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Root Cause Analysis Of Sustained Losses After Reputational Damage: A Case Study Of A Climate Change Company

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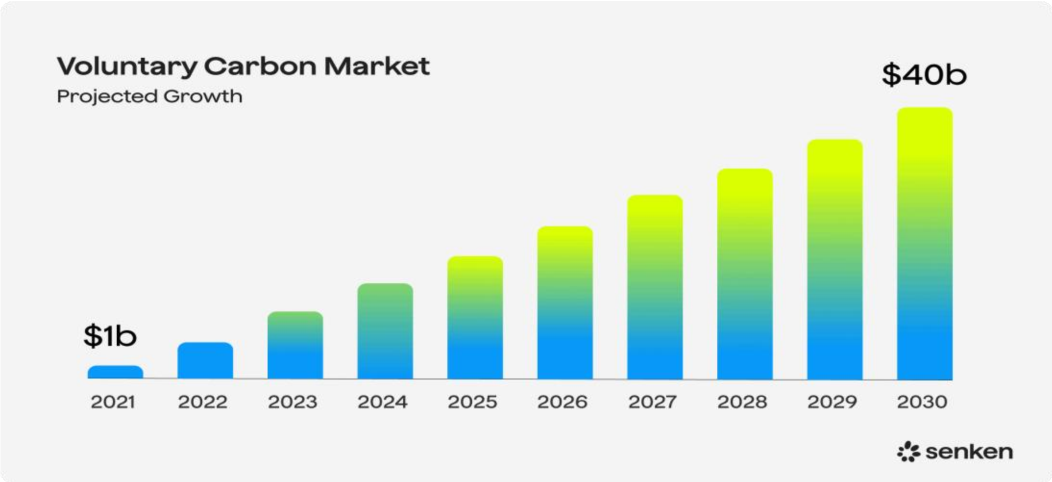
ABSTRACT

The reputations of environmental service companies have become increasingly vulnerable over the last several years, particularly for those engaged in the voluntary carbon market (VCM), which is still in the process of developing regulatory maturity and stakeholder understanding. A case in point is that of a multinational carbon project developer experiencing sustained financial losses amidst repeated efforts at recovery from a reputational crisis precipitated by negative media sentiments and public criticisms. Using Root Cause Analysis (RCA) as the primary methodology, the research investigates both internal inefficiencies and external perception problems that caused the company to collapse. Key findings are that in the midst of various recovery initiatives—including cost-cutting programs and public clarification—the organization failed to address deep-seated operational weaknesses, such as ineffective governance arrangements, poorly aligned shared service models, and a lack of transparency in carbon project delivery. The study also identifies reputational damage, triggered by media allegations of greenwashing, as the primary driver that snowballed losing clients' trust, investor confidence, and regulatory scrutiny. By dissecting the interconnected drivers through cause-effect mapping, this article offers valuable advice on how sustainability organizations can anticipate, isolate, and remedy systemic vulnerabilities in crisis management. The findings underscore the critical role of reputational integrity and internal consistency in ensuring financial sustainability in the voluntary carbon marketplace.

INTRODUCTION

The voluntary carbon market (VCM) is experiencing exponential growth as corporations from many sectors intensify efforts to mitigate their carbon emissions. The proportion of VCM is higher than the non-VCM which means they are no longer buying carbon solely for the sake of compliance. Therefore, the environmental service industry—especially carbon trading companies—has been expanding consistently over the past few decades and has experienced a recent boom. The boom of the industry is due to businesses being required to establish more ambitious objectives regarding sustainability and environmental care due to regulatory pressure, public awareness, and the demand for more environmentally conscious companies (Delmas and Montes-Sancho, 2010).

Figure 1 Voluntary Carbon Market Projected Growth (Senken, 2024)



In 2023, the VCM encountered substantial challenges, contracting contrary to anticipations of surging demand for carbon credits. Businesses must commit to acquiring credits from transparent, verifiable, and accredited projects while conducting due diligence to optimize the economic, social, and environmental value of their carbon credits over the long run. However, for the climate change or carbon seller company, selling carbon credits created for tackling climate change from business doers is prone to reputational risk, e.g. greenwashing. The risk is due to the immature and complex, unprepared regulations, with developers, project type variations, location, varying certification bodies and valuation methodology, and cost, which lead to unclear quality, transparency, and credibility.

