



Implementation Support
and Follow-up Unit



Public Authority for Mining

Mining Lab Outcomes

Towards Efficient Utilization of
Oman's Land Treasures

March 18TH – April 26TH 2018

Designed by: Nabila Mohammed Al-Habsi





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His Majesty's speech

Dear Citizens,

"We believe that the future for generations lies in the strong link to this good land, pride in the traditions of our ancestors in glorifying work and exertion of best efforts to utilize the natural resources of our country".

Qaboos bin Said
Sultan of Oman



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His Excellency Eng. Ahmed bin Hassan Al Dheeb

Undersecretary of the Ministry of Commerce and Industry and Chairman of PAM Board of Directors

The mining sector is a vital sector for world economies. It is considered as one of the most important sectors that drive governments' investments, given the high return value of mineral resources and its significant contribution to the development of the economy. As the mining sector is closely tied with manufacturing, the Ministry of Commerce and Industry and the Public Authority for Mining have collaboratively organized the mining lab. The six-week lab was supervised by the Implementation Support and Follow-up Unit. During the lab, the strategic direction of the sector as well as the opportunities, potentials, challenges facing investors and the means to overcome such challenges were thoroughly examined.

Focusing on the mining sector falls within the framework of the Ninth Five-Year Development Plan 2016-2020, which included 19 sectors that promote economic diversification. As a promising non-oil sector, the mining sector can attract investments in its various activities, which will consequently increase imports and exports, and create new jobs for Omanis, using modern technologies to keep pace with global developments in the fields of exploration, excavation and production. Moreover, the mining sector will serve the public interest, through the development of existing projects and the execution of new and more efficient initiatives that will contribute to the growth of the sector.

In cooperation with the Public Authority for Mining, the Ministry of Commerce and Industry is keen to develop the sector in all its aspects. Prior to the issuance of Royal Decree No (2014/49), the Ministry was responsible for the sector represented in the Directorate General of Minerals. The Ministry has

worked diligently during that period to support the mining sector, attract investments, and develop organizational laws in recognition of sector's significance. The Sultanate has a huge mineral wealth, distributed across its various governorates, and having different mineral characteristics. The Sultanate's mineral wealth is of great economic feasibility and includes both precious metals and industrial minerals. Preliminary estimates indicate that the Sultanate's reserves of minerals are still untapped by 97% of total estimated reserve, despite a 4% increase in production over the past five years.

The initiatives and projects suggested by the Lab aim to link the strategies adopted for vital economic sectors, including those related to the mining sector, reduce dependence on oil resources as a source of income, and diversify sources of national income. The Lab also aims to achieve effective participation of both public and private sectors, and identify government projects' opportunities and challenges, as well as unlock private sector investments. This can be done by developing a clear action plan to provide solutions capable of achieving the tasks given to various relevant stakeholders.

Finally, I would like to express my sincere appreciation to the Public Authority for Mining, which saved no efforts to make this Lab a success. My appreciation also goes to the Implementation Support and Follow-up Unit, who helped organize the mining lab. The Unit will be responsible of supporting the implementation of the recommended initiatives and projects and follows up on their progress, according to a clear vision and accurate performance indicators, which will eventually achieve the desired economic diversification in the sector.



His Excellency
Eng. Hilal bin Mohammed Al Busaidi
 CEO of the Public Authority for Mining

Since founded, the Public Authority for Mining (PAM) has been working steadily to develop and promote the mining sector through a number of continuous procedures and measures, with the aim to reach an optimal exploitation of the mineral wealth, on the one hand, and to invest its revenues in achieving growth objectives as well as enhancing the economic diversification in the Sultanate of Oman, on the other hand. PAM has committed itself to such mission by following clear, specific, traceable, sustainable and effective mechanisms.

The mining lab, organised by the Public Authority for Mining and supported by the Implementation Support and Follow-up Unit, has come up with more than 43 initiatives and projects, with a value estimated at OMR 813 million, 99% of which will be shouldered by the private sector. These initiatives and projects are expected to increase the contribution of the mining sector to the GDP by three times the current contribution, to reach an estimated value of around OMR 378 million by 2023. Besides, it will create no less than 1600 direct job opportunities to Omanis and raise the mining production of the Sultanate from 100 million tons in 2016 to 147 million tons by 2023. This is in addition to several recommendations that will contribute to raising the competitiveness level of the sector by developing a mining blocks system, which once approved, will allow the qualified investors to compete and submit their bids.

The mining lab, convened from March 18 till April 26th, 2018, lasted for 6 consecutive weeks and witnessed a wide participation of different stakeholders, civil society organizations, investors in the mining sector and a number of academics, to reflect the significance of the role of all parties and to enhance the values of responsibility and transparency. The event allowed all parties to work under one roof with a common vision in order to come up with initiatives and projects that would ensure the sustainability of the sector development and to identify its priorities.

In order to ensure accurate carrying out of the project functions, the Mining Lab identified, at an early stage of the lab, the key projects and enabling factors required for implementation in three main workstreams: a) industrial minerals, b) metals, and c) regulations and enablers. A number of initiatives and projects have emerged from each workstream. For industrial minerals, five initiatives were identified on the basis of targeted raw materials. Permit applications reviewed in the lab reached 19 applications, all of which were classified

as projects and five were endorsed by the lab. Moreover, downstream industries were classified and identified in cooperation with the Industrial Innovation Center. Initiatives and projects included gypsum mining, limestone mining, Gabbro and aggregates mining, kaolin and silica quartz mining, and other downstream projects.

As to metals workstream, five initiatives were identified on the basis of targeted raw materials. The lab received 43 permit applications. 24 projects were classified as feasible projects, 8 of which were endorsed by the lab. Initiatives and projects falling within this workstream included copper upstream mines and concentration plants, copper downstream plants, chromium upstream mines and concentration plants, ferrocrome downstream plants, different downstream projects, and review of inactive chromium mining licenses.

As for regulations and enablers workstream, the lab, in line with Oman's Mineral Wealth Law and Mining Strategy, came out with 9 initiatives with the aim to promote and organize the sector, as well as to streamline procedures. These initiatives and projects included the establishment of mining blocks system, simplification of exploration and mining licensing procedures, creating a central and integrated database, activating the financial independence of the Public Authority for Mining, outsourcing of monitoring and inspection services and the laboratory of the Public Authority for Mining, specialized training for the employees of the Public Authority for Mining, quality management system, developing a flexible framework for royalties, as well as a mechanism to regulate corporate social responsibility.

Lab outcomes also include the establishment of the Ministerial Delivery Unit (MDU) within the Public Authority for Mining, which will be responsible for setting regulations, projects implementation and investment facilitation. The Office will be monitoring performance indicators together with the Implementation Support and Follow-up Unit, as the Unit will be monitoring the progress made in the execution of all the lab initiatives and projects to ensure that challenges that may arise during the implementation phase are adequately addressed.

Finally, I would like to thank the Implementation Support and Follow-up Unit for its efforts made since the lab preparation phase and until the publication of this valuable book. My thanks should also go to PAM team and all participants who have worked with determination and devoted themselves to making this lab a success, which can only bring wealth and prosperity to our beloved country under the wise leadership of His Majesty Sultan Qaboos bin Said – may Allah protect him.



Important Highlights

- The mining sector is one of the promising economic diversification sectors identified in the Ninth Five-Year Development Plan (2016-2020). Accordingly, the project completion schedule may extend to the year 2023 as most of the projects are to start execution in 2018.
- The Mining Lab was held during the period from March 18th to April 26th, 2018 under the supervision of the Public Authority for Mining and in cooperation with the Implementation Support and Follow-up Unit.
- The methodology of economic diversification allows the involvement of different segments of civil society and stakeholders from the public and private sectors in the decision-making process through the opening of channels of systematic, common and sustainable participation between all parties, whether through the media (audio and video) or social media (YouTube, Twitter, Facebook, Etc.) or holding meetings and periodic sessions with stakeholders in order to ensure the involvement of all stakeholders. This stems from the belief in the importance of the roles of all parties and in promoting the principles of accountability and transparency.

- The methodology aims at strengthening trust between the community and the government, on the one hand, and between the government and the private sector, on the other, to create a healthy work environment and establish a common ground based on credibility and the principle of open dialogue.
- The methodology of the lab is based on the development of practical programs and detailed, implementable and measurable mechanisms.
- Efforts to promote economic diversification are aimed at developing a new work culture in the implementation of national plans, ensuring the identification and distribution of responsibilities and roles between stakeholders and measuring the performance of implementing agencies.
- The results of the lab are not a government product, but rather a “national product” that was co-developed and produced by participants from the government, private sector, civil society, academia and youth, and in which more than 21,000 hours were invested.
- The figures, statistics and performance indicators in this handbook may be modified according to the nature of the implementation of each project and the economic changes that may occur during the implementation phase.
- The handbook showcases the outcomes of the mining lab. It should therefore be noted that the percentages listed in the graphs are as discussed in the lab period (2018), which reflect the statistics of 2017 and earlier.
- Most of the projects listed in the handbook have their private investors already secured.
- The results of the lab are not final and the methodology used ensures continuous development and review by the lab participants in coordination with the concerned parties and under the supervision of the steering committee of the sector.
- In accordance with the requirements of development plans and government programs in the implementation of initiatives and projects to promote economic diversification, some changes are expected to occur during the implementation phase. A number of projects are expected to be implemented “as is”, while some adjustments are expected to occur to other projects during the implementation phase. In addition, a number of projects are expected to be reviewed and replaced by other projects to achieve equal objectives, given the possibility of better economic opportunities, impacts, potential challenges or constraints (economic, social, cultural, etc.) during the actual implementation phase.

Introduction

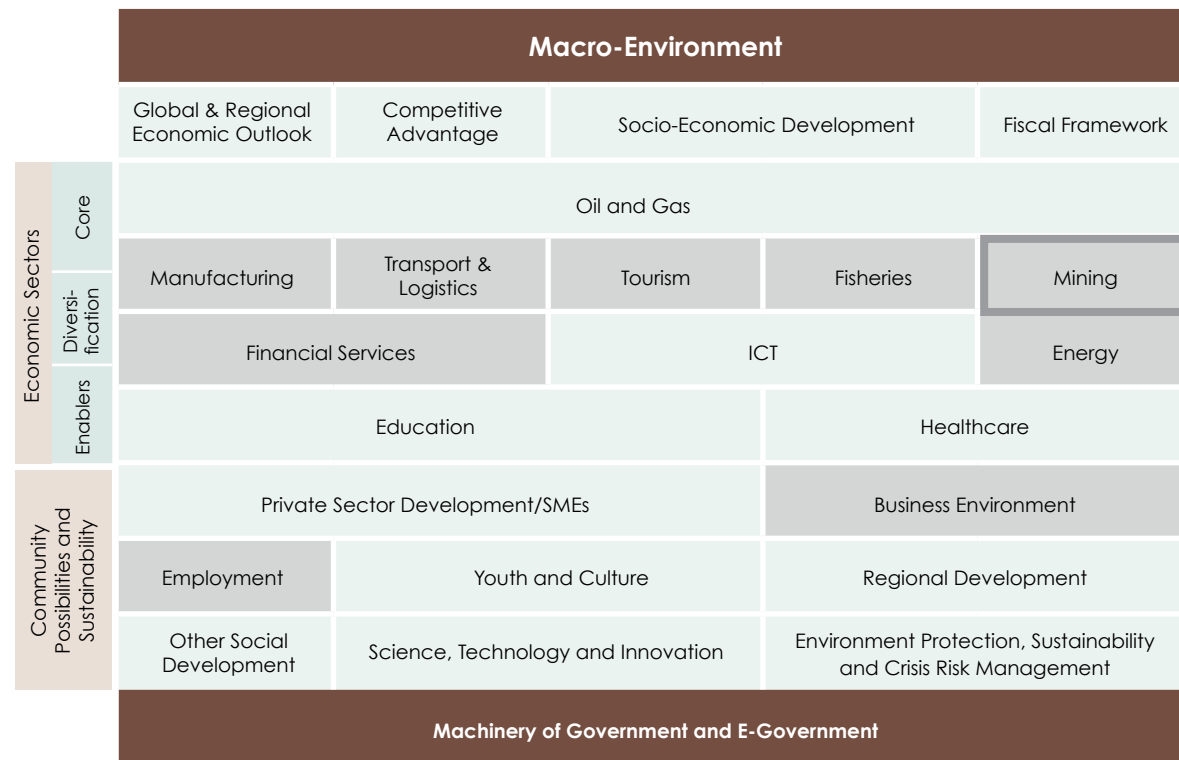


Executive Summary

The mining sector has been of great international importance since ancient times. It has accompanied human civilizations as it climbed up the pace of economic progress and prosperity. It has been one of the main drivers of human development thanks to its major growth-driven tools that are based on the extraction of raw materials and associated manufacturing operations.

The mining sector is considered one of the promising non-oil sectors identified in the Ninth Five-Year Development Plan (2016-2020). As a sector, mining represents an attractive environment for investment for its various activities, that can significantly increase revenues and exports, create new jobs and localize knowledge and techniques for exploration, excavation and production activities. Mining activities are a very important asset that must be exploited to the best of the public interest, through the development of existing projects and the creation of new projects with greater efficiency that would contribute positively to the growth of the sector.

