

Our Intellectual Capital comprises our brand, reputation, and organizational knowledge-based intangibles such as intellectual property rights, software, and licenses. This also covers our organizational capital such as systems, internal policies, procedures, and protocols.

Through our intellectual capital, EDC developed strategic, data-based decisions that strengthen our regenerative agenda. These, in turn, are integrated into our facilities, which enhance our service delivery.

We further boost our intellectual capital to protect and help regenerate the ecosystem through decarbonization and reforestation efforts. These activities are extended to our host communities. We collaborate with them to ensure their preparedness in managing the impacts of natural catastrophe-related risks.

EDC's overall operations are also further enhanced through its intellectual capital by introducing streamlined processes and a more efficient structure in data analysis and implementation, a timely and accurate weather monitoring system, as well as digitalization, automation, and facility management.

Intellectual capital is a prime enabler of our way to play that includes purposeful innovation. We are committed to fostering a culture of always-on transformation, continuously looking for ways to improve how we work, effectively maintain business costs, and discover new opportunities for growth. As such, EDC is not only building this capability internally, but have also forged partnerships with the Board of Innovation and Endeavor Philippines to achieve this goal.

These will allow us to continuously develop the intellectual capital for all our stakeholders as we fulfill our mission of a decarbonized and regenerative future.

Activities	Outputs	Value Created	Contribution to SDGs	Risks
<ul style="list-style-type: none"> Integrated management system quality, environmental and safety management systems Continuous improvement program Asset management Natural catastrophe risk management DrillApp Project Radon tempo Program intensity Geophysics Alternative technologies (3D modeling, online/offline dissolution) 	<ul style="list-style-type: none"> Enhanced process improvement, reduced risks Improved culture and behavior Additional revenue and cost savings Critical Asset Risk Register, Life Time Asset Plan, Asset Investment Plan Digital technology for smart exploration, development, and utilization Sustainable steam and brine supply Additional revenue from smaller power consumers 	<ul style="list-style-type: none"> Integrated EDC systems and processes Advanced resource and steamfield management Optimum and sustainable management of EDC assets Optimized well design 		<ul style="list-style-type: none"> Asset owner governance inaccuracy Data and resources projection Climate change impacts

Intellectual Capital

Taking the lead

EDC values its Intellectual Capital as it provides socioeconomic compliance for the Company. Through established systems and policies, EDC commits to corporate responsibility and regulatory compliance, increasing the corporate value of the Company and enhancing its internal operations. These existing structures are also continuously reviewed and assessed should there be a need to develop new policies, processes, and programs. Our Intellectual Capital also supports the EDC Customer Privacy system following the existing legal framework in data privacy. Respect for our customers is of utmost importance to us. By taking care of our customers and their information, we nurture their trust.

Capability for predicting reservoir performance

EDC has developed an internal capability for predicting reservoir behavior. An example of this predictive capability is the Leyte Sweetspot study which was based on a risk analysis approach to determine the level of generation to be maintained for the field in the next 10 years, given the long production history and present subsurface condition in the field.

“Sweetspot generation” is a level of generation wherein the reservoir management issues are managed with sufficient mitigation measures. We employed numerical and statistical modeling to better understand the reservoir and wellbore processes affecting the steam availability of Leyte. Parameters such as steam flow decline rate, pressure decline and well retirement, cooling, deposition, were then identified and correlated with the extraction level to determine how the risk level changes as a function of the steam generation.

The Leyte Sweetspot study produced an optimum steam production level for Leyte. At this level of steam extraction, the team believes that the field can be sustainably operated for the next 10 years without overwhelming resource management issues.

Foundational System Innovations

EDC introduced various innovations within its systems to improve operational efficiency and asset management. These include organizational systems, procedures, and protocols such as the integration of the ISO requirements on Integrated Management System: Quality Management System (ISO 9001:2015), Environmental Management System (ISO 14001:2015), and Occupational Health and Safety Management System (ISO 45001:2018). In addition, the Continuous Improvement (CI) Program was also encouraged within the organization, generating a value of PHP 4.1 billion from over 5,000 completed initiatives fleetwide from 2019-2022.

We further expanded our Intellectual Capital through digital enhancements, such as the Smart Steamfield project, investments in new and alternative technology, higher resolution (i.e., higher reliability) reservoir modeling, more sophisticated chemical tracer programs, and collaborations with partners that improve our operational efficiency. In Asset Management, we implemented facility-level governance to promote accountability and accuracy while also empowering our people to lead.