Corporate carbon selling strategies are perceived as very dependent on reputation and the carbon certification quality due to the intangible inventory that they have. Once they have their reputation wounded and the media blows off everywhere, it can be assured that the company will definitely be in crisis. One prominent case is that of a global leader in carbon project development—hereinafter "Blue Corp."—that was subjected to public accusations of greenwashing against one of its biggest REDD+ (Reducing Emissions from Deforestation and Forest Degradation) projects. The Kariba project, launched in 2011 was an early cornerstone of Blue Corp.'s business and has protected over 750,000 hectares of forest and benefited thousands of people in Zimbabwe. Corporations including Gucci, Porsche and Delta Airlines bought carbon credits to market themselves as "carbon neutral." But over-reliance on lenient methodologies for estimating deforestation meant that Blue Corp. over-credited the project and the money largely went to offshore accounts controlled by the project developer Steve Wentzel, and little reached local communities.

Immediately after the media strikes by The Newyorker (2023), Transparency.org (2023), The Guardian (2024), and many other big medias, Blue Corp. has responded to criticism of its flagship nature-based climate action project, Kariba REDD+, for allegedly issuing too many credits and not properly distributing financial benefits. The company claims that the Verra methodology used for the project, which has been running for over a decade, is effective in predicting and modeling deforestation rates. The company is now starting a first re-validation of the 30-year project, ensuring that the rate of carbon credit generation is adjusted as predicted. The company also denies making undue profits from the project and maintains a self-correcting mechanism for early issuance of verified carbon credits.

Figure 2 Blue Corp. Media Release of Kariba REDD+ Net Revenue (Blue Corp. Internal Document, 2023)

In fact, the project's benefit-sharing agreement mandates that profits from credits sales be distributed to stakeholders, including Carbon Green Investments, Carbon Green Africa, Rural District Councils, community projects, a community 'rainy day' fund, and concession leaseholders. Due to this false accusation, Blue Corp. has suffered a significant loss. However, despite the establishment of a range of response tactics, from cost savings to engagement of stakeholders, the company remained posting extended cycles of financial losses. This case is asking an extremely serious question: why weren't these measures giving rise to recovery?

Damage to reputation, most especially within areas of business addressing sustainability concerns, can visit on not only stakeholder confidence but also on operations and finances profoundly negative results. For the case of Blue Corp., reputational risk led to investors withdrawing, contracts being cancelled, and diffuse client fear, thereby undermining revenue streams and potential for growth in the future. Previous research has extensively discussed how corporate crisis and reputational risk influence consumers and brand worth. Few analyses, though, have pursued systematically the internal and external causal determinants stalling an organisation's recovery after such reputation shocks, and most particularly in the new and highly committed environment of carbon markets.

This article strives to fill that gap by employing Root Cause Analysis (RCA) to determine the root causes of the company's persistent underperformance. The 5 Whys approach of RCA is applied globally for quality and operations management but has been rarely applied for strategic and reputation crisis scenarios for sustainability industries. By breaking down the firm's internal decision-making, structural inefficiencies, and alignment shortcomings of its reaction planning, this research will seek to search for systematic problems underneath that resulted in the repeated losses of the firm.

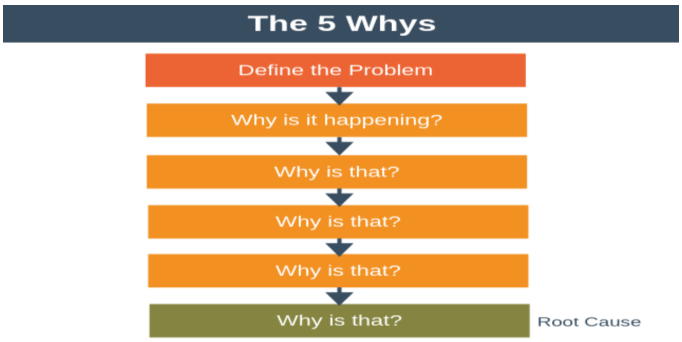
The research is spurred by the need for carbon market participants to establish robust business models, particularly in the wake of increasing stakeholder expectations and an end to mystique. Accurately locating the root causes—rather than just the physical symptoms—of organizational decline directs better recovery and risk avoidance techniques. Findings of this case study provide direct business applicability to firms operating in high-trust industries, but specifically under siege by the twin stress of delivery on sustainability and responsibility to reputation.

