

A Business Plan Template and How-To Guide

Supporting Material for ASGM Access to Finance

Artisanal and Small-Scale Gold Mining can take several forms of organization. The financing needs will vary mainly depending on the size of the organization. This document is a guide to help with the production of supporting material for financing ASGM regardless of the source of financing.

April 2022 / Version 1.0*¹

Supported by: Led by:



This document was developed by

Firas Abbasi

Artisanal Gold Council



**ARTISANAL
GOLD COUNCIL**

Table of Contents

- How to Use this Guide 4
- Applicability of the Business Plan Elements 5
- Sole Proprietorship or Individual Miners 6
- Small Business Partnership 7
- Corporation 11
- Mission Statement..... 11
- The Concept..... 11
- The Team 13
- Corporate Culture 15
- Description of the Operations 15
- The Opportunity 17
- Site Preparation..... 18
- Sourcing..... 18
- Human Resources 19
- Project Budgeting 20
- Proforma Financial Statements..... 22
- Financial Analysis 26
- Appendix 29



How to Use this Guide

The purpose of this guide is to help in compiling supporting documents for the purposes of obtaining financing for Artisanal and Small-Scale Gold Mining (ASGM) businesses. Supporting this guide is an excel-based financial evaluation template which will be referred to as “the financial model”.

Given the diversity of ASGM operations, this guide will provide an overview of the creation of three types of business organization: 1) Sole Proprietorship for Individual Miners 2) Partnership or Small Business and 3) Corporation. This is followed by a discussion on each of the business plan elements.

Applicability of the Business Plan Elements

The common framework for putting together a business plan regardless of the type of business organization requires clarity on the following:

- ▶ a) What needs to be funded?
- ▶ b) How much funding is required?
- ▶ c) How does this funding create value?

The financier² will use this information to assess the business potential and decide on whether to provide the funds or not. It is important that the information provided is as complete and accurate as possible.

For simplicity, we will assume the funding needs for the three types of different business organizations as follows:

- ▶ SP/Individual miners: US\$1,000 – US\$5,000,
- ▶ Partnership/Small business: US\$10,000-US\$50,000
- ▶ Corporation: \$100,000 and up

In general, the below table shows the applicability of each one of the following sections to each type of business organization:

Section	Business Organization and Funding Requirements		
	Sole Proprietorship US\$1000-US\$5000	Partnership US\$10,000-US\$50,000	Corporation US\$100,000+
Mission Statement			X
The Concept		X	X
The Team		X	X
Corporate Culture			X
Description of the Operations	X	X	X
Human Resources			X
Project Building			X
Proforma Financial Statements	X	X	X
Financial Analysis		X	X

² A Financier can be a debt or loan provider (bank) or an equity investor (single investor or consortium).

Sole Proprietorship or Individual Miners

To support financing for a sole proprietorship or an individual miner, it would help to begin by gathering some information. These may include some or all the following business elements:

1. Description of the Operations:

It would help the sole proprietor to provide basic information on the current business process, this includes:

- ▶ Description of the mine site location as accurately as possible
- ▶ Legal documents demonstrating valid authorization or license to operate on the mine site
- ▶ Ore information: Ore type, grade and processing method
- ▶ Operator's history: Years of mining experience and locations
- ▶ Average gold production (daily, weekly...etc.) supported by documentation, if available
- ▶ Gold sale process and price discovery: Who is the gold being sold to and how is the gold price determined?

Any lender will want some proof that the site contains gold and that the funds will be applied to secure and increase production. An independent mining professional can provide an opinion based on a review of available geological information. This can be a low-cost and brief report. Government agencies tasked with administering the artisanal and small-scale mining operations may be able to help an individual miner with regional geological reports to support the financing request.

Next, the miner can describe the use of funds and expected improvements in production, productivity, environmental practices, etc. The professional opinion may comment on the potential of the new equipment and/or process configuration.

The miner may also obtain documents supporting the benefits of the new equipment including the level of production and cost to operate from the manufacturer in addition to the input from the technical experts.

2. Proforma Financial Statements (simplified):

The area of focus here is to provide a **Financial forecast**. Once the appropriate equipment

cost and production estimate are determined, the miner can now provide a financial forecast to the financier outlining the profit sharing or loan repayment arrangement.

In case of a commercial loan: The agreement may take the form of a revolving or a term loan. It is important to make sure that the payments whether interest only or interest plus principle are not a burden on the miner.

In general:

- ▶ A revolving loan will only require interest payments to be made on the loaned amount. The miner could make extra payments to reduce the borrowed amount (principle) and thus reduce the interest payments.
- ▶ A term loan payment amortizes over a certain period. Meaning the miner will commit to a specific payment schedule where each payment contains a portion that goes towards interest and another that goes towards the principle amount³. By the end of the term the miner will have repaid back the loan amount in full.

Other support for commercial loans: Due to the riskiness associated with the ASGM business the miner may require additional support which can take the form of:

- ▶ **A guarantor⁴:** Some commercial banks see this as a risk reduction mechanism, thus increasing the probability of a successful loan. The guarantor may be:
 - A trusted friend or a family member with financial capacity
 - A government program
 - A donor or grant-funded program
- ▶ **Collateral:** A collateral is an asset the miner may have of value that the bank accepts as security against the loan. The collateral may be a car, a house or land. The loan can be set up with a lien on the equipment which can serve as a collateral.

