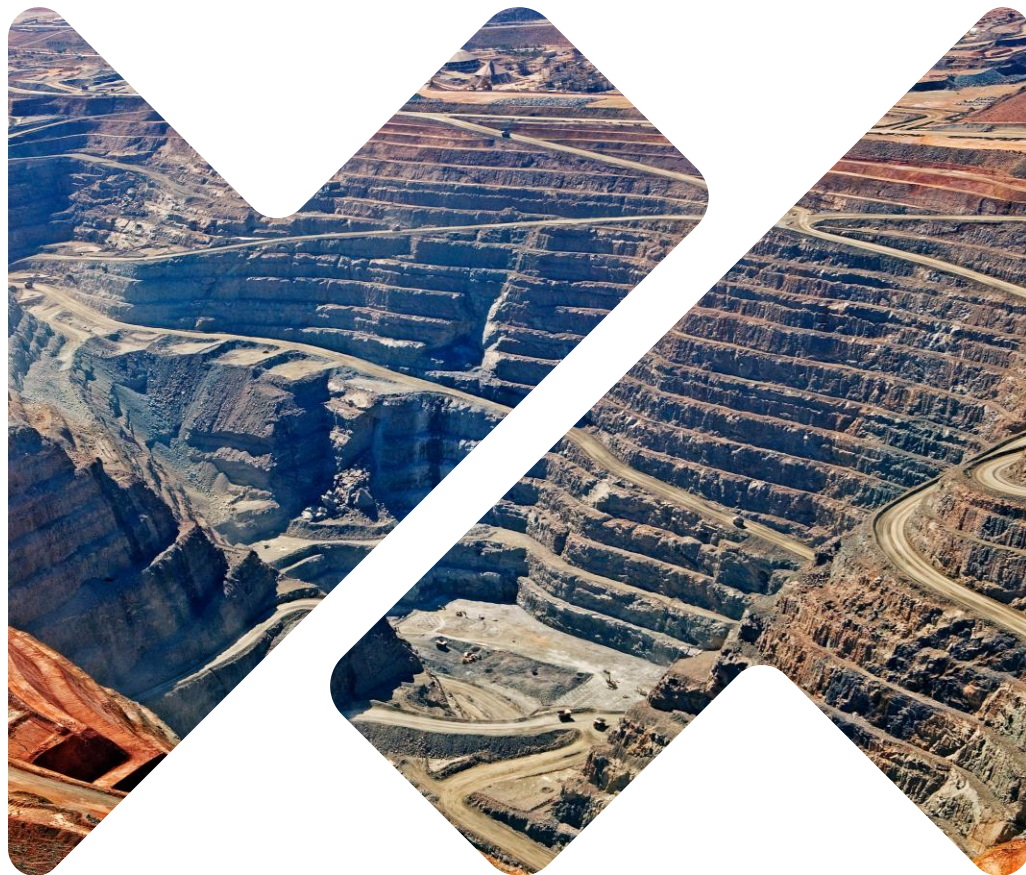


# Jordan National Mining Sector Strategy

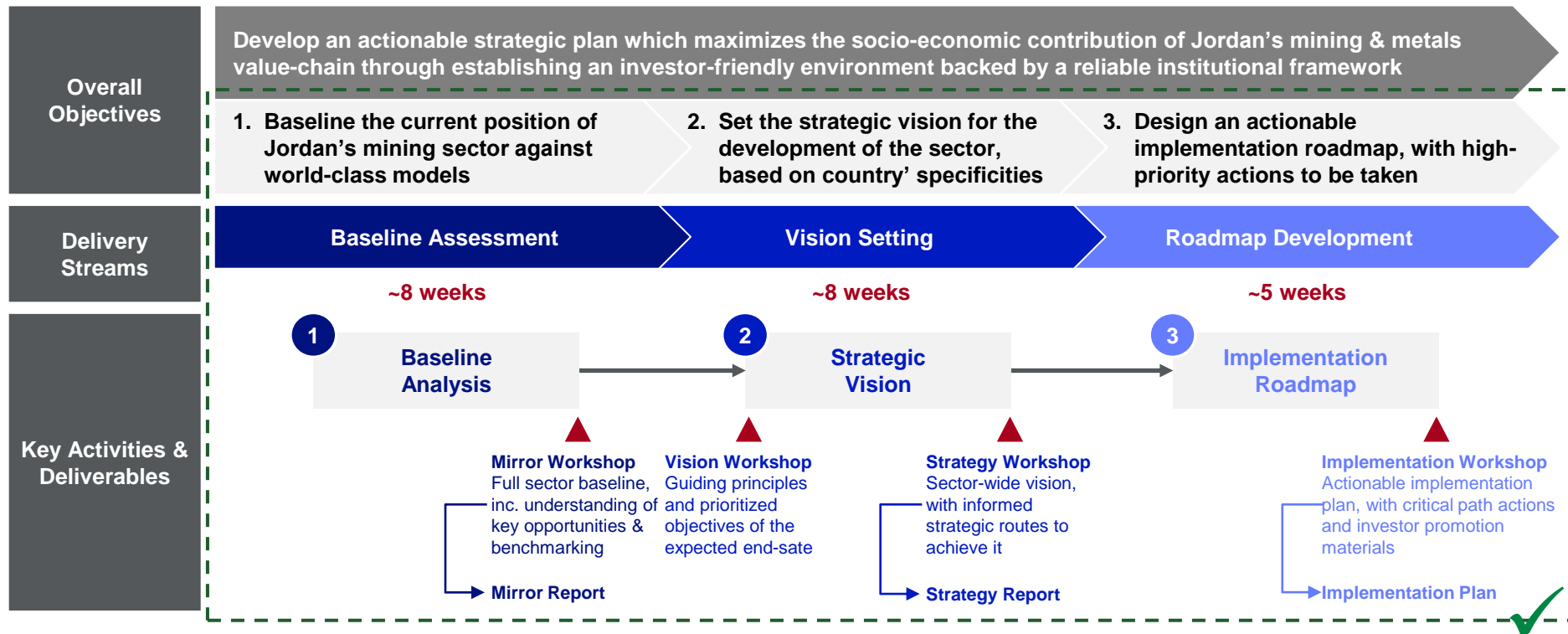
## Implementation Roadmap

Presented to the Ministry of Energy & Mineral  
Resources (MEMR) on 19 October 2023



# We have developed the Implementation Roadmap, which aims to formulate an actionable plan to execute the endorsed strategic recommendations

The actionable roadmap is designed to build momentum and demonstrate early successes



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# Executive Summary

**WHY:** Review of the socio-economic aspirations

**WHAT:** Overview of the implementation roadmap architecture

**HOW:** Convergence on the optimal execution plan



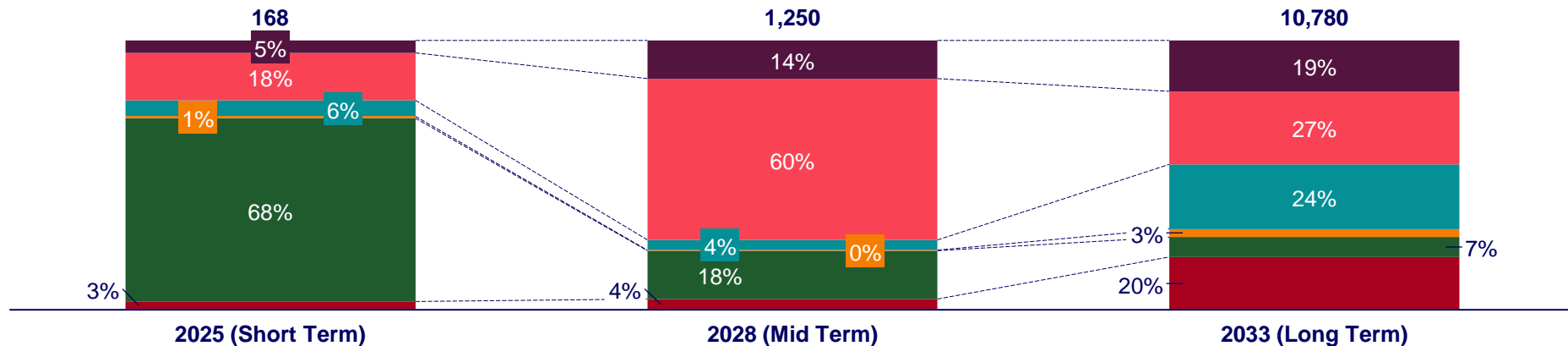
# WHY

Review of the socio-economic aspirations

# Jordan has the mineral potential to seriously aspire to develop its mining sector into a diversified pillar of the national economy ...

Doing so will require attracting foreign capital to accelerate exploration efforts and build new value chains

## Cumulative Mining Capital Investments as of 2025, 2028 and 2033 (US\$ Millions)



- Exploration capital is attracted & deployed towards the discovery of new minerals
- Development capital will help fast-track the development of brownfield Potash projects

- Construction capital will progressively flow-in to develop new greenfield projects
- Copper & Gold projects will get constructed first due to the higher development maturity

- Several value-chains are advancing in parallel, at various development stages
- Jordan has a mature, diversified and growing mining sector

■ Gold 
 ■ Copper 
 ■ Lithium 
 ■ REE 
 ■ Potash 
 ■ Phosphate

# ... and ultimately deliver on the ambitious socio-economic targets which are defined in the Economic Modernization Vision






The mine development lifecycle is long, so the most significant benefits ramp up late in the decade

## Incremental Socio-Economic Impacts as of 2025, 2028 and 2033 (US\$ Millions)



# To deliver the benefits on schedule, sector bottlenecks must be addressed to build trust with prospective investors, attract capital and accelerate development

Critical bottlenecks were identified as part of the Baseline Assessment within five strategic topics

