Leveraging the *Roadmap to Nature Positive: Foundations for the built environment system*

Examples from the built environment industry:

→ *Holcim*

World Business Council for Sustainable Development

HOLCIM

General introduction

WBCSD and its member companies have now launched the ***Roadmap to Nature Positive: Examples from the built environment industry.*** These cases explore how built-environment industry businesses are leveraging WBCSD's **Roadmap to Nature Positive: Foundations for the built environment system.**

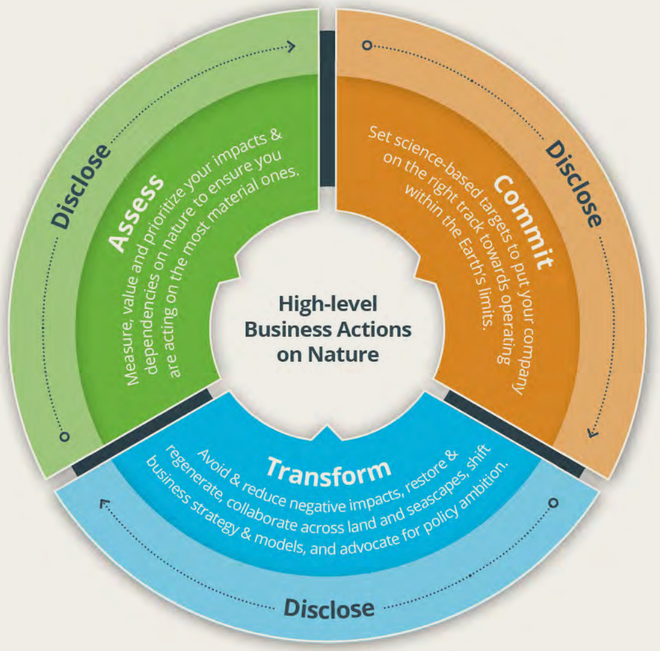
The ***Roadmap Foundations*** provide companies with a comprehensive step-by-step "how to" guide to taking credible, impactful nature action. It follows the underlying logic of key frameworks, including the **High-level Business Actions** on Nature to Assess, Commit, Transform and Disclose **(ACT-D)**, the **Taskforce on Nature-related Financial Disclosure (TNFD) LEAP approach** (Locate, Evaluate, Assess, and Prepare) and the **Science Based Targets Network (SBTN) AR3T** (Avoid, Reduce, Restore & Regenerate, Transform) Action Framework.

These industry examples serve as **practical illustrations that bridge the gap between theory and industry practice.** Building upon the Roadmap, they aim to show how companies in the built environment system are navigating their journey to nature action, offering valuable insights into the **particular and specific challenges** that businesses encounter on this journey.

As each organization confronts a combination of unique and shared hurdles, it is important to openly share these experiences to foster collaboration among peers and support the development of effective solutions.

It is by making these lessons available and collaborating with peers to develop solutions that it is possible to reach the speed and scale needed to achieve the shared goal of halting and reversing nature loss by 2030.

Figure 1: ACT-D framework, SBTN



Source: Business for Nature (2022). **High-level Business Actions on Nature**

Built environment member: *Holcim*

Sector: Building materials

Value chain: Building material manufacturer, products and services for construction

Company strategy & approach to nature positive

Sustainability is at the core of Holcim's business strategy as it rethinks operations from end-to-end and its positioning as a first mover on net-zero emissions, circularity and nature. Holcim has anchored its approach to sustainability on four key pillars: climate, circularity, nature and people.

→ **Climate/net-zero emissions**: Holcim is taking a science-driven approach to becoming a net-zero emissions company. The company has taken a leadership role in the industry by following science-based targets to reduce its carbon emissions by 40% by 2030 with the ambition to deliver net-zero emissions concrete globally by 2050.

→ **Circularity**: Holcim is on a mission to decarbonize buildings with circularity at the core of everything it does. Reducing emissions takes many forms at Holcim: developing materials with a lower CO_2 content, reducing the number of inputs, reducing and reusing production waste and using recycled materials.