LITERATURE REVIEW

Root Cause Analysis

The 5-why analysis is among the most prevalent Root Cause Problem Solving (RCPS) methods. Taiichi Ohno, the architect of the Toyota Production System, was a fervent advocate of the 5-whys analysis as a method for identifying fundamental causes of problems (Ohno, 1988). The concept is straightforward. Inquiring "Why" enables the distinction between the symptoms and the underlying reasons of a situation. This is essential, as symptoms can obscure the underlying causes of issues. The proper application of the 5-why analysis technique will identify the fundamental cause of non-conformances, enabling companies to formulate effective long-term remedial and potentially preventive measures. The 5 Why technique in Root Cause Analysis fits quite well in this study with regard to the systematic identification of the underlying causes of several complicated problems faced by Blue Corp.. The method by which such method produces an unequivocal process is complete simplicity coupled with potency in unearthing the deep-rooted problems without difficult tools and is therefore well-suited to examine matters such as reputational damage and/or operational inefficiencies. It is further apt for multidimensional problems because it cuts across operational, financial, and reputational factors. It is a flexible enough tool to accommodate different situations like analyzing loss situations or trust deficits in VCM. Besides university and field applications in management literature, 5 Why provides scope for the analysis through an empirically supported method for vulnerability.

Figure 3 5-Whys Analysis (Denis, 2019)



METHODS

This study uses a qualitative case study approach to identify the root causes of sustained financial losses at Blue Corp. following a reputational crisis in the voluntary carbon market (VCM). The main analytical tool employed is Root Cause Analysis (RCA), using the 5 Whys technique to trace visible problems—such as declining revenue and ineffective recovery efforts—back to their fundamental sources. Data were collected through internal document analysis (including financial statements and strategic reports), media reviews, and semi-structured interviews with key company stakeholders involved in crisis response, operations, and finance.

Each "why" was explored across three critical domains: reputational fallout, internal inefficiencies, and misalignment of strategic initiatives with financial capacity. The RCA process was carefully triangulated using evidence from internal performance data and external narratives to ensure robustness. This method provided a systematic way to isolate underlying issues and form a comprehensive picture of the organizational breakdowns that hindered recovery, offering practical implications for firms in high-trust sustainability sectors.

RESULTS AND DISCUSSION

5-Whys Root Cause Analysis For Blue Corp. Case

Identifying the Problem

The first step to a root cause analysis is to determine the core problems that create challenges for the company. The problems identified should be categorized and prioritized according to the level of impact and likelihood. While identifying issues, there is a need to reflect on events that have resulted in extensive damages or risks to the company, which demands immediate corrective measures. Impact refers to the magnitude of consequences carried by the problem. The likelihood means the frequency or probability of occurrence of the issue. For Blue Corp., the primary problem is that the year 2023-2024 was pretty tough because they lost all the trusts of its investors, clients, and stakeholders due to reputational incidents. Whatever efforts were made toward recovery could not be achieved only because of unbalanced financial management, poor operational efficiency, and inefficient plans for reputation recovery. Thus, this section probes into the root causes of the problems faced and implications on the performance of the company as a whole.

Identifying the Root Cause using 5-Whys Analysis

At the stage of identifying the root cause of a problem, researchers need to analyze the problem factors that have been collected, analyze thoroughly against the problem factors and identify the root cause of the problem by digging deeper into the root cause with the question "why" repeatedly. Every problem has a direct cause, but the direct cause is not necessarily the root cause of the problem. The root cause is the core of the process or system that can cause high impacts and losses. The author has conducted 3 interviews with different Subject Matter Experts (SMEs) who have been working in the company for more than 4 years, having technical expertise, strategic competency, and authorization in making decisions at Blue Corp.. The observation brought the author to 3 immediate causes, which are 1) Operational Inefficiencies, 2) Significant Decrease of the Revenue due to the Kariba REDD+ over crediting allegations, and 3) Ineffective Reputation Recovery Efforts.

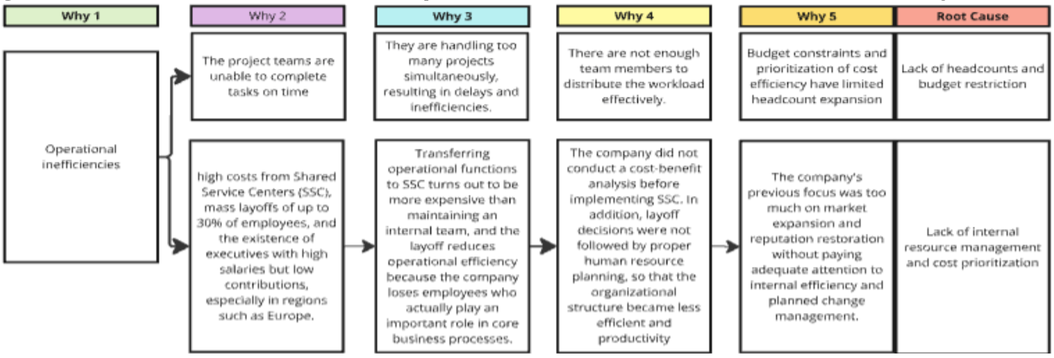
Operational Inefficiencies

After conducting interviews with Global Project Manager, it can be captured that operational inefficiencies occur not only from the cost center or low value added activity side, but also inefficiencies in project completion that impact revenue recognition delays. The focus on cost efficiency and budget constraints meant that headcount expansion was limited, resulting in overburdened staff and reduced productivity. This lack of adequate human resources and budget allocation created a bottleneck in project execution, resulting in delays and inefficiencies that further damaged the company's reputation. Let alone trying to get new projects, they struggle to maintain and work on the remaining projects.