Strategic Topics	Critical Bottlenecks
<div>1</div>  <div>Licensing Framework</div>	<ul style="list-style-type: none"> <li>• MOU and EA <b>terms are independently negotiated</b> for different operators</li> <li>• The strategic minerals licensing process <b>requires two government ratifications</b> (inc. Parliament)</li> <li>• There is <b>no security of tenure</b> for MOU holders</li> </ul>
<div>2</div>  <div>Fiscal Regime</div>	<ul style="list-style-type: none"> <li>• The <b>fiscal regime is incomplete</b> (e.g. copper / gold / lithium rare earths mineral royalties)</li> <li>• <b>Rent Fees are excessively high</b></li> <li>• There is a lack of <b>fiscal stability</b> across the mine project lifecycle</li> </ul>
<div>3</div>  <div>Institutional Governance</div>	<ul style="list-style-type: none"> <li>• The institutional structure include <b>shared authorities across several governance functions</b></li> <li>• The existing <b>geoportal (and underlying database) is not comprehensive &amp; accessible</b> enough</li> <li>• <b>Investment promotion remains relatively passive</b></li> </ul>
<div>4</div>  <div>Regulatory Framework</div>	<ul style="list-style-type: none"> <li>• The mining regulatory framework (law, bylaws, instructions) is <b>not comprehensive enough</b></li> <li>• Several gaps exist, leaving <b>room for substantial discretionary decisions</b></li> <li>• Relevant <b>legislations are not consistently cross-referenced</b> (e.g. environment, investment)</li> </ul>
<div>5</div>  <div>Growth Enablers</div>	<ul style="list-style-type: none"> <li>• <b>The institutional structure</b> is not fit for long-term growth</li> <li>• <b>Power costs are very high</b>, and are a critical enabler of downstream processes</li> <li>• <b>Water is scarce</b>, and its access is a critical enabler of downstream processes</li> </ul>



# 14 licensing, fiscal, governance and regulatory strategic recommendations have been approved to launch the necessary reforms

These strategic recommendations fall within 4 reform pillars, and some will have notable short-term impacts

Proposed Strategic Recommendations		Implementation Prioritization	Short-term Impact
<b>F1</b>	Work with the MOI to define mining-specific criteria ensuring the applicability of the investment incentives	Quick Win	High
<b>G3</b>	Establish a 'single window' through the Ministry to facilitate collaboration across relevant sector entities	Quick Win	High
<b>G1</b>	Dedicate resources to improve the quality of the geoscience database & its accessibility by investors	Quick Win	Medium
<b>G2</b>	Scale-up sector promotion efforts to address market mis-perceptions & start building trust with investors	Quick Win	Medium
<b>F3</b>	Enact the proposed copper & gold mineral royalty rates equations within the regulatory framework	Quick Win	Low
<b>F5</b>	Define new globally competitive mineral royalty rates for lithium and rare earths	Quick Win	Low
<b>L1</b>	Pre-define as many exploration & production terms as reasonably possible by policy	Must Have	High
<b>F2</b>	Work with the MOF to reduce the Rent Fees in line with other competitive jurisdictions	Must Have	High
<b>R1</b>	Propose regulatory adjustments / additions to bring the regulatory framework in line with best-practices	Must Have	High
<b>L2-B</b>	Ensure successful exploration outcome results in awarding the mining license to the explorer	Must Have	Medium
<b>L2-A</b>	Remove copper, gold, lithium & rare-earths from the 'strategic minerals' category	Important	Medium
<b>F4</b>	Insert a fiscal stabilization clause in the Executive Agreement to secure the incentives application	Important	Low
<b>G4</b>	Establish a national geological survey to assume the Database Promotion mandate	Low Priority	Low
<b>G5</b>	Conduct a redesign of the mining institutional governance structure to delineate key functions	Low Priority	Low

# WHAT

Overview of the implementation roadmap architecture

# Given these reforms will need to be conducted in parallel, we recommend the establishment of an overarching Strategy Management Office upfront

The SMO is a centralized cross-functional unit which will oversee the entire implementation process

## Implementation Architecture – Phase 1



### Description

- The Strategy Management Office is a centralized cross-functional unit within an organization that **oversees and facilitates strategic planning, execution and performance management** processes

### Objectives

- **Oversee the implementation** of the strategic recommendations
- **Coordinate communication** across the different streams
- Track progress & **suggest alternative courses of actions** if need be
- **Maintain a risk register** and suggest mitigating measures
- Ensure **budget and timeframe expectations** are met
- **Align with the Economic Modernization Vision** roadmap

## Execution Framework – Phase 1



## Subsequently, to deliver each of the Reform Pillars, we propose a five-step implementation process designed to be actionable

The Reform Pillars will run in parallel, and should be provided with appropriate resources to succeed

### Implementation Architecture – Phase 2



#### Description

- The four Reform Pillars will be **running in parallel**, and should be **provided with the relevant resources to succeed**: a stream lead backed by a specialized team, supported by a dedicated budget

#### Objectives

- **Lead the delivery** of stream-specific strategic recommendations
- Manage stream-specific **resources (human, financial, etc.)**
- **Coordinate communication** across stream stakeholders & upwards
- **Engage third-party expert** studies where need be
- **Facilitate knowledge transfer** to build-up in-house capabilities
- Assess implementation success & **drive continuous improvements**

### Execution Framework – Phase 2



- Immediate steps which MEMR can take on its own to **kick-start the implementation** of the reforms and identify barriers which must be overcome
- Actionable steps which must be taken to **detail the reforms & finalize their execution**, includes mapping of the stakeholders and their respective roles
- **Legal implications** related to each recommendation, including details on which part of the regulatory framework needs to be amended and to what extent
- **Dissemination of the policy changes** to relevant stakeholders to facilitate their understanding and improve the perception of Jordan
- **Monitoring of selected long-term indicators** to ensure the policy changes are acting as expected and seek to improve where necessary

# Finally, once the initial reforms have been addressed, the Substrategy Detailing will aim to lay sector-wide foundations to drive long-term growth

The Substrategy Detailing will be initiated after the foundational reforms have been successfully conducted

## Implementation Architecture – Phase 3



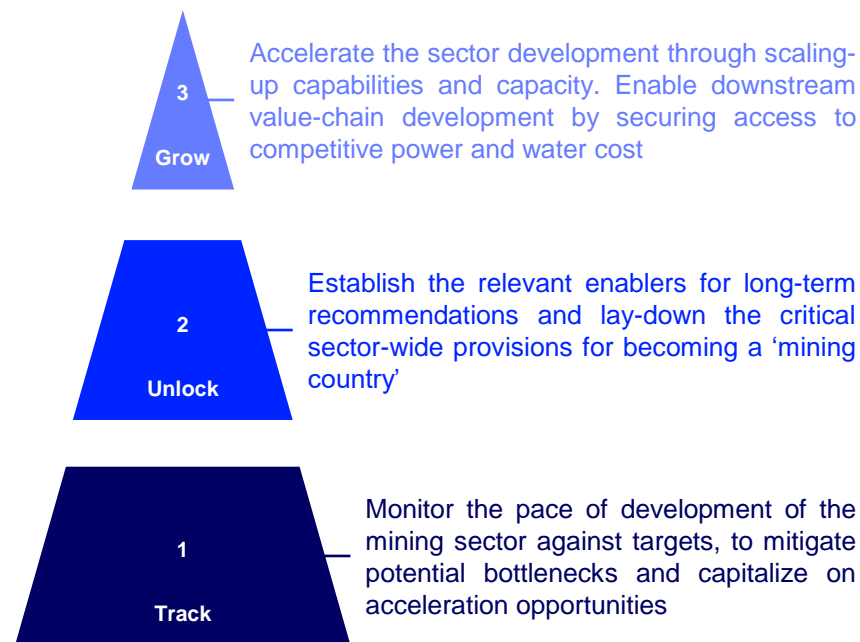
### Description

- The Substrategy Detailing is **critical to scale-up sector-wide sector provisions and help accelerate its development**, however it cannot be initiated until the foundational reforms have been conducted

### Objectives

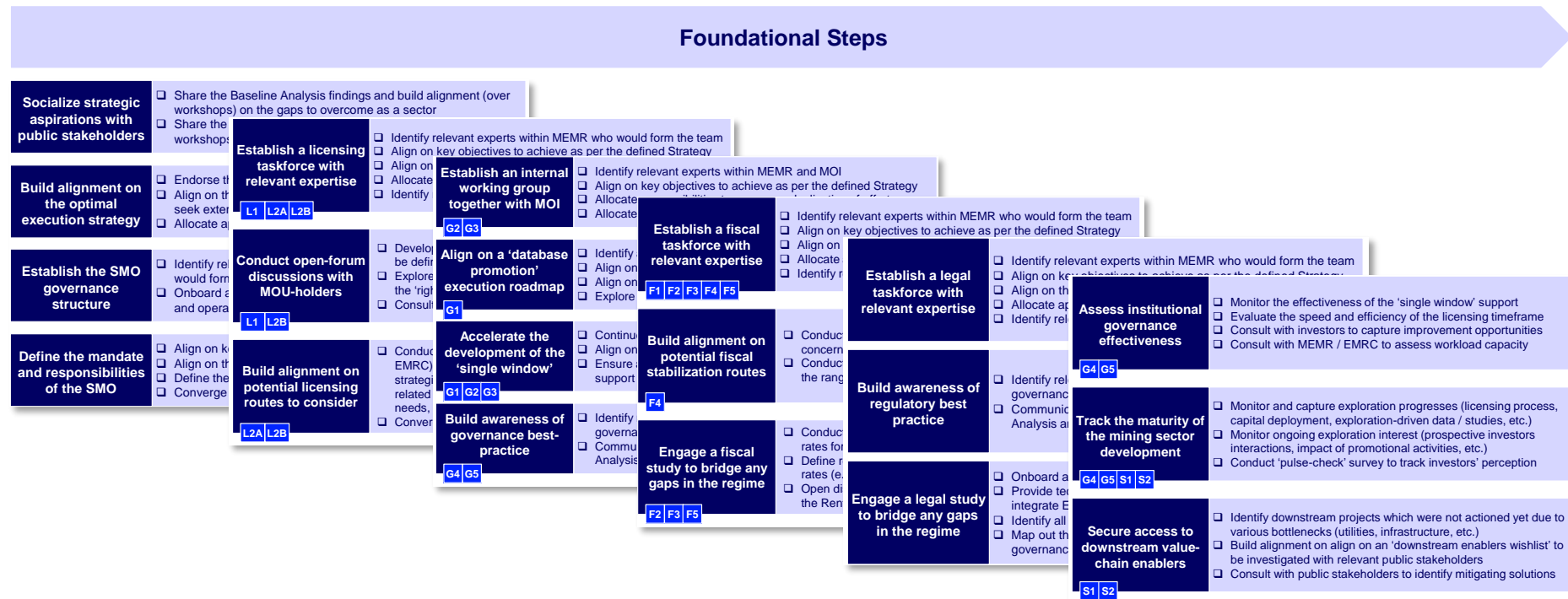
- Ensure the initial reforms have achieved their intended impact
- Address follow-up improvements where relevant
- Conduct a redesign of the mining institutional governance structure
- Build the critical foundations for becoming a 'mining country'
- Develop downstream-driven industrial clusters
- Foster the development of local specialized capacity & capability