→ **Nature:** Recognizing the industry's heavy reliance on natural resources, Holcim is committed to contributing to a nature-positive future and to preserving land, biodiversity and ecosystem services beyond its operations to mitigate climate change and promote healthy, natural ecosystems. Science-driven, measurable water and biodiversity targets guide its nature strategy. Additionally, Holcim has released its **Nature Policy**, which sets out the objective to protect and restore water and biodiversity and indicates how employees should interact with business partners, suppliers, communities and other stakeholders.

→ **People:** Holcim is building progress for people and the planet by upholding the highest human rights standards and spearheading various social initiatives. The company's commitment to communities builds on a legacy of positive social impact.

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continued

Rationale for the company to start the nature journey:

→ **Dependencies on nature:** Holcim's business is highly dependent on nature. Its operations are linked to natural resources. From the raw materials extracted to the ecosystems that support supply chains, its rigorous, science-based approach to biodiversity, freshwater and natural resource use is essential for the business's long-term success.

→ **Attracting investments:** As investors increasingly focus on environmental, social and governance (ESG) factors, particularly those related to nature, it is essential to take action on nature.

Guidelines currently considered by the company in its nature strategy

Holcim's work on nature aligns with:

→ Target 15 of the Global Biodiversity Framework **(GBF)** urges companies to regularly monitor, assess and transparently disclose impacts, dependencies and risks.

→ The nature pillar of the United Nations Sustainable Development Goals **(SDGs)**, where Holcim has identified four goals that can make a significant difference: clean water and sanitation; responsible consumption and production; life on land and partnerships.

→ The Science Based Targets initiative **(SBTi)** validated the company's net-zero targets for all scopes, and the Science Based Targets Network **(SBTN)** methodology, which the company is piloting.

→ The Taskforce on Nature-related Financial Disclosures **(TNFD)** is supporting the development of the framework for businesses to assess risks and opportunities related to nature as one of the early adopters in 2023 and the Task Force on Climate-related Financial Disclosures **(TCFD)**, which Holcim has officially supported since 2017.

→ The Global Cement and Concrete Association **(GCCA)** Sustainability Framework Guidelines and the Greenhouse Gas Protocol.

→ Holcim is consulting and applying the WBCSD's Roadmap to Nature Positive for the Built Environment System where necessary.

Stage 1 in the Roadmap to Nature Positive – Assess

This section describes how the company is assessing dependencies, impacts, risks and opportunities (DIROs).

In 2022, Holcim redesigned its materiality assessment to align closely with the risk assessment process and significantly broaden the stakeholder groups it engages with to capture additional insights and deepen understanding of key risks and opportunities facing the business.

These insights helped refine strategic and operational activities to maximize stakeholders' impact. The company will update its materiality assessment in 2024 to align with stakeholders' priorities and upcoming new regulations such as the **Corporate Sustainability Reporting Directive (CSRD)**.

The company is committed to regularly conducting materiality assessments and to strengthening and adjusting its process.

Holcim has aligned with relevant material ESG topics:

→ Stakeholder perspectives: Impact on decision-making and key stakeholder groups implicated, including partners, suppliers and communities.

→ External impact: Impact on both people and the planet.

→ Internal impact: Impact on financial performance and business in terms of risks and opportunities that also impact corporate value.

