



MANIPAL INSTITUTE OF TECHNOLOGY MANIPAL

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Essentials of Management (HUM3022)

REPORT ON MANAGERIAL FUNCTIONS OF

Freeport-McMoran

Members:

1. Rohan Khandelwal - 220905143
2. Srishti Singh - 220905526
3. Adicherikandi Sidharth - 220905249
4. Arav Chadha - 220905330
5. Suprotiv Moitra - 220905548

I. Introduction

Freeport-McMoRan (FCX) is a global leader in the mining industry, specialising in copper, gold, and molybdenum production, with operations spread across North America, South America, and Indonesia. As one of the largest producers of copper, the company plays a crucial role in meeting global demand for metals that are fundamental to the electronics, renewable energy, and electric vehicle industries. FCX emphasises a balance between growth, operational efficiency, and social responsibility, with a focus on creating long-term value for its stakeholders while maintaining an environmentally responsible approach.

At the core of Freeport-McMoRan's operations lies a well-structured management philosophy based on the principles of Planning, Organizing, Leadership, Staffing, and Controlling. These functions are implemented through a robust corporate governance framework, which ensures the efficient deployment of resources and maintains accountability across all business segments.

The company's planning process is driven by strategic objectives such as expanding leaching technologies and increasing automation in mining operations to reduce costs and improve output. FCX also prioritises sustainability, as demonstrated by securing significant investments to develop environmentally responsible technologies. Through tactical, operational, and strategic planning, the company navigates the complex dynamics of the global mining industry while staying true to its core values of safety, respect, integrity, excellence, and commitment.

The organising function within FCX is structured around a clear division of labour, with specialised committees handling specific areas of governance, such as financial oversight, compensation, and corporate responsibility. This approach ensures that decision-making is streamlined and that responsibilities are clearly delegated, allowing for efficient operations across geographically dispersed mining sites. The

company's leadership emphasises open communication and collaboration, fostering an environment where innovation and operational excellence can thrive.

II. Planning at Freeport-McMoRan

Planning at a large operational company involves drawing a blueprint, which has several sub-plans within them for the sake of understanding and manoeuvrability.

Some of them are:

Tactical Plans

Freeport sought to pursue the expansion of its leaching technologies across key mining areas which allowed the company to recover copper from waste piles at a lower cost

By involving and using more automated technologies, especially in their truck fleets, they reduced operational costs and increased output.

As part of its commitment to sustainability, Freeport has secured an \$80 million investment from the U.S. Department of Energy, thereby adhering to their sustainability initiatives.

Operational Plans

FCX has undertaken several programs in various parts of the world, more specifically North America, South America and Indonesia, including seven open-pit copper mines in North America, another two copper mines in South America and a mine with one of the world's largest copper and gold deposits in the Papua district of Indonesia.

“Accelerate the future, Responsibly” is one of the company's main initiatives, which wholly focuses on reducing the environmental impact of its operations.

Freeport McMoRan also sought to improve on its operational resiliency by using renewable resources and reducing reliance on smelters, which is in line with its sustainability drive.

Purpose

The main purpose of FCX, as stated on their company website is to “create and enhance long-term values for both shareholders and employees”.

They are committed to do so in a manner that is environmentally responsible and as good citizens in the communities which they operate in.

Mission and Vision

The mission of FCX involves investing in technology and financial and human resources as well as their current existing businesses.

They also aim to diversify their portfolio and to opportunistically expand into areas they understand, while maintaining a strict moral and ethical code of conduct.

Their vision is to operate in a manner that prioritises safety, respect and integrity above all else by ensuring safety for employees, listening to shareholders by being transparent with them as well the general community, and committing to sustainability of the environment wherever they work at.

Goals

Freeport-McMoRan's has the following goals:

1. To create long term value for its stakeholders.
2. To adopt sustainable and environmentally conscious practices.
3. To set the standard for responsible copper, gold, and molybdenum production
4. To deliver products responsibly to their global economy.
5. To ensure a safe working environment with zero fatalities and injuries.
6. To support and foster the well being of their host communities.