## Execution Framework – Phase 3



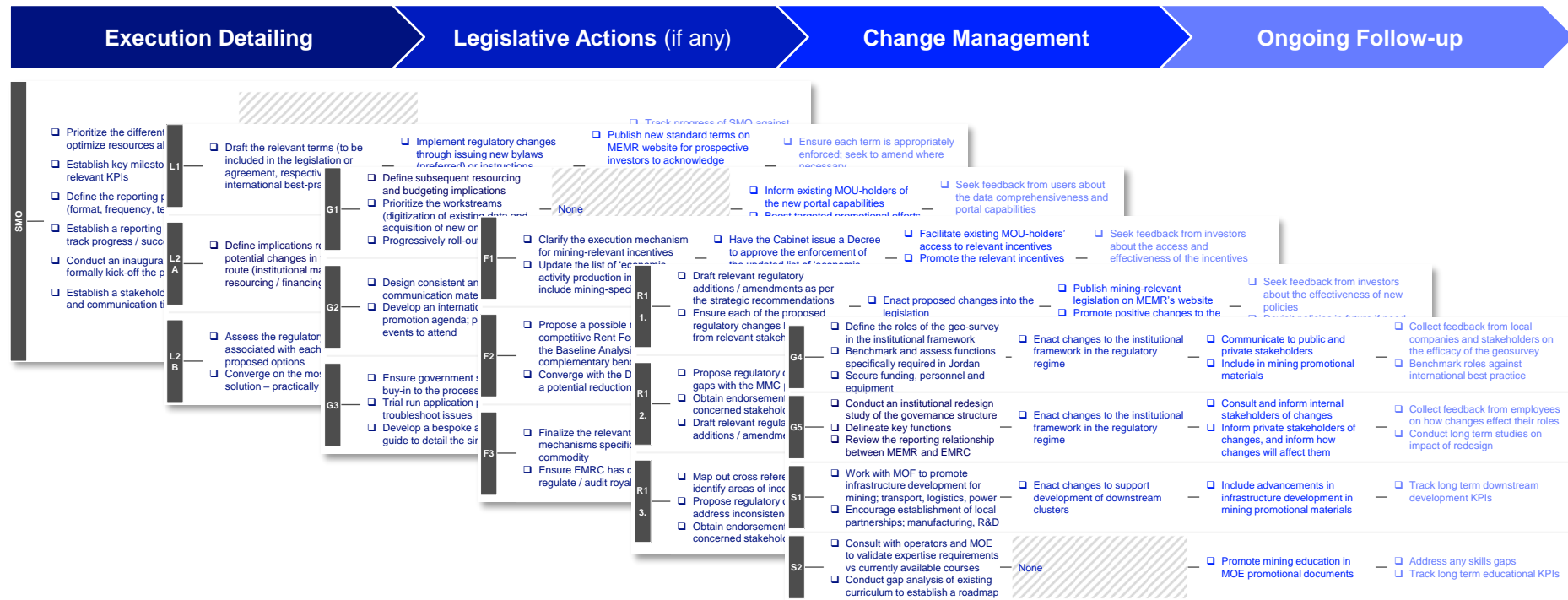
# Overall, the implementation roadmap describes >20 foundational steps including >80 different activities which must be delivered over the initial months

Those foundational steps can be immediately launched by MEMR to establish positive momentum



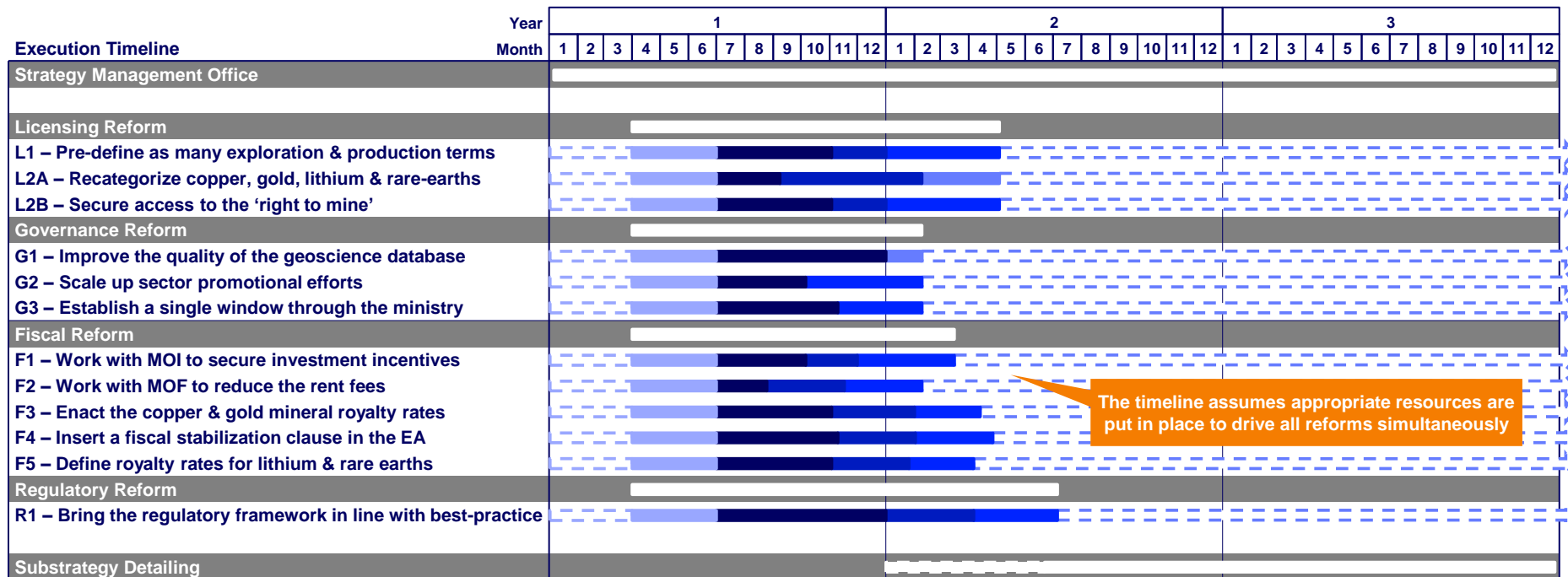
# The roadmap also documents >150 activities across the different reforms which will aim to detail, enact and communicate the relevant changes

Those subsequent steps require third-party support, either from public institutions or industry experts



# Overall, the integrated execution of the strategic reforms would extend over ~10-18 months, with the SMO remaining active throughout the implementation

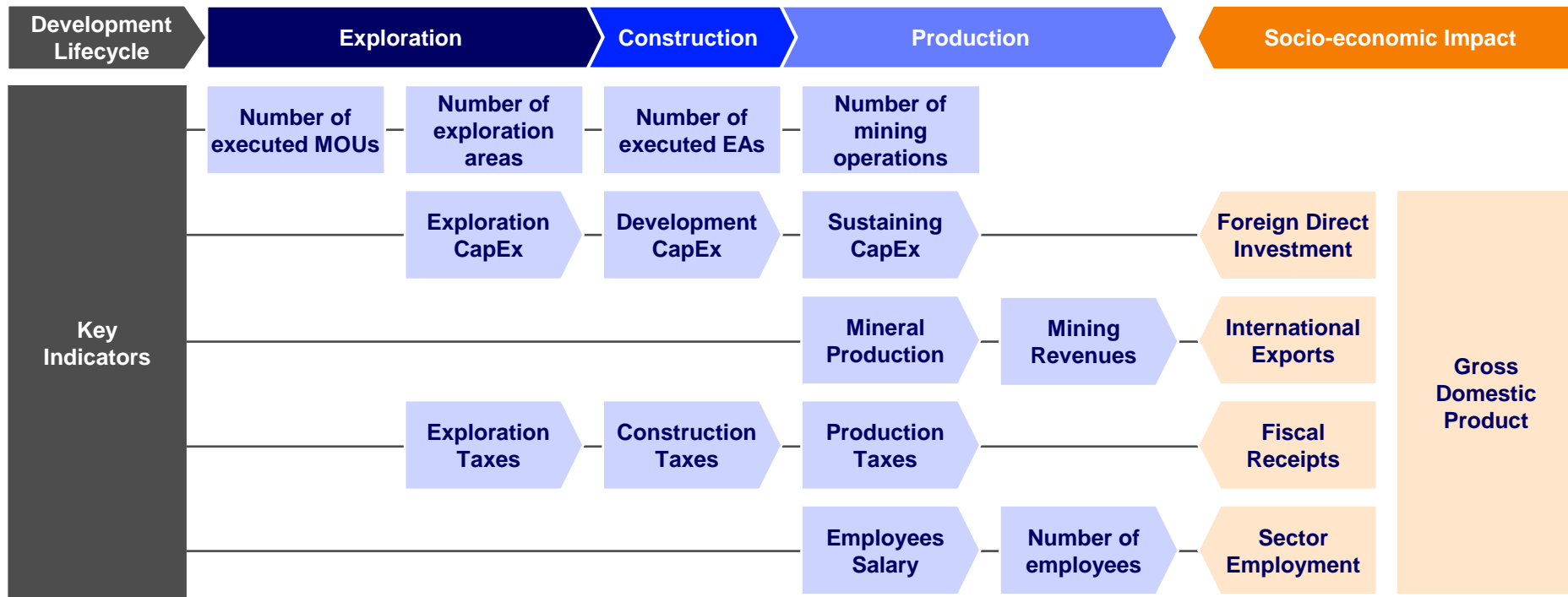
There will be a number of interim milestones that can be promoted along the way to all the key stakeholders





# Throughout that period, MEMR can track several indicators to monitor the mining sector development & maturity, and the socio-economic impacts generated

The mining sector would contribute in terms of foreign direct investment, exports, fiscal receipts & employment



# HOW

Convergence on the optimal execution plan

## Six types of activities need to be conducted as part of the implementation roadmap, comprising a mix of one-time efforts and ongoing responsibilities

