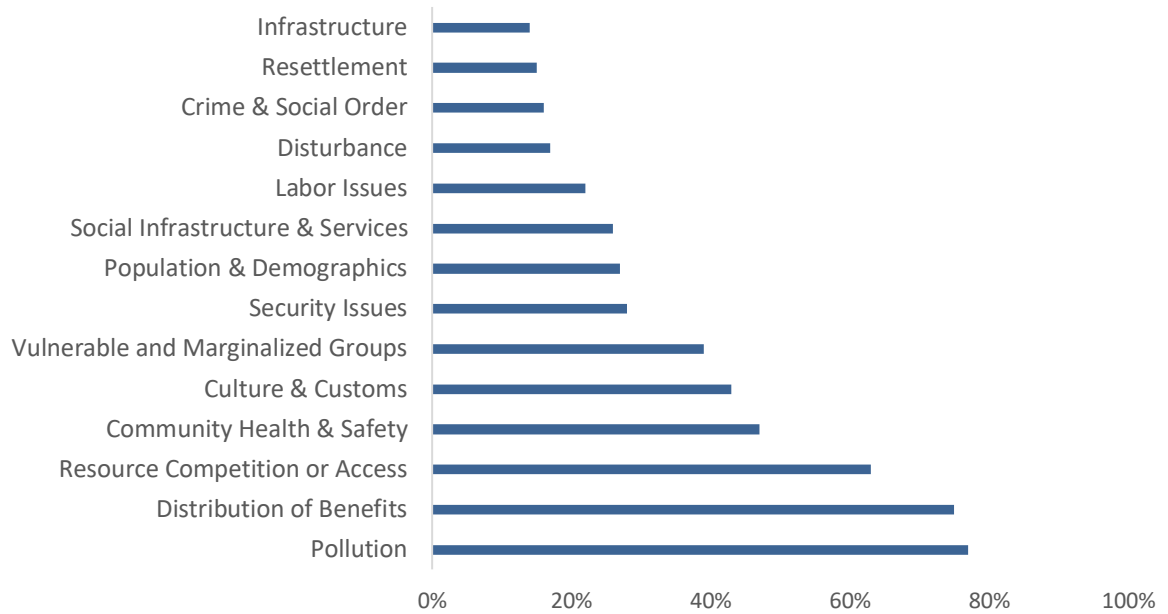


Figure 2. Mining Companies' Exposure to Social Risk

“ENODO applies military-developed techniques in a civilian environment to undertake risk assessments, anticipate problems, and maximize commercial impact.”

3 Social Risk Solution

ENODO leverages decades of experience in Military Planning, Operations, Strategic Communications, and Information Operations (IO) to predict and prevent Social Risk for our diverse set of clients. Our Social Risk-based strategy enables companies and governments to identify, manage, and mitigate population-centric challenges by bridging the existing divide between technology, data, and human understanding. We leverage advanced Social Listening tools (social media exploitation), data analytics, social science competencies, and the power of identity to uncover underlying Social Risk factors, track and measure public sentiment, shape public perceptions and trigger favorable behaviors. This approach enables organizations to prevent disruptions, safeguard reputations, increase profits, improve safety and efficiency, and manage and mitigate crises, while simultaneously fostering enduring relationships with communities.

3.1 Social Listening

In increasingly complex and competitive social environments, corporations that successfully incorporate Social Listening into the design and implementation of their strategies can understand and shape public perceptions. Social Listening provides corporations with several competitive advantages:

- Real-time public perception on key issues and trending topics segmented by demographic group (e.g., What are the key and trending topics a population cares about? How do perceptions differ among demographic groups based on gender, sex, race, ethnicity, socioeconomic status, or geographic location?)
- Query-able database that enables corporations to ask questions, which inform engagement activities (e.g. how will the announcement of plans to open a new mining plant be perceived by the local community?)
- Detect and mitigate potential threats (e.g. will a new corporate policy spur backlash?)
- Uncover and address underlying Social Risk factors and population grievances (e.g. what are the population's needs and how can addressing them improve company performance?)
- Manage crises more effectively (e.g., measure the performance of narratives disseminated by the corporation, understand public sentiment and perceptions before taking action, and prevent online activists from taking hold of harmful narratives)
- Safeguard corporation's reputation (e.g., measure public perceptions of the company and its activities in real-time)

3.2 Population-Centric Methodology

ENODO's advantage over traditional consultants or social media / data analytics firms lies in our population-centric methodology. Our methodology bridges the gap between data, technology and human understanding, and serves as the lens through which data is analyzed and synthesized into actionable insights. It examines complex social dynamics through a single variable: identity, the key to understanding people's beliefs, values, interests, and behaviors. By harnessing the power of identity and incorporating it into corporate strategies, ENODO helps corporations shape public sentiment, influence behavior, and ensure positive outcomes.