Objectives

- I. Qualitative

1. The company's main goal is to be the top leader in the copper industry, focusing on technological innovation and operational efficiency
2. They also aim to follow human rights policies and address any adverse impact of their mining activities.
3. FCX's 2030 goals are focused on reducing Scope 1 and Scope 2 greenhouse gas emission and transitioning to cleaner energy. They also focus on fostering long term partnerships by protecting the rights of the Indigenous community, affected by their mining activities.

I. Quantitative

1. FCX projects 4.1 billion pounds of copper production in 2024 due to rising global demand.
2. The company is also focusing on increased capital expenditure and expansion in areas such as South America and Indonesia.

Business Portfolio Analysis(BCG) Matrix

Developed by the Boston Consulting Group in the 1970s, this technique allows us to classify the various businesses under Freeport-McMoRan as Question Marks, Stars, Dogs or Cash Cows.



Stars (High Growth, High Market Share) - Copper Mining

The most valuable asset of the company lies in their copper mining sector. With growing demand for copper in various fields like electronics, more specifically in electric vehicles, this sector can be placed in the 'Stars' category due to its leading market share and strong growth potential.

Cash Cows (Low Growth, High Market Share) - Gold and Molybdenum

These sectors were particularly stable, not fluctuating too much and provided the company with a solid cash flow, one that could help Freeport to either attempt to make a 'Question Mark' into a 'Star' or to continue supporting operations.

Question Marks (High Growth, Low Market Share) - Rare Minerals and Exploration

Unexplored areas with copper mines and a plethora of rare earth minerals could be a potential 'Star' for the company. These ventures have high growth potential but as of now, an uncertain market share

Dogs (Low Growth, Low Market Share) - Divested Oil & Gas Operations

Freeport exited its oil and gas operations in 2016, realising the weak potential upside of the sector and instead, focused on its core competencies.

SWOT Analysis

SWOT analysis refers to analysing the strengths, weaknesses, opportunities, and threats of the organisation. It was developed by Albert Humphrey in the 1960s

I. Strengths:

1. Freeport- McMoRan is one of the largest producers of copper globally, especially in Indonesia, North and South America making it a critical player in areas of infrastructure and renewable energy.

2. FCX earns huge profits through its mining operations, they have increased cash flow and increased investments in mining technology and exploration which ensures long term competitiveness in the market.
3. FCX also focuses on strategic diversification, producing an essential steel alloy metal known as molybdenum. This helps in mitigating the negative effects of market volatility.
4. Freeport McMoRan has significant technological expertise that helps in quick and efficient extraction of metals, they also focus on large scale operations ensuring economies of scale and production efficiency.

II. Weaknesses:

1. FCX is heavily dependent on the global commodity prices of copper, gold, and molybdenum, which are subject to volatility due to macroeconomic, supply and demand and geopolitical factors.
2. FCX is facing increasing scrutiny and stricter regulations due to mining operations having higher environmental impacts, which in turn leads to higher costs, fines, and operational delays.
3. The company also faces geopolitical risk in areas of operations such as Indonesia. Increased labour strikes, unfavourable nationalisation policies and profit negotiations with the local governments can disrupt the company's operations and profits.
4. Freeport- McMoRan is very capital- intensive, having to make continuous investments in modern technologies, equipment and explorations, which can reduce the cash flows of the company.

III. Opportunities:

1. There is increasing demand for copper in Renewable energy and in Electrical Vehicles (EVs) for batteries, electrical wiring, and motors which will significantly benefit Freeport- McMoRan.
2. FCX has substantial exploration and expansion opportunities, especially in South America, including new projects in Peru and Chile.

3. FCX has strategic partnership and merger and acquisition opportunities that could help increase resources and operational efficiency and gain access to new markets.
4. With an increased global focus on sustainability, Freeport- McMoRan can strengthen their market position by adopting greener mining technologies, reducing carbon footprint, and strengthening ties with local communities.

IV. Threats:

1. As FCX focuses on commodity prices, any downturn in copper or gold prices can drastically affect the company's revenue and earnings.
2. Increased environmental regulations leads to higher compliance and waste management costs which reduces company profits.
3. There is increased competition due to new mining companies and decreased demand due to development of alternative materials to substitute copper in EVs and renewable energy.