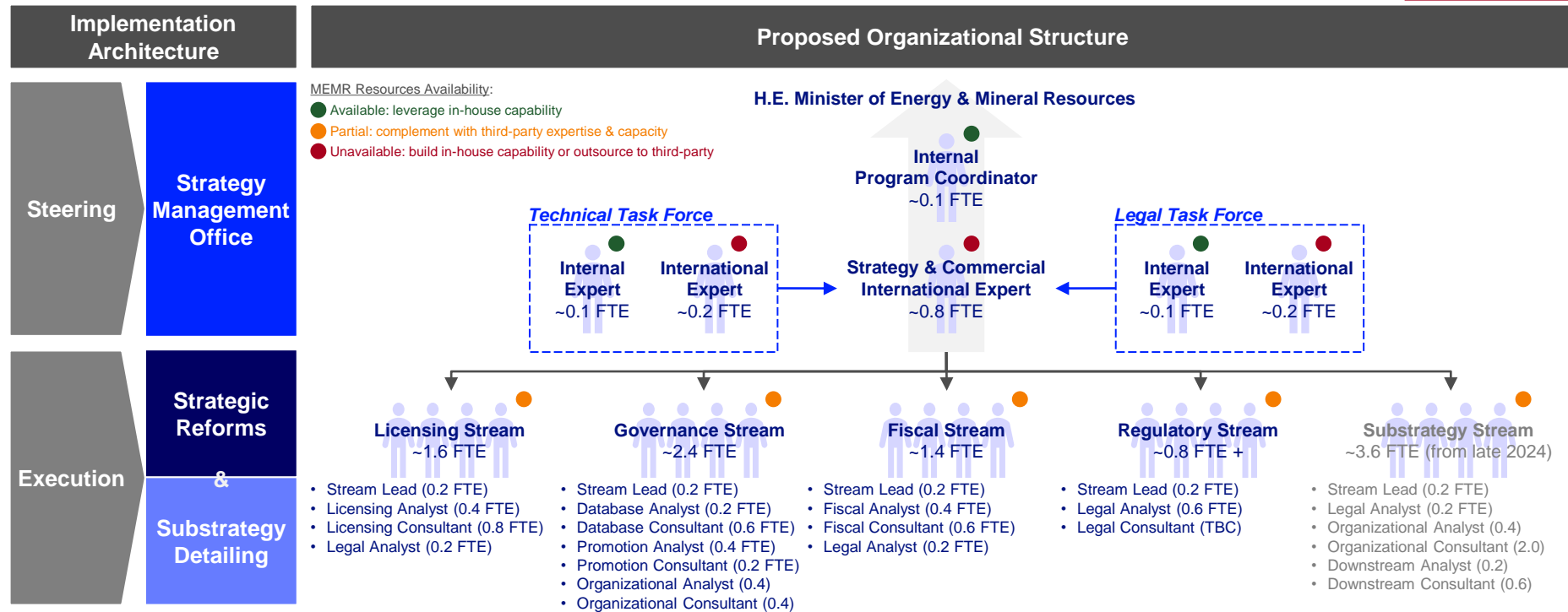
Each activity type is characterized by a 'frequency of execution' and specific 'expertise requirements'

Activity Type		Activity Description	Frequency		Expertise Requirement		
			One-off	Ongoing	Strategy	Technical	Legal
Steering	Implementation Oversight	<b>Oversee the execution process</b> to ensure the recommendations are successfully delivered in time, on budget and up to expectations		✓			
	Stakeholders Engagement	<b>Collaborate with relevant parties with a vested interest</b> , ensuring their perspectives are incorporated and they provide ongoing buy-in		✓			
Execution	Benchmarks Detailing	<b>Capture industry &amp; peer countries standards</b> to ensure best practice is followed and competitive terms are being implemented	✓				
	Policy Drafting	<b>Draft relevant legislation</b> (new and amendments) to officialize the application of licensing, governance, fiscal & regulatory reforms	✓				
	Support Material Detailing	<b>Develop informative resources</b> to communicate the substance & impact of the different reforms to relevant public & private audiences	✓				
	Performance Measurement	<b>Track &amp; analyze relevant metrics</b> to assess the success of the strategic recommendations, and to drive continuous improvement		✓			

# To fulfil these ambitious reforms, MEMR will need to allocate appropriate in-house resources and supplement with external expert support where needed

The implementation architecture will require  $\geq 8$  FTEs in various work fronts during the first year

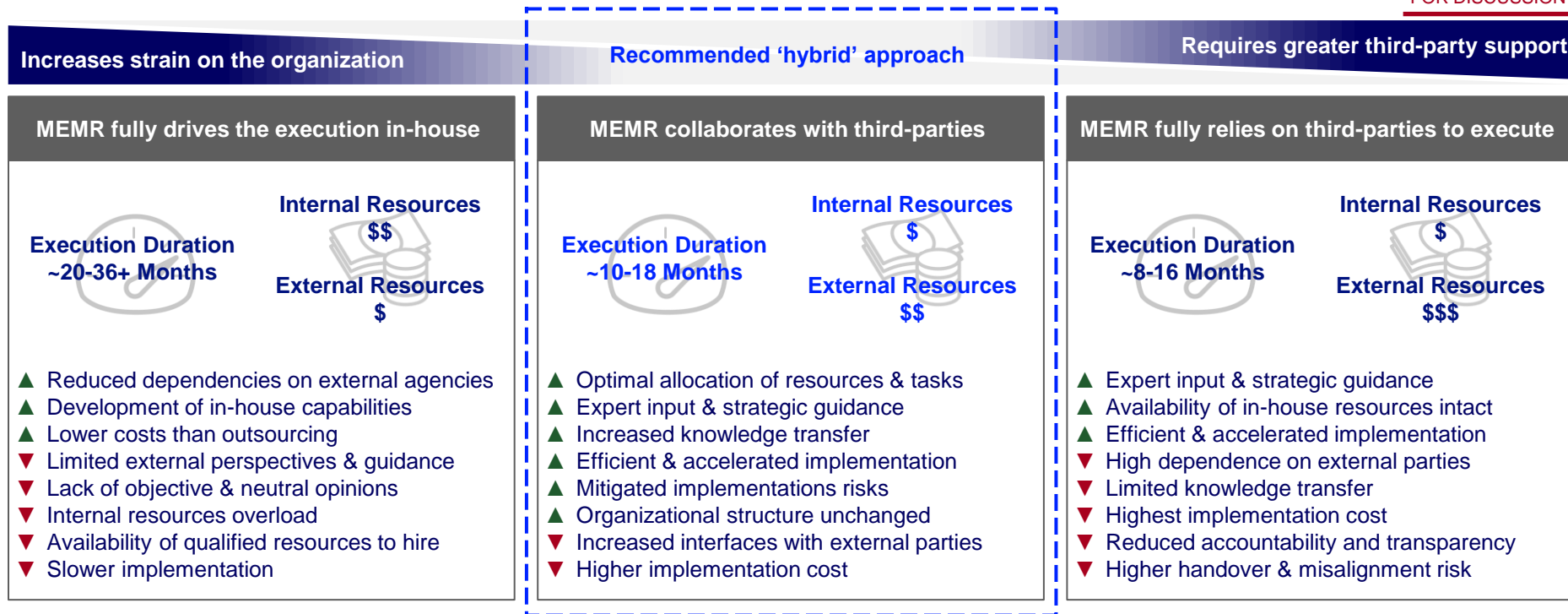
FOR DISCUSSION



# The roadmap calendar is based on a resourcing model that optimises MEMR's employee involvement and use of third-party expertise to de-risk the schedule

This collaborative approach improves alignment, develops capabilities, and reduces the likelihood of setbacks

FOR DISCUSSION



# In terms of next steps, the priority is to capture any feedback post-workshop and fine-tune the Implementation Roadmap to finalise the Mining Sector Strategy

Subsequently, MEMR can focus its attention on laying the foundation to kick-off the implementation

**1**

## **Finalize the Mining Sector Strategy phase**

- ✓ Obtain endorsement on the proposed Implementation Roadmap
- ✓ Capture feedback following the Implementation Workshop (within 1 week)
- ✓ Fine-tune the Implementation Roadmap (organizational structure, timeline, etc.)
- ✓ Submit the final report documenting the completed phase

**2**

## **Prepare for the implementation**

- ✓ Identify internal capability gaps which must be complemented
- ✓ Secure budget to obtain external support to fill the gaps (expertise & capacity)
- ✓ Iterate on the implementation organizational structure, based on resource capacity
- ✓ Establish the final Implementation Roadmap

**3**

## **Launch the Strategy Management Office**

- ✓ Nominate internal project leaders who will take part in the SMO
- ✓ Socialize aspirations with relevant public stakeholders & build alignment
- ✓ Establish the SMO governance structure
- ✓ Define the reporting process (format, frequency, etc.) and establish a baseline



# Introduction



# Jordan has key foundations in place to grow its mining sector, but critical bottlenecks must be overcome to establish a trusted investment environment

The government must focus on factors which can be highly influenced through policy-making

## Strengths

- Diverse **mineral potential** for mid-size deposits
- **Effective collaboration** across public institutions
- Nascent mining **ancillary value-chains** exists
- Top-down **Economic Modernization Vision**
- **Geopolitical stability** & security
- **Economic stability** (JOD pegged to the USD and ease of profits' repatriation)

Leverage

## Weaknesses

- No **security of tenure** for MOU-holder to the EA
- The existing **fiscal regime** lacks clarity and is incomplete
- Unclear & **discretionary regulatory framework**
- Underpopulated **project development funnel**
- **Power costs** are among the highest globally
- **Water access** is limited for mining activities

Overcome

## Opportunities

- **Geographic access** to 'western' supply-chains
- Accelerated **energy transition** globally
- Phosphate & potash **mining expertise**
- Ready access to a highly **educated workforce**
- **Promotional efforts** can easily be scaled-up
- Alignment with **decarbonization goals**

Capitalize

## Threats







- Increasing **pressure on water usage**
- Intensifying **regional competition** for investment
- Deterioration of the **social license** to operate
- Perception of mining **impact on the environment**

Mitigate








# To attract investors, Jordan needs to conduct relevant reforms to improve the transparency, uniformity and clarity of its investment framework

The current Jordanian mining investment framework is not competitive enough with regards to best-practice