In case of angel investors: Angel investors are usually friends and family who provide finance in the form of an equity investment. Under this arrangement, the investor agrees to provide a certain amount of financing in return for a portion of the profits. The angel investor should be made aware of the risks that the returns may fluctuate wildly.

Small Business Partnership

³ As the principle declines the interest payments also decline, in general however the total payment remains constant but an increasing portion of the payment goes towards the principle and declining portion goes towards interest.

⁴ A guarantor commits to making the loan payments (interest + principle) in full in case the primary borrower defaults.

In a small business partnership, several miners group to create the business. This form of organization will have a more defined structure than the sole proprietorship.

To support the financing application, the partnership should present details relating to the formal organization of the partnership. This could be an official agreement by the partners to enter the business venture, joint bank accounts, other.

Some of the sections applicable to a corporation may also be applicable to a small business partnership. We will mention the applicable sections below with some comments on the possible variations or specific requirements as compared to the corporation type of business organization.

1. The Concept

This section introduces the business idea and explains how the partners collectively can add value. The concept of the business provides a brief overview of the expected economic, social and environmental benefit from using mercury-free technologies.

2. The Team

This section has the biographies and operating experience of the involved parties. Introducing the partners of the business and explaining their backgrounds and experience in the ASGM industry gives confidence to the financier. There is no need to go into details in specifying the role of each partner, however, explaining the areas of expertise is valuable. There is no separation between the strategic decision makers and the partners, however, if an equity investor was involved, they may have a say in the strategic direction of the business depending on the investment agreement.

3. Description of the operation

This is the most important section. In case of a brownfield operation, this section describes the process in detail from ore extraction to the final sale of the gold product. For a greenfield operation, this section will describe in detail the partner's plan to operate.

This includes:

- ▶ Description of the mine site location as accurately as possible
- ▶ Legal documents demonstrating valid authorization or license to operate on the mine site
- ▶ Ore information: Ore type, grade and processing method

- ▶ Operating experience: For each of the partners, this includes years of mining experience and locations worked. It could also include skills that are not directly in mining. For example, some of the partners may be equipment engineers or geologists
- ▶ Average gold production (daily, weekly...etc.) supported by documentation, if available
- ▶ Gold sale process and price discovery: Who is the gold being sold to and how is the gold price determined?

The financier will need to assess the long-term viability of the partnership and hence the requirement for geological proof of the deposit. An independent mining professional can provide an opinion based on a review of available geological information. Since the financing size can be substantial, the partnership may wish to negotiate financing some exploration or geological work to understand the resource potential. It could be worthwhile to explore the ability to have government agencies tasked with administering the artisanal and small-scale mining operations subsidize some or all this work.

The partnership will then describe the use of funds and expected improvements in production, productivity, environmental practices, etc. The professional opinion should comment on the possibility to expand operations, equipment on site, additional equipment required, and any item that in their mind can improve or hinder production as planned (environmental problems, lack of geological information, poor surface exposure).

4. Proforma Financial Statements (simplified)

The area of focus here is to provide a **Financial forecast**. Once the appropriate equipment cost and production estimate are determined, the partnership can now provide a financial forecast to the financier outlining the profit sharing or loan repayment arrangement.

In case of a commercial loan: The agreement may take the form of a revolving or a term loan. It is important to make sure that the payments whether interest only or interest plus principle are not a burden on the partnership. Depending on the legal structure and the agreement between partners, at least one partner is liable for the borrowed funds in case of a default.

In general:

- ▶ A revolving loan will only require interest payments to be made on the loaned amount. The partnership could agree on making payments towards the borrowed amount (principle) and thus reduce the interest payments.
- ▶ A term loan payment amortizes over a certain period. Meaning the partnership will

commit to a specific payment schedule where each payment contains a portion that goes towards interest and another that goes towards the principle amount⁵. By the end of the term the partnership will have repaid back the loan amount in full.

Other support for commercial loans: Due to the riskiness associated with the ASGM business the partnership may require additional support which can take the form of:

- ▶ **A guarantor⁶:** Some commercial banks see this as a risk reduction mechanism, thus increasing the probability of a successful loan. The guarantor may be:
 - A government program
 - A donor or grant-funded program
- ▶ **Collateral:** A collateral is an asset one or more of the partners may have of value that the bank accepts as security against the loan. The collateral may be a car, a house or land. The loan can be set up with a lien on the equipment which can serve as a collateral.

In case of angel investors: Angel investors are usually friends and family who provide finance in the form of an equity investment. Under this arrangement, the investor agrees to provide a certain amount of financing in return for a portion of the profits. The angel investor should be made aware of the risks that the returns may fluctuate wildly.

5. Financial Analysis (simplified)

To support a partnership financing application, the cost per unit of product sold can be a useful metric to demonstrate profitability. This metric can be calculated using different gold price scenarios to show the profit sensitivity to fluctuating gold prices.

- ▶ **Operating costs per unit of gold:** Dividing all of the cash costs by the amount of gold produced in ozs, kgs, etc. provides an opportunity to assess the profitability of the business. For example, if the company produces 1 kg of gold per month and the cost of running the operation is \$50,000 per month then the monthly cost per unit of gold is \$50,000 per kg. If the gold price is \$58,000, the operation generates \$8,000 of cash flow per kg of gold sold. The financier can now estimate the amount of financing the partnership can handle.