Budget and Financial Statements

According to several key financial metrics like:

1. Revenue Projections: Copper production sales remained robust, the Gold and Molybdenum sectors were stable
2. Operating Costs: The total operating expenses were in the range of 12-14 billion USD, which was in line with predictions.
3. Capital Expenditure: The CapEx for 2023 was around 5.2 billion, allocating approximately half the mining budget for expansion of their major mining projects.

4. Cash Flow and Debt: FCX generated a strong cash flow of approximately 6-8 billion in 2023, and by the end of 2023 had a consolidated debt of around 9.5 billion USD.

Freeport McMoRan demonstrated a lot of growth potential and strength, solidifying its position in the Fortune 500 list.

III. Organizing Principles of Management at Freeport-McMoRan

The organizing function of management is crucial to any business, as it determines how resources, including people and tasks, are structured to meet company objectives. Freeport-McMoRan, a global leader in the mining industry, demonstrates this function through its robust corporate governance framework, which ensures efficient decision-making, accountability, and long-term success. The following sections outline key organizing principles as implemented by Freeport-McMoRan's Board of Directors and management.

Division of Labor and Specialization

At Freeport-McMoRan, the Board of Directors has established several specialized committees to handle distinct functions, thereby reflecting the organizing principle of division of labor. The key committees include:

1. **Audit Committee:** Supervises financial reporting and manages internal controls.

2. **Compensation Committee:** Manages executive compensation and human capital oversight.
3. **Governance Committee:** Maintains corporate governance policies and manages Board composition.
4. **Corporate Responsibility Committee:** Focuses on environmental and social risks, safety, and community relations.

Each committee is responsible for specific areas of oversight, ensuring that no one entity is overloaded with responsibilities, which allows for focused and effective management across all essential areas.

Delegation of Authority

The delegation of authority at Freeport-McMoRan is evident at multiple levels of the organization. The Board delegates key responsibilities to its committees, allowing for a streamlined decision-making process. Senior management, in turn, has the authority to implement strategies and policies. For example, the Compensation Committee has the authority to determine executive compensation, while the Audit Committee handles internal financial controls and compliance.

In line with the company's Principles of Business Conduct, managers and supervisors are expected to demonstrate leadership by delegating tasks appropriately and ensuring their teams follow the company's ethical guidelines.

Coordination and Communication

Effective coordination between different parts of the organization is a hallmark of Freeport-McMoRan's operations. The Board ensures that various committees and departments align with the company's overall strategic objectives through regular meetings and executive sessions. In addition, the company fosters open communication channels, allowing employees at all levels to raise concerns or report issues without fear of retaliation.

Coordination is also reflected in the company's Principles of Business Conduct, where employees are encouraged to collaborate and share ideas, helping to drive innovation and operational excellence. Moreover, the company's robust internal policies ensure that information flows efficiently between departments, promoting better decision-making and alignment of goals.

Chain of Command

Freeport-McMoRan maintains a clear chain of command, starting with the Board of Directors at the top. The company's governance guidelines specify that the Chairman of the Board is responsible for overseeing board meetings and ensuring that communication with senior management is effective. The CEO and other executives report to the Board and are responsible for carrying out the company's strategic plans.

The company's Principles of Business Conduct also emphasize the importance of leadership at every level. Employees are expected to lead by example, with supervisors setting the tone for ethical behavior and operational excellence. This clear hierarchy ensures accountability and smooth execution of tasks.

Span of Control

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Departmentation at Freeport-McMoRan

Departmentation is a key organizing principle that divides an organization into distinct units based on specific criteria such as functions, geography, or products. At Freeport-McMoRan, departmentation is used to streamline operations, clarify responsibilities, and ensure efficient management across global operations.