3.3 Data Analytics

The backbone of our offering is our customized data analytics platforms that transform data into meaningful, actionable information. Each platform is customized for the specific information, language, and social environments where corporations operate. We leverage best-in-class tools like Natural Language Processing and Machine Learning to quantitatively measure text-based narratives, perceptions, and sentiments. By combining advanced technologies with our population-centric methodology, we make sense of digital information from online news outlets, social media, and proprietary datasets to deliver clear recommendations that guide corporate strategies and measure results over time.

3.4 Process

Corporations need timely, accurate information on how and when to connect with the public to ensure positive outcomes. ENODO’s analysis provides a repeatable, measurable process to understand what matters most to populations, how they feel about those topics, who influences those perceptions, how those perceptions change over time, and how they can be changed or impacted by the corporation. The graphic below provides an illustration of how the various techniques, when properly sequenced, are used to develop findings and recommendations to support our analysis:

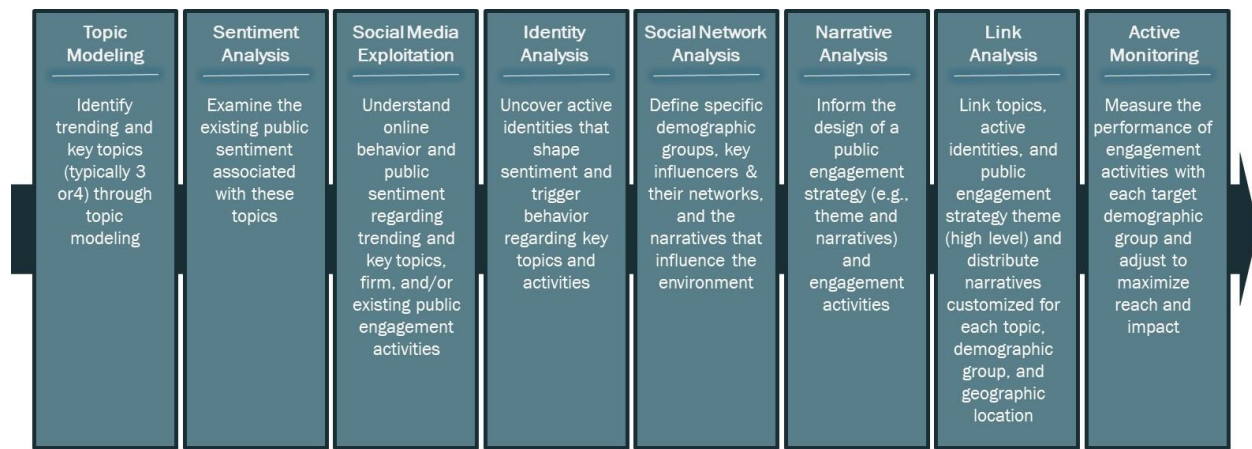


Figure 3. Data Analytics Process

- **Topic Modeling:** Identify and classify the most relevant and discussed issues related to corporate activities (e.g., key and trending topics) to uncover potential risks and opportunities
- **Sentiment Analysis:** Measure the positive versus negative (and neutral) sentiment of online discourse associated with key and trending topics, and corporate activities
- **Demographic Analysis:** Dissect the population into demographic groups to understand how primary (e.g., family, age, and gender) and secondary (e.g., education, occupation, and other affiliations to organizations) identities influence their perceptions and behaviors
- **Social Media Exploitation:** Collect data from online and social media platforms (e.g., Facebook, Instagram, Twitter, and YouTube)
- **Identity Analysis:** Uncover active identities that underpin public sentiment and shape and trigger behaviors
- **Social Network Analysis:** Map out the most important communications conduits (key individuals or “influencers”) and the patterns that drive popular narratives
- **Narrative Analysis:** Design a Master Narrative and sub-narratives to connect key groups and the topics they care most about through a common identity

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- *Link Analysis*: Link key topics, identities, and corporate messaging to align tactical corporate activities with broader, high-level strategy
- *Sentiment Over Time*: Track changes in public perceptions of individuals, issues, and events over an extended time period
- *Social Reach*: Measure how many online users the corporation's online posts reach beyond its immediate followers
- *Online Use By Platform*: Breaks down citizens' social media use by platform to identify the best platforms to reach the public

4 Return On Investment

4.1 Costs of Social Risk

ENODO's approach mitigates Social Risk and delivers significant savings, especially for capital intensive endeavors. This section illustrates the cost associated with Social Risk for a business investing in an oil and gas project. The demonstration highlights the need to integrate Social Risk analysis into a firm's business model to produce a comprehensive risk mitigation strategy across multiple business units and protect its bottom-line.