We also invested in geoscience studies and research on explorations and resource management. These include geohazard monitoring initiatives, utilization of 3D modeling, drone thermal mapping, and the use of the Global Navigation Satellite System (GNSS), to name a few.



Strategies, Governance, and Performance

With the integration of Integrated Management System (IMS), EDC elevated its organizational processes and systems, reduced risks, and generated additional revenue and cost savings. It also empowered its people through enhanced initiatives on employee engagement, welfare and development, which improved culture and behavior. For our customers, this translated to a continuous delivery of excellent care and services.

To ensure these initiatives are efficiently executed, EDC embedded the IMS in the company's business processes. We regularly conduct audits for monitoring and enhancements. For the Continuous Improvement (CI) Program, we collaborated with Culture Workstream and Vertical CI governance for execution. We also identified CI Sponsors and CI Champions per vertical to further integrate it within the organization.

In Asset Management, the implementation was conducted and monitored by the Reliability and Asset Integrity Management Group under Facilities Operations and Maintenance (FOM). The Asset Management Lead represents each facility, and the squad members were composed of operations and maintenance personnel, led by a scrum master from the Reliability Group. The maintenance and management of our facilities were prioritized through a governance structure integrated into the end-to-end asset management framework.

Technology was also leveraged through the launch of the DrillApp, a cost-efficient drilling application that identifies strategic locations for well planning, and the Smart Steamfield with sensors installed in wells that monitor steam availability. A Strategic Technology and Innovation Squad was assigned to develop and implement the new drilling technology.

Additionally, EDC explored Resource Modeling that offers data in predicting where to drill for optimal steam generation. In Well Asset Performance Monitoring, we prioritized:

1. Accessibility and availability of all well monitoring data needed for well risk assessment
2. Identification of gaps on well condition monitoring
3. Providing accurate diagnostics and predictive capability on well performance monitoring

The Well Risk Review Framework and the Well Risk and Asset Management program were successful. In 2021, these initiatives developed the Critical Asset Risk Register, Long Term Asset Plan, Asset Investment Plan (CARR-LTAP-AIP), well utilization protocols, critical wells standard operating procedure (SOP), well incident protocols, and well condition monitoring.

Our Natural Catastrophe Risk Management equipped us with Landslide Mitigation, Typhoon-proofing, and Earthquake-proofing Programs. These are crucial in protecting our assets and facilities, particularly in high-risk areas prone to landslides, flash floods, earthquakes, extreme wind, and forest fires. This value-at-risk approach to risk assessment guided EDC on prioritizing investments, bringing optimum value to our customers and shareholders.

Through geoscience studies and technology upgrades, we implemented Rapid Earthquake Damage Assessment System (REDAS) for geohazards assessment in operations fields. We also monitored initiatives on well drilling and design by evaluating the fault's permeability, targeted for production and injection wells. Radon gas

anomalies were mapped to help identification areas with potential permeability, while microseismic tomography modeling from permanent seismic stations were used to track possible geothermal fluid movements.

Furthermore, we invested in alternative technologies such as a 3D Gravity modeling software for modeling gravity data and a 3D magnetotelluric (MT) modeling software for MT data. These are just some of the geophysical tools that added value to EDC's resource delineation activities which further strengthened its operational capacity.



Inherent Risks Management and Opportunities

EDC encounters organizational system risks such as asset owner governance inaccuracy, which can lead to concerns in data and resources projection. To address this, we promoted the importance of accountability and collaboration across the organization and implemented definitive work plans per facility. Encouraging ownership amongst our people enhanced our resource allocation and improved our service to customers. On the other hand, the CI Program can be incremental in terms of progress. Nevertheless, this is compensated with low-cost initiatives, while also allowing EDC to reinforce its foundations with purposeful innovation and a continuous improvement mindset.

Facilities, equipment, and asset management also come with their challenges, including the need for continued competency development of the teams, transmitters and support for the communication infrastructure, and varying well conditions. EDC managed these by providing our people with the necessary training, maximizing digital initiatives including automation and online calculations, and optimizing well planning, monitoring, maintenance, and utilization.

Natural hazards pose imminent danger to our organizational intellectual capital as well, as the landslides and earthquakes threaten the safety of our people and impact our surface facilities and technologies. We addressed these by applying the latest tools and closely coordinating with our internal and external partners. In addition, the real-time data through digital platforms provided timely insights which informed immediate data-driven decisions. These allowed us to identify high-risk areas for incorporation in the updated mitigation plans.