Functional Departmentation

The company divides its top leadership into functional areas, ensuring that critical operations such as finance, administration, and legal affairs are managed by dedicated executives:

- **Kathleen L. Quirk** serves as the President and Chief Executive Officer, overseeing the overall strategy and management of the company.
- **Maree E. Robertson** holds the role of Executive Vice President and Chief Financial Officer, responsible for the company's financial health.
- **Douglas N. Currault II** serves as Executive Vice President and General Counsel, managing legal and regulatory affairs.
- **Stephen T. Higgins**, as Chief Administrative Officer, supervises administrative functions that ensure smooth internal operations.

This functional departmentation enables Freeport-McMoRan to manage specialized functions independently, ensuring that each area of the company receives the attention and expertise necessary to optimize performance.

Geographical Departmentation

Freeport-McMoRan operates in multiple regions across the globe, and the company's leadership structure reflects a geographical approach to management:

- **Mark J. Johnson**, the President and COO of Freeport-McMoRan Indonesia, oversees operations in Indonesia, one of the company's largest and most important regions.

- **Joshua F. Olmsted**, the President and COO of Freeport-McMoRan Americas, manages operations across North and South America, including key mining sites in the U.S. and Peru.

By delegating leadership by geographic region, the company can tailor its strategies and operations to the specific needs of each region, taking into account local regulations, market conditions, and cultural considerations.

Product-Based Departmentation

In addition to functional and geographical departmentation, Freeport-McMoRan employs product-based departmentation to manage its diverse portfolio of products:

- **Michael J. Kendrick**, as President of Climax Molybdenum Co., is responsible for overseeing the production and operations related to molybdenum, a critical metal for various industrial applications.

This structure allows the company to focus on individual product lines, ensuring that each business area can respond to market demands and innovate independently.

Line and Staff Organization at Freeport-McMoRan

Freeport-McMoRan uses a line and staff organizational structure to balance operational control with specialized expertise.

Line Organization

The line organization within Freeport-McMoRan refers to the direct, hierarchical relationships between operational managers and executives. The executive officers, such as the CEO and COO, hold direct control over the company's primary operations. For example, **Joshua F. Olmsted** and **Mark J. Johnson** oversee their respective geographic regions, ensuring that daily mining operations, production targets, and compliance with local laws are met.

This traditional line organization ensures that decision-making flows directly from the top executives to the operations managers at various sites, maintaining clear accountability and control over day-to-day activities.

Staff Organization

Alongside this, Freeport-McMoRan employs a staff organization that provides support functions without direct operational control. These staff roles offer advisory, administrative, and strategic input to enhance the company's decision-making:

- **William E. Cobb**, as Vice President and Chief Sustainability Officer, provides specialized advice on sustainability practices, ensuring the company aligns its operations with environmental and social governance (ESG) standards.
- **Pamela Q. Masson**, Senior Vice President and Chief Human Resources Officer, supports line managers by overseeing human capital management, including recruitment, retention, and diversity initiatives.
- **Bertrand L. Odinet, II**, the Chief Innovation Officer, provides strategic guidance on technological advancements and innovation to improve operational efficiency and competitiveness.

These staff functions play a critical role in supporting the operational leaders (line officers), ensuring that they have the resources, guidance, and expertise necessary to execute their duties effectively.

IV. Staffing at Freeport-McMoRan

Role of managers in staffing at Freeport-McMoRan has multiple faces and is embedded within the company's Principles of Business Conduct (PBC) as well as core values in Safety, Respect, Integrity, Excellence, and Commitment. The following is a discussion on some of the core responsibilities of managers in staffing:

Recruitment and Selection

Managers ensure that the recruitment and selection process is fair, transparent, and based on merit. Their responsibilities include:

- **Analysing workforce needs:** Managers will work with Human Resources to recruit people who meet the talent needs of business.
- **Avoiding favouritism or bias:** Employment decisions should be based on merit. Cultural background, appearance, or lifestyle should not influence the selection process.
- **Promotion of Diversity and Inclusion:** Managers ensure open recruitment by being representative of the requirement of future work needs through attracting a diverse set of perspectives and backgrounds.

Training and Development

Managers build and develop teams:

Education: safety education, ethical obligations, professional skills.

Development of professionals with innovation and creativity, and continuous learning.

Safety and Welfare at Work

The welfare of the workforce is of top importance at Freeport-McMoRan.