A typical oil and gas megaproject averages initial capital expenditure of \$7.4 billion and can be expected to produce \$3.8 billion in annual revenue.² A project will, on average, incur approximately \$131 million in net present value losses from delays related to Social Risk based on ENODO's analysis of common budgeting estimates for large-capital projects. Moreover, management will spend an additional \$87 million in business activities associated with Social Risk that include security, CSR, PR, and litigation. Investors can expect to incur approximately \$218 million in potential losses and budget items due to Social Risk (see Figure 5). Typical mitigation strategies do not account for Social Risk eventualities or plan for their occurrence as accepted operational costs. Strategies take the form of insurance policies, rely on physical and technical security protocols, are based on regression analyses of past projects that may not be comparable within the current environment, and do not attempt to prevent or avert Social Risk events.

² ENODO's analysis indicates \$7.4 billion is a typical capital expenditure on multibillion projects in the upstream, liquefied natural gas, pipeline, and refining sectors on a weighted basis. Estimates in Figures 4 & 5 are based on values of typical losses and budget items for the oil and gas sector reported in academic and business research.

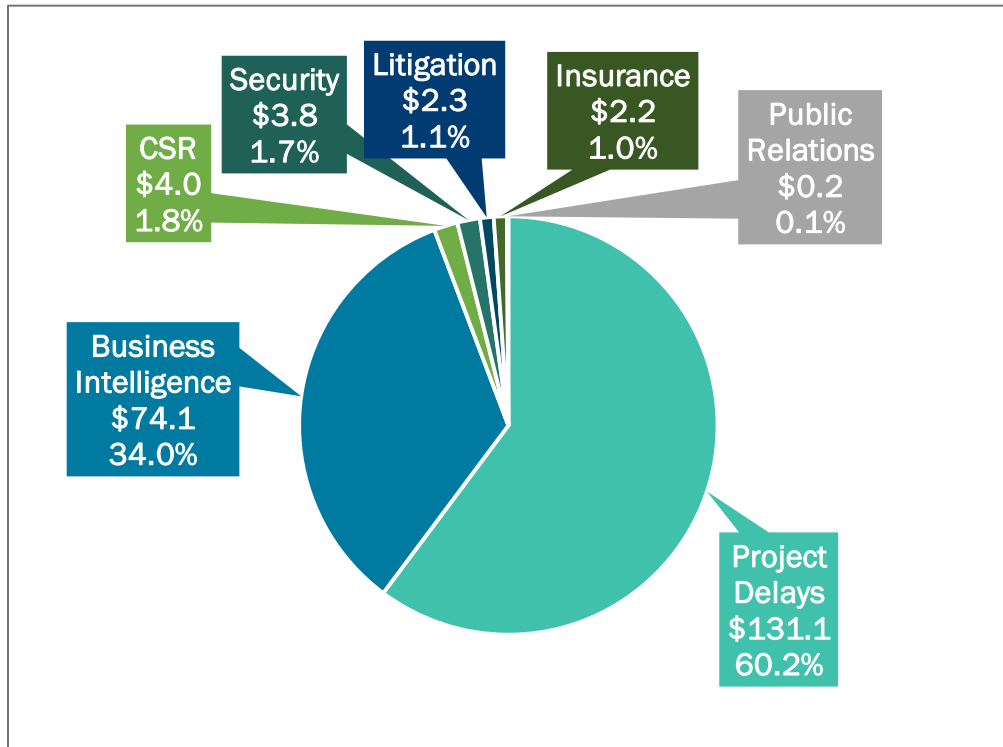


Figure 4. Social Risk Share of CAPEX (In Millions of USD)

4.2 Reduced Social Risk Costs

ENODO applied its approach to the \$7.4 billion investment scenario to identify improvements in efficiency and reductions in the occurrence of Social Risk events. Savings range from 10% to 30% of budgeted and emergency expenditures depending on the given operating environment.