⁵ As the principle declines the interest payments also decline, in general however the total payment remains constant but an increasing portion of the payment goes towards the principle and declining portion goes towards interest.

⁶ A guarantor commits to making the loan payments (interest + principle) in full in case the primary borrower defaults.

Corporation

In case of a corporation and generally speaking, all the business plan elements mentioned above apply. Throughout this business plan template we use a hypothetical example of a JV between stakeholders (a mining co-op as an example), which will act as an operating company and an external equity investor who will only serve as a passive equity holder.

In reality, the applicability of each segment may vary depending on several factors, including - but not limited to - the size of the operation, the ease of doing business, and the availability of skilled managers and operators. Nevertheless, this template can be modular, where some sections may apply to particular situations more than others.

The hypothetical company is Dore Gold Mining (DGM), and the investor is the Capital for Positive Change fund (CPC).

Mission Statement

The mission statement provides clarity on the direction where the business is headed. It keeps the management and employees of the operating company focused on what needs to be achieved while highlighting the core values and principles. An example of a mission statement for a hypothetical company Dore Gold Mining:

“Dore Gold Mining is focused on producing high-quality artisanal gold dore bars through the diligent application of efficient and environmentally sound production practices, all following the highest standards for responsible gold mining as outlined by the CRAFT code for responsible sourcing.” It is important to note that the country projects are expected to comply with the planetGOLD responsible sourcing criteria which is based on the core modules of the CRAFT code.

Having the leaders of the company produce the mission statement will make the purpose more relatable, and the leaders are more likely to maintain this focus as a guide towards the success of the new venture.

The Concept

Introducing the business concept.

Here we explain how the business idea is plausible. We focus on how the business will add value through a general description of the need or the problem and the opportunity for a

business to provide or contribute to providing the solution. After the general comments, we provide some general description of the business. This will inform the reader if the business plan is for a brownfield expansion (already operating business or a greenfield project (new project):

A hypothetical example for Dore Gold Mining (DGM):

Describing the need:

“There is an increased global awareness of business practices and their externalities, including their effect on the environment and the social fabric. This is evidenced by the increased availability of responsible investments that focus on businesses that generate positive returns and have positive social and/or environmental impact. See A1 in the appendix for the impact investing spectrum.”

Describing the opportunity:

“Artisanal and small-scale gold mining (ASGM) is an industry that represents a significant opportunity for meaningful social and environmental improvements, in addition to substantial positive economic returns. Jewelry consumers are increasingly aware of the gold production ecosystem, including the source of the gold, the production process, and the fairness of trading in the supply chain.”

High level description of the business:

“In the XYZ region, in ABC country, approximately x tonnes of gold is produced annually. The current production process involves poor health and environmental practices such as the use of Mercury to extract the gold.

DGM is well into a 5-year program laying the groundwork for a socially responsible, environmentally-sound, and professionally-run operation. PlanetGOLD is implementing social, health, and operational improvement programs to make DGM investor ready.

Teams of technical experts assess and choose a mining site for economic viability and introduce the needed technology and process to reduce mercury use and increase production levels. Health care and social experts create programs that educate the workforce on best practices in those fields. Finance experts work with the local teams to optimize the returns and facilitate funding and supply chain experts assist with the implementation of transparent mine to market trading practices.”

The Team

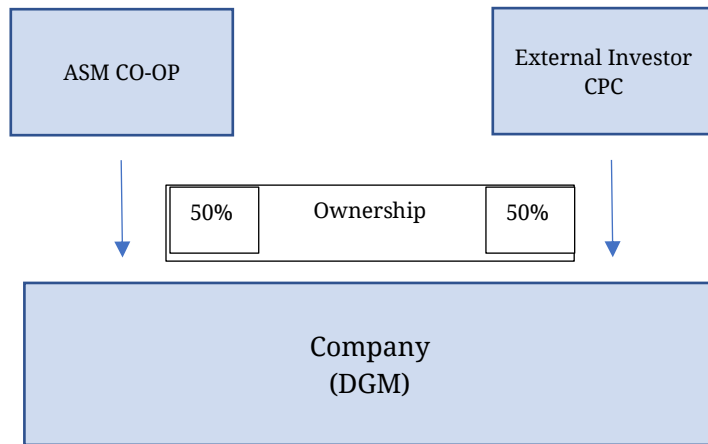
It is highly likely that a well-defined organizational structure increases the confidence financiers have in the company being able to meet its financial obligations and create value. A well-organized corporate team reduces the overall risk of the business and increases the likelihood of accessing financial resources. In the case of a smaller business venture, providing the funder with details on the team and their expertise serves the same function.

This section of the business plan addresses the organizational structure and the company’s background.

The Board of Directors:


The board is selected by the company owners and is responsible for overseeing the management team to ensure their actions are aligned with the owner’s interests. The board of directors is not involved in the day to day activities; instead provides input into and makes decisions related to the high-level corporate strategy.

Example of an organizational structure for a hypothetical company Dore Gold Mining (DGM) as a joint venture between external investors and an artisanal mining association:



Investors will usually want to nominate board members to represent their interests. The larger the investor interest, the more board representation they will have.

It is vital in this context to have members of the board that represent the miner's interest. An organized miner's association (for example, a miner's co-op) can nominate board directors. Directors on the board are experts in their respective fields. It is important to consider best practices, such as board diversity, size, appropriate committees, and independence.