Attributes	Features	Jordan Assessment	Key Objectives
Stability	Transparent		<ul style="list-style-type: none"> <li>Improve the <b>clarity and structure</b> of existing policies</li> <li>Ensure that investors can <b>easily access &amp; process</b> relevant policies</li> </ul>
	Enforceable		<ul style="list-style-type: none"> <li>Continue to <b>promote Jordan as a stable socio-political regime</b></li> <li><b>Keep enforcing contract's execution</b> as per the rule of law</li> </ul>
Effectiveness	Uniform		<ul style="list-style-type: none"> <li><b>Pre-define as many of the licensing terms</b> in the law as possible</li> <li><b>Standardize licensing agreements</b> across all sector participants</li> </ul>
	Fair		<ul style="list-style-type: none"> <li>Facilitate the access to the relevant <b>investment incentives</b></li> <li><b>Promote the competitiveness of the Jordanian fiscal regime</b></li> </ul>
Efficiency	Clear		<ul style="list-style-type: none"> <li><b>Close the gap</b> with international best practices</li> <li>Prevent the potential for <b>discretionary interpretations</b></li> </ul>
	Actionable		<ul style="list-style-type: none"> <li>Enable public institutions to cope with the <b>sector scale-up ambitions</b></li> <li><b>Delineate appropriately governance functions</b> across public entities</li> </ul>

# The strategic recommendations which were formulated as part of the Strategy aim to address the critical bottlenecks identified during the Baseline Analysis

Addressed the required reforms and relevant accelerators is key to building trust with prospective investors

Proposed Strategic Reforms & Accelerators	Critical Bottlenecks
<div>1</div>  <div>Licensing Reform</div>	<ul style="list-style-type: none"> <li>• MOU and EA <b>terms are independently negotiated</b> for different operators</li> <li>• The strategic minerals licensing process <b>requires two government ratifications</b> (inc. Parliament)</li> <li>• There is <b>no security of tenure</b> for MOU holders</li> </ul>
<div>2</div>  <div>Fiscal Reform</div>	<ul style="list-style-type: none"> <li>• The <b>fiscal regime is incomplete</b> (e.g. copper / gold / lithium rare earths mineral royalties)</li> <li>• <b>Rent Fees are excessively high</b></li> <li>• The <b>access to investment incentives is uncertain</b></li> </ul>
<div>3</div>  <div>Governance Reform</div>	<ul style="list-style-type: none"> <li>• The institutional structure include <b>shared authorities across several governance functions</b></li> <li>• The existing <b>geoportal (and underlying database) is not comprehensive &amp; accessible</b> enough</li> <li>• <b>Investment promotion remains relatively passive</b></li> </ul>
<div>4</div>  <div>Regulatory Reform</div>	<ul style="list-style-type: none"> <li>• The mining regulatory framework (law, bylaws, instructions) is <b>not comprehensive enough</b></li> <li>• Several gaps exist, leaving <b>room for substantial discretionary decisions</b></li> <li>• Relevant <b>legislations are not consistently cross-referenced</b> (e.g. environment, investment)</li> </ul>
<div>5</div>  <div>Downstream Accelerators</div>	<ul style="list-style-type: none"> <li>• <b>Power costs are very high</b>, and are a critical enabler of downstream processes</li> <li>• <b>Water is scarce</b>, and its access is a critical enabler of downstream processes</li> <li>• Downstream processes may generate <b>toxic wastes</b>, which <b>should be carefully managed</b></li> </ul>

# Based on our analysis, we have prescribed 14 licensing, fiscal, governance & regulatory strategic recommendations, 6 of which were identified as 'quick wins'

We have grouped strategic recommendations by reform type and assessed their short-term impact

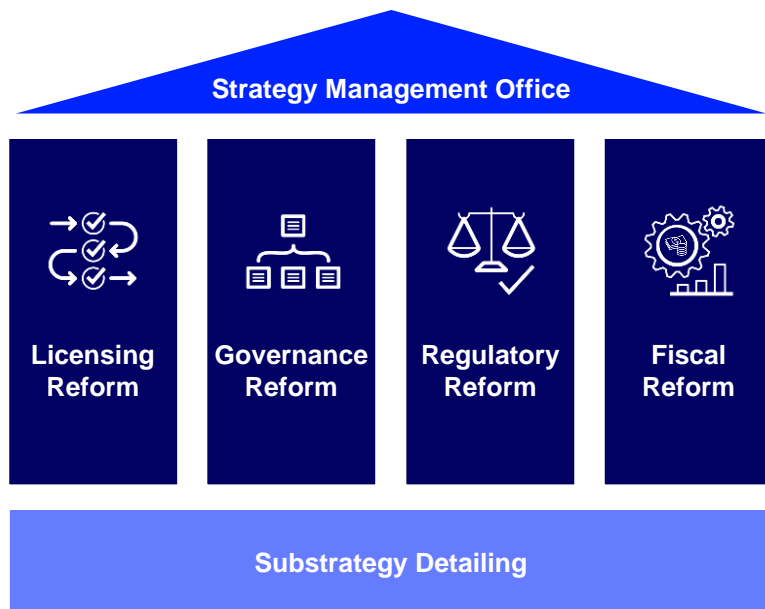
Proposed Strategic Recommendations		Implementation Prioritization	Short-term Impact
<b>F1</b>	Work with the MOI to define mining-specific criteria ensuring the applicability of the investment incentives	Quick Win	High
<b>G3</b>	Establish a 'single window' through the Ministry to facilitate collaboration across relevant sector entities	Quick Win	High
<b>G1</b>	Dedicate resources to improve the quality of the geoscience database & its accessibility by investors	Quick Win	Medium
<b>G2</b>	Scale-up sector promotion efforts to address market mis-perceptions & start building trust with investors	Quick Win	Medium
<b>F3</b>	Enact the proposed copper & gold mineral royalty rates equations within the regulatory framework	Quick Win	Low
<b>F5</b>	Define new globally competitive mineral royalty rates for lithium and rare earths	Quick Win	Low
<b>L1</b>	Pre-define as many exploration & production terms as reasonably possible by policy	Must Have	High
<b>F2</b>	Work with the MOF to reduce the Rent Fees in line with other competitive jurisdictions	Must Have	High
<b>R1</b>	Propose regulatory adjustments / additions to bring the regulatory framework in line with best-practices	Must Have	High
<b>L2-B</b>	Ensure successful exploration outcome results in awarding the mining license to the explorer	Must Have	Medium
<b>L2-A</b>	Remove copper, gold, lithium & rare-earths from the 'strategic minerals' category	Important	Medium
<b>F4</b>	Insert a fiscal stabilization clause in the Executive Agreement to secure the incentives application	Important	Low
<b>G4</b>	Establish a national geological survey to assume the Database Promotion mandate	Low Priority	Low
<b>G5</b>	Conduct a redesign of the mining institutional governance structure to delineate key functions	Low Priority	Low

# Implementation Activities



# The architecture of the implementation roadmap comprises the four Reform Pillars, the Substrategy Detailing & an overarching Strategy Management Office

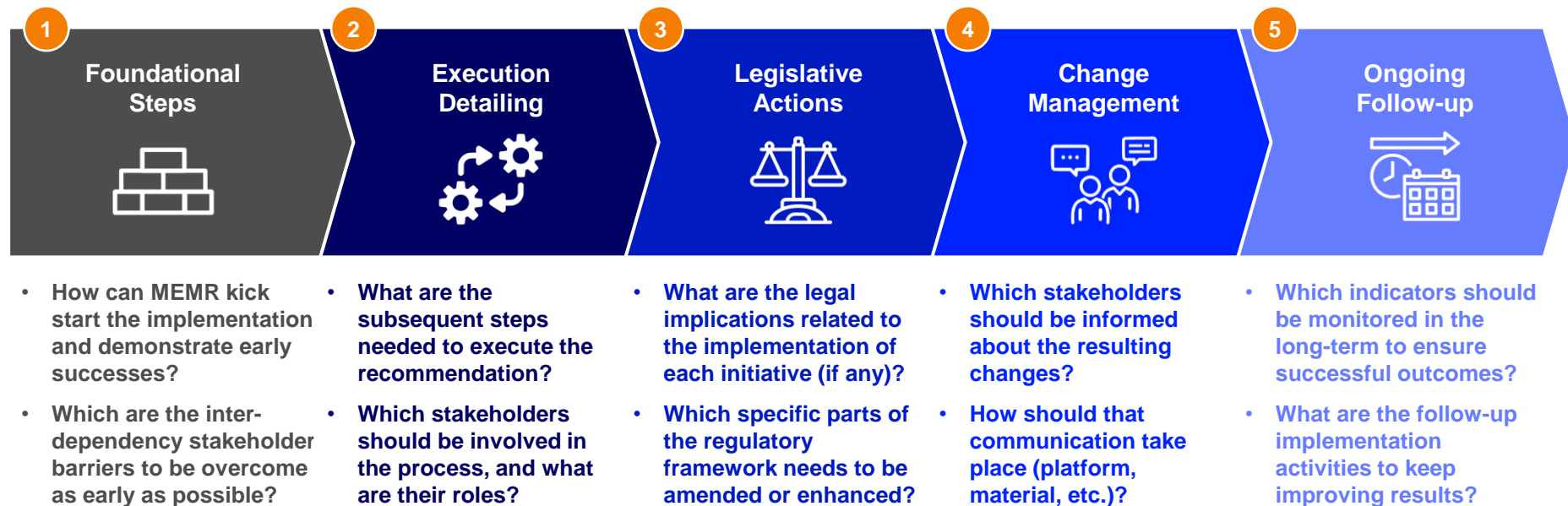
Overview of the proposed implementation roadmap architecture



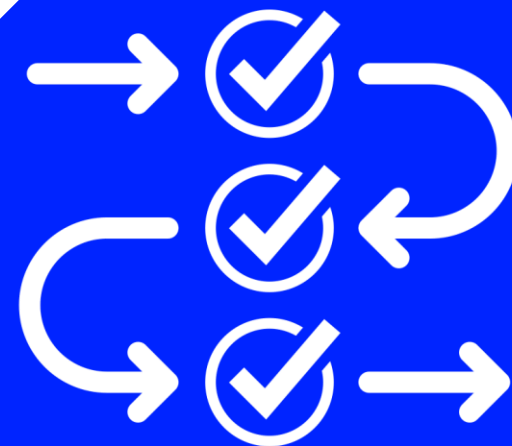
- Oversees the **implementation** of the strategic recommendations
- **Tracks progress** and suggests alternative courses of actions
- Coordinates with the **Economic Modernization Vision roadmap**
- Each pillar works as a program in its own structure, including:
  - A project leader
  - A specialized project team
  - Own budget
  - Own implementation milestones
- Running on a standalone basis, **programs are responsible for their own tracking of progress, milestones achievement and recommended changes** when applicable
- Addresses **ongoing follow-up activities** from the initial reforms
- Unlocks enablers for the **long-term recommendations**
- Build the critical **foundations for becoming a 'mining country'**