The Sultanate is replete with special mineral wealth, spread across its vast territory. Each part of this

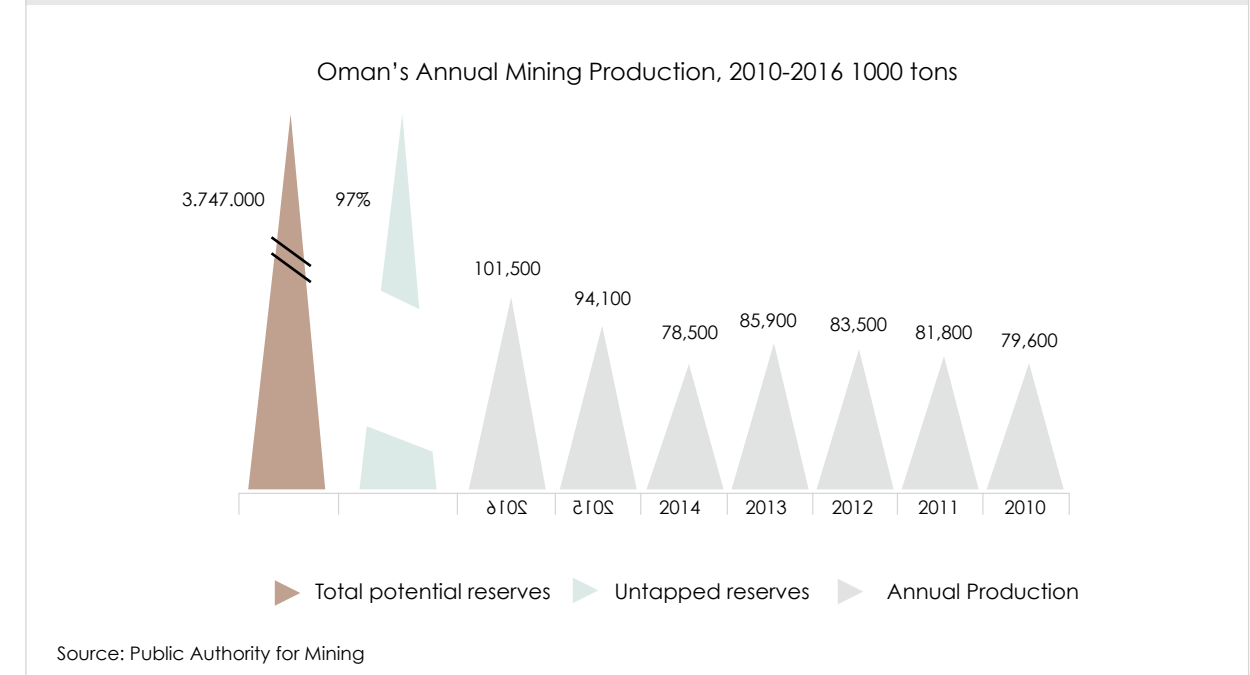


■ Sectors targeted during 2016-2018

Source: 9th Five-Year Plan (2016-2020). The Supreme Council for Planning

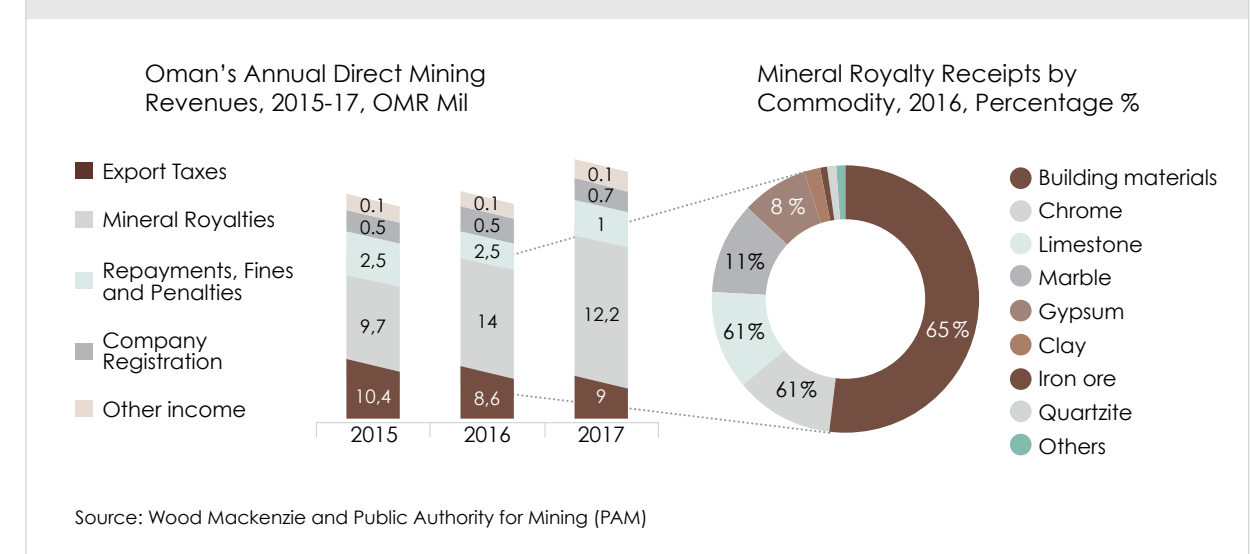
wealth is characterized by different compositions that are formed by mineral ores, due to the date of its natural formation. These formations represent a wide range of ores of economic feasibility between precious metals and industrial minerals. Preliminary estimates indicate that Oman's reserves of minerals are still untapped by 97% of the total estimated reserves in the Sultanate so far, although production has increased by 4% over the last five years despite the fact that total value of mining production declined by 3.4%.

Oman's mining reserves remain untapped with 97% of the total potential stocks remain unexploited



It should be noted that production in the mining sector requires continuous search and exploration of inventory quantities, discovery of new sites, compensation of losses happening in the existing mining sites, and evaluation of sites discovered to study their economic feasibility in preparation for their exploitation. Many of these studies have been carried out for gypsum, chromium and limestone ores in various parts of the Sultanate, but these studies are still few and insufficient. This is why it is necessary to invest in exploration projects and developing studies and research to achieve long-term stability in mining production.

Due to lack of new exploration projects, the annual direct revenue has remained stagnant



The developmental and economic importance of the mining sector made it one of the promising sectors for economic diversification. Therefore, the mining lab aims at linking the strategies of the vital economic sectors, including those related to the mining sector. It also aims at reducing dependence on oil resources as an income source, achieving the objectives of the Ninth Five-Year Development Plan (2016-2020), and creating effective participation between the public and private sectors, to identify the opportunities of the government projects and the challenges facing them. This is in addition to private sector investments through the definition of a clear work plan to ensure finding solutions capable of achieving the tasks assigned to the various entities.

The lab has injected private investments amounting to OMR 813 million and can reach up to OMR 955 million if the remaining licenses are approved. In addition, four meetings for the Mining Applications Acceleration Committee were held during the lab period, which resulted in the clearance of 13 mining licenses valued at OMR 79.67 million and the provision of about 330 jobs for Omanis.

Mining Lab, challenges and case for change

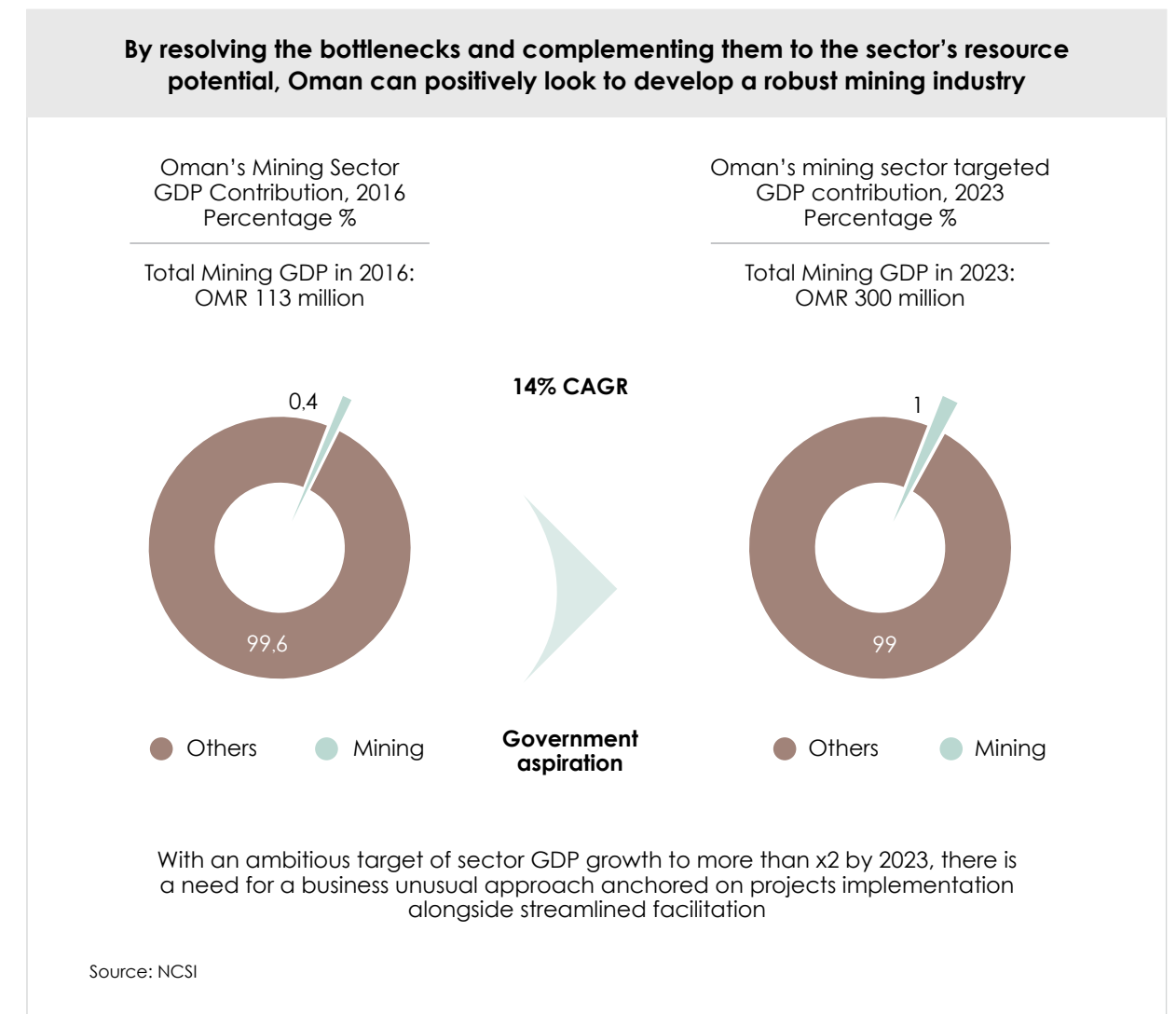
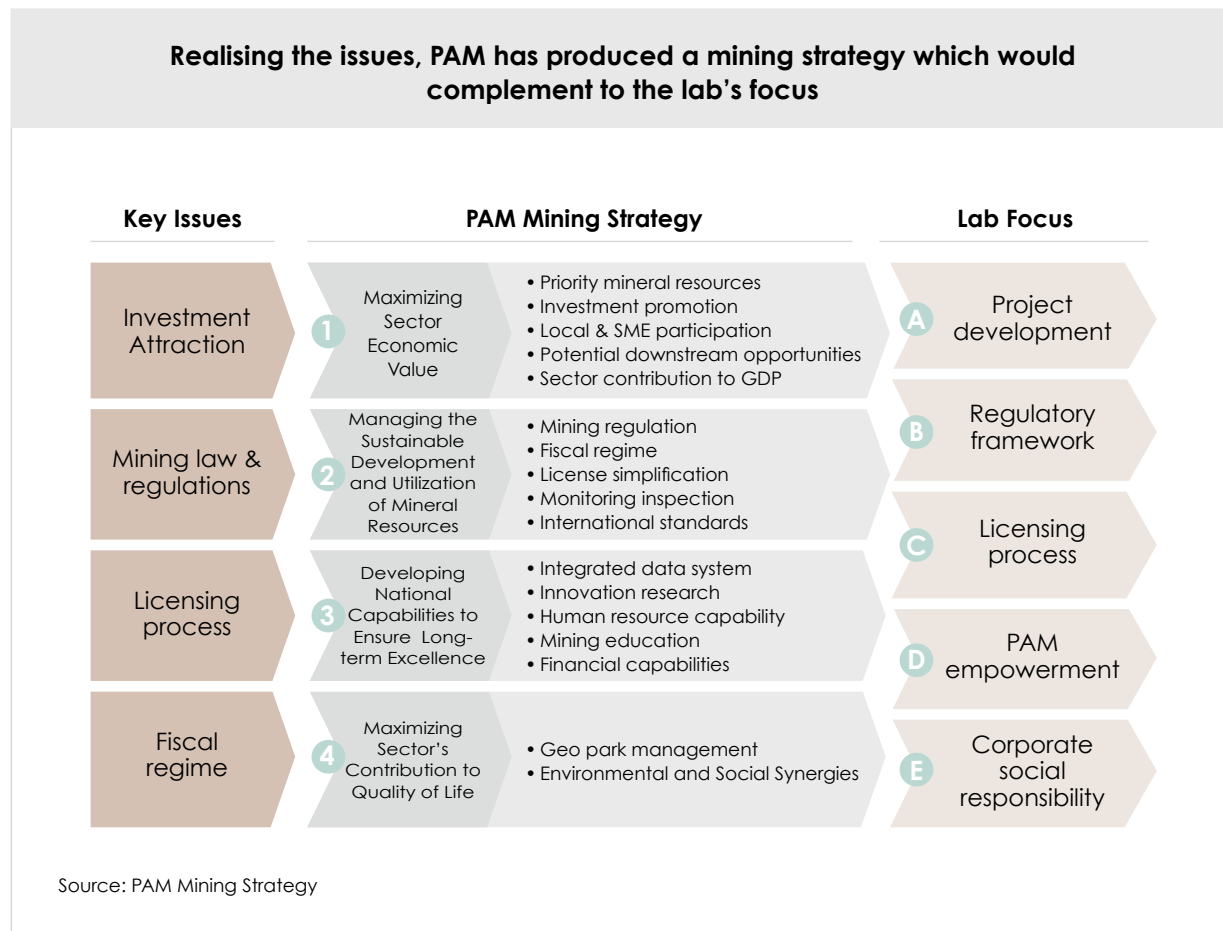
Identifying the difficulties and challenges facing the mining sector was essential. The lab discussed and studied these challenges in order to come up with practical recommendations and solutions that could improve the sector's progress to reach the goals set for it. The challenges of the mining sector relating significantly to the business environment have greatly affected the growth of Oman's mining industry.

These challenges include lack of attractiveness of the business environment for interested investors. In

addition, there is a need to strengthen efforts to encourage further exploration to identify available types of mineral resources that are likely to be discovered and quantified accurately. Geological information, data and other important information shall be provided to investors in an effective manner as part of facilitation services for investors.