Figure 6 illustrates the savings for seven cost areas identified in this scenario assuming a common cost reduction rate of 30%. Savings total \$65 million dollars in the first year, which is equivalent to nearly a 1% reduction in the project's capital expenditures. The majority of savings are realized in the first year when ENODO's platform is integrated into existing business units to optimize legacy programs and operations.

Savings are compounded in out years, as ENODO's platform becomes fully integrated across a firm's operations. In the out years, ENODO helps firms create pockets of security through enduring stakeholder relationships established through tailored engagement strategies. By shaping the security environment in which the organization operates, ENODO reduces the likelihood of and negative impacts of Social Risk. Active monitoring and engagement of key stakeholders across the entire supply chain enhances traditional BI, security, PR, and CSR efforts. Moreover, it also reduces the incidence of Social Risk events that lead to project delays, litigation, and insurance claims to maximize cost savings.

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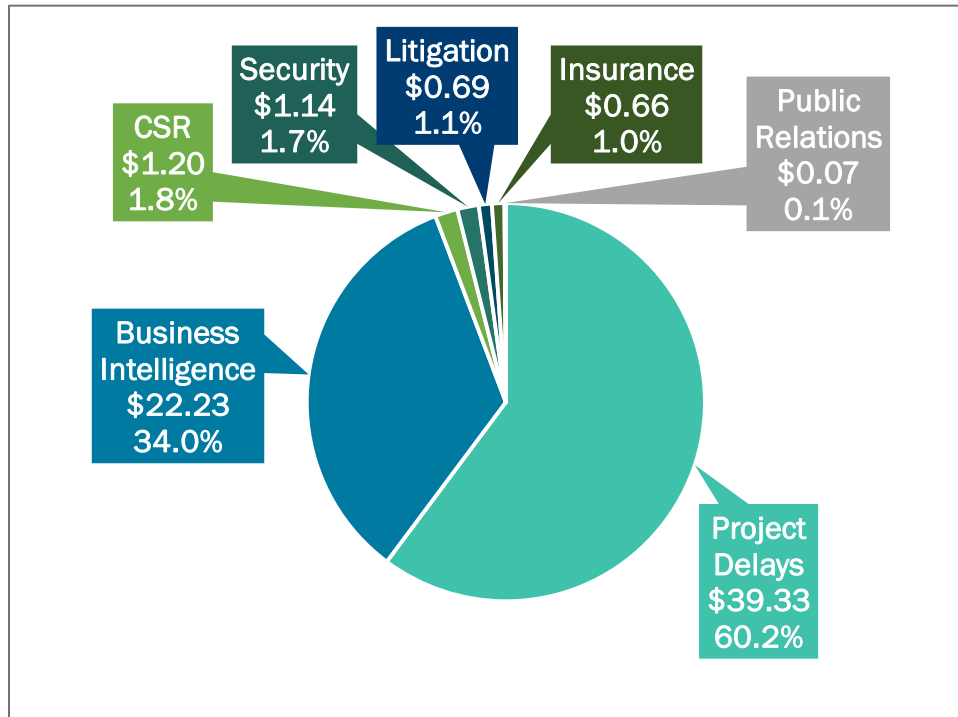


Figure 5. Projected Savings by Risk Type (In Millions of USD)

4.3 Lowered Costs of Capital

Reductions in Social Risk offer additional financial benefits beyond operational savings. By reducing costs arising from Social Risk-driven delays and litigation, ENODO's platform can reduce the overall risk-related, discount rate a business encounters when raising capital. Small reductions in a business's weighted average cost of capital (WACC), in capital-intensive projects, can lead to dramatic savings. For investments over multiple years, a small reduction in the cost of capital can lead to savings on top of significant reductions in operating costs.

Based on analysis of publicly available data, ENODO estimates that a \$7.4 billion project would have a WACC of 8.06% and a yearly Earnings before Interest Taxes Depreciation and Amortization (EBITDA) value of \$2.2 billion. Time horizons for projects in this sector range from a few years to over a decade, and long project lifecycles compound the savings realized from marginal reductions in capital costs. Figure 7 illustrates that a modest 10 basis point (bps) reduction in the cost of capital from 8.06% (to 7.96%) in the current scenario would result in net present savings of up to \$126 million dollars. A more optimistic reduction by 50 basis points could lead to over a half a billion in savings.