# The implementation roadmap will follow a five-step process for each of the reform pillars, which is designed to be actionable to drive momentum

Each pillar will be underpinned by foundational activities which can be implemented now by MEMR



# Licensing Reform



# The main objectives of the licensing reform are to increase the predictability of the process and enforce a uniform structure for sector participants

We have outlined the strategic objectives, key activities and expected outcomes

Strategic Objectives	Key Activities	Expected Outcomes
<p><b>Provide investors with confidence in their ability to secure the 'right to mine'</b></p> <ul style="list-style-type: none"> <li>• Ensure the criteria underlying the licensing process are transparent</li> <li>• Minimize discretion in the decision-making process</li> <li>• Accelerate the decision-making process turnaround time</li> </ul> <p><b>Establish a uniform exploration and production licensing framework</b></p> <ul style="list-style-type: none"> <li>• Define uniform licensing terms across exploration / mining companies</li> <li>• Enforce industry-standard work programmes with license holders</li> <li>• Prevent the potential for negotiations leading to exceptional terms</li> </ul>	<ul style="list-style-type: none"> <li>• Establish a legal taskforce within MEMR with relevant expertise, which will be interacting with relevant external counterparts</li> <li>• Conduct open-forum discussions with existing MOU-holders &amp; relevant mining sector government stakeholders</li> <li>• Build alignment on potential regulatory options to standardize license terms and provide confidence in the 'right to mine'</li> <li>• Assess the regulatory complexity associated with each of the proposed options</li> <li>• Converge of the most optimal solution – practically &amp; legally</li> <li>• Draft the relevant licensing terms to be included in the regulatory framework as per international best-practice</li> <li>• Communicate changes internally to MOU-holders and relevant government entities and externally to prospective investors</li> <li>• Monitor the execution of proposed changes, capture feedback from concerned parties and seek to amend where necessary</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Internal alignment on the most appropriate licensing route</b> to support the develop of new copper / gold / lithium / rare earths value-chains</li> <li>• <b>A comprehensive, consistent and transparent licensing framework</b> (policy and forms) in line with international best practice</li> <li>• <b>A licencing route that is clear, consistent and timebound</b> to speed up applications for investors</li> <li>• <b>Ensure risk is lowered for potential investors</b> by improving the pathway to secure the right to mine</li> </ul>








# Based on our analysis, we have summarized the strategic reforms which we recommend to engage to improve Jordan’s mining licensing framework

## Overview of the proposed licensing strategic recommendations

Licensing Strategic Recommendations	
L1	<p><b>Pre-define as many exploration &amp; production terms as reasonably possible by policy</b></p> <ul style="list-style-type: none"><li>Generic terms are typically defined in policy to reduce discretionary negotiations and ensure equity among players, hence increasing investors’ confidence; these typically include, among others: exploration / exploitation period (initial term and clear criteria for automated renewal), dispute resolution mechanisms (resolution / arbitration process, applicable laws, etc.), fiscal terms &amp; investment incentives (stabilization provisions prevent unforeseen changes), operational data sharing &amp; reporting (data type, frequency, format, etc.), change of control terms (license transfer conditions)</li></ul>
L2A	<p><b>Remove copper, gold, lithium &amp; rare-earths from the ‘strategic minerals’ category</b></p> <ul style="list-style-type: none"><li>The “strategic minerals” licensing process, which is currently under MEMR’s mandate, requires two separate Council of Ministers &amp; Parliamentary approvals. Compared with other jurisdictions globally, the Parliamentary ratification is very unusual, and the Council of Ministers’ approval could also be simplified.</li><li>Recategorizing copper, gold, lithium and rare-earths as non-strategic would help streamline their licensing process, under EMRC’s mandate. While this is an effective solution, it is quite irrevocable, so it would require strong alignment across the relevant stakeholders beforehand to ensure readiness to pursue this option.</li></ul>
L2B	<p><b>Ensure successful exploration outcome results in awarding the mining license to the explorer</b></p> <ul style="list-style-type: none"><li>Instead of pursuing recommendation L2-A (or in complement), different measures can be taken to de-risk as much as possible the licensing process and provide investors with more confidence in their ‘security of tenure’, i.e. their ability to get awarded the mining license upon successful exploration outcomes. These include:<ul style="list-style-type: none"><li>Define clearly, in policy, the exact criteria which must be met to progress through the various licensing stages, including pre-defined process timeframes</li><li>Provide existing license-holders with a clear ‘right of first refusal’ according to specified terms, over any other third-party</li></ul></li></ul>

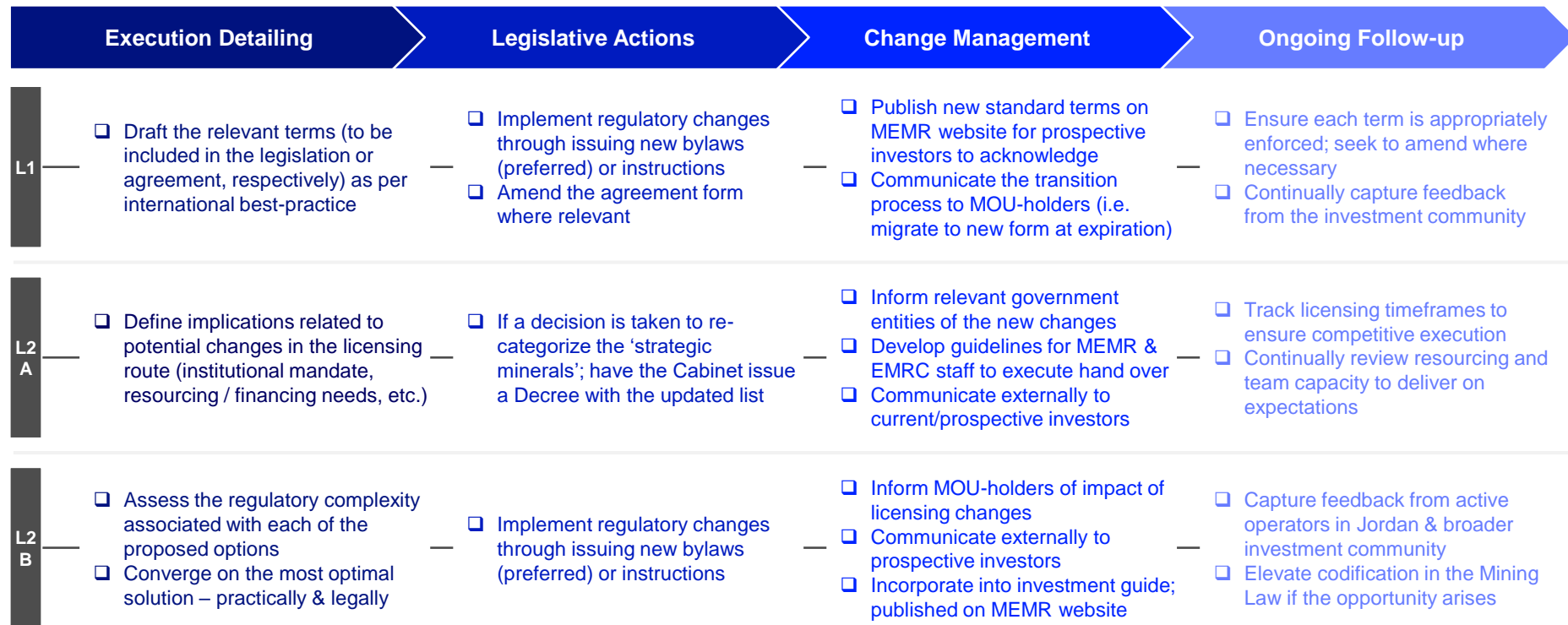
# Based on the licencing strategic recommendations which were endorsed, we have identified the immediate priorities which rely on MEMR to be launched

Foundational steps are key to demonstrate quick-wins, and to overcome dependency barriers for other changes

Foundational Steps		Key Resources	
		Human	Material
<b>Establish a licensing taskforce with relevant expertise</b> <b>L1 L2A L2B</b>	<ul style="list-style-type: none"> <li>Identify relevant cross-functional experts within MEMR who would form the team</li> <li>Align on key objectives to achieve as per the defined Strategy</li> <li>Align on the desired timeframe for completing the relevant initiatives</li> <li>Allocate appropriate budget to engage relevant third-party experts into the analysis</li> <li>Identify relevant counterparts &amp; third-party experts to work with</li> </ul>		
<b>Conduct open-forum discussions with MOU-holders</b> <b>L1 L2B</b>	<ul style="list-style-type: none"> <li>Develop a basis for discussion, proposing which terms would be defined by policy and which will remain negotiated</li> <li>Explore potential regulatory options for providing confidence in the 'right to mine' upon successful exploration outcomes</li> <li>Consult with third-party expert to reflect on industry best-practices, to meet international investors' expectations</li> <li>Prioritize the most effective (practically &amp; legally speaking) option(s) to pursue</li> <li>Align on a path to migrate existing MOU-holders into an eventual future framework</li> </ul>		
<b>Build alignment on potential licensing routes to consider</b> <b>L2A L2B</b>	<ul style="list-style-type: none"> <li>Conduct discussions with public stakeholders (especially with EMRC) to investigate the range of possible licensing routes for strategic &amp; non-strategic minerals</li> <li>Consider implications related to each (institutional mandate, resourcing needs, monitoring &amp; control, etc.) to assess the most appropriate route for each type of mineral</li> <li>Converge on the preferred option, practically &amp; legally speaking</li> </ul>		-