Furthermore, the sector needs to update the laws and regulations governing the sector to optimize its growth and guide investment projects. The licensing process in the mining sector is complex and involves many parties and may take a lengthy period, which may negatively affect the seriousness of investors. On the other hand, the efficiency of the financial system of the sector needs to be improved. For example, the high export taxes limit exports competitiveness globally, while at the same time reduce domestic prices and avoids high export prices.


In addition, there are other bottlenecks associated with the society's passive approach for the mining sector, as of causing dust, water, air and noise pollution. These challenges have affected the sector's efforts and development, and it has become necessary to find solutions that call for this change in order to overcome such challenges, being a sector of high potential that will contribute to diversifying the economic base in the Sultanate.



The strategic direction of the mining lab is as follows:

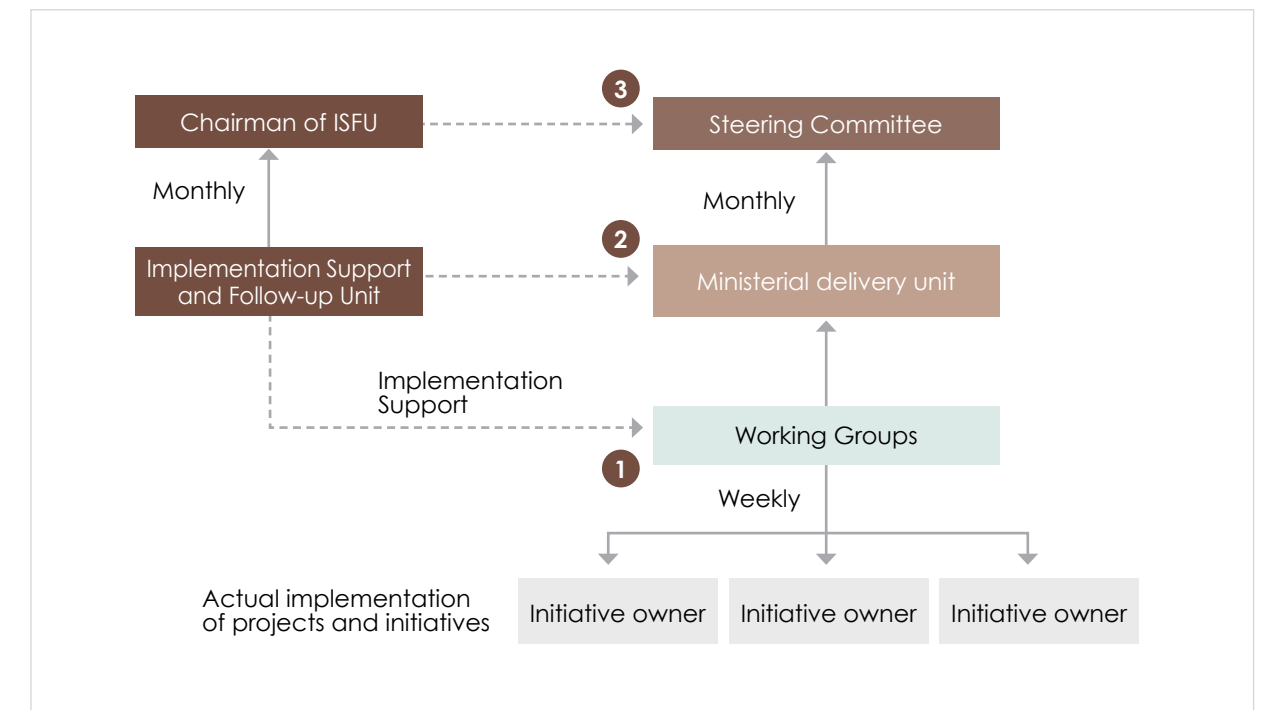
1. Gross Domestic Product (GDP) increased from OMR 118 million in 2016 to no less than OMR 300 million by 2023.
2. Increase production from 100 million metric tons in 2016 to 147 million metric tons by 2023.
3. Investment creation: at least 80% of private sector investment.
4. New job creation: about 2,000 new jobs by 2023.

1 Industrial Minerals 	2 Metals 
<ul style="list-style-type: none"> • Increase in industrial minerals production from 100 MT in 2016 to 138 MT in 2023. • Downstream Products: Develop and enhance value added products. 	<ul style="list-style-type: none"> • Increase in metals production from 1.1 MT in 2016 to 1.8 MT in 2023 with focus on high value – copper, chrome, nickel, etc. • Downstream Products: Develop and enhance value added products.

3 Regulations & Enablers 
<ul style="list-style-type: none"> • Taxes and Royalties: Define optimal taxes and royalties fees. • Permits & Licenses: Definition and simplification of licensing processes and sector monitoring measures. • Concessions Allocation: Identification of prioritised land allocations for mining & mining project concessions. • Infrastructure & Accessibility: Identification of basic infrastructure required to facilitate sector growth. • Social Responsibility: Develop criteria to ensure synergy in involvement with community, environment and SMEs. • Capability Development: Develop criteria on education and training, data management and authority empowerment to ensure sector sustainability. • Innovation in Mining: Develop innovation road map to maximize the value of the mineral resources.

Implementation and Follow-up Mechanism of the Sector Projects

The Implementation Support and Follow-up Unit (ISFU) has adopted a clear approach for providing support, which is supervised by the Mining Sector Steering Committee. The Steering Committee oversees the overall progress of projects and initiatives according to a bottom-up process, whereby projects and initiatives owners prepare weekly reports on project developments and progress and discuss implementation challenges within their sectoral working groups. Sectoral working groups (SWGs) also identify important achievements and key constraints that are problematic. If problem



Lab workstreams and major outcomes

The mining lab identified key projects and the most important enabling factors required for implementation, through three main workstreams:

- a. Industrial minerals
- b. Metals
- c. Regulations and enablers

Industrial Minerals



Metals



Regulations and Enablers





Industrial Minerals

Industrial Minerals

Industrial minerals are non-metallic minerals, and are found in nature more than metallic minerals in terms of quantity. They are different from metallic minerals in their characteristics. Examples of industrial minerals include limestone and gabbro. This type of minerals have a significant importance which stems from its huge reserves in the Sultanate and its large uses in various industries, construction and urbanization in general. In this workstream, the focus was on the following minerals: gypsum, limestone, gabbro, marble, kaolin, quartz, clay, basalt, potash and dolomite.

During the lab, up to OMR 203.9 million was approved as private investments, amounting to OMR 150.3 million as a gross domestic product of these investments, providing approximately 900 job opportunities. These figures will increase, when all licenses are issued, to OMR 313.5 million as private investments and OMR 183.5 million as gross domestic product. And as a result, employment opportunities for Omanis may reach up to 1,300.

The discussions of the industrial minerals workstream focused around the following:

- Identifying 5 initiatives based on targeted raw materials.
- The applications for licenses after being verified in the lab reached 19 applications, and were classified as projects, of which 5 projects endorsed during the lab.
- Setting up a mechanism to regulate gypsum prices.
- Classifying and characterizing final production opportunities in cooperation with the Industrial Innovation Center.

The following are the main initiatives of the industrial minerals workstream:

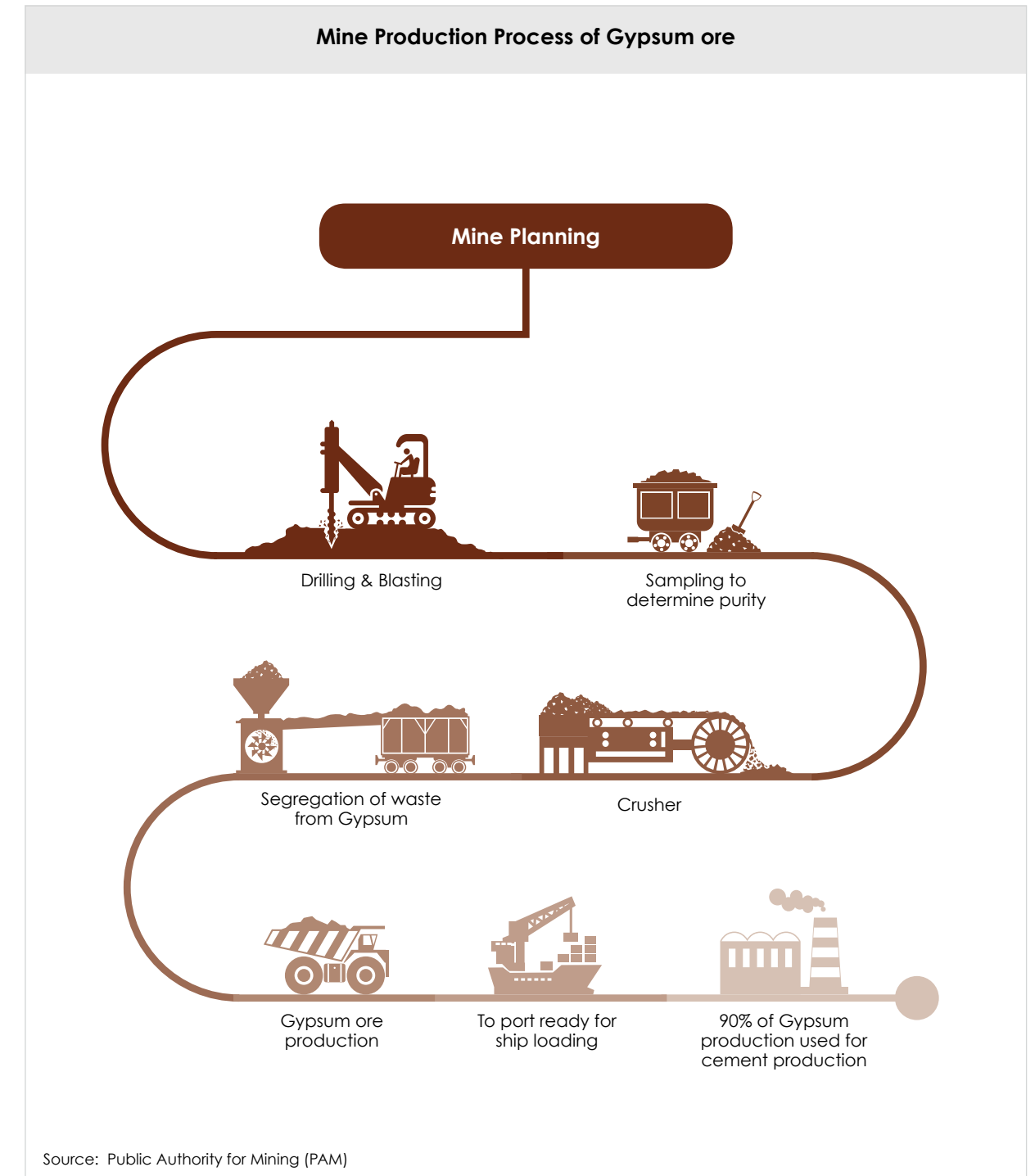
1- Gypsum mining

Indicators confirm that Sultanate of Oman was one of the largest gypsum exporters in the world by the end of 2017, competing with the biggest exporter of gypsum which is the Republic of Thailand. The growth rate of Omani gypsum exports stands at 37% as the highest growth rate for gypsum exports globally. This growth confirms competitive strength and high quality of the Omani gypsum ore, in addition to the role played by the mining sector in the Sultanate in directing optimal exploitation of natural resources.

Gypsum exports are expected to rise steadily. Experts have confirmed that this will make Oman a global gypsum supplier in the coming years, especially that it is well-known for its high purity, competitive prices and proximity to the crude consuming markets, as well as the ease of exporting the mineral through the sea ports of the Sultanate. Gypsum ore is mainly used in manufacturing cement and gypsum boards. It is increasingly demanded by a number of Asian and African countries, especially as large suppliers of crude are facing limited reserves and trying to significantly reduce gypsum exports to feed their local industries.

The value of this initiative lies in increasing the production of gypsum to 7.4 million tons annually, with investments amounting to OMR 14.1 million, and employment opportunities to 135, through three main projects run by two different companies. All projects are based in Wilayat of Thumrait and are in the process of exploration. The current indicators highlight the high quality of the ore in this region.

It is worth mentioning that gypsum is found largely in southern Oman and with 95% purity. Part of it is consumed locally in cement factories, as well as gypsum board manufacturing. A significant proportion is exported to the Asian and African markets.

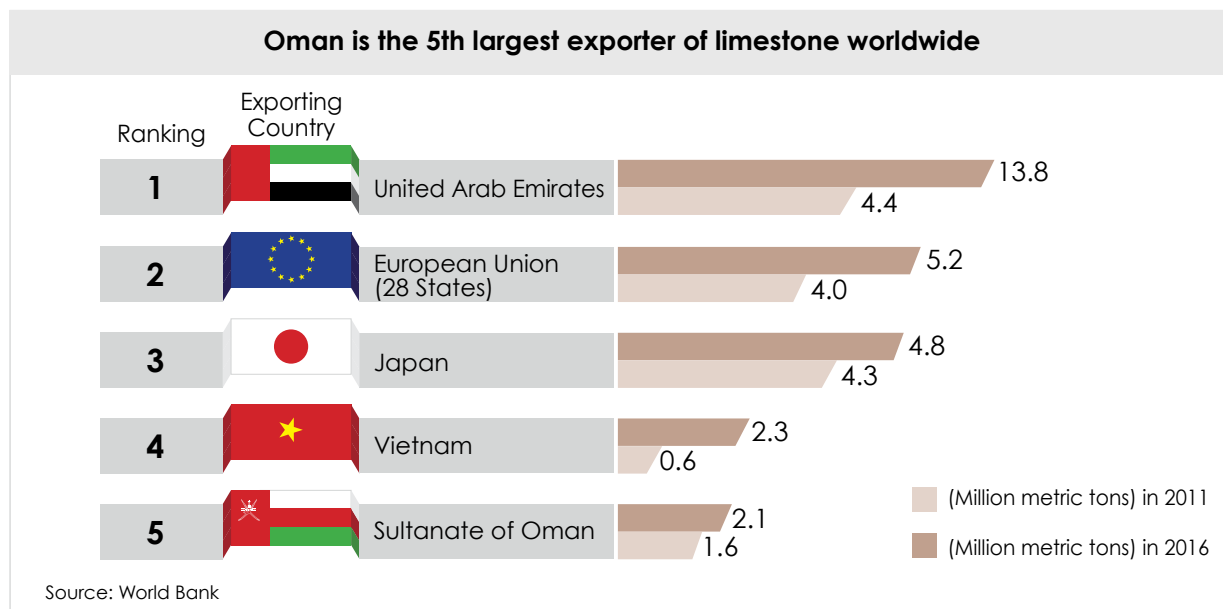


Lead Implementer	<ul style="list-style-type: none"> - Al Tasnim - Mining Development Oman 	
Key Stakeholders	<ul style="list-style-type: none"> - Public Authority for Mining - Ministry of Environment and Climate Affairs - Ministry of Housing - Ministry of Regional Municipalities and Water Resources - Office of the Minister of State and Governor of Dhofar - Ministry of Heritage and Culture 	<ul style="list-style-type: none"> - Ministry of Tourism - Ministry of Defense - Royal Oman Police

2- Limestone mining

The Sultanate is the fifth largest limestone exporter in the world with 2.1 million tons according to statistics of 2016. In the coming years, the Sultanate is aiming to increase the value of its investment in limestone to OMR 13.8 million. It is expected that this growth will be achieved through a project located in Dhofar Governorate. The increase in production and the value of investments will help raise the Sultanate's competitiveness among other limestone exporting countries. It will also emphasize on the quality of Omani limestone as well as the pivotal role played by the mining sector in the Sultanate.