An example of a professionally well-diversity board may include a geologist, an accountant, and a government policy professional. Board diversity also includes other aspects like age and gender. Since board members oversee the management team's actions, it is considered a best practice to have the board be as independent of the management team as possible.

The management team:

The board of directors often appoints the senior management of the company. The three primary functions are the Chief Executive Officer (CEO), the Chief Financial Officer (CFO), and the Chief Operating Officer (COO). If the operation is less formal, the company's management could be directing the company's strategic vision. However, in the case of a significant equity investor, the investor or an investor's representative would likely assume a directorship role.

Chief Executive Officer (CEO):

The CEO is responsible for strategic and tactical decisions and overseeing the day-to-day operations at the company level. The CEO should have extensive experience in the industry. In a less formal business arrangement, the CEO may take on several roles, including the company's financials and operations.

Chief Financial Officer (CFO):

The CFO is responsible for the company's financial position. The CFO assesses the sources and uses of financial resources and assists the management team in making strategic, operational decisions. The CFO should have experience in the capital markets. The CFO can also be responsible for managing the company's day to day financial activities and communicate with investors and lenders.

Chief Operating Office (COO):

The COO is responsible for the technical day to day functions of the operations. The COO is an expert in the industry and can guide operational teams. The CCO may have a background in geology or engineering and would provide crucial input into the management of the various operating segments like mining, processing, and possibly equipment and material procurement.

Corporate Culture

The corporate culture influences the critical decision-making process and the way the company operates. It is the set of core values, beliefs, and business style that employees of the company share when dealing internally and externally. Successful companies tend to have a healthy corporate culture. Corporate culture is adopted by the company's management and employees and guides their day-to-day activities. A healthy and robust organizational culture signals a form of cohesion and increases its chances of success.

In the ASGM context, a healthy corporate culture would contain aspects like:

- ▶ Paying a fair price for products and services by the ASM communities and
- ▶ treating everyone with respect regardless of their age, gender, or personal belief
- ▶ Respecting the community and the environment the company is conducting operations in
- ▶ Adhering to the highest degrees of accountability and transparency
- ▶ Reward management and employees based on merit

Management can work with experts on how to create and maintain a positive and healthy corporate culture. Company policies (hiring employees, remuneration, interaction with vendors, etc..) should be developed in harmony with the corporate culture. For example, some companies may emphasize values that govern internal and external interactions like transparency and accountability.

To start filling out this section, the founders of the company can reflect on the local community culture and values as sources of inspiration.

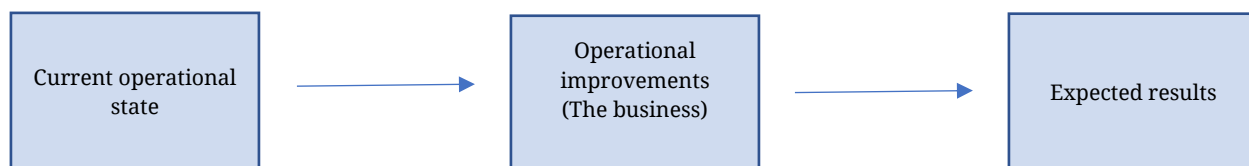
Description of the Operations

This section represents the core of the business plan. Clarity is crucial to instill confidence in capital providers, including equity investors and lending institutions. For smaller ventures, sole proprietorships, or operations requiring more modest funding needs, this section is still relevant. It explains to the investor or lender how the funds will be used to generate value and grow the business. Some sub-sections may be expanded or omitted as needed.

The amount of detail provided should balance the need for clearly articulating the roadmap for value creation and level of detail that can be understood by a general audience. Readers of the business plan may include bankers, investment managers, private investors, and

philanthropists, to name a few. The best practice is to focus the details on the segments that are less intuitive to the typical reader. In other words, it should be assumed that the reader is not an expert in the industry. Hence, the use of jargon should be limited, and all industry-specific acronyms should be explained.

It is best to introduce the reader to the current state of the industry as well as the business if applicable, and the challenges the business plans to overcome. The plan presents ways for progress and how the company's operations add value.



Let's take an example of a hypothetical company Dore Gold Mining (DGM) and assume DGM has rights to mine ore from site "A." The plan should describe site A in the following terms:

Location:

- ▶ A. Location map
- ▶ B. How to get to the site
- ▶ C. What are the nearest town/city and the population and services of that town/city
- ▶ D. Access to infrastructure (power, water, transportation, and skilled labor)
- ▶ E. Site history if available

Current operation:

- ▶ A. What is the estimated number of ASM miners that are currently working on the site
- ▶ B. How is the operation organized (Are miners paid daily wages?)
- ▶ C. What is the current permitting status?
- ▶ D. What is the mineralization (brief description – not too technical)
- ▶ E. What is the production process which includes:
 - Mining methods
 - Processing methods, including chemical used.