Management should:

- Ensure that the workplace is hazard-free and safe, meeting all safety standards, with employees being well-equipped and trained to handle work.
- Stop work: Management can be allowed to stop work if it notices the unsafe practice then and there until the problems are rectified.
- Advocate wellness: The managers are responsible for the wellbeing of their teams in terms of health and safety at work.

Employee Relations and Conflict Management

The managers play the central role of maintaining healthy relationships among the workers. Their activities include:

- **Open communication:** Managers allow the people and their employees to openly voice issues and share ideas.
- **Grievances and complaints:** They effectively, impartially, and in time settle conflicts, harassment, or grievances in respect of accountability and transparency.
- **Enforcing anti-harassment policies:** Managers will prevent, detect, and resolve harassment in all forms in the workplace.

Performance Management

Employee performance management and development is one of the key responsibilities assigned to managers. Major functions include:

Some of the main duties are as follow:

- **Setting performance expectations:** Managers communicate performance expectations to employees against the objectives set for the business.

- **Performance recognitions and support:** Managers recognize good performance and provide the needed support to enable underperforming employees to meet the standards.
- **Exercising ethical leadership:** Whether it is a promotion, salary increase, or disciplinary action, managers must exercise fairness and integrity.

Succession Planning and Human Capital Development

Managers play the most important strategic role of getting the organization ready for the future by:

- **Identifying potential leaders:** Managers spot high potentials and groom them for future assignments
- **Creating career paths:** They work with their employees in drawing out their career paths for the long-term retention of the appropriate talent required for success.

Ethics and Compliance Monitoring

Managers are ethics and compliance guardians of the teams they manage:

- **Viewing the PBC:** Managers ensure that all team members are aware of and comply with the regulations for conduct established by the organization.
- **Reporting violations:** Managers must report violations of legal and regulatory requirements to the relevant agencies.

V. Leadership at Freeport-McMoRan

The Principles of Business Conduct (PBC) document provides vital insights into the leadership practices employed at FCX.

FCX regularly trains personnel on the PBC. Annually, select personnel, including managers, supervisors, and company leaders, must attest their understanding and compliance with the PBC and its values. This practice ensures all employees, especially company leaders are skilled enough to meaningfully lead their organisation and departments.

Core Values

At the heart of this company's leadership principles lie five core values : **Safety, Respect, Integrity, Excellence, and Commitment**. Each of these qualities are closely linked with the leadership concepts of effective communication, sufficient motivation and positive leadership styles which facilitate quality governance at the company.

1. **Safety:** The foremost priority at FCX is ensuring a safe working environment. Leaders are expected to promote safety by encouraging employees to report unsafe conditions and take responsibility for their own safety and that of their colleagues.
2. **Respect:** FCX fosters a culture of respect among its employees and stakeholders. Leaders are encouraged to treat everyone courteously and value diverse perspectives, which enhances collaboration and innovation.
3. **Integrity:** Ethical conduct is paramount at FCX. Leaders are expected to demonstrate honesty and transparency in their actions, fostering an environment where employees feel comfortable speaking up about concerns without fear of retaliation.
4. **Excellence:** The pursuit of excellence drives FCX's operational standards. Leaders are tasked with promoting high-quality work, encouraging innovation, and challenging accepted practices to improve efficiency and effectiveness.

5. **Commitment:** Leaders at FCX are dedicated to ensuring the long-term sustainability of their operations and the communities they serve, which encompasses a focus on environmental stewardship and social responsibility.

Communication

FCX employs effective communication strategies ensuring a strong leadership framework and a positive workplace culture.

1. **Open and Honest Communication:** To ensure clarity and comprehension among employees, leaders are encouraged to communicate about corporate policies and developments in an open and honest manner. In keeping with the ideas of active listening, FCX promotes a work environment where staff members can express problems without worrying about reprisals.

2. **Respectful Interactions:** Leaders communicate the value of appreciating different points of view, promoting candid communication, and actively listening. FCX encourages courteous feedback channels so that staff members can express their opinions about procedures without worrying about unfavourable outcomes.