This initiative seeks to enhance the potential for an incremental growth of ores existing all over the Sultanate in order to exploit future demand opportunities. Currently, Points of Sale stand in the local and Asian markets contributing to cement, construction, steel and chemicals industries locally and exporting it to India as a primary market. It is worth mentioning that limestone is used as a main or secondary material in many industries, including cement industry, sodium carbonate industry (soda ash), rock wool industry, where it is used as heat insulation material, live-lime manufacturing, which is used in the manufacturing of hydrated lime used in developing building materials, Iron, steel and coal. It is also used as an auxiliary material for the removal of impurities, in addition to other industries such as paints, ceramics, pastes, plastic industries, insulating materials for roofs and tanks. Limestone is found in most parts of the Sultanate in large quantities, and its quality and quantity vary from one region to the other.



Lead Implementer	<ul style="list-style-type: none"> - Mining Development Oman 	
Key Stakeholders	<ul style="list-style-type: none"> - Public Authority for Mining - Ministry of Environment and Climate Affairs - Ministry of Housing - Ministry of Regional Municipalities and Water Resources - Office of the Minister of State and Governor of Dhofar - Ministry of Heritage and Culture - Ministry of Tourism - Ministry of Defense - Royal Oman Police 	

3- Gabbro and aggregates mining

The idea of the initiative is to increase production of gabbro and aggregate through three projects in order to achieve 17.4 million tons of production annually, with investments amounting to OMR 24.8 million and employment opportunities of up to 75. The majority of the Sultanate's production of aggregate comes from mining alluvial valleys sediments. The domestic market is the largest consumer of this ore, with limited export to neighboring countries (Qatar, Kuwait and the United Arab Emirates). Moreover, Qatar's demand for aggregates is expected to reach around 6 million tons annually by the beginning of next year.

Gabbro and aggregate are a large group of black rocks that are chemically equivalent to basalt. They form when the molten magma is trapped under the surface of the earth and cools gradually to become a mass of holocrystalline rocks. Aggregates are used in construction and building industries and as wave barriers.

Lead Implementer	<ul style="list-style-type: none"> - Al Tasnim - Mining Development Oman 	
Key Stakeholders	<ul style="list-style-type: none"> - Public Authority for Mining - Ministry of Environment and Climate Affairs - Ministry of Housing - Ministry of Regional Municipalities and Water Resources - Ministry of Interior Affairs - Ministry of Heritage and Culture - Ministry of Tourism - Ministry of Defense - Royal Oman Police 	

4- Kaolin and silica quartz mining

Kaolin has many uses such as paper manufacturing due to its low cost for paper production compared to the pulp of wood or any other product. It is also used to manufacture refractory bricks (ceramic), and plastic as it gives the plastic material soft surfaces, protects it from the chemical effect and makes it non-conductive of the electric current. Kaolin is found in Al Wusta Governorate and its rocks are formed in the shape of low mountain heights in both Hushi and Wadi al-Sumayna.

Silica has been the basic material for the glass industry since ancient times. Its granules are made of quartz and are highly pure. It is also used in the manufacture of computer chips and it exists in the Sultanate with promising highly pure reserves spread throughout the country.

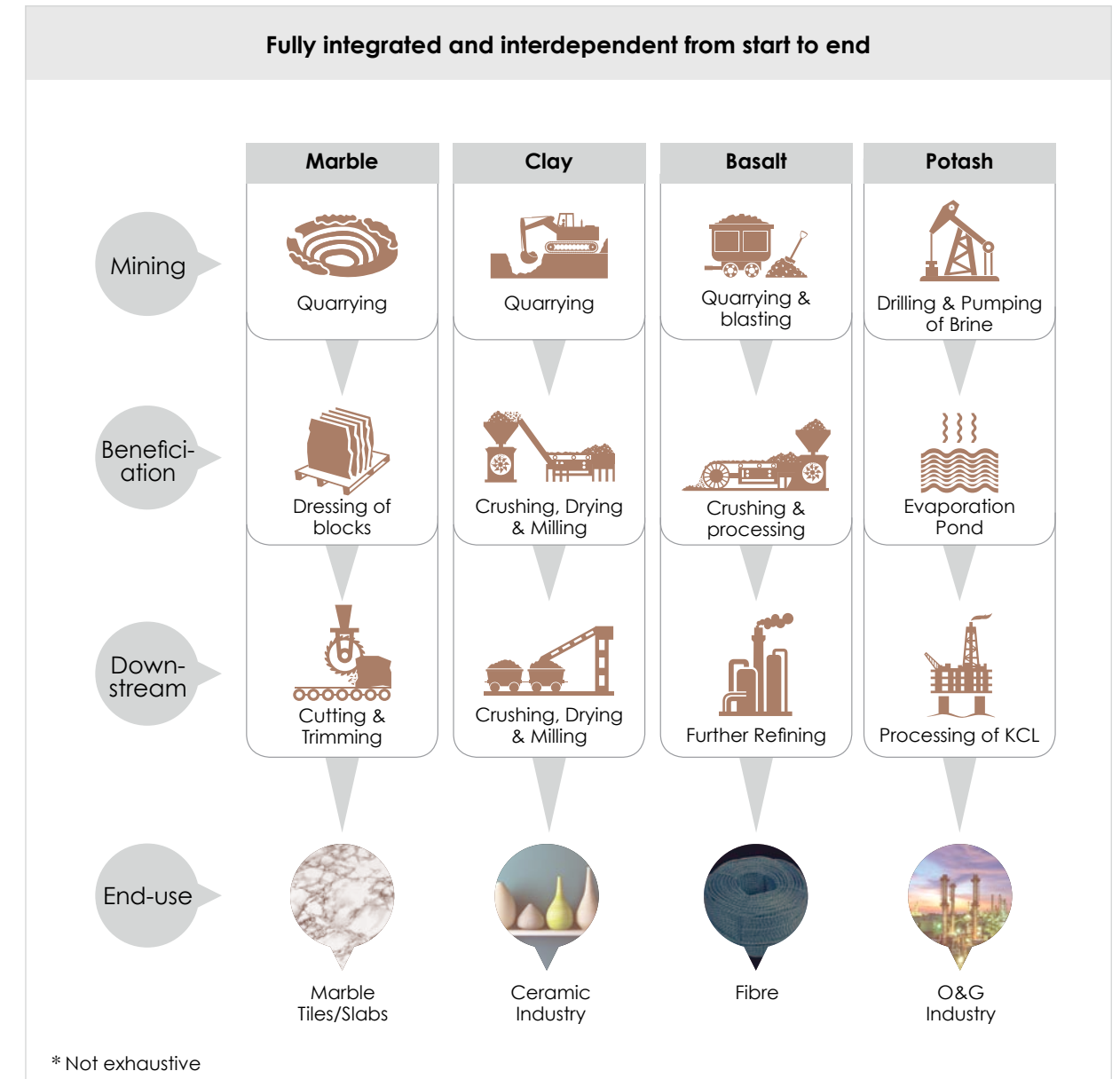
This initiative aims at producing 10 million tons per year with an investment value of OMR 12.1 million, creating 57 jobs through two projects that will be instrumental in increasing production and investment value.

Indicators shows a continuous growth in the production of, due to the increasing demand for the alternative product for the final stages of the two ores to be added to Duqm, as well as the demand of local and regional market. Kaolin and silica quartz are also used in processing oil and gas products, paints, paper, and ceramics.

Lead Implementer	<ul style="list-style-type: none"> - Al Tasnim - Mining Development Oman - Al Tamman Indsil Ferrochrome LLC
Key Stakeholders	<ul style="list-style-type: none"> - Public Authority for Mining - Ministry of Environment and Climate Affairs - Ministry of Housing - Ministry of Regional Municipalities and Water Resources - Ministry of Interior - Ministry of Heritage and Culture - Ministry of Tourism - Ministry of Defense - Royal Oman Police

5- Downstream projects

This initiative seeks to stimulate new integrated potentials for the final stages of manufacturing in the Sultanate, as there is a limited number of similar projects such as common practices in marble and clay. The total number of projects is nine in the downstream field related to marble, clay, basalt, dolomite, potash, etc., including potash project of Gulf Potassium LLC, the dolomite project of Kunooz LLC and the ceramic project of Al Hael. The initiative will inject total investment of OMR 223.5 million, with up to 890 jobs.



Lead Implementer	<ul style="list-style-type: none"> - Mining Development Oman - Al Tasnim - Kunooz LLC 	<ul style="list-style-type: none"> - Gulf Mining/ Gulf Potassium LLC - Al Hael
Key Stakeholders	<ul style="list-style-type: none"> - Public Authority for Mining - Ministry of Environment and Climate Affairs - Ministry of Housing - Ministry of Regional Municipalities and Water Resources 	<ul style="list-style-type: none"> - Ministry of Interior - Ministry of Heritage and Culture - Ministry of Tourism - Ministry of Defense - Royal Oman Police - Ministry of Commerce and Industry



Metals

Metals

Metals represent solid materials that are ductile, malleable, heat and electricity conductor, like copper, iron and chromium. A special workstream has been allocated for metals due to its great importance and multiple uses. These materials have a high economic value represented in commercial quantities in the Sultanate. The focus of this workstream was on copper and chromium.

Up to OMR 609.4 million has been approved during the lab as private investment amounting to OMR 110.9 million as a gross domestic product of these investments, providing up to 766 job opportunities. These figures will increase when all licenses are issued to OMR 642.6 million as private investments and OMR 146.9 million as gross domestic product. The number of job opportunities expected for Omanis is approximately 870. The focus of the workstream was also on the following:

- Identifying 5 initiatives on the basis of targeted raw materials.
- Applications for licenses in the lab reached 43 applications and were classified as suitable projects reaching 24 projects, of which 8 were endorsed in the lab.
- Suggesting an initiative to resolve the challenge of expired or inactive chromium sites.
- Memorandum of Understanding for joint investment in copper smelter and refinery agreed upon between the participating companies concerned with the initial stages of production of copper.
- Potential of re-use of the ferrochrome slag in Oman with short and long term solutions.

The following are the main initiatives of the metals workstream:

Copper Projects:

Archaeological findings confirm that Oman has been known for copper mining and smelting since the third millennium BC, i.e. 5,000 years ago. Research also confirms that the Sultanate exported copper to Mesopotamia. The Assyrians and Sumerians used to call Oman "Majan" meaning copper land.

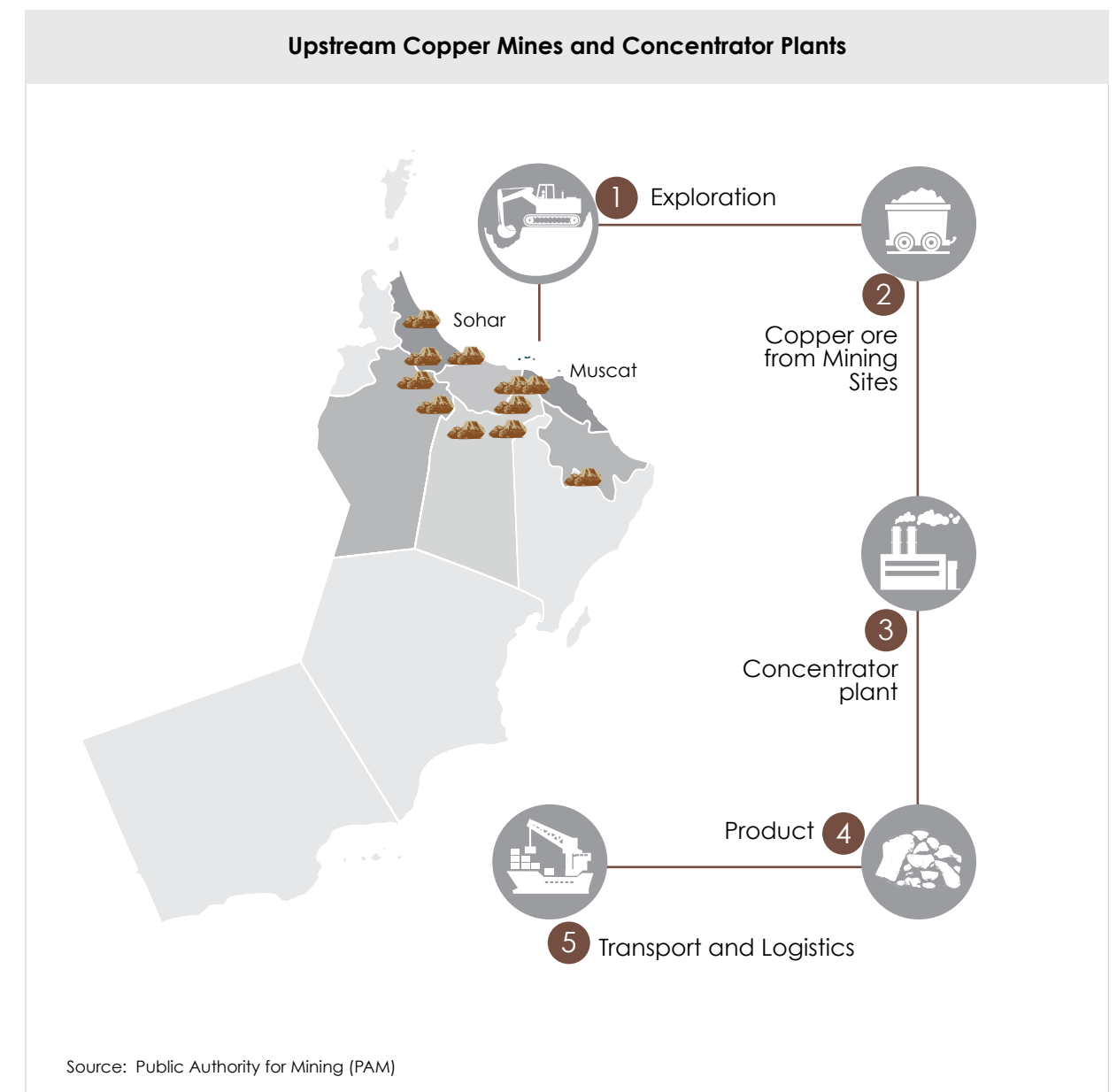
In the modern era, the exploration of copper began in 1973, where efforts culminated in the discovery of the Al-Aseel, Al-Baydhaa and Arjaa mines in Sohar governorate, thus announcing the beginning of exporting Omani copper in commercial quantities in 1983. Copper extraction and smelting continued in Oman until the local production of copper ore stopped in 2004, while imported copper smelting continued to 2015. Currently, there are no active copper mines in the Sultanate, and there are many unapproved applications for mining and exploration operations. The value of copper per metric ton is high, and Oman has huge unexploited potential for mining copper and increasing its value.