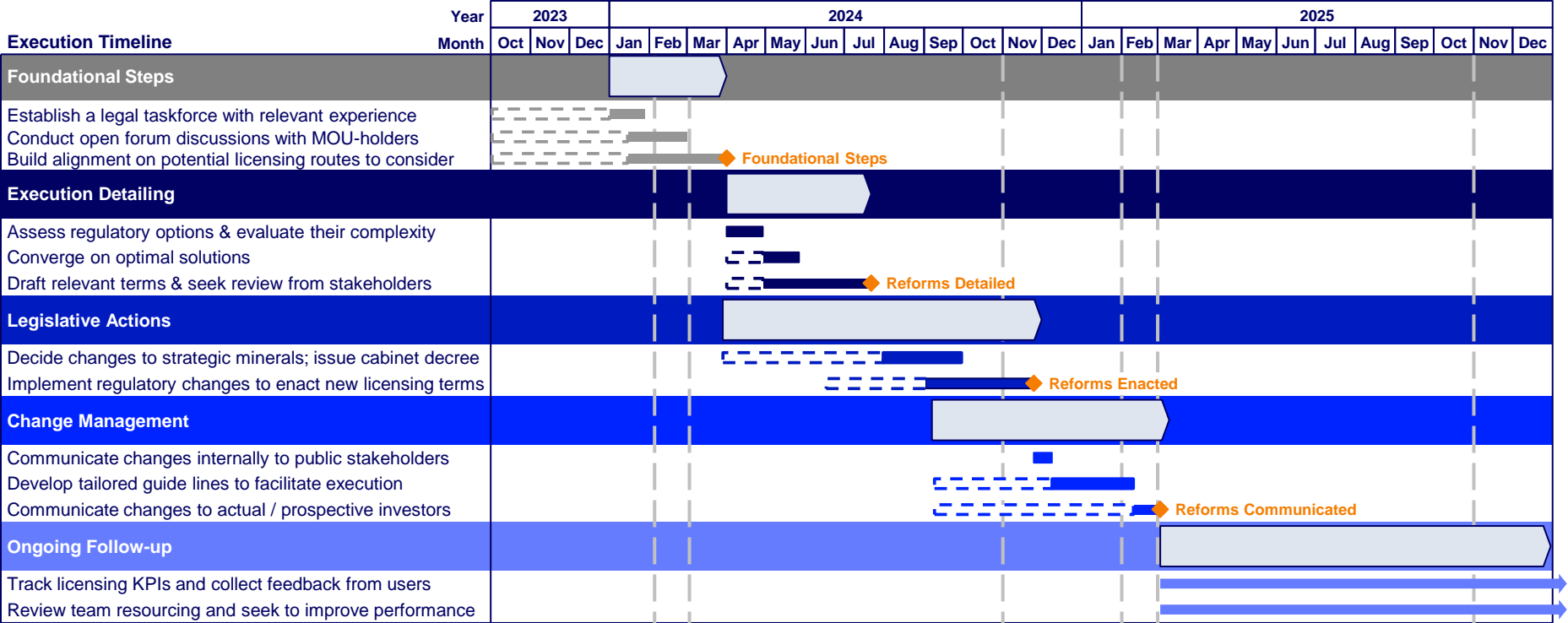
# Upon successful completion, these foundational steps will trigger subsequent implementation activities to fulfil the intended licensing outcomes

Those activities may require support or decision-making from other government entities



# The full licencing reform will require ~14 months to be completed, with selected activities expected to remain ongoing in the longer term

The proposed timeline assumes that MEMR will seek external support to oversee & accelerate the execution



# Governance Reform



# The main objectives of the governance reform are to improve the institutional collaboration and scale-up promotional efforts

We have outlined the strategic objectives, key activities and expected outcomes

Strategic Objectives	Key Activities	Expected Outcomes
<p><b>Streamline the collaboration between investors and the sector entities</b></p> <ul style="list-style-type: none"> <li>Optimize interfaces across the different relevant government entities</li> <li>Provide prospective investors with a single-window support</li> </ul> <p><b>Showcase the mineral prospectivity of Jordan to potential investors</b></p> <ul style="list-style-type: none"> <li>Build a comprehensive geoscience database with up-to-date information</li> <li>Enable investors to access relevant data for assessing opportunities</li> </ul> <p><b>Elevate Jordan's global profile as a 'mining investment destination'</b></p> <ul style="list-style-type: none"> <li>Develop a fact-based &amp; targeted communication plan</li> <li>Develop a targeted international promotion agenda</li> </ul>	<ul style="list-style-type: none"> <li>Accelerate the development of a 'single window' support in collaboration with the relevant sector-wide government entities</li> <li>Improve the geoscience database comprehensiveness through digitizing existing data and acquiring new information</li> <li>Collaborate with the Ministry of Investment in order to:               <ul style="list-style-type: none"> <li>Design consistent &amp; compelling communication materials</li> <li>Develop an international promotion agenda</li> </ul> </li> <li>Develop a tailored investment guide for the mining sector to promote Jordan's attractiveness as an investment destination</li> </ul>	<ul style="list-style-type: none"> <li><b>Internal alignment on the most optimal institutional governance structure</b> for the mining sector</li> <li><b>Clear delineation of institutional governance functions</b> across the relevant sector entities</li> <li><b>Active and effective single-window support function</b> for prospective investors through MEMR</li> <li><b>Improved perception of Jordan as a mining investment destination</b> by the global investment community</li> <li><b>Increased interactions with industry leaders and prospective investors</b> interested in Jordan</li> </ul>

# Based on our analysis, we have summarized the strategic reforms which we recommend to engage to improve Jordan's mining governance framework

## Overview of the proposed governance strategic recommendations

### Governance Strategic Recommendations

#### **Dedicate resources to improve the quality of the geoscience database & its accessibility by investors**

G1

- Overlay publicly available administrative data (roads, railways, airports, etc.) and previous country-wide geophysical survey (magnetic / radiometry)
- Ensure existing licence details are completed (owner, status, etc.), and maintain open blocks for exploration and environmentally protected areas up-to-date
- Acquire multispectral remote sensing public imagery (Sentinel 2, Landsat 8, Aster, etc) and apply a band ratio to visualize alterations
- Compile mineral occurrences from existing reports & maps and conduct focused country-wide geo-chemical sampling
- Geo-reference, translate & digitize all available datasets (maps, reports, etc.) & complement with public Arabian Peninsula data

#### **Scale-up sector promotion efforts to address market mis-perceptions and start building trust with investors**

G2

- Attend mining events: increase presence (sponsor, in addition to sending delegates) at large scale international conferences (e.g. PDAC, INDABA, IMARC) to showcase the Jordanian mining industry to appropriate audiences and network with key stakeholders (e.g. lenders)
- Host mining events: host local events for pre-selected international and local audience (networks typically built through international events) to facilitate the exposure of local stakeholders (e.g. government) and strengthen relationships with prospective international investors (e.g. site visits)
- Other initiatives include: produce publications (e.g. periodic reports) and maintain an online presence (e.g. one-stop-shop intuitive website)








#### **Establish a 'single window' through the Ministry to facilitate collaboration across relevant sector entities**

G3

- A single window's objective is to facilitate investors' onboarding process, which is achieved through:
  - Clarifying workflows: provide as much clarity as possible about the process (pre-requisites, decision criteria, etc.)
  - Minimizing interfaces: ensure all relevant approvals (with external government entities) are integrated, for completeness
  - Streamlining decision-making: provide a clear timeframe for obtaining approvals, provided right documents, and act on it

# Based on the governance strategic recommendations which were endorsed, we have identified the immediate priorities which rely on MEMR to be launched

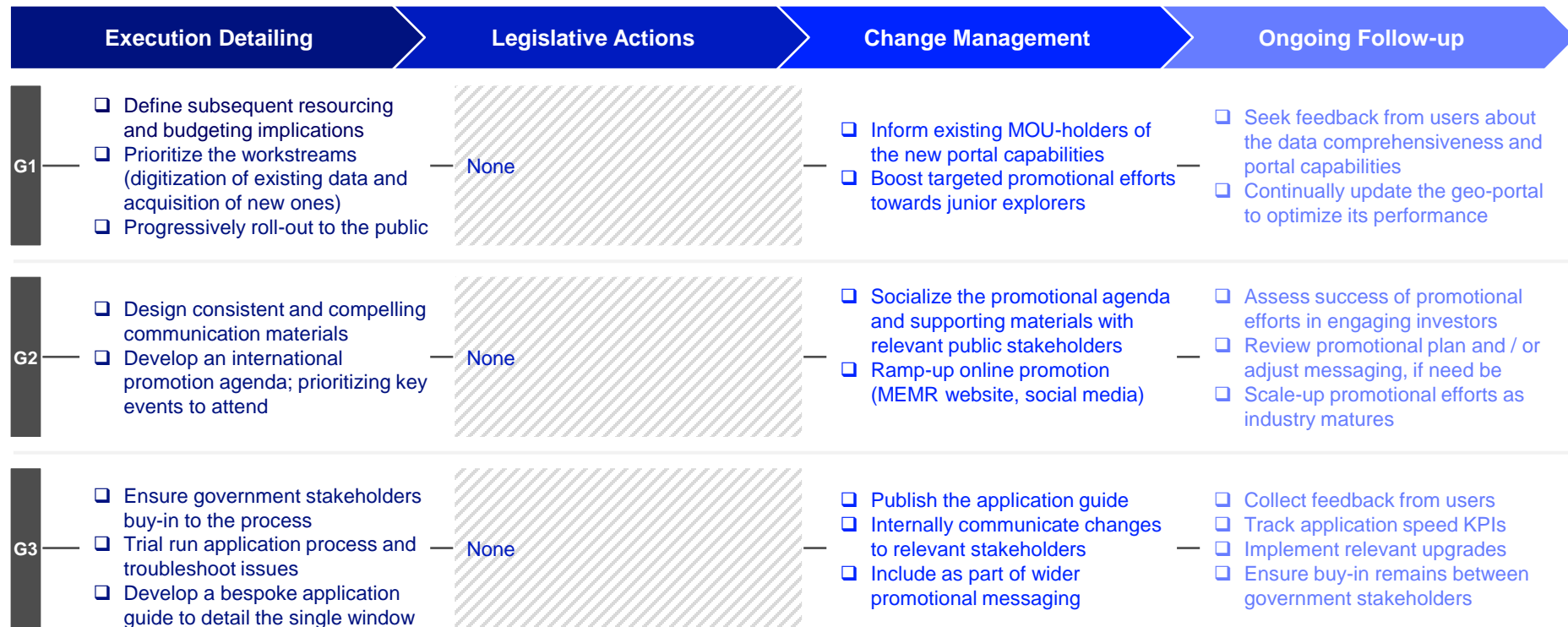
Foundational steps are key to demonstrate quick-wins, or to overcome dependency barriers for other changes