There is an important shortage of human resources, particularly in key operating departments. The shortage has impacted the company's ability to conceptualize and deliver projects in time, leading to revenue realization lags. Despite having some promising opportunities already lined up, the company lacks sufficient manpower as well as certain specialized expertise to fully exploit them. As of 2024, the global project team accounts for 169 employees, handling a total of 619 ongoing projects. However, only 25 projects were completed during the year, indicating the scale of the operational bottleneck and the need for strategic workforce planning.

This is due to layoffs for the project team which causes bottlenecks or backlogs in getting revenue. After a major layoff including the sales team and Key Accounts Manager (KAM), most of the project team is not only tasked with completing the carbon project, but also has to pitch to investors for funding, reach out to clients, and coordinate with stakeholders. From the project team side, they also find it difficult to accelerate the project due to limited headcounts and cannot also propose significant additional headcounts due to limited budgets.

Figure 4 First immediate cause: Operational Inefficiencies (Author's Analysis, 2025)



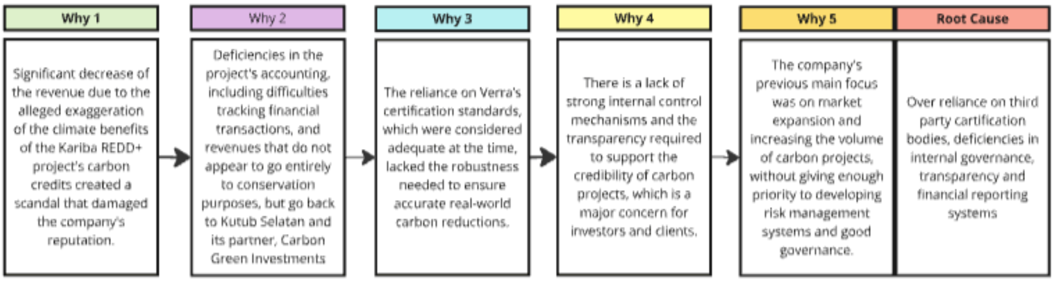
From the cost center side, the Head of Finance in an interview on January 17, 2025 stated that there were operational inefficiencies originating from management's own decisions. The desire of top management for efficiency resulted in mass layoffs from the company's original total of 1,200 employees globally, as of December 31, 2024 the company only had less than 800 employees, which means that there was a 30% reduction in the number of employees. However, the company did not conduct a cost-benefit analysis first and it is suspected that top management did not calculate at the beginning that layoffs would require very large funds. Another impact of this layoff was that several empty positions were not re-recruited so that the remaining employees had to do double or even triple jobs, which was clearly ineffective. Based on an interview with the People Operations Manager, the addition of responsibilities that was not balanced with an increase in rewards caused employee demotivation so that productivity decreased significantly. Lastly, the Head of Finance stated that the company should be able to cut redundant roles in Europe, which clearly has a very high wage rate compared to employees located in Asia-Pacific, East Asia, India, and Africa.

Another thing that causes operational inefficiencies is the company's decision to hire a Shared Services Center for HR, IT, and Finance departments. Instead of wanting to focus on the core business and not wanting to be too distracted by support functions, top management instead chose to contract with SSC companies whose operations are located in Romania for SSC in IT, Africa for SSC in finance, and the US for SSC in Human Resources. These three countries clearly have high minimum wages and living costs compared to providers in ASEAN countries (cxcglobal.com, 2024) and were also confirmed by this informant. Therefore, cost efficiency strategies are difficult to implement when the monthly cost / fee for SSC is even more expensive than having in-house employees. Another problem also arises when there is a difference in timezone between the service provider and the user, causing operational inefficiencies due to the inability to handle problems or work requests in a timely manner as expected by the user.

Significant Decrease of Revenue due to Exaggeration of Climate Benefits Allegation

During the interview, Global Project Manager mentioned that there was a drastic decline in the company's income which caused continuous losses due to allegations that the carbon sold was only recorded on paper and did not actually exist. Internal whistleblowers, such as Dirk Muench, raised concerns about the company's ethics, and several high-profile clients have since distanced themselves from its projects. Moreover, the media highlighted that Blue Corp. did not really channel benefits to local communities as promised. As a person directly involved, the informant said that all this happened because we were too dependent on the certification body which was a third party and had been assumed at the beginning to be adequate. The standards were not robust enough to ensure the carbon reductions were accurate and verifiable, hence questionability by many stakeholders.