Copper is found in nature in the form of free metals, oxides, sulfides, carbonates or silicate. Its ores can be found in all types of rocks and are often combined with other elements, such as the chalcopryrite metal, which is the main component of copper metal. Zinc, lead, iron, gold or silver minerals are usually found in the ores. Moreover, copper is used in large quantities in manufacturing copper wire, plates, brass, bronze, wireless and electrical equipment, ammunition, coins and for chemical purposes. Copper is found mainly in Al Batinah North, Ad Dhahirah and Ash Sharqiyah.

1- Copper upstream mines and concentration plants

The value of copper per metric ton is high and the Sultanate has a huge resource, that is yet to be fully exploited to enhance copper added value. The idea of this initiative is to identify 13 copper mining sites, including Al-Ghizin mine of Mawarid, Al-Washhi/Al-Mazazi mine of Alara, Yanqul mine of Oman Mining Company, and establish three concentrator plants to increase copper concentration to 20%-25%. These projects are run by four mining companies. The first phase of these projects includes development, exploration and excavation of the sites identified, and the majority of them are now ready to start mining operations.

The total private investment for these projects is estimated at OMR 135 million and will provide about 150 employment opportunities.



Lead Implementer	<ul style="list-style-type: none"> - Mawarid Mining Company L.L.C. - Al Tamman Indsil Ferrochrome Company and the Modern Sources Company/ Alara Company - Minerals Development Oman and Oman Mining Company
Key Stakeholders	<ul style="list-style-type: none"> - The Public Authority for Mining - Ministry of Environment and Climate Affairs - Ministry of Housing - Ministry of Regional Municipalities and Water Resources - Ministry of Interior - Ministry of Heritage and Culture - Ministry of Tourism - Ministry of Defense - Royal Oman Police - Ministry of Commerce and Industry

2- Copper downstream plants

The current copper smelting plant in Sohar is facing an efficiency challenge since 2015, as the plant uses outdated and inefficient operational solutions. This initiative aims to replace the existing plant with a new copper smelting and refining plant, with a total capacity of 100 kilotons/annum. The project will also contribute to the utilization of waste materials through the use of glycine filtration technique. It will contribute to the transformation of waste into useful minerals such as copper and gold. This is considered a future biodegradability process and can be used in bio filtration plants.

The initiative is distributed to two companies that will contribute up to 20-25% of the intensification of copper concentration. The secondary product of the copper filtration plant will reach 2 million tons of oxides and slag from the mining sites and unsaturated liquid copper with potential concentrations of up to 8000 tons, if the refining process has been increased.

The total cost of the projects of this initiative is about OMR 155 million from the private sector, providing about 100 job opportunities in various stages of construction and operation.

Lead Implementer	<ul style="list-style-type: none"> - Minerals Development Oman - Actors in the field are expected to form a joint venture with Minerals Development Oman - Modern Resources Company / Al Tamman Indsil Ferrochrome Company
Key Stakeholders	<ul style="list-style-type: none"> - Ministry of Commerce and Industry - Ministry of Environment and Climate Affairs - Final stage contractors such as Copper and Cables of Oman (buyers)

Chromium Projects:

Chromium is an important chemical element which is formed in a gray or silver color and has a metallic luster. It was discovered in the 18th century and was used in the 19th century and later. Chromium is used in many industries. It is a fast oxidizing element in the case of exposure to outdoor air. It is surrounded by an outer layer of chromium oxides that isolates the rest of the metal from the air. Chromium is extracted from chromites ore found in igneous rocks. It is used in many fields, like the manufacture of some metals and improvement of their resistance to corrosion and rust, such as the manufacture of non-oxidizing steel. Chromium is used in leather tanning, glass coloring, painting and coating, and this is done by specific salts and acids extracted from chromium. Through geological surveys and excavations, many sites have been discovered where deposits of chrome ore are found in the Sultanate.

Oman witnessed a decline in the production of chromium, where the annual rate of decline is 6% during the last six years, with 74 sites of mining sites currently inactive without production.

3- Chromium upstream mines and concentration plants

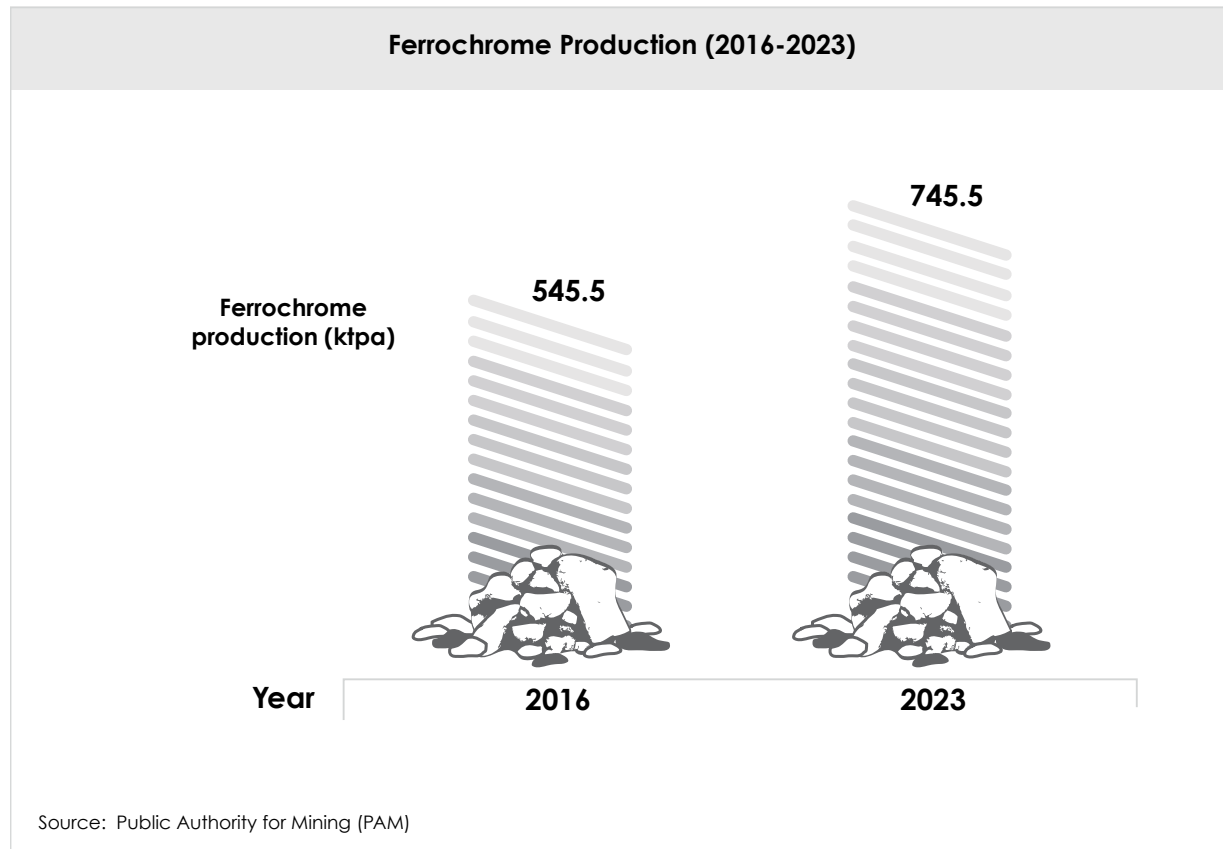
This initiative emphasizes the importance of increasing the production of chromium in the Sultanate, as this will feed into downstream industries with an additional capacity of 30 kilotons/annum. 28 chromium sites and one beneficiation site were discussed in the lab. These sites are distributed among five mining companies, some of which are small and medium-sized, distributed in different parts of the Sultanate. Large enterprises collect chromium from these SMEs their main supplier. Ore Beneficiation process contributes to better utilization of local chromium resources and the import of alternative raw materials.

Lead Implementer	<ul style="list-style-type: none"> - Minerals Development Oman - Oman Chromite Company - Gulf Group for Mining - Al Tamman Indsil Ferrochrome Company - Majan Al Dhahabi Beach/ East Capital LLC
Key Stakeholders	<ul style="list-style-type: none"> - Public Authority for Mining - Ministry of Environment and Climate Affairs - Ministry of housing - Ministry of Regional Municipalities and Water Resources - Ministry of Interior - Ministry of Heritage and Culture - Ministry of Tourism - Ministry of Defense - Royal Oman Police - Ministry of Commerce and Industry - Existing chromium mining companies

4- Ferrochrome downstream plants

The idea of the initiative is to promote the value adding industries of local chromium ore with additional production of chrome ore up to 200 kilotons. 77% of the world's production of iron and chromium alloys is used as raw material for stainless steel products. The value-added ferrochromium plant is planned to be produced through three projects, two for the expansion of the ferrochrome smelting plants, one belongs to Gulf Group for Mining, and the other to Al Tamman Indsil Company, in addition to another new project. Moreover, the investment value of this initiative is estimated at OMR 60 million and will provide around 200 job opportunities.

The production of chromium beneficiation is expected to increase with a potential to upsurge its added value. In 2016, 300 kilotons (55%) were exported without benefiting from the value added industries of the chromium.



Lead Implementer	<ul style="list-style-type: none"> - Gulf Group for Mining - Minerals Development Oman/ Oman Chromite Company - Al Tamman Indsil Ferrochrome Company
Key Stakeholders	<ul style="list-style-type: none"> - Ministry of Commerce and Industry - Ministry of Environment and Climate Affairs

5- Downstream projects for different metals (magnesium, silicon)

The importance of increasing the value added of minerals will increase the investments value and strengthen the sector as a whole. In addition, investment in this field will bring new knowledge and technology along with job opportunities for job seekers. At present, there are no factories in the Sultanate to manufacture magnesium alloys or silicon metal, and raw materials are exported from dolomite and quartzite without benefiting from the manufacture of locally added value products.

Therefore, this initiative will contribute to increasing the added value of dolomite and quartzite for the final stages of manufacturing, to 25 Kilotons/annum of metal and 50 Kilotons/annum of molten silica. Opportunities will also be available for the production of the magnesium alloy plant for final engineering and metal processing, thermal extrusion, rolling and casting processes.

On the other hand, the silicon metal plant will provide materials for many final applications and manufacturing of chemicals and minerals. The cost of the initiative will reach up to OMR 287 million, and will provide around 300 jobs.

Lead Implementer	<ul style="list-style-type: none"> - Minerals Development Oman and specialized partners in the field of technology
Key Stakeholders	<ul style="list-style-type: none"> - Ministry of Commerce and Industry - Ministry of Environment and Climate Affairs - Dolomite production companies such as Kunooz Oman, and another in Al Duqm - Quartzite production companies - Magnesium and molten silica contractors (buyers)