3. **Clarity:** Setting clear performance standards that adhere to the idea of conciseness and clarity is demanded of leaders. FCX leaders guarantee effective communication at all levels by giving regular updates on business performance and safety procedures.

4. **Nonverbal Communication Awareness:** Positive nonverbal communication practices, such keeping eye contact and displaying open body language, are emphasised in leaders. Effective communication techniques, such as recognizing nonverbal clues, are taught by FCX.

5. Fostering an Environment for Open Dialogue: Regular meetings allow employees to share ideas and raise concerns openly, aligning with the emphasis on encouraging dialogue. The company creates platforms for underrepresented voices within the organization, enhancing open communication.

Employee Motivation

Motivation is an important part of leadership that can significantly impact a company's performance. Freeport-McMoRan effectively fosters an atmosphere that promotes employee engagement, contentment, and performance, hence contributing to the company's success.

1. Safety and Well-Being: FCX prioritizes safety by promoting a healthy and secure workplace. The PBC states that safety is paramount, encouraging employees to report unsafe conditions and take responsibility for their own safety and that of others. This commitment to safety fulfills employees' basic needs, allowing them to focus on their work without fear.

2. Respect and Inclusion: The PBC highlights the importance of treating each other with respect and valuing diverse perspectives. FCX fosters an inclusive environment where employees feel valued and encouraged to share their ideas. This respect enhances team cohesion and motivates employees to contribute actively.

3. Recognition and Feedback: FCX promotes constructive feedback mechanisms where employees can share thoughts on processes without fear of negative repercussions. Leaders are encouraged to recognize employee contributions, reinforcing the importance of performance and motivating individuals to excel in their roles.

4. Opportunities for Growth: FCX provides training programs and development opportunities, encouraging employees to enhance their skills and pursue career

advancement. The PBC emphasizes commitment to employee development, which motivates individuals by aligning their personal goals with organizational objectives.

5. Commitment to Excellence: The PBC encourages a pursuit of excellence in all work. Leaders at FCX are expected to promote high standards and foster innovation, motivating employees to take pride in their work and strive for continuous improvement

Leading By Example

FCX has created an atmosphere that encourages leaders to lead by example, establishing the standard for ethical behaviour and high-quality work. Leaders are expected to uphold the highest moral ideals and standards, with each team member expected to demonstrate the same level of devotion. They take proactive steps to detect and resolve potential concerns before they escalate, promoting an accountability culture. Furthermore, executives encourage employees to express their concerns as they occur, ensuring that everyone feels empowered to speak up about ethical quandaries or compliance issues. To maintain a well-informed workforce, executives make certain that all employees complete all necessary training, emphasising the necessity of understanding corporate regulations and processes.

Furthermore, executives are clearly involved in ethics and compliance issues, displaying their commitment to building a workplace that values honesty and upholds ethical norms. This leadership style not only builds trust within teams, but it also demonstrates FCX's commitment to its core values of safety, respect, integrity, excellence, and commitment.

VI. Controlling

In the case of Freeport-McMoRan, one of the world's largest publicly traded copper, gold, and molybdenum mining companies, controlling plays a crucial role in ensuring operational efficiency, profitability, and sustainability. The controlling process involves monitoring performance, comparing it to set standards, and making necessary adjustments to meet organizational goals.

Standards Used by Freeport-McMoRan in the Controlling Process

Freeport-McMoRan operates in a capital-intensive and resource-extractive industry, which requires the implementation of several control standards, including:

1. **Physical Standards:** These refer to the quantitative measures of physical output and resource utilization. For Freeport, physical standards include metrics such as tons of ore mined per day, energy and water usage, equipment uptime, and safety incidents. Given the scale of its operations, Freeport monitors these metrics to optimize production and minimize environmental impact.
2. **Cost Standards:** Controlling costs is critical for a mining company like Freeport-McMoRan, where fluctuations in commodity prices affect profitability. Cost standards would include metrics such as cost per ton of ore mined, maintenance costs, energy costs, and operational expenses. These standards ensure that Freeport operates efficiently and stays within budgetary limits.
3. **Capital Standards:** Mining companies like Freeport have significant capital investments in machinery, equipment, and facilities. Capital standards would involve controlling the return on investment (ROI) from these assets and ensuring the productive use of capital. Freeport may measure equipment utilization rates, lifespan of machinery, and capital project completion times as part of their capital standards.
4. **Revenue Standards:** Revenue standards involve monitoring the sales of metals such as copper, gold, and molybdenum, which are subject to market volatility.