Figure 5 Second immediate cause: Significant Decrease of Revenue due to Exaggeration of Climate Benefits Allegation (Author's Analysis, 2025)



Blue Corp. has also been less transparent in informing its financial activities, especially on income from the Kariba project. The absence of good internal controls and lack of transparency also reduced confidence in the company's operations. So far the company has only focused on business expansion and increasing the volume of carbon projects and forgot to allocate resources and provide sufficient competence to carry out internal control and governance.

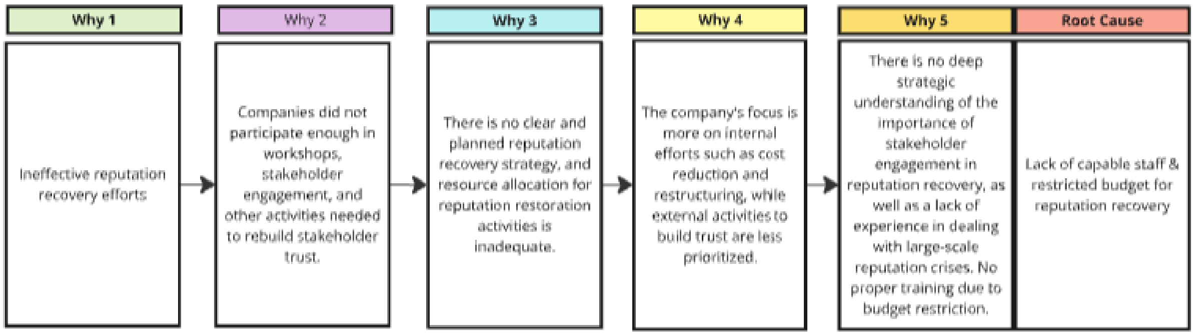
Ineffective Reputation Recovery Efforts

The other informant, Director of Operation who was double-heading as a Public Relation, stated that Blue Corp.'s efforts to recover its reputation were ineffective and that led to drastic revenue decline. It did not participate enough in workshops and other stakeholder-engaging activities to restore the lost trust. Among the recovery strategies of the company most in need of attention has been the lack of sufficient funding. Following huge financial losses amounting to millions of euros due to damage to its reputation, the company imposed tight cost limits on recovery operations, limiting spending. Therefore, recovery communications have been largely relegated to clarification statements made through corporate social media profiles, including LinkedIn, Facebook, Instagram, and X (formerly Twitter), paid media placements, and press releases on the company's official website.

Inside the company, details related to the case have been shared through the company intranet site, with the general goal of regaining employee trust. However, there has been a clear attempt to give open, uniform, and prompt communication to address stakeholder concerns and reaffirm the position of the company on the allegations. Participation in external events, forums, and stakeholder gatherings has been minimal, primarily due to ongoing budgetary constraints. This is a problem because the low reach can inhibit broader reputation restoration despite strategic intent.

The company has actually arranged one particular transformation objective to rebuild Blue Corp.'s reputation. The key areas are make the processes and outcomes of the portfolio review transparent, launch digital climate journey product (Luumo) subject to changing business priorities, determine and train key corporate spokespeople for media interviews, external speaking engagements for CEO / CXOs e.g. attending more workshops, talkshow, forums, etc. including deploy CEO listening program with speaking to industry influencers and market shapers on what needed to create industry worldwide improvement (and recreation of trust in VCM), and engage with industry leaders and establish an Expert/Policy Advisory Board. However, unfortunately, all of the plans haven't successfully executed due to a restricted budget. The company is too focused on internal and little has been done for external.

Figure 6 Third immediate cause: Ineffective reputation recovery efforts (Author's Analysis, 2025)



Also, while the company focused on market expansion and reputation restoration, it did not focus sufficiently on internal efficiency or planned change management, which had negative implications for the recovery efforts. There was no clear, planned strategy regarding the recovery of reputation, and resources allocated for these activities were at variance. Emphasis on internal activities like cost reduction and restructuring over the external activities of restoring stakeholder confidence alienated the stakeholders further.

CONCLUSION

Based on the analysis, it was found that the root cause of the significant losses experienced by Blue Corp. post reputational damage was a combination of operational inefficiency, losing market trust, and ineffective recovery strategies. Results from both key informant interviews and simulations indicate that the reputational damage caused by the Kariba REDD+ scandal had a direct impact on the decline in client and investor acquisition, which ultimately reduced the company's revenue drastically. In addition, organizational inefficiencies, including overreliance on an inefficient Shared Services Center (SSC), further contributed to deteriorating the company's financial position.