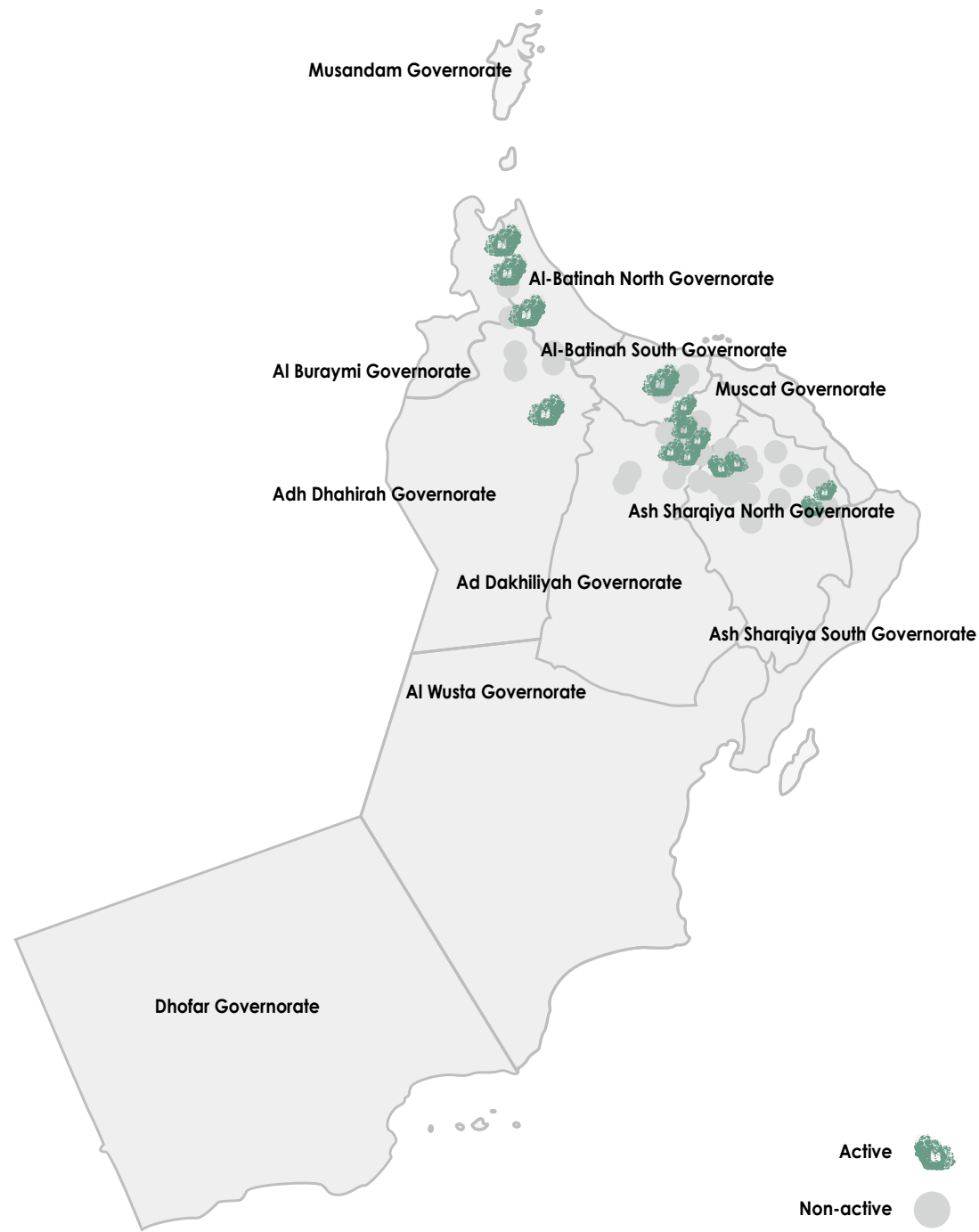
6- Review of inactive chromium mining licenses

Currently, there are about 74 inactive and non-operational mining licenses which are not associated with any commercial activity, resulting in non-utilization of the available chromium resources in various locations, with only 23 active licenses. These licenses are distributed over an area of 33.3 square kilometers.

The initiative aims to increase the number of active licenses to benefit from the sites granted to companies with inactive licenses, as the Public Authority for Mining will identify the 74 inactive mining sites that may be made available to other applicants.

Lead Implementer	<ul style="list-style-type: none"> - Public Authority for Mining (lead implementer) - Ministry of Environment and Climate Affairs
Key Stakeholders	<ul style="list-style-type: none"> - Licenses Committee of the Public Authority for Mining - Mining and Quarrying Department of the Public Authority for Mining - Legal Affairs Department of the Public Authority for Mining - GIS Department of the Public Authority for Mining - Quartzite production companies

Active and non-active chromite mining sites



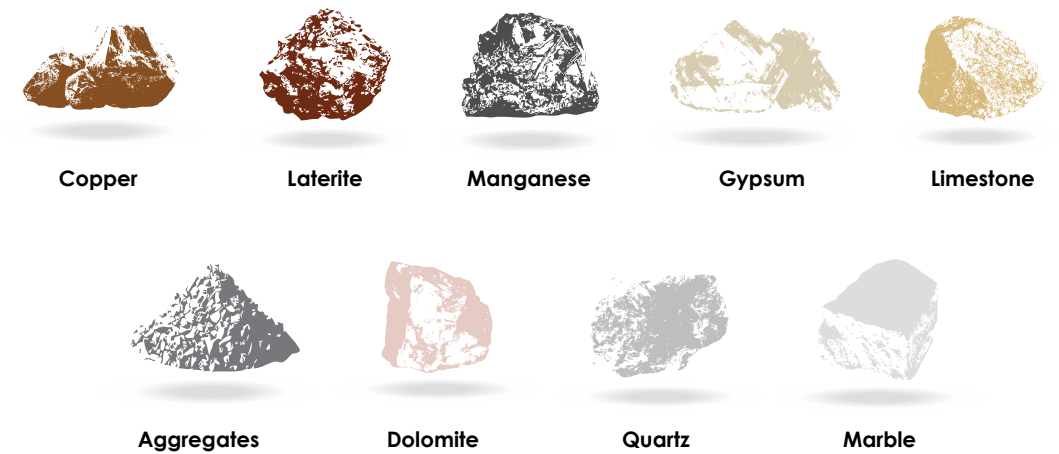
Source: Public Authority for Mining (PAM)

Inactive Mines can be Categorized into Three Main Categories: Production have not started, Production Stopped, and at Closure Stage

Category	Details
Not started	<ul style="list-style-type: none"> Licensee or company doesn't have the financial and technical capability to develop the mine Licensee may be looking for other investors to operate the mine No regulation to enforce licensees to operate
Started but operation stopped	<ul style="list-style-type: none"> Licensee has technical and financial issues during mining stage Exploration stage flawed, with low technical know how Studies have proven no reserves Selling price fluctuations discourage production Quality and grade of ore found to be low Reserve size found too small to be economically viable Local community objection during production
In process of closure (1st time)	<ul style="list-style-type: none"> No agreed closure plan Lack of auditing/understanding from PAM/MECA at mining sites during the years of mine operation Lack of enforcement from PAM/MECA to follow the agreed closure plan No clear standards and regulation from the related entities Costly to companies to close mines according to standards

Source: Public Authority for Mining (PAM)

Moving forward, this initiative can be replicated to other metals





Regulations and Enablers

Regulations and Enablers

Since its establishment, the Public Authority for Mining has sought to develop the mining sector through a number of continuous measures and activities, with the aim of achieving optimal utilization of mineral wealth and investing on natural resources to meet the objectives of development and economic diversification in the Sultanate. This has been done according to clear, specific and easy-to-follow mechanisms and guaranteed continuity on the same efficiency. A one important mechanism is the drafting of the road map to develop Oman Mining Strategy, which was finalized by the Authority and is now in its final approval stage. The Authority also worked on preparing the Mineral Wealth Law, which will regulate the work of the sector in line with the current stage.

In line with the work of the Authority and as per Mineral Wealth Law and Oman Mining Strategy, the mining lab has embarked on nine initiatives in the workstream of regulations and enablers in order to unlock, regulate and facilitate procedures. The following are the main initiatives of the regulations and enablers workstream:

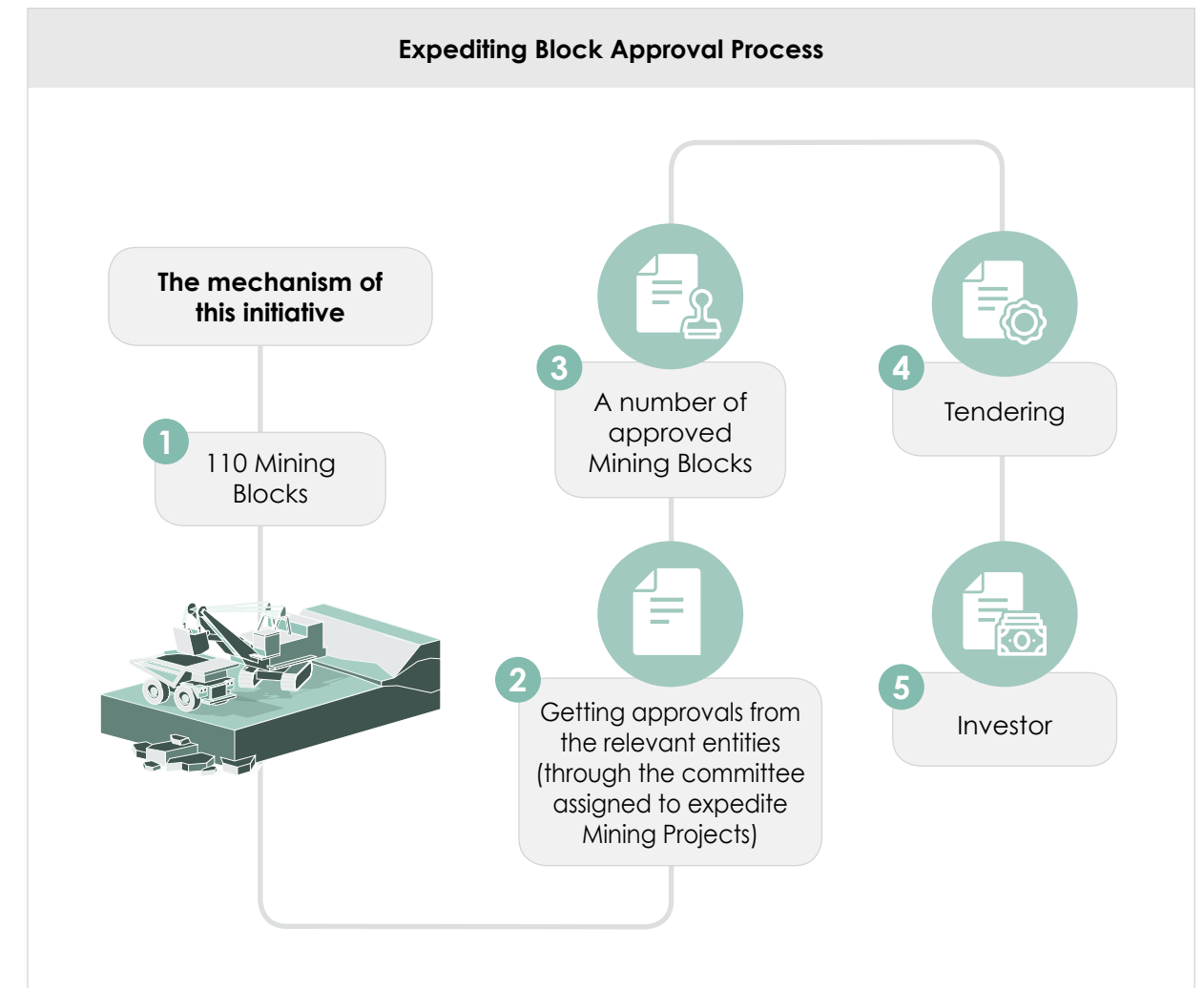
1- Establishment of the mining blocks system

The current licensing framework allows the private sector to identify the sites the companies wish to explore or mine, requiring a lengthy and complex eight-point approval process. This is often unsatisfactory and discourages investors in case of disapproval after long waiting time.

In order to enable more targeted investments, the Public Authority for Mining sought to identify promising mining blocks based on PAM existing geological studies and maps. Then, approvals for these blocks from the eight relevant authorities shall be obtained, provided that mining blocks shall be introduced in a public tender.

In order to address the challenge of obtaining the approval from the concerned authorities, the lab first and foremost worked on the establishment of an integrated mechanism for approval of these areas within 30 days. Second comes the development of a licensing mechanism for the mining areas after obtaining all authorities approvals on public tendering or other possible methods. And third, the lab worked on setting up criteria for the selection of mining areas developers which require further development.

The Public Authority for Mining has identified 110 new mining blocks that could be made available for exploration and are now in the process of obtaining approvals. PAM has also made significant progress in assessing the boundaries of these areas and identifying them at these sites. The lab's steering committee has also confirmed that 20 pre-approved mining sites can be reserved for Minerals Development Oman Company to accelerate investments in the sector, which in turn will need to develop competitive business models for these sites and provide a clear vision to the authority on these models. Moreover, the company shall accelerate investment in these sites with contrast to the tender process and long auctioning conducted by the authority, while ensuring the maintenance of competition between other mining sites in order to provide equal opportunities in the market.



Lead Implementer	- Public Authority for Mining
Key Stakeholders	<ul style="list-style-type: none"> - Ministry of Environment and Climate Affairs - Ministry of Interior - Ministry of Defense - Ministry of Health - Ministry of Tourism - Ministry of Transport and Communications - Ministry of Heritage and Culture - Ministry of Regional Municipalities and Water Resources - National Center for Statistics and Information