Freeport would control its revenue by ensuring that it meets sales volume targets and by hedging against price fluctuations through futures contracts or other financial instruments.

Goal-Oriented Standards: At a strategic level, Freeport-McMoRan likely sets goals related to sustainable growth, reducing environmental impact, and increasing shareholder value. These goals guide both short- and long-term decision-making. For example, Freeport's commitment to sustainability would involve setting goals to reduce carbon emissions, water consumption, and waste.

Feedforward Controls

Feedforward control focuses on preventing issues before they occur by analyzing inputs and predicting their outcomes. Freeport-McMoRan employs several feedforward control mechanisms, including:

1. **Environmental Impact Assessments (EIAs):** Before initiating any new mining projects, Freeport conducts EIAs to predict and mitigate potential environmental impacts, such as air and water pollution, habitat destruction, and energy consumption. These assessments allow the company to implement preventive measures, such as water recycling systems or emissions-reduction technologies.
2. **Technology and Equipment Upgrades:** Freeport continually invests in advanced mining technologies and machinery. Feedforward control is exercised by assessing the long-term performance and cost benefits of new technologies before they are implemented. For instance, introducing automation or AI-driven analytics to optimize ore extraction would be a preventive measure to improve efficiency.
3. **Commodity Price Forecasting:** The volatility of commodity prices poses risks to profitability. Freeport uses feedforward controls by employing advanced forecasting models to predict price fluctuations. Based on these forecasts, the company can adjust production volumes, hedge through futures contracts, or diversify its portfolio to minimize financial risk.

Concurrent Controls

Concurrent control involves monitoring ongoing processes to ensure they meet set standards. In Freeport-McMoRan's case, this could include:

1. **Real-Time Monitoring of Production Operations:** Freeport employs real-time data analytics and sensors in their mines to monitor production levels, equipment performance, and safety conditions. For example, systems track tons of ore extracted, detect equipment malfunctions, and monitor worker safety. Concurrent controls ensure immediate adjustments are made to optimize production and prevent accidents.
2. **Operational Dashboards:** Managers at Freeport have access to operational dashboards that provide real-time data on key performance indicators (KPIs). This enables them to monitor costs, production rates, and inventory levels on an ongoing basis, making adjustments as needed to stay on target.
3. **Safety Monitoring:** Mining is inherently risky, so concurrent controls are vital for ensuring worker safety. Freeport uses real-time safety monitoring systems, which track hazardous gas levels, machinery malfunctions, and worker movements to minimize accidents and ensure compliance with safety regulations.

Feedback Controls

Feedback control involves analyzing results after the fact and using the data to improve future performance. At Freeport, feedback controls include:

1. **Financial Performance Reviews:** Freeport conducts regular financial performance reviews, comparing actual results to budgeted figures for cost control, revenue generation, and capital expenditure. Variances are analyzed, and corrective actions are taken to address any deviations from financial targets.
2. **Post-Project Audits:** After completing major capital projects, such as opening a new mine or upgrading existing facilities, Freeport conducts post-project audits to assess the project's success in terms of cost, time, and efficiency. These audits provide insights for improving future projects.
3. **Environmental and Sustainability Reporting:** Freeport regularly publishes sustainability reports that track its environmental impact, including emissions,

water usage, and waste generation. Feedback from these reports informs future sustainability initiatives and helps the company meet its environmental goals.