RECOMMENDATION

As a follow-up step to the results and conclusions that have been presented, this chapter will outline the recommended strategies that can be implemented by Blue Corp. to maximize profitability after reputational damage. These recommendations are based on the main findings in the study, especially related to the differentiation strategy which has proven to be the most optimal approach in financial recovery and corporate reputation reconstruction. Below are recommendations which include practical steps that can be implemented gradually to ensure the effectiveness of strategy implementation:

1. Blue Corp. needs to implement strict and monitored Key Performance Indicators (KPIs), not only for operational employees such as project teams, but also employees in the company's support departments and Shared Services Center vendors so that they can work more effectively and efficiently to help restore the company's financial condition.
2. As we know that Blue Corp. is currently in a loss-making state, which also means that the company does not have a healthy cash flow to carry out a differentiation strategy. The author recommends that the company approach existing and potential investors (government/State Owned Entity, private investors, or venture capital firm) with a proposal containing clear and promising plans for the company going forward so that the company can get new investments in the form of fresh money for both business as usual (BAU) activities and business improvement.

3. In terms of the difficulty in finding new investments due to allegations for the Kariba project, the company can apply for a loan with a carbon credit project or receivables from long-term contracts as collateral. If conventional banking considers the risk too high, Blue Corp. can seek more realistic financing alternatives such as Venture Debt, Private Credit, Carbon Financing from development institutions such as the Asian Development Bank (ADB) and the European Investment Bank (EIB), and Sustainability-Linked Loans.
4. Optimize existing resources to increase transparency and credibility of Carbon Credit Projects using stricter verification standards such as Science Based Targets (SBTi) or Gold Standard, open new market segments with premium carbon credit products targeting multinational companies and financial institutions that have more ambitious net-zero targets and are looking for high-quality carbon credits, increase branding and positioning as a leader in the sustainability market from hiring sustainability influencers to participating in international forums and sustainability conferences such as the COP Climate Summit or the World Economic Forum, leverage strategic partnerships to increase project scale and impact with governments, non-profit organizations, climate technology startups, and SOEs, and finally increase internal efficiency without sacrificing differentiation, such as optimizing organizational structures by reducing redundant positions, automating administrative processes and project monitoring and contracting with a more efficient Shared Services Center (SSC).

REFERENCES

Ackoff, R. L. (1999). *Recreating the corporation: A design of organizations for the 21st century*. Oxford University Press.

Alabdullah, T., Ahmed, E., & Ahmed, R. (2021). *Organization Features and Profitability: Implications for a Sample of Emerging Countries*. JABE (JOURNAL OF ACCOUNTING AND BUSINESS EDUCATION), 5(2), 43-52. doi:http://dx.doi.org/10.26675/jabe.v5i2.16351

Alpaslan, C. M., Green, S. E., & Mitroff, I. I. (2009). *The role of leadership in crisis response: An integrative framework*. The Journal of Applied Behavioral Science, 45(3), 277–298. https://doi.org/10.1177/0021886309335073

Barney, J. B. (2002). *Gaining and sustaining competitive advantage*. Prentice Hall.

Barney, J. B. (2020). *Gaining and sustaining competitive advantage (5th ed.)*. Pearson.

Berrone, P., & Gomez-Mejia, L. R. (2009). *Corporate governance and social responsibility: A missing link*. Corporate Governance: An International Review, 17(6), 648–660. https://doi.org/10.1111/j.1467-8683.2009.00759.x

Brendel, J., Chen, C., Keusch, T., Sautner, Z., Cao, Y., Cassar, G., Cascino, S., Choi, D., Feichter, C., Gu, Z., Ilhan, E., Janschek, O., Li, X., Tamayo, A., Raghunandan, A., Speckbacher, G., Timmermans, O., Yang, G., Zerbib, D., Zeng, J. (2024). *The Value of NGOs in ESG* We appreciate helpful comments from Daniel Bens.