- An estimate of the gold produced, including grade and recovery.
- Estimate of the cost per unit (\$/oz, \$/kg, \$/gr)*
- Waste management plan
- Reclamation and restoration

*It is best to maintain unit and currency consistency throughout the document to avoid confusion

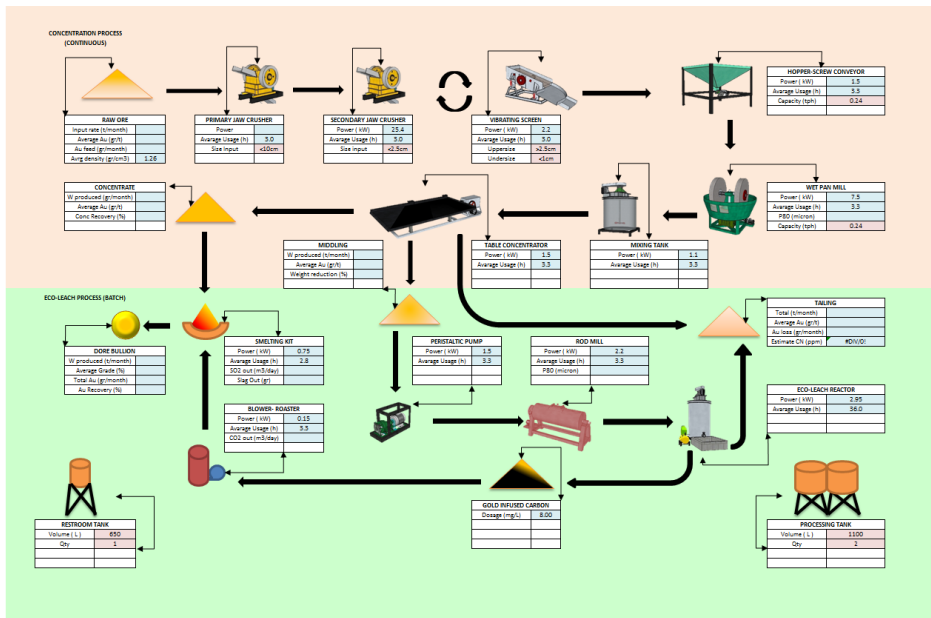
The Opportunity

Here we discuss what can be improved through professionalizing and formalizing the operation with the introduction of the business:

A. Operational improvements:

- ▶ Describe the equipment and training to be introduced and how the ore extraction rates will increase as a result
- ▶ Describe the processing equipment introduced and the processing method. The description should emphasize how the process is controlled, how mercury use is eliminated, and how recoveries are improved, and the estimated gold production.
- ▶ Provide an estimate of what the operating cost per unit is

It is useful here to include a simple flow-chart that describes the operation – The below is an example only:



B. Social improvements:

Here, we can discuss how the company aligns with the UN's sustainable development goals. It would be useful to highlight the education and training on such matters – if applicable - provided by the planetGOLD program. Some examples include:

- ▶ The elimination of child labor and the introduction of gender equality
- ▶ The improvement of economic income for miners

C. Environmental improvements:

Here, the specifics of the mercury reduction from the process could be included. That is the amount removed from the operation and the health impact. The plan should discuss the training provided through the planetGOLD program concerning health if applicable.

In the following sections we discuss some specifics that are helpful in assessing the business opportunity with regards to describing the operations:

Site Preparation

The work involved and the site preparation and associated costs should be estimated. Other details to consider may include timelines/seasonality/other.

- ▶ Make sure all permits are in place or provide clarity on the permitting process. The permitting process may have a significant cost associated with it (ex. Environmental Impact Assessment study)
- ▶ Mining concession: Depending on the state of the site, some preparation may be required
- ▶ Plant site: Where will the plant be situated and what is the required construction. This may include the pouring of concrete foundations, small buildings to house the equipment, tailings management, etc.

Sourcing

- ▶ Equipment:
 - Describe the function, capacity and suitability of the equipment, for example,

a tonne per day crusher, also explain why this equipment was chosen

- Describe the make and model of the equipment
 - Explain the import process. Where will the equipment come from and how will it get to its final destination
 - Maintenance requirements
 - Estimate the cost of the equipment including installation
- ▶ Reagents and consumables:
- Depending on the mineralization, the type and quantity of reagents and consumables will vary. The type and amount will need to be documented.
 - The reagents and consumables may be regulated. Identify and briefly explain the regulation and how the operation will be in compliance.
 - Identify the sourcing process and if any of the consumables require special importation.
 - It is advisable to have multiple vendor options for risk mitigation purposes.

Human Resources

The description of the operation above, as well as the operational flow-chart, may be used as a guide to starting a human resource management strategy. This section may not apply to smaller operations.

The following considerations are essential before starting the hiring process:

- ▶ The aggregate income should significantly improve as a result of operational improvements; this will be an important incentive for miners and communities to adopt the change.
- ▶ Determine which positions will be full-time employees of the JV and which will be contract based
- ▶ It is recommended that upper and mid-level management be employees of the company.
- ▶ Draw-out the organizational structure as per the example below:

Project Budgeting

Establishing the project budget starts with identifying and estimating initial capital requirements, free cash flow, and maintenance capital. For smaller operations, a plan showing the timing of the required work and the associated expense would instill confidence in the financier and may increase the chance of successfully securing financing.

Initial capital⁷:

Site preparation, construction, and equipment are examples of initial capital expenditures required to advance the operation to the “shovel ready” state.

It is crucial to identify long-lead items⁸ to optimize the construction phase timeline. The project engineers will determine what is required for site preparation, construction, installation, and appropriately size the equipment. All these efforts need to be carefully coordinated to minimize idle time.