2- Simplification of exploration and mining licensing procedures

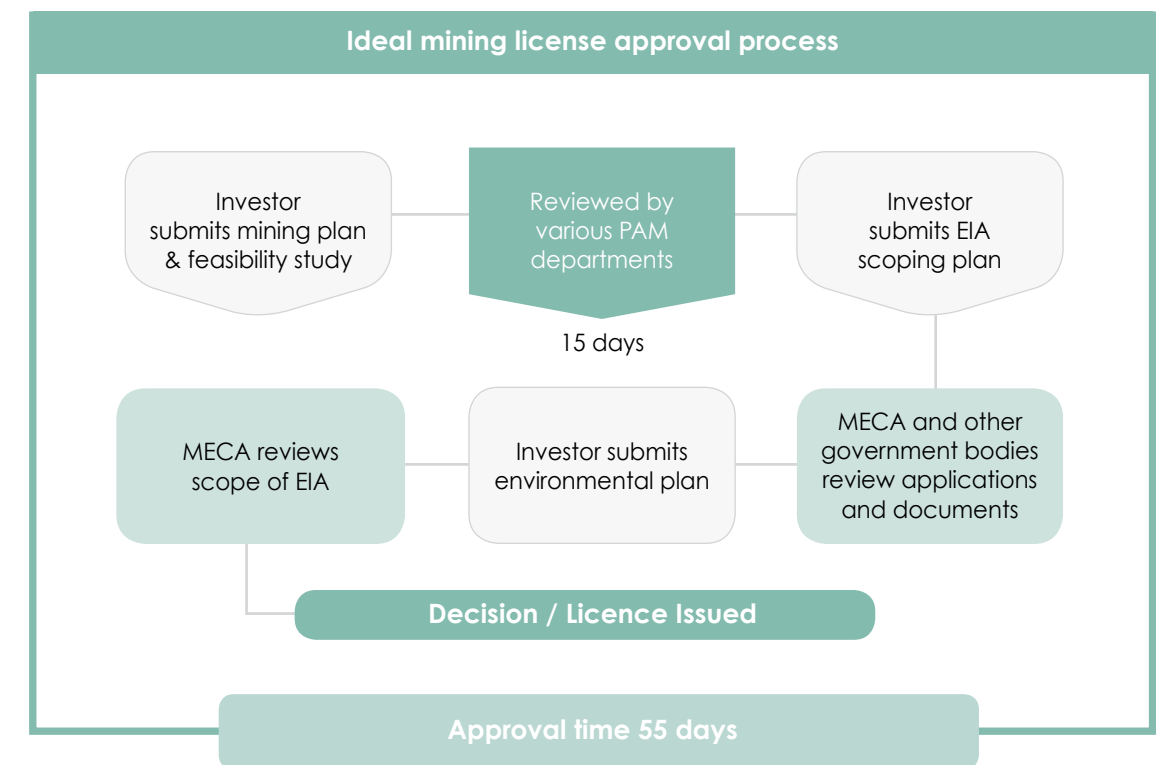
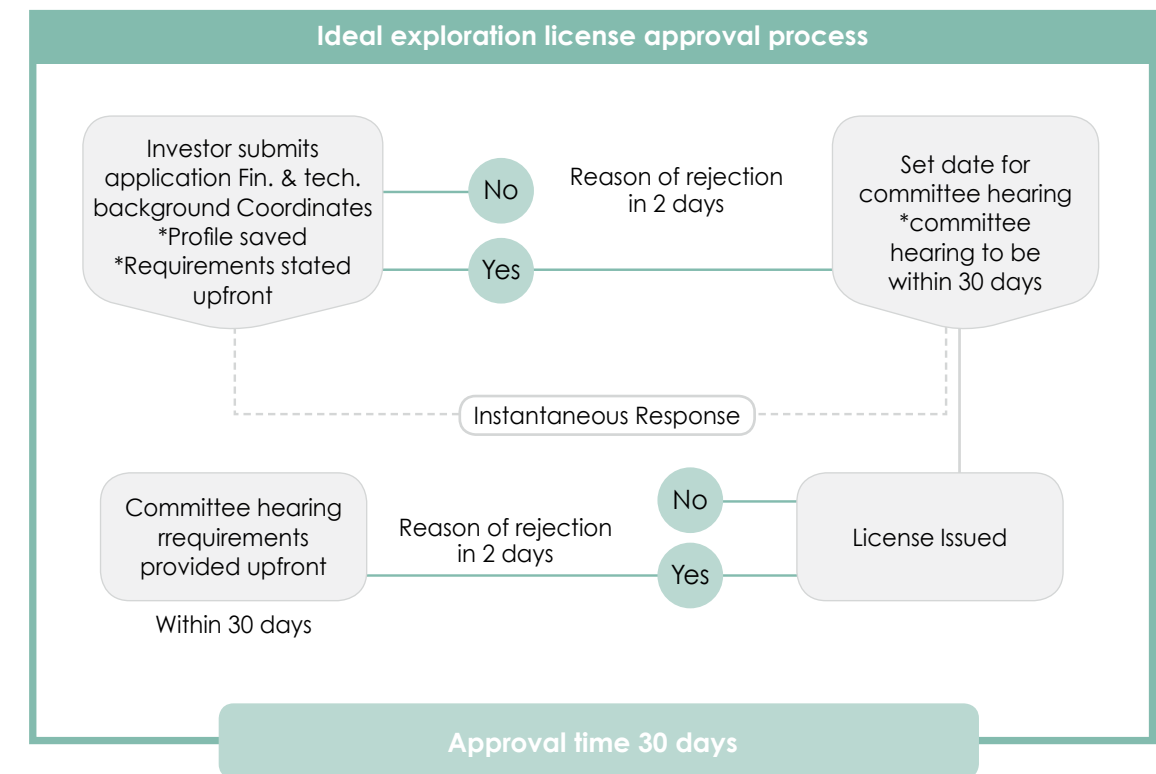
The long process of requesting licenses for the mining sector requires investors to deal with multiple entities, and it can be difficult with the slow and unclear requirements and procedures required by these entities. Hence, the importance of this initiative lies in reducing procedures and the handling of applicants with the concerned parties in addition to the transparency and clarity of the conditions of licenses applications. The eight parties will provide PAM with the authority to clear the licensing procedures, which will significantly reduce the overall application process.

The initiative also aims to accelerate the approval process for exploration licenses to 30 days. With a binding timeframe for all parties, the process will see further improvement while reducing the number of actions required, through the integration of the automation system and the GIS system of the relevant entities.

For mining licenses, the new mechanism is designed to obtain approval within 55 days, where all requirements will be clear, transparent and known from the start of the process. It will also determine the time it takes to approve each license and inform the applicant.

The initiative includes detailed proposals for the ideal mechanism in which exploration and mining licenses can be issued within the specified timeframe.

Lead Implementer	- Public Authority for Mining
Key Stakeholders	<ul style="list-style-type: none"> - Ministry of Environment and Climate Affairs - Ministry of Interior - Ministry of Defense - Ministry of Health - Ministry of Tourism - Ministry of Transport and Communications - Ministry of Heritage and Culture - Ministry of Regional Municipalities and Water Resources - National Center for Statistics and Information

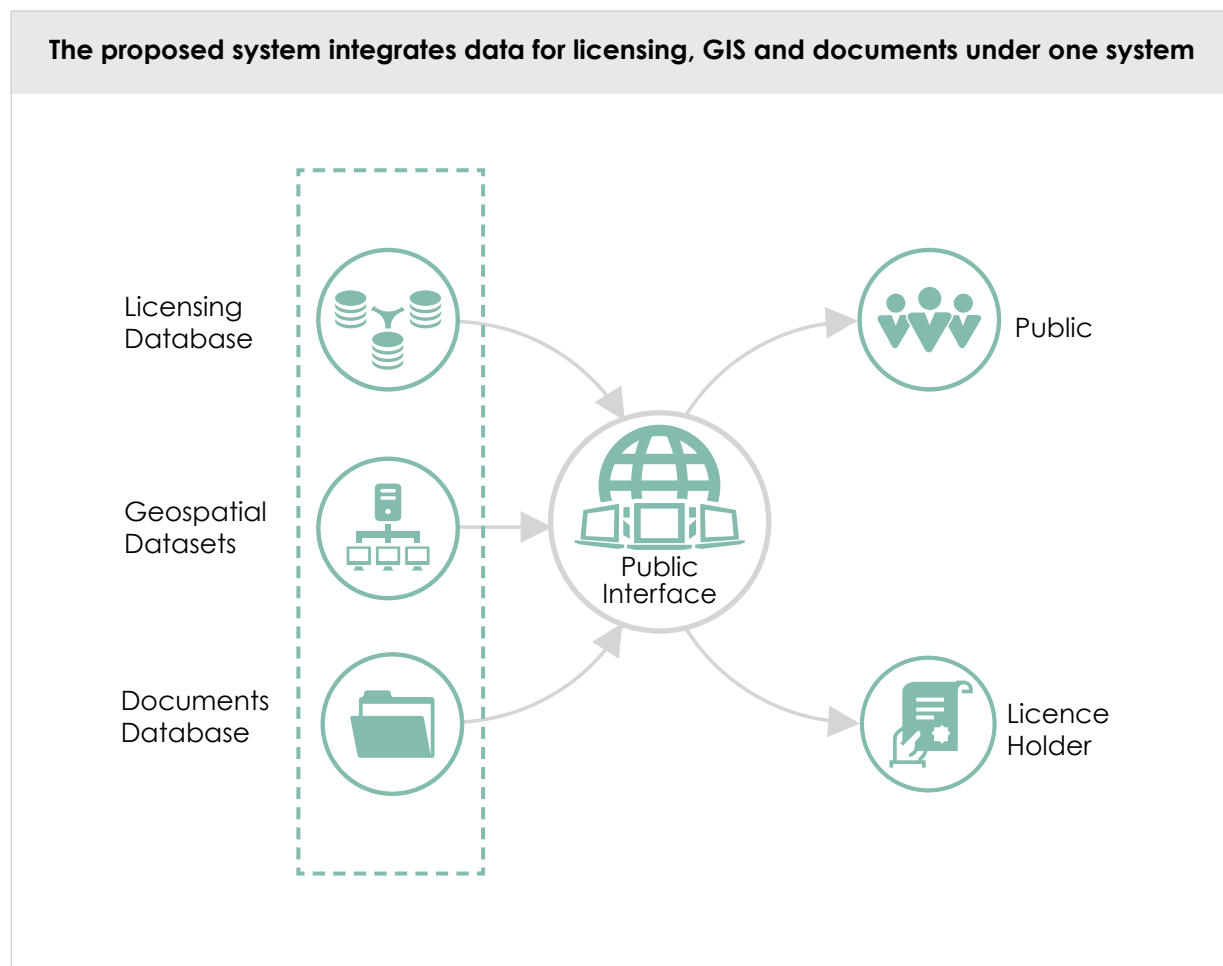


3- Creating a central and integrated database

Due to the lack of integration of data for the mining sector due to the multiplicity of entities having the data and the lack of a single platform to access them, this causes the slow process of licensing. Therefore, this initiative was introduced to develop a system that combines key elements into a single platform, allowing quick access to them, and reducing the time for approval of licenses as data from relevant parties will be synchronize in one system.

In order to ensure the effective performance of the central database, two main areas will be addressed. Firstly, the data management process, as standardization of the formats will reduce the time of approvals and possible errors, together with a specific timetable for the submission of standardized formats, as well as a rigorous and accurate timeframe for continuous updating. Secondly, Database Integration Framework with its three key elements (license database, spatial geographic databases and related documents) maintained in a single platform with an easy and quick access by all stakeholders.

The government investment in this initiative is expected to reach OMR 1,181,280 in 2019.



Lead Implementer	- Public Authority for Mining
Key Stakeholders	<ul style="list-style-type: none"> - Ministry of Environment and Climate Affairs - Ministry of Interior - Ministry of Defense - Ministry of Health - Ministry of Tourism - Ministry of Transport and Communications - Ministry of Heritage and Culture - Ministry of Regional Municipalities and Water Resources - National Center for Statistics and Information

4- Activating the financial independence of the Public Authority for Mining

The Public Authority for Mining is currently fully dependent on the annual budget allocated by the Ministry of Finance, and with the Ministry's recent measures to reduce the effects of the financial crisis by reducing budgets to entities, the budget for PAM decreased by 75%, which led to a reduction in allocations for main activities.

The revenues of PAM amounted to OMR 10 million from fees and licenses, yet the Authority is not allowed to retain a percentage of these revenues, as the Authority is still treated as a ministry despite its independence from the Ministry of Commerce and Industry since 2014.

Through the proposed change in the financial situation of the Authority from its current status as a ministry to an independent entity, this initiative proposes to allow PAM to retain a percentage of the revenues collected. In return, it shall provide the Ministry of Finance a fixed amount that is agreed upon annually and obtain alternative sources of funding without complying with the requirements of MOF or government.

In addition, one of the benefits that the Authority will derive from this change is the non-compliance with government employment procedures and the retention of a percentage of revenues from services, fees and licenses.

Lead Implementer	- Public Authority for Mining
Key Stakeholders	- Ministry of Finance

5- Outsourcing of monitoring and inspection services and the laboratory of the Public Authority for Mining

The financial constraints on the Public Authority for Mining led to its inability to effectively implement its commitments in key areas, including PAM inability to optimize their facilities, such as PAM laboratory, resulting in unnecessary expenditures. Therefore, there is a need for A better prioritization.

This initiative aims to privatize the “non-core” activities of the Public Authority for Mining, which will reduce total expenditures and allow the transfer of existing allocations to other work areas. Privatization will lead to more effective monitoring, inspection, and laboratory services. Privatization of laboratory services will also be an alternative and profitable source to finance the Authority.

With the proposal to outsource monitoring and inspection services, it will significantly improve the effectiveness of the operation that will have a direct impact on increased revenue collection. The services will be assigned to a single entity to ensure a comprehensive and high quality service. Priority will be given to companies with considerable experience in providing monitoring and inspection services, with the Public Authority for Mining retaining a core team whose role is to guide and supervise the process and strategy in general, to act as an auditor and ensure quality control of operations.

Lead Implementer	- Public Authority for Mining
Key Stakeholders	- Ministry of Finance - Private sector

6- Specialized training for employees of the Public Authority for Mining

Due to the shortage of the Authority’s staff, on the one hand, and the lack of training and qualification in the skills required, on the other, the current staff are required to handle several tasks and they face difficulties meeting all the requirements for the Authority’s multidisciplinary. Thus, this initiative aims to bridge this gap through training and qualification of the staff of the Public Authority for Mining in order to raise their professional level, develop the performance and improve technical expertise, with a view to best practices and international methods used in this regard. Training should focus on raising the efficiency of performance and paying attention to specialized mining knowledge to meet the growing needs of the sector. The value of government investment for this initiative is OMR 180,000 for the years 2019-2020.