Broekhoff, D., Gillenwater, M., Colbert-Sangree, T., & Cage, P. (2019). *Securing climate benefit: A guide to using carbon offsets. Offsets."*. Stockholm Environment Institute & Greenhouse Gas Management Institute

Bundy, J., Pfarrer, M. D., Short, C. E., & Coombs, W. T. (2017). *Crises and crisis management: Integration, interpretation, and research development*. Journal of Management, 43(6), 1661–1692. https://doi.org/10.1177/0149206316680048

Canyon, D. (2020). *Definitions in crisis management and crisis leadership*. Security Nexus Research

Carbon Offsets and Credits, Explained. (2024). Retrieved from: https://paiaconsulting.com.sg/carbon-offsets-and-credits-explained/

Chaffee, E. E. (1985). *The essence of competitive strategy.* Strategic Management Journal, 6(3), 283–293. https://doi.org/10.1002/smj.4250060307

Coombs, W. T. (2007). *Protecting organization reputations during a crisis: The development and application of a new model*. Corporate Reputation Review, 10(3), 163–176. https://doi.org/10.1057/palgrave.crr.1550049

Coombs, W. T., & Holladay, S. J. (1996). *Communication and attributions in a crisis: An experimental study of crisis communication.* Journal of Public Relations Research, 8(4), 279–295. https://doi.org/10.1207/s1532754xjprr0804_2

Delmas, M. A., & Burbano, V. C. (2011). *The drivers of greenwashing*. California Management Review, 54(1), 64–87.

Delmas, M. A., & Montes-Sancho, M. J. (2010). *Voluntary agreements to improve environmental quality: The case of the Mexican automobile industry.* Journal of Business Ethics, 91(3), 497–511. https://doi.org/10.1007/s10551-009-0101-1

Delmas, M. A., & Tofel, M. (2008). *Institutional pressures and environmental management practices: The case of ISO 14001*. Business & Society, 47(3), 360–387. https://doi.org/10.1177/0007650308318488

Delmas, M., & Montes-Sancho, M. (2009). *Voluntary agreements to improve environmental quality: Symbolic and substantive cooperation*. Strategic Management Journal, 31(6), 575–601. https://doi.org/10.1002/smj.826

Denis, G. (2019). *The-5-whys*. Retrieved from: https://expertprogrammanagement.com/2019/05/the-5-whys/

Dolben, M. & Lopez, E. (2023). *Global climate policy forecast predicts 'well below 2°C' Paris Agreement climate goals will be met*. Retrieved from: https://www.unpri.org/news-and-press/global-climate-policy-forecast-predicts-well-below-2c-paris-agreement-climate-goals-will-be-met/11790.article

Drucker, P. F. (1946). *The concept of the corporation*. John Day Company.

Drucker, P. F. (1954). *The practice of management.* Harper & Row.

Eisenhardt, K. M. (1989). *Agency Theory: An Assessment and Review*. The Academy of Management Review, 14(1), 57–74. https://doi.org/10.2307/258191

Fombrun, C., & Shanley, M. (1990). *What's in a Name? Reputation Building and Corporate Strategy*. The Academy of Management Journal, 33(2), 233–258. https://doi.org/10.2307/256324

Furlonge, H. I. (2011). *A stochastic optimisation framework for analysing economic returns and risk distribution in the LNG business*. International Journal of Energy Sector Management, 5(4), 471-493.

Gelmini, S. (2021). *We're living in a golden age of greenwash*. Greenpeace, June 29, 2021.

George, M. L. (2007). *Lean Six Sigma: Combining Six Sigma quality with Lean production speed*. McGraw-Hill.

Global Voluntary Carbon Credit Market Size, Trends And Projections. (2023). Retrieved from: https://www.marketresearchintellect.com/product/voluntary-carbon-credit-market

Gold Standard. (2024). *Fairly contributing to global net-zero: Framework for organizational climate mitigation strategies*. Retrieved September 4, 2024.

Grant, R. M. (1996). *Toward a knowledge-based theory of the firm*. Strategic Management Journal, 17(S2), 109–122. https://doi.org/10.1002/smj.4250171110

Gupta, Y. (2011). *Carbon Credit: A Step Towards Green Environment*. Global Journal of Management and Business Research

Halan, S., Gopalan, S., & Mittal, S. (2014). *Crisis management in the age of social media: A case study approach*. International Journal of Business Communication, 51(3), 252–275. https://doi.org/10.1177/2329488414524205

Hamel, G., & Prahalad, C. K. (1990). *The core competence of the corporation*. Harvard Business Review, 68(3), 79–91.

Haya, B. K., Evans, S., Brown, L., Bukoski, J., Butsic, V., Cabiyo, B., Jacobson, R., Kerr, A., Potts, M., & Sanchez, D. L. (2023). Comprehensive review of carbon quantification by improved forest management offset protocols. Frontiers in Forests and Global Change, 6, 95887. https://doi.org/10.3389/ffgc.2023.95887

He, Bin., Liu, Rongxiao., & Li, Tengyu. (2023). *Integrated carbon footprint with cutting parameters for production scheduling*. Journal of Cleaner Production

Hill, C. W. L., Jones, G. R., & Schilling, M. A. (2014). *Strategic management: Theory: An integrated approach (11th ed.)*. Cengage Learning.