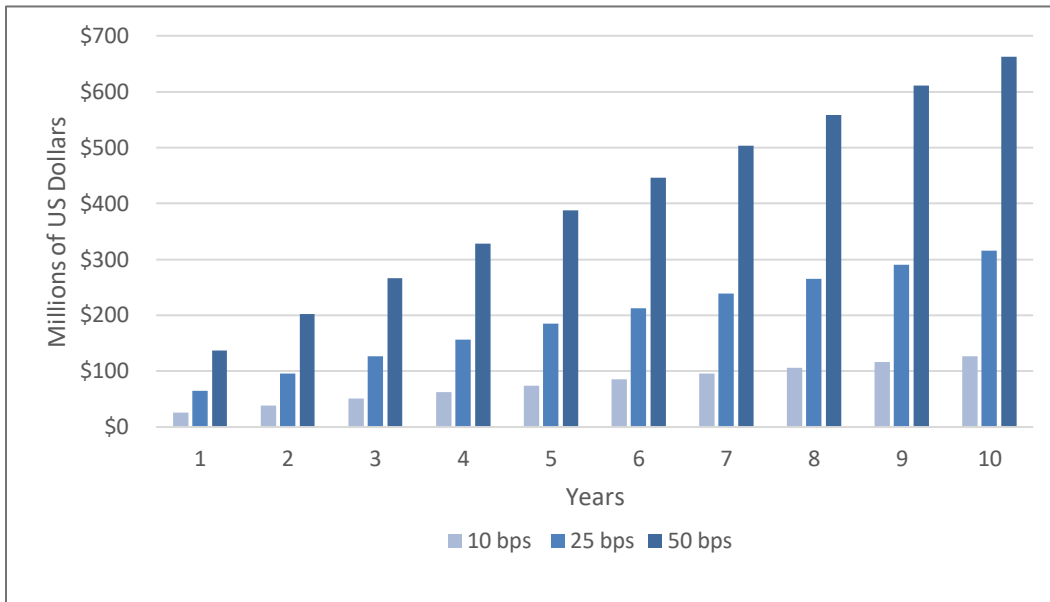


Figure 6. Cost of Capital Projected Savings

5 Case Study: Standing Rock Sioux and the Dakota Access Pipeline

In 2014, Energy Transfer Partners (ETP) began construction of the 1,200 mile Dakota Access Pipeline at a cost of over \$3.7 billion. After securing federal and state permissions for the project, ETP completed 87% of the pipeline by November 2016. ETP’s decision to reroute a small portion of the pipeline to run near a series of Native American burial sites in North Dakota sparked virulent backlash. Protests, attracting world-wide support through a savvy social media campaign, caused \$100 million in project delays and \$10 million in security costs for the state of North Dakota.³ Despite receiving regulatory approval for the route, ETP failed to anticipate and subsequently mitigate the hostile reaction by a local Native American tribe. The tribe claimed the pipeline threatened locations vital to their social identity and compounded a series of outside infringements on its sovereignty. State and local police were ill-prepared to address mass protests and accusations of harsh police tactics by protestors via social media. This further inflamed tensions that led to broadened protests, negative international attention, and ultimately White House intervention.

ETP could have anticipated and reduced the negative impact of Social Risk on its multi-billion dollar investment by incorporating ENODO's population-centric methodology throughout the project’s planning and construction phases. For this specific case, ENODO's Social Listening tools, data analytics platform, and recommended mitigation strategies would have enabled ETP to:

³ <http://www.wsj.com/articles/dakota-pipeline-backers-ask-court-to-order-final-approval-by-corps-1479240584>

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- Save \$32.6 million in Social Risk costs (30% reduction), \$63.1 million in capital costs (10-year time horizon and a 10bps reduction in cost of debt), and \$100 million in costs associated with protests and project delays
- Create baseline assessments that identify communities along the pipeline's path that would be sensitive to development
- Identify the topics related to the DAPL that are most prevalent among those groups and their existing sentiment (positive, negative, and neutral)
- Pinpoint stakeholder grievances (e.g., tribal / community leaders, online activists / protestors, and politicians) to understand their perceptions and sentiment
- Monitor growing discontent through near real-time social media analysis—mobilization of counter pipeline construction
- Identify external influencers to understand their impact on protests
- Craft tailored communication and engagement strategies to address existing social and environmental grievances across different stakeholder groups
- Conduct quantitative and qualitative analysis to measure performance of these campaigns in real-time and modify based on findings