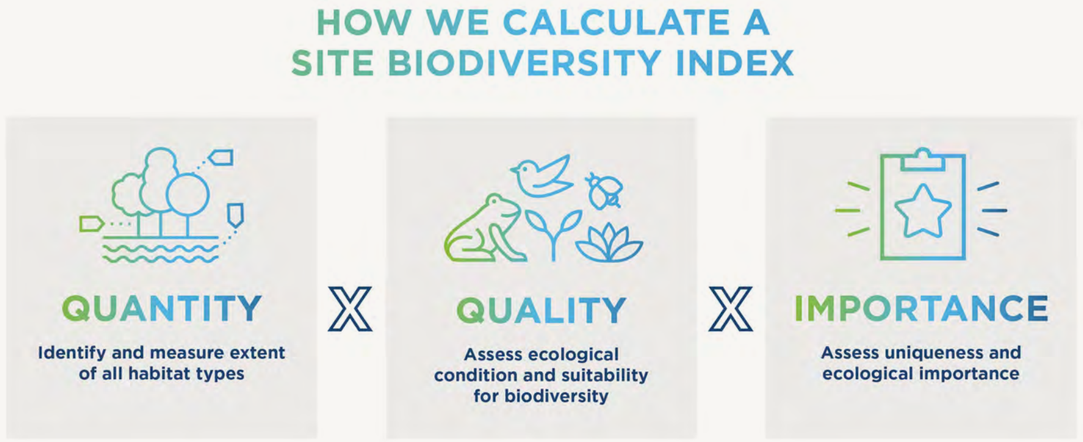
Scope & locate, impacts & dependencies

Holcim assesses impacts on biodiversity at multiple levels, from site to global, using complementary tools.

1. Holcim uses the **ENCORE** tool to identify the most material nature-related impacts and dependencies in the sectors and sub-sectors where it works and the **SBTN Materiality screening tool** to identify the impacts: water use, land use including biodiversity, solid waste and greenhouse gas emissions. It then considered them in the overall Enterprise Risk Management (ERM) process.
2. The company uses the **Integrated Biodiversity Assessment Tool (IBAT)** to conduct an assessment of all extractive sites (with a 5km buffer) to identify priority locations with high biodiversity importance and help prioritize actions in high biodiversity areas.

Figure 2: BIRS* methodology applied by Holcim

Source: Holcim



*Measured using the BIRS, developed in partnership with the IUCN.

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3. All of the company's extractive sites are required to assess their importance related to biodiversity through an internal evaluation methodology, the **Biodiversity Importance Category (BIC)**.

4. The IUCN-partnered methodology, **Biodiversity Indicator and Reporting System (BIRS)**, assesses site-level biodiversity impacts, determines how habitats and ecosystems are affected, evaluates mitigation and rehabilitation measures and guides measurement and reporting of management activities. The BIRS biodiversity baselines for all managed land will be established by 2024 and Holcim will use the same method to confirm the company's positive biodiversity impact by 2030.

5. Holcim uses the **WRI Aqueduct tool** to prioritize water risk areas. Water is essential for Holcim's operations and its availability is affected by local conditions and climate change. Holcim conducts annual water risk assessments at each site to prioritize actions and design tailored solutions.

6. The company validates the gathered information through **stakeholder consultations**, collecting quantitative inputs from almost 400 stakeholders — both internal and external — to define all material including environmental priorities for the company. It complements this quantitative analysis with stakeholder interviews for a deeper qualitative understanding of their views.

Risks & opportunities

Holcim's climate risk and opportunity assessment is embedded in its Enterprise Risk Management (ERM) process. Leveraging the integration of the TCFD into the ERM process, the company performed a gap analysis and has started to fully embed all nature elements into the ERM process to ensure full compliance with TNFD in 2024.

Working with the Risk Management Team and leveraging the annual risk assessment exercise, the company identifies **short- to medium-term threats at the local level**. This enables operational teams to anticipate and adapt their business strategy to, for example, reduce freshwater withdrawal, engage with key local stakeholders and prepare for potentially more stringent regulations and new market conditions.

Holcim leverages the latest technology for biodiversity and ecosystem mapping and anchors the nature risk and opportunity assessment as part of the climate resilience and adaptation program. It also includes a detailed view of the nature-related dependencies and impacts of operations and applies a bottom-up approach. The objective is to ensure the risk map includes all potential concerns and that the risk assessment anticipates risks from strategic initiatives or projects in the next 3-10 years.

The company also considers the impact on the group's or local operation's reputation with investors, rating agencies, regulators and external stakeholders such as NGOs or the media.

Adopting an integrated risk and opportunity approach allows Holcim to **balance climate and nature risks against other material risks and opportunities**, such as those related to strategic, operational or external topics and to facilitate the prioritization of the main threats.

→ To identify **physical risks and opportunities at a site level**, Holcim used **Swiss Re's Biodiversity and Ecosystem Services (BES)** index tool at its cement sites and quarries. The tool combines science-based data with global BES index information to assess the dependency and impact of economic activities on BES.

- The company is integrating the results identified as high (H) and very high (VH) into a questionnaire for sites in different countries to validate these risks and identify what kind of mitigation measures are in place, the financial impact these specific risks can have and how to reduce them with existing mitigation measures. This is an ongoing process and Holcim will have a more robust conclusion on this analysis by the end of 2024.