Huang, X., Kim, J., Hong, K. R., & Kim, N. (2023). *How do carbon trading price and carbon tax rate affect power project portfolio investment and carbon emission: An analysis based on uncertainty theory*. Journal of Environmental Management, 345, 118768. https://doi.org/10.1016/j.jenvman.2023.118768

International Monetary Fund. World Economic Outlook. (2024). Retrieved from: https://www.imf.org/external/datamapper/PCPIPCH@WEO/WEOWORLD/VEN

Johansen, W., Aggerhold, H., & Frandsen, F. (2012). *Organizational crisis communication: A multivocal approach*. Corporate Communications: An International Journal, 17(3), 314–330. https://doi.org/10.1108/13563281211259038

Keramidou, I., Mimis, A., Fotinopoulou, A. and Tassis, C.D. (2013). *Exploring the relationship between efficiency and profitability*. Benchmarking: An International Journal, Vol. 20 No. 5, pp. 647-660. https://doi.org/10.1108/BIJ-12-2011-0090

Kishwan, J. (2023). *REDD+ and its implementation in the Himalayan region: Policy issues*. In Climate change in the Himalayas (pp. 121-139). Elsevier. https://doi.org/10.1016/B978-0-443-19415-3.00006-2

Lakhani, N. (2023). *Revealed: top carbon offset projects may not cut planet-heating emissions*. The Guardian.

Lange, D., Lee, P., & Dai, Y. (2011). *Organizational reputation: A review*. Journal of Management, 37(1), 153–184. https://doi.org/10.1177/0149206310390963

Loffler, T., Stamouli, K., & Saunders, J. (2024). *The first Core Carbon Principles-qualifying projects — The VCM steps on the gas*. MSCI Research Insight, June 6, 2024.

Lyon, T. P., & Montgomery, A. W. (2015). *The Means and End of Greenwash*. Organization & Environment, 28(2), 223-249. https://doi.org/10.1177/1086026615575332

Mitchell, L., & Ramey, W. (2011). *Look how green I am! An individual-level explanation for greenwashing*. Journal of Applied Business and Economics, 12(1)

Moxnes, E., & Saysel, A. (2009). *Misperceptions of global climate change: Information policies*. Climatic Change, 93(1–2), 15–37. https://doi.org/10.1007/s10584-008-9465-2

MSCI Sustainability Institute. (2024). *The MSCI Net-Zero Tracker*.

Naik, G. & White, N. (2023). *Junk Offsets Are Feeding Wave of Greenwashing, Study Shows*. Bloomberg.

Ohno, T. 1988. *Toyota Production System: Beyond Large-Scale Production*. New York: Productivity Press

Robson, J. and Farquhar, J.D. (2021). *Recovering the corporate brand: lessons from an industry crisis*. European Journal of Marketing, Vol. 55 No. 7, pp. 1954-1978. https://doi.org/10.1108/EJM-09-2019-0698

Romero, P. (2008). *Beware of green marketing, warns Greenpeace exec*. ABS-CBN. Retrieved from: www.abs-cbnnews.com/special-report/09/16/08/beware-green-marketing-warns-greenpeace-exec

Science Based Targets initiative. (2024). *The SBTi releases new reports to help accelerate corporate climate action beyond the value chain*.

Sterman, J. (2012). *Sustaining sustainability: Creating a systems science in a fragmented academy and polarized world. In Sustainability science: The emerging paradigm and the urban environment*. Springer. https://doi.org/10.1007/978-1-4614-3188-6_2

Susilowati, Y., Hardiyasanti, D. C., Widianingrum, S., Endrasari, F., Djamari, D. W., Bahar, A. H., Wahono, J., & Veza, I. (2023). *Carbon credit and economic feasibility analysis of biomass-*

solar PV-battery power plant for application in Indonesia remote area. Renewable Energy, 219(Part 1), 119383. https://doi.org/10.1016/j.renene.2023.119383

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Voluntary Carbon Market (VCM). (2024). https://www.senken.io/glossary/voluntary-carbon-market-vcm

Walker, K., & Wan, F. (2012). *The harm of symbolic actions and green-washing: Corporate actions and communications on environmental performance and their financial implications*. Journal of Business Ethics, 109, 227–242. https://doi.org/10.1007/s10551-011-1122-4

Welch, J. (2020). *What's in a name? Complications in overcoming reputational damage during the corporate recovery process*. Strategic Direction, Vol. 36 No. 3, pp. 1-3. https://doi.org/10.1108/SD-09-2019-0167

Yoon, Y., Tamer, Z., & Hastak, M. (2015). *Protocol to Enhance Profitability by Managing Risks in Construction Projects*. Journal of Management in Engineering, 31, 04014090.