The below is only an example. Activities and timelines will vary depending on the project plan:

Activity	Month								
	1	2	3	4	5	6	7	8	9
Feasibility study - Finalized	█								
Financing package in place		█							
Hiring personnel		█	█	█	█				
Engineering	█	█	█						
Site preparation			█	█	█	█			
Construction						█	█	█	█
Equipment installation								█	█
Plant Commissioning									

The drawdown of the initial capital should match the expense schedule as closely as possible to avoid unnecessary costs.

Other considerations include:

- ▶ Interest on borrowed capital starts immediately after the funds are advanced to the borrower unless the lender grants a grace period. Even if a grace period is granted, interest will accrue.
- ▶ It is unlikely that a startup company will be able to finance all of the initial capital

⁷ Initial Capital: Is the amount of funds needed to get the business ready to begin operations

⁸ Equipment or activities that take a long time to be delivered or completed from when the order or work commences

expenditures with debt. A capital structure that is mostly equity will have higher chances of success given the business risk profile and the lack of consistent cash flow required to service the debt.

An estimate of the amount of the initial capital will rely on the feasibility study and engineering optimization⁹. The technical and financial teams work together to create a financing strategy. Depending on the operation, a phased approach may generate cash flow after certain milestones are completed, which may help finance later stages of the project.

Operating Costs:

Operating costs are generally classified as fixed or variable. Variable costs fluctuate directly with production rates, while fixed costs are constant regardless of production. Irrespective of the operation's size, a clear understanding of the costs is required for the lender to assess the viability of the business.

Choosing the cost structure:

The business may have a choice of structuring certain costs as fixed or variable. For example, some mining companies may have a dedicated mining team. The company will need to pay the salaries for all personnel regardless of mining activity. Other companies choose to outsource the mining operations by hiring miners based on a contract.

In case the commodity price declines to a level where the company is generating losses, the company with the mining contract may wish to either end the contract or not renew the contract when the contract period lapses. However, in the case of hired employees, the company will either keep the personnel on payroll until the operation returns to profitability or will have to decide to lay off some of the workforce. The latter scenario could result in a significant cost to the company.

In some cases, the company will have limited choice in determining a cost structure. For example, if a company uses cyanide to leach the gold, cyanide's price may fluctuate outside of the company's control. A commodity hedging program or long-term agreements with suppliers could provide some stability.

While there is no scientific formula for how much of the costs should be variable and how much should be fixed, the best practice is to structure the costs according to visibility. For example, if the

⁹ A feasibility study is well-thought-out analysis and forecasts describing the project from start to the operating state. It is used to evaluate the economics of the project. In large scale mining they can be presented within a 43-101 technical reporting standards

company believes the next five years will experience a commodity boom, it might be best to hire and retain their team. The capital structure of the company may also influence the cost structure. For example, if the company has a significant amount of debt that requires regular service, achieving the highest level of cash flow certainty through hedging and contracts would be a better strategy in case of unforeseen events that may impact the company's revenue stream.

Proforma Financial Statements

This section is one of the most critical parts of the business plan that will be required by financiers; equity investors and lenders.

The proforma financial statements¹⁰ are mainly a product of revenue, costs, capital structure¹¹, and timeline estimates. They provide a window into the predictability of cash flows and are indicative of the company's financial health and, ultimately, survival, success, and growth.

The financial model Template

planetGOLD global developed an excel based financial model template to create the financial forecast and evaluate a project's economic viability.

As a general rule, blue font cells are for user inputs and black font cells are formulas that should not be modified. Most of the user input is done in the "Estimates and Assumptions" sheet. The template consists of five sheets, a brief description of each sheet's function is provided below:

Dashboard:

This sheet provides a summary of a business's expected financial and operational performance ex. gold price, production and revenue estimates.

Estimates and Assumptions:

Here we have detailed assumptions that will drive the model. These details will need to be collected from multiple sources. Ex. engineers and geologists can provide their best estimates on gold grade and processing rates, whereas, financial specialists can provide insights into the costs of the equipment, labor, etc..

Model Operations:

¹⁰ Forecasted financial statements

¹¹ The mix of debt and equity investments in the business

This is the main engine of this tool where pre-set formulas create the operational and financial forecasts based on the inputs in the “Estimates and Assumptions tab”. For example, gold production is based on gold grade, processing throughput and recovery rates. Any changes to these estimates will result in changes in the gold production forecast.

Model Financials:

This section is mainly driven by the output of the model operations tab ex. Revenue. Other estimates flow directly into this sheet as well. For example, the “Selling, general and Administration costs” are drawn from “Estimates and Assumptions” sheet.

Schedules:

This sheet contains items that are specific to the financial statements. These estimates are based on accounting rules as well as financial agreements with the financiers (if any).

The income statement:

The income statement starts with the top line (revenue). In forecasting the revenue for Dore Gold Corp., we need to forecast the gold production and the price of gold.

Production = processed ore x grade x recovery

This can be found in the “Model Operations” sheet in the financial model template (line 15).

Revenue = production x price per unit

This can be found in the “Model Operations” sheet in the financial model template (line 57).

Direct operating costs:

These are costs that are directly associated with the operation. They include employee salaries, equipment rentals, reagents, electricity, dewatering, hauling etc. Some expenses are fixed and can be forecasted as an estimate, for example, equipment rental costs. While other costs are associated with production. For example, fuel is a cost that is a direct result of the mining activity.