The development of alternative technologies comes with its own set of risks and opportunities, particularly in the competence of our teams in utilizing these new tools. Once in place, these new technologies can facilitate cost reduction in our overall operations, open doors for new business markets in management services, and power generation to customers on a smaller scale. Further, these initiatives provide a safer, more sustainable steam supply for the organization.

Futuristic Innovation

In enhancing its Intellectual Capital, EDC is focused on integrating a Company-wide IMS certification, along with sustained engagement and participation from all employees. We are also gearing our initiatives toward best-in-class geothermal resource development and management through the effective use of data and technology, coupled with industry best practices in asset management.

We established a risk-based Well Asset Management Framework for proper resource allocation, prioritization of projects and activities, and protocols for operating critical wells. This framework enabled us to reduce risks and ensured the steady availability and reliability of our wells.

Through investments in purpose-driven innovation, we leveraged the latest tools, automation, and digitalization, for immediate intervention. Our teams developed an analytics model for event prediction and accurate forecasting of steam flow. As a result, we minimized well outage, opportunity loss in tubing blockage, and the cost of monitoring discharge by improving its electricity dispatch.

Our well monitoring dashboard powered by automated data analytics also enabled the Company to improve its manpower allocation, shifting the focus from data gathering to analysis. This led to more efficient decision-making and proactivity in solving well issues.

Through alternate technologies, EDC generated an estimated savings of PHP 7 million per year on the fleetwide silica inhibitor requirement. This cost efficiency provided the Company with more flexibility in resource allocation which enhanced operational systems and employee welfare.

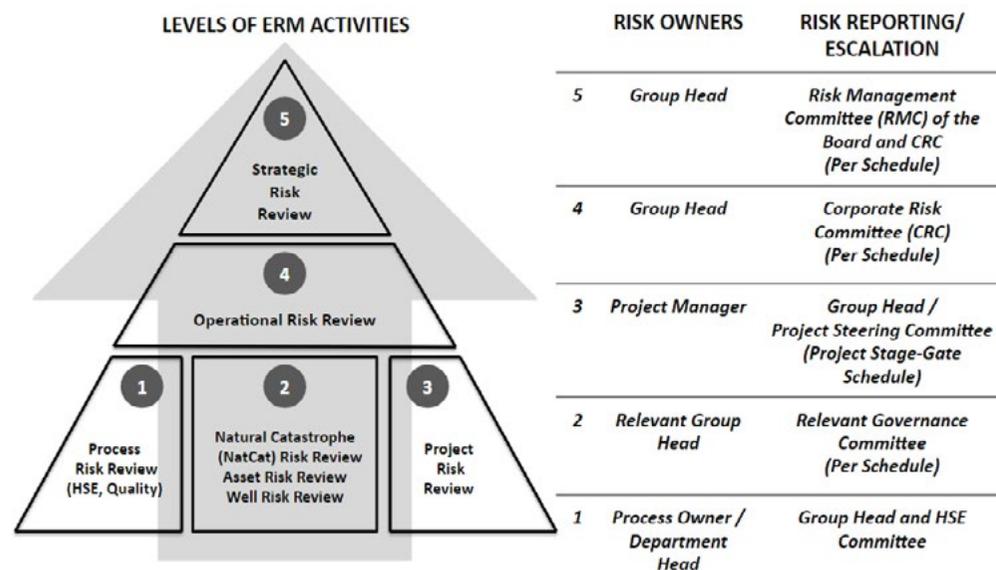


EDC launches micro-learning sessions on enterprise risk management and business continuity

To promote risk awareness and facilitate the strategic risk review at the leadership level in EDC, the Risk Management Department conducted the following activities:

- **Enterprise Risk Management (ERM) Microlearning Session:** A 1.5-hour microlearning session on ERM was conducted with EDC's Management Committee. The objectives were to provide a refresher on the risk management concepts and process, highlight the importance and benefits of implementing it, and develop a risk management culture across the organization.
- **Strategic Risk Workshop:** A 2-hour Strategic Risk Workshop was conducted with EDC's Management Committee to identify the strategic risks that will significantly impact the Company's long-term objectives and strategies. Correspondingly, the strategic risks will be monitored and reported to the Corporate Risk Committee and Risk Management Committee of the Board.

EDC's ERM System is implemented following the Risk Management Principles and Guidelines of ISO 31000:2009. EDC's risk management activities are conducted at various levels, as shown in the figure below.