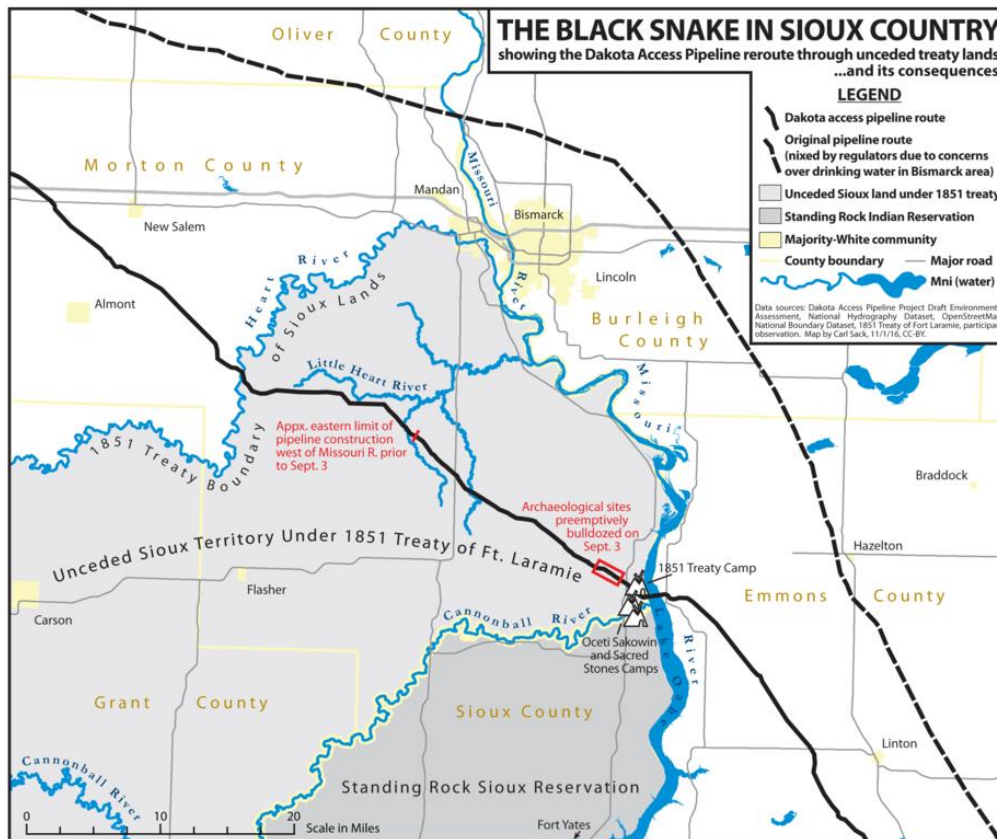


Figure 7. Dakota Access Pipeline Route

6 Conclusion

In an increasingly dynamic, complex, and competitive social environment, organizations that successfully incorporate Social Risk analysis can predict and prevent disruption. By understanding its origins and addressing its root causes, Social Risk analysis provides companies a distinct competitive advantage. ENODO's Social Risk analysis delivers enhanced decision-making that benefits governments, businesses, and citizens alike. It reduces costly risks and unrest, promotes sustainable economic growth, and advances meaningful engagement between all stakeholders. Adopting Social Risk analysis into corporate strategy and operations enhances existing programs and offers direct benefits as well:

- *Business Intelligence:* Builds customized data collection and analysis platforms for specific populations or geographic areas that generate automated, timely, and actionable insights that evolve over time
- *Security:* Creates an additional security layer that augments existing physical and technical security measures by creating enduring stakeholder relationships established through programs that fulfill basic needs and are tailored to the culture of local communities
- *Public Relations:* Enhances ongoing campaigns by aligning company and community objectives through narratives that create local buy-in, increase investor confidence, and safeguard reputations
- *Social Investment / Corporate Social Responsibility:* Customizes programs to improve infrastructure, increase local procurement spending and builds local governance by tailoring initiatives to communities' human capital and natural resources
- *Project Delays/ Disruptions:* Reduces the occurrence of workforce and supply chain disruptions stemming from diverse Social Risk factors
- *Delay Time:* Redirects lost management time to operations and business development opportunities
- *Capital Costs:* Lowers equity and debt costs by reducing Social Risk-related security incidents, project delays, and investor uncertainty
- *Litigation Costs:* Reduces the probably that aggrieved individuals or groups seek legal damages through proactive community engagement
- *Insurance:* Reduces premiums by helping businesses identify and avoid catastrophic events stemming from Social Risk