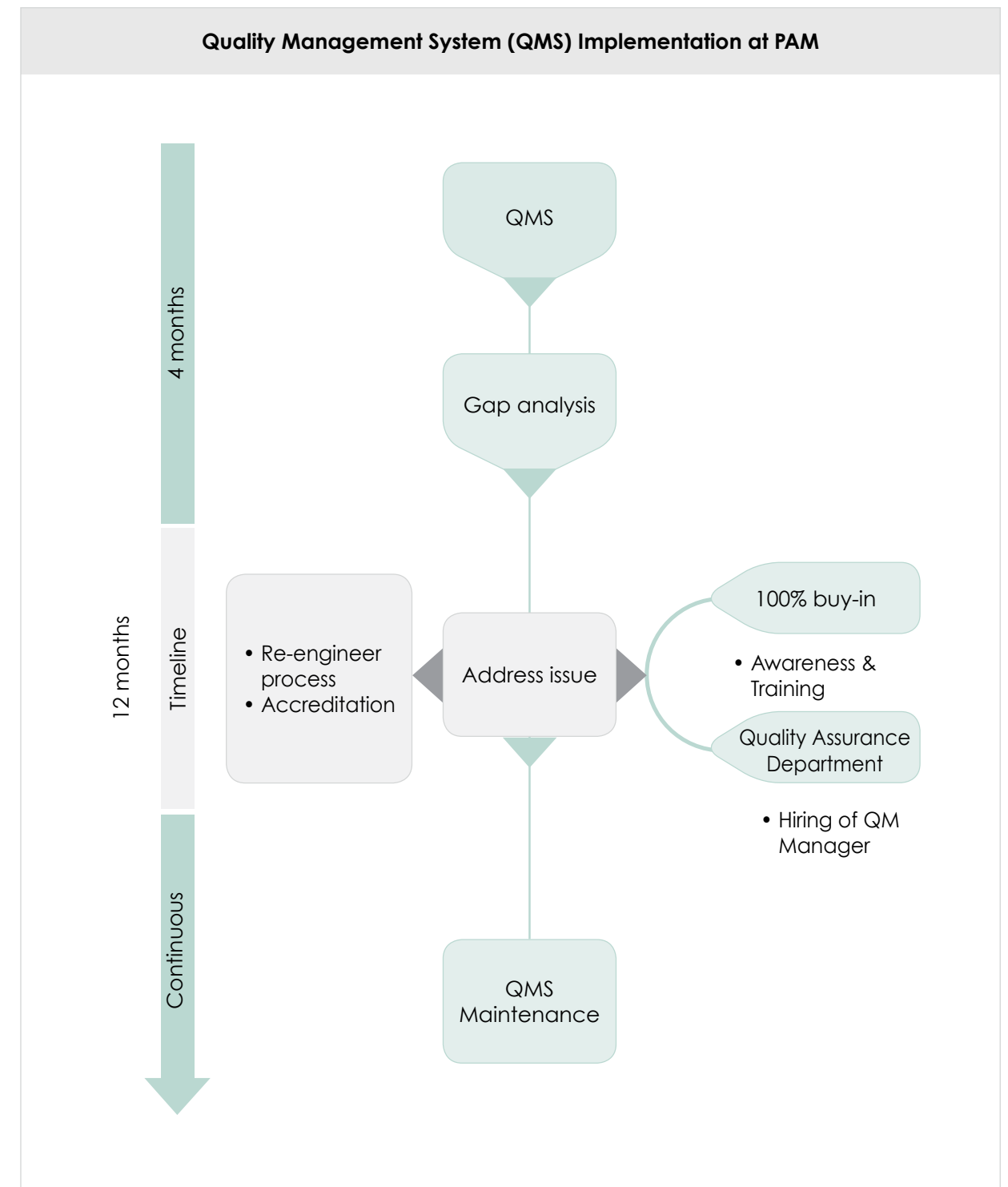
Lead Implementer	- Public Authority for Mining
Key Stakeholders	- Private Sector

7- Quality Management System

The capacity of the Public Authority for Mining can be improved through the development of internal processes, quality management system and staff training. The quality management system aims to improve and streamline processes within the organization itself, enhance the quality and efficiency of the work to achieve customer satisfaction with the services provided by the Authority, and ensure compliance with international quality management standards. Capacity building is realized by providing training to staff, mainly in the specialized areas of the Authority’s work, where training can be in the form of international conferences, professional certification and distance learning.

In addition, implementation of Quality Management System will reduce 50% of the time spent on internal operations and 50% of the management and communication costs, and can be fully implemented within 18 months. To achieve this initiative, OMR 36,000 will be invested annually from 2019 to 2020.

Lead Implementer	- Public Authority for Mining
Key stakeholders	- Public Authority for Mining



8. Developing a flexible framework for royalties

One of the reasons that do not attract mining investors in the Sultanate is the current fiscal measures of royalties and taxes, as they are relatively higher than in other mining countries, as well as the fact that the tax framework is not clear in the new Mining Law. A structured and transparent framework for royalties would improve royalty revenues and attract investors.

One of the proposals that would improve Oman's revenues and attract investors is to create a base classified as per the metals type and strategic importance to the country. It is also imperative to encourage companies to increase Omanisation rates, reduce local sales to boost the growth of the final stages of production and support the development of local small and medium enterprises.

The existence of a dynamic royalty structure will not only increase the total income of the Sultanate, but will also stimulate the growth of the downstream industries.

Lead Implementer	- Public Authority for Mining
Key Stakeholders	- Private sector

9- Developing a mechanism to regulate corporate social responsibility

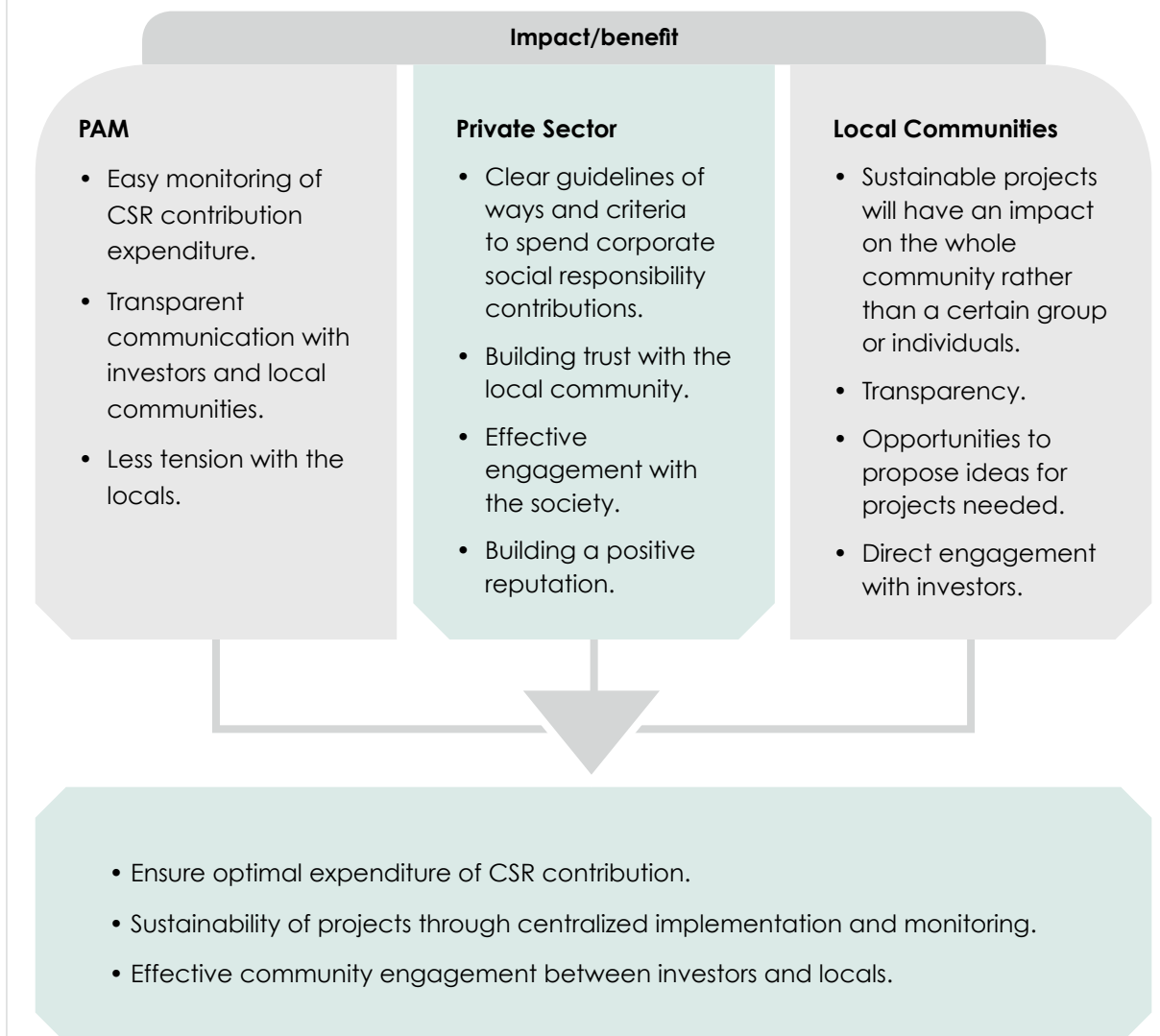
The current situation of companies in terms of contribution to local community is to provide this contribution directly to governors' offices in various provinces of the Sultanate. However in most cases, the response of these offices would be not to accept or not to benefit from this support as there is no clear mechanism to efficiently utilize it. As a result, companies' contribution don't reach the local community as required. This initiative was, therefore, introduced to ensure that society effectively benefits from the contribution of companies to social responsibility.

An appropriate plan is being developed by this initiative's working team by drawing on the experience of other sectors in the area of social responsibility. The appropriate program will be adopted in a later stage.

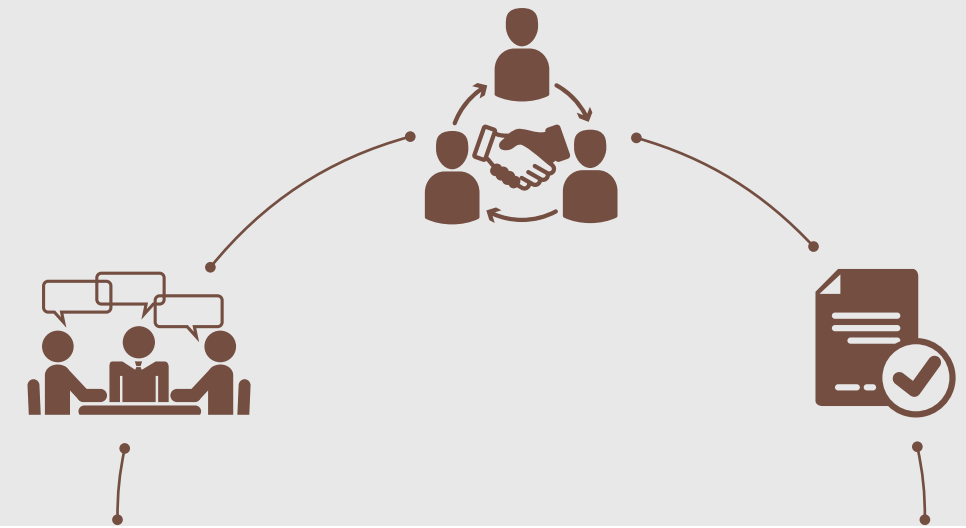
Lead Implementer	- Public Authority for Mining
Key Stakeholders	- Local community - Shura Council - Ministry of Social Development - Jusoor - Minerals Development Oman

A centralized CSR collection and distribution would benefit all stakeholders within the mining sector including the local communities, private investors and PAM

The implementation of a Centralized Corporate Social Responsibility Management would bring immediate and sustainable impact to community development in the effected mining areas



Post-Lab Implementation Governance



The work carried out during and before the Mining Lab, up to the closing of the lab, emphasizes the importance of the outcomes implementation and application in accordance with a specific and organized action plan. Therefore, mining post-lab steering committee was formed based on a scheduled framework, where the members of the committee meet once a month and are chaired by the Undersecretary of the Ministry of Commerce and Industry. The committee has permanent members from the governmental and private bodies, including the Undersecretary of the Ministry of Environment and Climate Affairs, the Undersecretary of the Ministry of Regional Municipalities and Water Resources, the Undersecretary of the Ministry of Housing, the Undersecretary of the Ministry of Interior, the Supreme Council of Planning, the Ministry of Commerce and Industry, Minerals Development Oman, senior representatives of the private sector in the mining field, and the Implementation Support and Follow-up Unit.

Representatives from the Ministry of Finance, Ministry of Tourism, Ministry of Heritage and Culture, Royal Oman Police, Ministry of Defense, initiatives and projects owners, National Training Fund and Industrial Innovation Center can also be invited.

The Ministerial Delivery Unit (MDU) of the Public Authority for Mining is chaired by HE the Chief Executive Officer of PAM. He is responsible for the key performance indicators progress. The work is divided into two working groups; the first handles on regulations and implementation under the leadership of the Director General of Administration & Financial Affairs. The membership includes the Director of Legal

Affairs of the Public Authority for Mining, representatives of the Ministry of Finance, the Ministry of Legal Affairs, the Ministry of Environment and Climate Affairs, the Ministry of Regional Municipalities and Water Resources, as well as the private sector through advocacy.

The group will oversee a number of proposed initiatives and they are: developing a flexible framework for royalties, activating the financial independence of the Public Authority for Mining, specialized training for employees of the Public Authority for Mining, developing a mechanism to regulate corporate social responsibility, creating a central and integrated database, outsourcing of monitoring and inspection services and the laboratory of PAM and the quality management system. The final stages will be implemented by the Industrial Innovation Center and reported to the steering committee, where the team of the MDU meets the mining team of the Implementation Support and Follow-up Unit on a weekly basis to follow up on the initiatives and projects progress.

The second working group facilitates investments under the leadership of the Director General of Minerals Investments Affairs. It consists of General Directors from the Ministry of Environment and Climate Affairs, the Ministry of Regional Municipalities and Water Resources, the Ministry of Health, the Ministry of Interior, the Ministry of Heritage and Culture, the Ministry of Tourism, Oman Royal Police, the Ministry of Defense, and initiatives and projects owners. Initiatives to be supervised by this group are: review of inactive chromite mining licenses, following up all licenses for industrial minerals and approval of mining blocks, establishing a central trading company and integrating GIS with 8 licensing authorities.

Labs Close-up





Lab Participants

1	Al Hael Ceramic Company LLC	21	Ministry of Housing
2	Al Tamman Indsil Ferrochrome LLC	22	Ministry of Interior
3	Al Tasnim Enterprises	23	Ministry of Legal Affairs
4	Alara Resources Limited	24	Ministry of Manpower
5	Bauer Nimr LLC	25	Ministry of Regional Municipalities and Water Resources
6	Desert Enterprises Trading & Contracting Company	26	Ministry of Tourism
7	Diwan of Royal Court	27	Nakhal Mining Company
8	Gulf Mining Group	28	Oman Chromite Company
9	Gulf Mining Materials Company	29	Oman Rail Company
10	Gulf of Potassium Mining LLC	30	Public Authority for Mining
11	Industrial Innovation Center	31	Royal Oman Police
12	Kunooz Oman Holding	32	Savannah Resources
13	Majan Golden Beaches LLC	33	SGS Company
14	Mawarid Mining Company	34	Shura Council
15	Minerals Development Oman Company	35	Sohar Port and Free Zone
16	Ministry of Commerce and Industry	36	State Audit Institution
17	Ministry of Defense	37	State Council
18	Ministry of Environment and Climate Affairs	38	Supreme Council for Planning
19	Ministry of Finance	39	The Research Council
20	Ministry of Heritage and Culture	40	The Special Economic Zone Authority at Duqm
		41	Zawawi Minerals LLC