→ To identify **transitional risks and opportunities at a country level**, Holcim is setting up a questionnaire based on TNFD's risk and opportunity (markets, resource efficiency, reputation) categories. Country representatives will use it to report potential or expected changes in these areas to assess financial impacts.

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Stages 2 & 3 in the Roadmap to Nature Positive – Commit & Transform

This section illustrates how the company, after identifying the material DIROs is setting its commitments, implementing practical and concrete actions, and improving its nature-related strategy.

Holcim's **Nature Policy** outlines efficient natural resource use and a path to a nature-positive future, providing concrete directives and detailed guidance. It aligns sites with standards, aiding comparability and internal audits at country levels. Holcim also has policies on climate, circular economy and human rights.

Based on Holcim's materiality assessment and prioritization process, it has set commitments for the key material issues identified: water use, land use including biodiversity, solid waste and greenhouse gas emissions.

→ Biodiversity: Implementing progressive transformative rehabilitation plans as measured by a scientific methodology developed in partnership with IUCN:

- Global Biodiversity Indicator and Reporting System (BIRS) baselines complete for all active and non-active quarries by 2024.
- By 2030, a higher biodiversity index measured by BIRS.

→ Water: Prioritizing actions in high water-risk areas, tailoring solutions to local conditions:

- By 2030, commit to lowering water intensity across business lines, with a 33% reduction in cement, 20% in aggregates and 15% in ready-mix concrete.
- By 2030, replenish freshwater in water-risk areas with 75% of sites water-positive and 100% of sites equipped with water recycling systems.

→ Circularity: Applying the principles of "reduce, recycle and regenerate" throughout the business:

- By 2030, increase recycled content in its cement to 30%.
- By 2030, recycle 70 million metric tons of waste and by-products for alternative energy and raw materials.

→ Climate: Aligning with the 1.5°C framework:

- Upgrading the company's combined scope 1 & 2 2030 targets to meet the latest SBTi validation criteria.
- Extending the company's 2050 target coverage to include all 15 categories of scope 3 emissions.

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continued

Actions on nature

Holcim applies **the mitigation hierarchy** for land-use change, including biodiversity, to prioritize and guide actions to enhance positive biodiversity impact. Additionally, it follows a mitigation **hierarchy for waste management** (circular economy).

The company translates its commitments into targets and clear actions to drive performance within and beyond operations. The company complies with local, state, federal and national regulations in all operations and advocates for collective actions with relevant stakeholders.

Avoid

The company is not opening new sites or explorations within protected areas declared under World Heritage, IUCN I (strict nature reserve and wilderness area) and IUCN III (natural monument or feature).

Minimize/reduce

The company minimizes and reverses fragmentation of habitats, reducing damage of important habitats.

The company reduces its freshwater footprint every year. For example, it is reducing freshwater withdrawals in cement to reach the target of 33% by 2030 (compared to 2018).

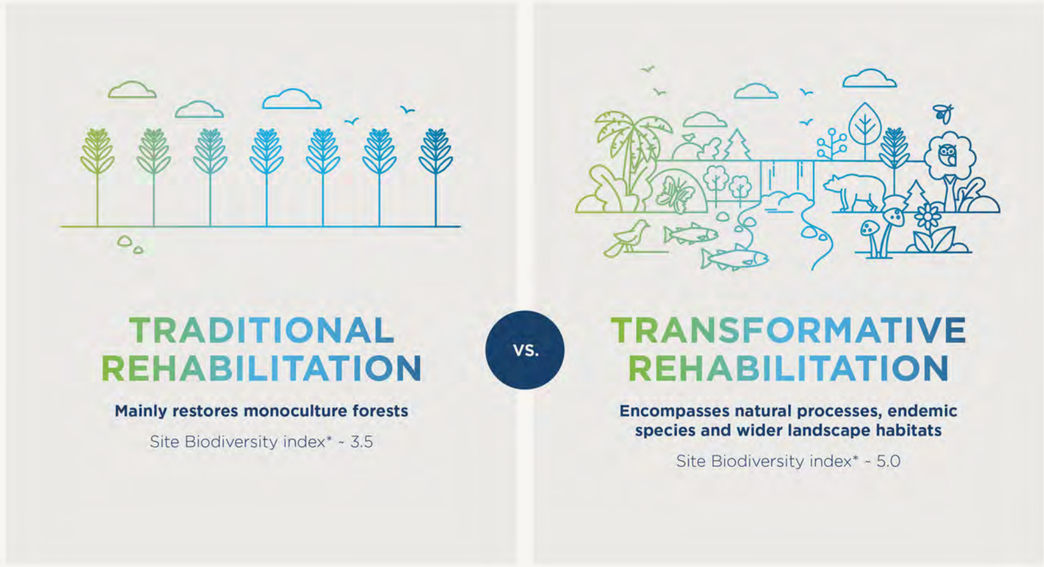
Holcim is increasing the recycling of construction demolition material (CDM) waste, recycling 8.4 million metric tons in 2023 (a 24% increase from 2022). Using the new proprietary **circular technology ECOCycle platform**, Holcim is accelerating urban mining and recycling CDM into new building solutions. Holcim aims to implement ECOCycle at 150 European sites by 2030 to recycle 20 million metric tons of CDM annually.