Business Continuity Management (BCM)

EDC has an established Business Continuity Management (BCM) System covering emergency response, crisis management, and business recovery.

The BCM plans and strategies are established and updated based on the risks that have been identified during the various risk reviews. BCM teams (i.e., Crisis Management Committees, Incident Management Teams, and Business Recovery Teams) are also established across all locations to execute the Company's BCM plans and strategies.

To test the readiness of the members of the BCM teams and to further strengthen and improve EDC's BCM plans and strategies, desktop simulations are conducted annually. In 2021, the Risk Management Department, in coordination with the facilities' BCM managers, organized simulation exercises for all operating sites considering each location's top risk exposure. Part of the desktop simulations is the ongoing pandemic situation.

Process Risk Reviews, Focused Risk Reviews (i.e., Natural Catastrophe (NatCat) Risk Review, Asset Risk Review, and Well Risk Review), and Operational Risk Reviews are triggered annually and updated regularly to ensure that risks are identified and managed.

Project Risk Reviews are conducted as part of the Company's project management and enterprise stage-gate process. Project risk assessments are led by the project teams and are regularly updated and monitored as part of the project status reporting.

As part of the Company's risk governance, top risks coming from the various risk review activities are reported to Line Management, relevant Governance Committees, Corporate Risk Committee (CRC), and/or the Risk Management Committee (RMC) of the Board to ensure clear direction and strategies on the management of the Company's top operational and strategic risks.

Since the pandemic began in 2020, specific BCM teams (i.e., Corporate COVID-19 Crisis Management Committee, Facility Crisis Management Teams, Corporate Incident Management Team, Site and Head Office Incident Management Teams, Corporate Vaccine Working Group, and Site Vaccine Working Groups) across all locations were activated for COVID-19 response and crisis management. This ensured that EDC continued to operate and provide power, while ensuring the health and safety of its employees and contractors.

Program Intensity: Introducing seismic expertise in geothermal sites

As part of EDC's initiatives in Geosciences Studies and Researches for Exploration and Resource Management, Program Intensity was created to provide information on well targets with potential permeability while providing geohazard insights, particularly on earthquakes. Two (2) projects exist under Program Intensity - Permanent Seismic Stations Project (PESST) and Ground Deformation Monitoring Project (GDEM). Through this program, EDC harnessed its expertise in seismic monitoring and tomography, as well as ground deformation monitoring, and applied it to the geothermal sites.

The Permanent Seismic Stations (PESST) Project constructed and installed permanent seismic stations in all EDC geothermal sites. These stations are equipped with Worldwide Interoperability for Microwave Access (WiMAX) systems that enable remote data accessibility and almost real-time data processing. The project allows EDC to monitor seismicity, identify earthquake generating structures and assess influence of resource utilization to seismicity. With its continuous recording capability and remote data access, the project has the capability to send out automated alert messages to stakeholders thru an established alert system protocol within a short period of time after earthquake occurrence. Images of the subsurface are also generated via seismic tomography (e.g. velocity, attenuation and other elastic parameters) from the data collected by the permanent stations to identify areas of interest for future development.

The insights obtained from PESST Project also provide EDC with information necessary in resource management strategies and recommendations on well targets with higher permeability. PESST Project

also helps the organization establish seismically active areas and create seismic monitoring reports.

Another initiative under Program Intensity is Ground Deformation Monitoring (GDEM) Project that primarily aims to determine and evaluate the general ground movements and their behavior affecting EDC's critical facilities. Data loggers and receivers working on Global Navigation Satellite System (GNSS) were installed fleetwide, focusing on pre-identified high-value assets such as power plants, pads, and administration buildings. The project intends to collect positional data recorded and submitted by various satellites and process them near-real time, providing ground movements information frequently at specific time intervals. Additionally, the direction of the movements in which the facilities are moving towards are also determined which gives more information on how major faults in the production fields are potentially behaving.

GDEM Project stations have been installed back in 2020 and will be collecting data until 2024 for evaluation. All data are transmitted online and are accessible for remote monitoring by end-users. Data processing and interpretation involve statistical analyses for time-series data, generating visual graphs for easier assessment. An alert system will also be established for the project after obtaining the baseline average movement in the sites.

Correlation between the projects under Program Intensity triggered by the alert systems will enable a scientific input in conducting mitigations and safety measures. All findings will be correlated with other geohazard initiatives in order to strengthen the interpretations.