This can be found in the “Model Operations” sheet in the financial model template (line 76).

SELLING, GENERAL, AND ADMINISTRATION (SG&A) costs:

These costs are associated with overhead costs that are not directly related to producing gold. These costs could include management's salaries, marketing, and others.

This can be found in the “Estimates and Assumptions” sheet in the financial model template (line 45).

Depreciation and Amortization (D&A):

These costs are based on the accounting method used to calculate depreciation on assets. Accelerated depreciation artificially lowers net income in the earlier years to minimize the tax expense and maximize the cash flows' time value.

This can be found in the “Schedules” sheet in the financial model template (line 17).

Operating profit:

This is a measure of the operation’s profitability independent of the capital structure. Meaning, this measure does not take into account the cost of financing; for example, if the company has debt that requires interest payments, these payments will not be reflected in the operating profit. This is an important measure that investors look at as the capital structure can be altered in some situations for maximum profitability. Operating profit is calculated as:

$$\text{Operating profit} = \text{Revenue} - \text{direct operating costs} - \text{SG\&A} - \text{D\&A}$$

This can be found in the “Model Financials” sheet in the financial model template (line 28).

Interest expense:

If the capital structure has debt that requires service, interest payments are included in the financial statement as a cost before taxation.

This can be found in the “Schedules” sheet in the financial model template (line 10).

Income tax:

Income tax is based on the rate set by the government. Depending on the jurisdiction, some tax-efficient strategies can be valuable for the company. It is important to understand the tax law. Consulting with a corporate tax accountant on this matter is beneficial.

This can be found in the “Model Financials” sheet in the financial model template (line 28).

Net Income:

Also known as the bottom line, net income is defined as:

Net Income = Operating profit - interest expense - income tax

This can be found in the “Model Financials” sheet in the financial model template (line 35).

Earnings before interest, tax, depreciation, and amortization (EBITDA):

This is a useful measure that is considered as a proxy for cash flows. EBITDA multiples are often used by investors to value a company.

This is the sum of lines 28 and 25 in the “Model Financials” sheet.

The Balance Sheet:

The balance sheet has two sides that are always in “balance”; assets on one side and liabilities and shareholders’ equity on the other side. When forecasting the company's financials, the balance sheet is generally a product of the cash flow generated by the company; however, if changes in the capital structure or asset composition are expected, this can be transferred to the balance sheet most likely through forecasting changes in the cash flow statement.

Assets:

The assets of the company may contain current assets like cash and accounts receivable and long-term assets like property, processing facilities, and equipment.

This can be found in the “Model Financials” sheet in the financial model template (line 70).

Liabilities:

Same as with assets, liabilities can be current like accounts payable, or long-term like debt.


This can be found in the “Model Financials” sheet in the financial model template (line 80).

Shareholders equity:

This part of the balance sheet includes the book value of shareholders' equity and retained earnings and other items.

This is the sum of lines 82 and 83 in the “Model Financials” sheet in the financial model template.

The Cash flow statement:



The cash flow statement has three main segments: Cash flow from operating activities, cash flow from investing activities, and cash flow from financing activities.

Cash flow from operating activities:

As the name implies, this part of the cash flow statement reflects the cash flows resulting from the business operations. Non-cash flow items that impact operating income are removed, and cash items that have been excluded are added to calculate the final operating cash flow amount. Changes in working capital are reflected in this section.

This can be found in the “Model Financials” sheet in the financial model template (line 43).

Cash flow from financing activities:

This section accounts for cash flows into the company as a result of investing activities like raising debt or equity; it also accounts for cash outflows related to investing activities like paying dividends.

This can be found in the “Model Financials” sheet in the financial model template (line 53).

Cash flow from investing activities:

This section accounts for changes in cash outflows resulting from investing in equipment or cash inflows as a result of divesting of equipment or land.

The cash account change over the accounting period should match the difference between the cash balances in the current and previous period on the balance sheet.

This can be found in the “Model Financials” sheet in the financial model template (line 47).

Financial Analysis

There are several financial metrics that investors use to assess the attractiveness of a business. Some of these metrics are commonly used in the mining investment world in various forms, while others are specific to mining investments.

The Net Asset Value (NAV):

This is a valuation metric based on the idea of the time value of money or "discounted cash flow."¹² NAV is calculated by forecasting cash flows over the business's life, and applying a discount factor to determine what the value of these cash flows is today. The discount factor considers the risk associated with the cash flows and the company's capital structure.

The NAV should represent the intrinsic value that an investor is willing to pay for the business. However, due to market inefficiencies, investment transactions can occur at a premium or a discount to the NAV.

This can be found in the "Model Financials" sheet in the financial model template (line 101).

Cost per unit produced

Investors look at several metrics to determine profitability as well as the sustainability of the operation. Some of the typical cost per unit measures that investors look at are referred to as C1, C2, C3, and all-in sustaining costs (AISC) per oz of gold. See appendix 2 for definitions.

While there is some guidance on what should and shouldn't be included in this measure, it is always advisable to include a note explaining what goes into each of the metrics.

For example, the AISC includes all direct cash costs associated with the production of gold, administration costs, as well as costs related to sustaining capital expenditures over the life of the operation (replacing equipment parts). For specific reporting periods, these costs are added up and divided by total production to measure per unit.