Restore/rehabilitate

The company rehabilitates/restores all its quarries with progressive transformative actions. As of 2022, all 256 quarries in high biodiversity areas have a biodiversity management plan.

Beyond Holcim's sites, a landscape approach - Holcim aims to become a leading voice in landscape protection beyond its sites, participating in or **leading multi-stakeholder collaboration** to enable a holistic and inclusive view, resulting in a more sustainable landscape for all.

Figure 3: Rehabilitation processes
Source: Holcim



*Measured using the BIRS, developed in partnership with the IUCN.

Built environment member: Holcim
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Transform - Holcim is working to bring more nature into cities while enhancing their resilience. Nature-friendly systems reduce urban heat, improve air quality and water management and create green public spaces. Solutions include green roofs with trees and plants, rainwater harvesting and permeable concrete to recharge groundwater and expand urban green spaces.

It is also supporting marine habitats, which are equally affected by climate change and pollution. Its bioactive concrete can be used to build bioactive infrastructure for marine and coastal ecosystems including artificial reefs.

Holcim's bioactive concrete: preserving marine wildlife

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continued

PROJECT EXAMPLE

Kujawy region in Poland wetlands revitalization

As Holcim strives to protect biodiversity and water resources across sites and contribute to building a nature-positive future, Holcim recognizes the vital role that such ecosystems as wetlands play. Wetlands are one of the world's most biodiverse habitats and one of the most endangered ecosystems in Europe. Holcim has a long global tradition of wetland creation and preservation. For example, the company is **harvesting rainwater from one of Europe's largest quarries to revitalize Poland's Kujawy region**, providing water security and enhancing biodiversity.

Kujawy is a water-stressed hotspot requiring action to better manage freshwater sources. Holcim's Kujawy Quarry is Europe's largest open-pit limestone quarry. Until recently, the company discharged all of the quarry drainage water into the Noteć River, which flows directly into the Baltic Sea, instead of using it locally for farmlands and forests. At the same time, the Kujawy Region is facing water risks exacerbated by extreme rainfall events. In some months, there is little rainfall and in others, the rain is torrential. A shortage of water is causing environmental problems: the forest has deteriorated, ponds have dried out and birdlife has disappeared.

Working with the State Forests National Forest Holding, Holcim put in place an innovative solution to supply water to the forest bordering Kujawy and restore its biodiversity, creating favorable conditions for new species, plants, animals and birds to thrive. The investment will rehydrate the area and bring marshes and ponds that had disappeared over the last 50 years due to water shortages back to life.

With a 30-year project commitment, Holcim is in it for the long run. Local environmental experts agree that it will be possible to restore water conditions similar to those that existed in the 1970s and create new ecosystems. The humidity of forest habitats and wetlands will improve as well, helping new species of flora and fauna to flourish. More info, here.

Holcim's wetlands revitalization project in Poland, Kujawy region.
Source: Holcim

Stage 4 in the Roadmap to Nature Positive – Disclose

Holcim's Health, Safety, and Sustainability Committee, coupled with its nature strategy with measurable water and biodiversity commitments, places the company in a favorable position to implement the full scope of the TNFD recommendations in 2024.