Control Techniques Used by Freeport-McMoRan

Several control techniques are likely employed by Freeport-McMoRan to ensure effective management:

1. **Budgetary Control:** Freeport's extensive operations require detailed budgets for each department, mine, and project. Budgetary control involves setting financial benchmarks and comparing actual expenses and revenues against these targets. Corrective actions are taken when variances arise, ensuring cost efficiency.
2. **Financial Ratio Analysis:** The company likely employs ratio analysis to assess its financial health, including profitability ratios (e.g., gross profit margin), liquidity ratios (e.g., current ratio), and leverage ratios (e.g., debt-to-equity ratio). These metrics help Freeport maintain a strong financial position and ensure long-term sustainability.
3. **Quality Control Systems:** Ensuring the quality of the extracted ore is important as per customer requirements. Freeport employs quality control systems that measure the ore's grade and purity at various stages of production. Non-conforming batches are addressed to maintain high standards.
4. **Internal Audits:** Freeport likely has a robust internal audit system to ensure compliance with financial regulations, environmental standards, and internal policies. These audits identify areas of improvement and reduce the risk of fraud, inefficiency, or non-compliance.
5. **Benchmarking:** Freeport benchmarks its performance against industry peers, comparing key metrics such as production costs, output levels, and sustainability initiatives. This helps the company stay competitive and identify areas where it can improve operations.

VII. Conclusion

This report has provided a detailed analysis of Freeport-McMoRan (FCX), examining key aspects of its management practices and how they influence the company's operations and strategic direction. We have highlighted critical elements of FCX's management philosophy, organizational structure, and strategies. We have also illustrated how the company effectively manages its global operations to achieve its long-term objectives. The focus of this report was the examination of essential management functions—planning, organizing, staffing, leadership, and controlling.

In our discussion of planning, we examined the company's tactical, operational, and strategic initiatives, including investments in advanced leaching technologies and automation to boost efficiency. We also discussed FCX's proactive approach to sustainability, such as securing federal investments, highlighting the company's commitment to environmental responsibility.

To analyze FCX's strategic direction, we employed tools like the BCG Matrix and SWOT Analysis. The BCG Matrix helped categorize the company's operations, identifying the high-growth potential of its copper mining segment as a 'Star' while classifying divested oil and gas operations as 'Dogs.' This analysis illustrated how FCX strategically manages its resources across various business segments to maintain a competitive edge. The SWOT Analysis further highlighted FCX's strengths, such as its leadership in copper production, as well as potential challenges like market fluctuations and geopolitical risks.

The report also provided insights into FCX's organizational structure, focusing on its division of labor, delegation of authority, and departmentation. We described how various committees, such as the Audit, Compensation, and Corporate Responsibility Committees, contribute to specialised governance and effective decision-making. By exploring the company's geographical and product-based departmentation, we

demonstrated how FCX adapts its management strategies to meet the unique demands of operations in different regions, from the Americas to Indonesia.

In analyzing FCX's leadership practices, we discussed the role of the Principles of Business Conduct (PBC) in shaping the company's leadership style and ethical standards. This section highlighted how FCX promotes a culture of safety, integrity, respect, excellence, and commitment. By emphasising open communication, recognition, and development opportunities, we showed how these practices help create a positive work environment and motivate employees, demonstrating the critical role of leadership in driving organisational success.

Furthermore, the report addressed the controlling function by examining the control standards used by Freeport-McMoRan. We looked into feedforward, concurrent, and feedback controls that monitor and adjust performance. Environmental assessments, real-time production tracking, and post-project evaluations, illustrates how FCX maintains efficiency and adapts to changes in the market. The focus on cost management, capital allocation, and quality control highlighted the significance of these measures in maintaining profitability and reaching strategic goals within a capital-intensive industry.

Throughout our analysis we have utilised both qualitative and quantitative data from reliable sources, including FCX's annual and sustainability reports, as well as insights from industry research and management theories.

In conclusion, our thorough analysis has shown that Freeport-McMoRan's success is grounded in strong strategic planning, structured organisation, effective leadership, and robust control mechanisms. By continuously adapting to market changes and maintaining a focus on sustainability, the company remains dedicated to delivering long-term value to shareholders, employees, and the communities it serves. The analytical tools and methods used in this report not only clarify the operational complexities of FCX but also highlight the crucial role of effective management in driving sustainable growth and maintaining a competitive edge in the mining industry.

VIII. References

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