Let's use our hypothetical example Dore Gold Mining (DGM). Assume DGM produced 500 ozs of gold in 2020. The direct costs associated with this gold production were \$400k, other administration and overhead costs were \$100k, and sustaining capital expenditures amounted to \$50k in 2020. We add up these costs and divide by the ozs produced in the same year:

$$\begin{aligned} \text{AISC} &= (\text{direct costs} + \text{overhead and administration} + \text{sustaining capital}) / \text{gold produced} \\ &= \$550\text{k} / 500\text{ozs} = \$1,100/\text{oz} \end{aligned}$$

This implies that the operation can generate the difference between the gold sale price and the cost per oz in cash flow for every oz produced. For example, if the realized gold price is \$1,900, the operation will generate $\$1,900 - \$1,100 = \$800/\text{oz}$ in cash flow. Keep in mind that some other costs like taxation or

¹² Time value of money: A dollar to be received 1 year from today is worth less than \$1 today



capital investment may not be included in these costs and should be accounted for when computing free cash flow.

This can be found in the “Dashboard” sheet in the financial model template (lines 21 and 22).

Leverage

Measures of leverage indicate to the investors what financial risks may be due to the debt financing. Several metrics can be used to calculate the company's financial leverage.

One of these measures is calculated by dividing the debt a company holds by profit generated by the company like EBITDA. The higher the debt/EBITDA ratio, the more the operation is exposed to financial distress.

Due to several factors that may impact a company's profitability, there is no perfect threshold for determining what constitutes a healthy leverage ratio. However, ratios that are more than 2x may be considered high and undesirable for a commodity-producing company like DGM.

This can be found in the “Dashboard” sheet in the financial model template (line 34).

Appendix

A1: The Impact Investing Spectrum

	Responsible Investing		Impact Investing		
Traditional Investing	Ethical Investing	Sustainable Investing	Thematic Impact Investing	Impact First Investing	Venture Philanthropy
	Seeking competitive returns				
	Mitigating Environmental, Social, and Governance (ESG) risks				
		Pursuing Environmental, Social, and Governance opportunities			
			Focusing on measurable high-impact solutions		
Financial returns with limited consideration of ESG factors or ethical constraints	Investments are screened out based on ESG risk or ethical constraints	Sustainability factors and financial returns drive investment selection and shareholder advocacy	Focus on issue areas where social or environmental need creates a commercial opportunity for market-rate returns	Focus on issue areas where social and environmental need requires some financial trade-off	Addresses societal challenges that cannot generate a financial return for investors
	Negative Screens: Tobacco Alcohol Weapons Gambling Pornography Nuclear Energy	Factors Considered: Resource use Waste reduction Compensation Product safety Gender equality	Solutions For: Climate Change Population Growth Urbanization Water scarcity Food systems	Support For: Innovation & Risk Taking Proof of Concept/Pilots Commercial Capital Leverage	
	Ethically-screened Investment Fund	"Best-in-Class" SRI Fund	Sustainable Agriculture Fund	Debt to Enterprising Charities	

Source: The Impact Investing Guidebook for Foundations (impactinvesting.ca/foundations)

A2: Cash Costs

Cash costs are performance measures that do not belong to the generally accepted accounting principles and therefore may be defined differently by the presenters. Wood Mackenzie (a global resource consultancy group) defines cash costs as follows:

C1 cash costs: Cash costs incurred in the production of the metal in addition to marketing and selling costs. For example: mining, milling, smelting, site administration and freight.

C2 cash costs: Include C1 cash costs in addition to depreciation, depletion, and amortization.

C3 cash costs: C2 costs plus indirect costs and interest charges like attributable corporate overhead costs, royalties, and interest payments

All-In Sustaining Costs (AISC):

The World Gold Council provides some guidance on how to calculate AISC in the table below:

Cost Category	Source	US \$ / gold ounces sold
On-site mining and processing costs (on a sales basis)	Income Statement	(a)
On-site general and administrative costs	Income Statement	(b)
Royalties and production taxes	Income Statement	(c)
Realised gains and losses on hedges of operating costs	Income Statement	(d)
Community costs related to current operations	Income Statement	(e)
Permitting costs related to current operations	Income Statement	(f)
3 rd party smelting, refining and transport costs	Income Statement	(g)
Non-cash remuneration (site-based)	Income Statement	(h)
Stockpile, leach pad and product inventory write-downs	Income Statement	(i)
Operational Stripping Costs	Income Statement	(j)
By-product and co-product credits (<i>Note: will be a credit</i>)	Income Statement	(k)
<i>Sub-total (Adjusted operating costs)</i>		(l) = (a)+(b)+(c)+(d)+(e)+(f)+(g)+(h)+(i)+(j)+(k)
Corporate or regional general and administrative costs, including share-based remuneration (sustaining)	Income Statement	(m)
Reclamation & remediation – accretion & amortisation (operating sites)	Income Statement	(n)
Exploration and study costs (sustaining)	Income Statement	(o)
Capital exploration (sustaining)	Cash Flow	(p)
Capitalised stripping & underground mine development (sustaining)	Cash Flow	(q)
Sustaining capital expenditure	Cash Flow	(r)
Sustaining leases	Cash Flow	(s)
All-in Sustaining Costs		(t) = (l)+(m)+(n)+(o)+(p)+(q)+(r)+(s)



Supported by:



Led by:



In partnership with:



CONSERVATION INTERNATIONAL