Holcim reports according to the Global Reporting Initiative **(GRI)**, Sustainability Accounting Standards Board **(SASB)**, Task Force on Climate-related Financial Disclosures **(TCFD)**, Taskforce on Nature-related Financial Disclosure **(TNFD)**, Corporate Sustainability Reporting Directive **(CSRD)**, CDP (climate and water) EU Taxonomy and Article 964b of the Swiss Code of Obligations.

Datasets/databases & tools

→ Integrated Biodiversity Assessment Tool **(IBAT)**; WRI Aqueduct tool; ENCORE, SBTN Materiality screening tool, Swiss Re's Biodiversity and Ecosystem Services **(BES)** index tool, Biodiversity Indicator and Reporting System **(BIRS)**

Built environment member: Holcim
continued

Key challenges & lessons learned

→ **Access to primary data:** Being able to find good quality primary data is still very challenging, especially considering that the company has thousands of suppliers and many of them are small and medium-sized enterprises (SMEs). Many of which still do not measure their consumption and impacts (like water consumption) or suppliers do not share their data due to confidentiality.

Lessons learned

→ **Strong leadership and engagement with business initiatives** for nature such as TNFD and SBTN are key for business sustainability. The endorsement of senior management together with a dedicated Chief Sustainability Officer have been one of Holcim's main success factors. Being part of nature initiatives allows the company to support and inform future nature-related disclosure developments and adapt its strategy accordingly.

→ **Adopting an integrated risk and opportunity approach** allows the company to balance climate and nature risks against other material risks and opportunities, such as those related to strategic, operational or external topics, and facilitate the prioritization of the main threats.

→ **Nature policy as a guiding force for everyone in the company:** The company's nature policy describes its approach to the efficient use of natural resources and its path to a nature-positive future. It sets out how its employees should interact with business partners, suppliers, communities and other stakeholders. It has also provided alignment across the different countries where the company operates.

→ **Role of governments:** Public policies are key to accelerating actions to reverse nature loss and advance actions to protect nature. Business has an active role to play in providing solutions. For this, Holcim:

- supports mandatory rehabilitation requirements in all countries, encouraging ecosystem restoration with high-diversity fauna and flora, endemic species, continuity with natural landscapes, and progressive rehabilitation. Incentives can protect endangered species, especially in biodiversity-sensitive areas.
- encourages government mandates and incentives to promote investment in technologies for rain harvesting, optimization of water use in processes and affordable low-carbon energy desalination for a greater impact on freshwater reduction.

→ **Advocacy for the development of a common framework to measure and monitor the impact of activities on biodiversity and freshwater** to allow for better target-setting and the measurement of improvements.

Acknowledgements

Disclaimer

This document showcases a practical example of a corporate approach to building a nature strategy for the built environment sector. The primary intention is to offer a real-life case illustrating how an industry player is undertaking their nature journey and implementing the WBCSD *Roadmap to Nature Positive: Foundations for the built environment system.*

The example does not prescribe a one-size-fits-all approach. Each case depicted is specific to the context of the respective company and may not be directly applicable to all situations. Given the evolving nature of sustainability practices, it is advisable to continuously review and update strategies in line with emerging industry standards, regulatory changes and evolving best practices.

Acknowledgements

This publication has been written by WBCSD in collaboration with Holcim and represents Holcim's perspective and position. It is by no means a disclosure document. The report has been prepared for general informational purposes only and is not intended to be relied upon as accounting, tax, legal or other professional advice.

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About WBCSD

The World Business Council for Sustainable Development (WBCSD) is a global community of over 220 of the world's leading businesses, representing a combined revenue of more than USD $8.5 trillion and 19 million employees. Together, we transform the systems we work in to limit the impact of the climate crisis, restore nature and tackle inequality.

We accelerate value chain transformation across key sectors and reshape the financial system to reward sustainable leadership and action through a lower cost of capital. Through the exchange of best practices, improving performance, accessing education, forming partnerships, and shaping the policy agenda, we drive progress in businesses and sharpen the accountability of their performance.

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