Foundational Steps		Key Resources	
		Human	Material
<b>Establish an internal working group together with MOI</b> <b>G2 G3</b>	<ul style="list-style-type: none"> <li>Identify relevant cross-functional experts within MEMR and MOI</li> <li>Align on key objectives to achieve as per the defined Strategy</li> <li>Allocate responsibilities to ensure no duplication of efforts</li> <li>Allocate appropriate budget for promotional activities</li> </ul>		
<b>Align on a 'database promotion' execution roadmap</b> <b>G1</b>	<ul style="list-style-type: none"> <li>Identify a dedicated 'database promotion' team within MEMR</li> <li>Align on key objectives to achieve as per the defined Strategy</li> <li>Align on the desired timeframe for completing relevant initiatives</li> <li>Explore relevant execution routes (in-house vs. outsourcing)</li> </ul>		
<b>Accelerate the development of the 'single window'</b> <b>G1 G2 G3</b>	<ul style="list-style-type: none"> <li>Continue to support the ongoing initiative within MEMR</li> <li>Align on key objectives to achieve as per the defined Strategy</li> <li>Ensure appropriate resources (human, financial) are in place to support the execution within the desired timeframe</li> <li>Establish a performance monitoring process to capture feedback, and apply potential enhancements</li> </ul>		
<b>Build awareness of governance best-practice</b> <b>G1 G2 G3</b>	<ul style="list-style-type: none"> <li>Identify relevant public stakeholders active in mining sector governance (e.g. EMRC, MOF, MOI)</li> <li>Communicate the findings &amp; recommendations of the Baseline Analysis and the Strategic Vision</li> <li>Map mining sector strategic ambitions with other cross-sector priorities</li> <li>Build alignment on mutually-acceptable positions to help accelerate the mining sector development</li> </ul>		-



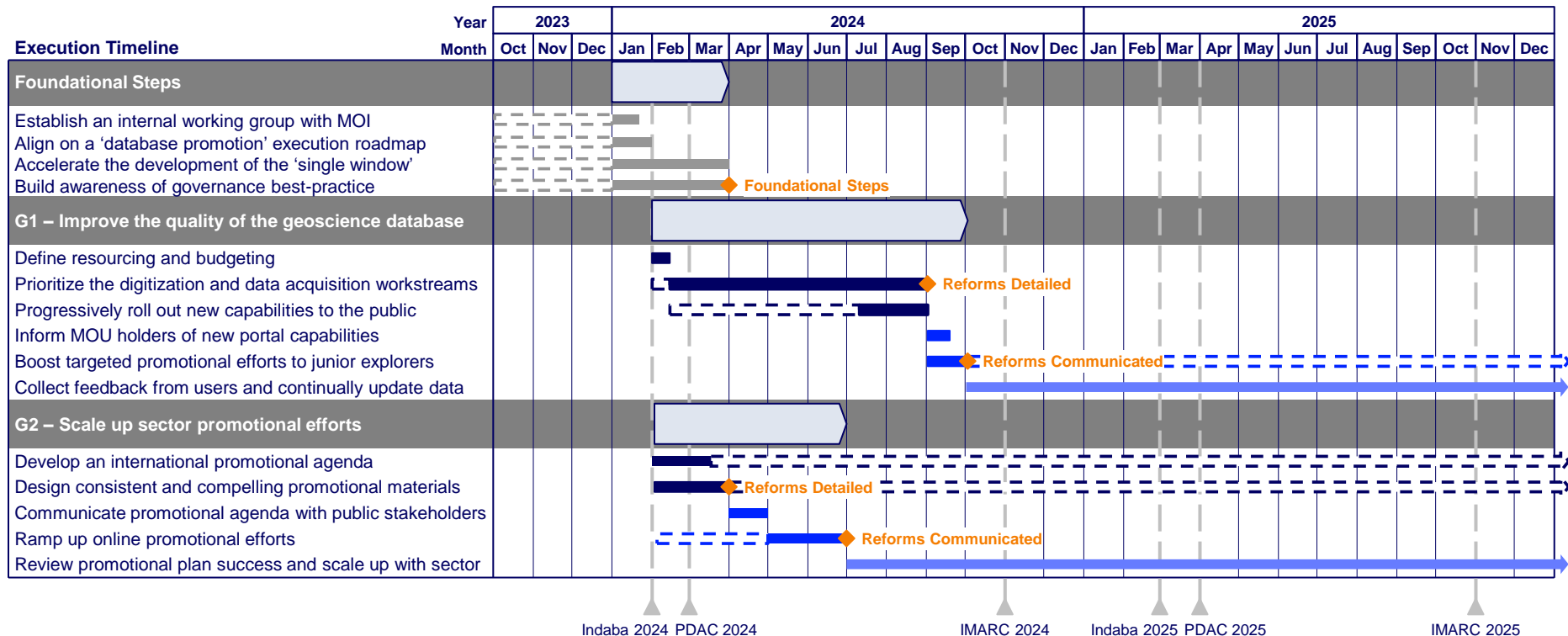
# Upon successful completion, these foundational steps will trigger subsequent implementation activities in order to fulfil the intended governance outcomes

Those activities may require support or decision-making from other government entities



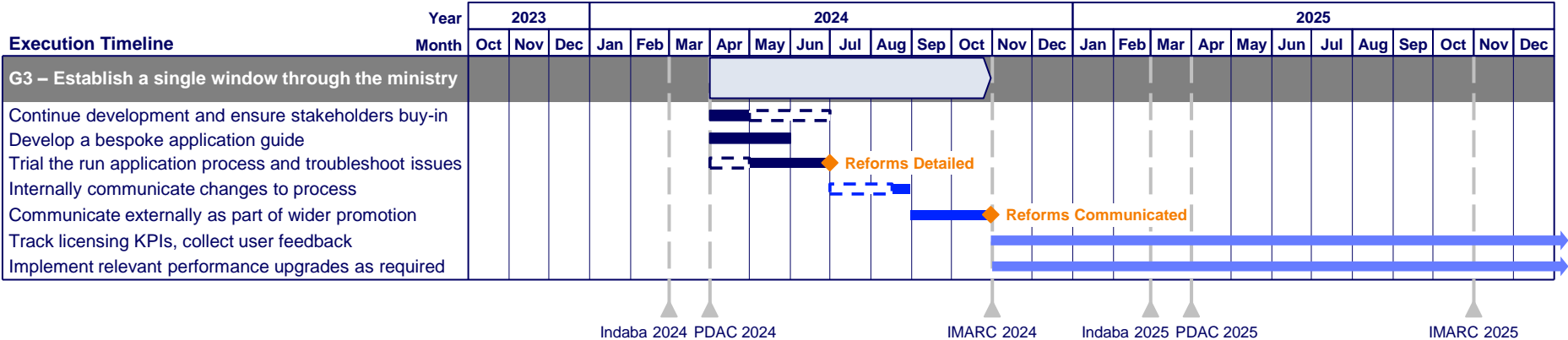
# The governance reforms will be executed concurrently over ~9 months, with selected activities expected to remain ongoing in the longer term (1/2)

The proposed timeline assumes that MEMR will seek external support to oversee & accelerate the execution



# The governance reforms will be executed concurrently over ~9 months, with selected activities expected to remain ongoing in the longer term (2/2)

The proposed timeline assumes that MEMR will seek external support to oversee & accelerate the execution

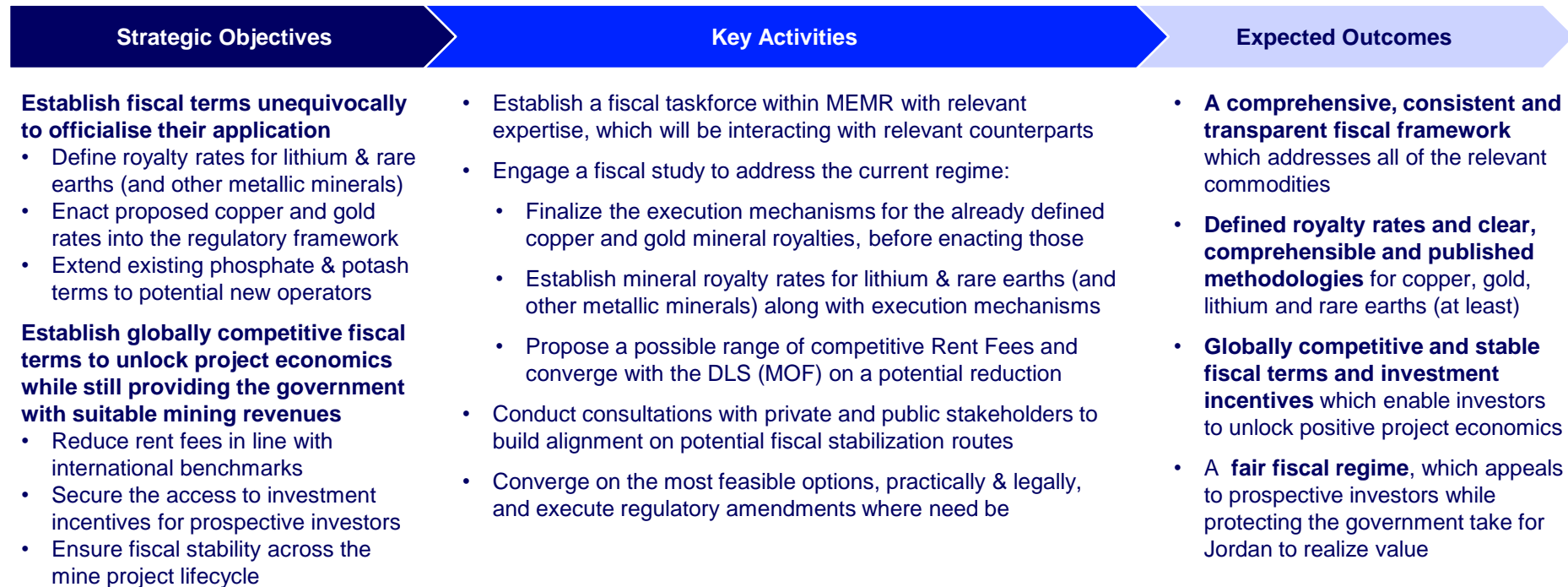


# Fiscal Reform



# The main objective of the fiscal reform is to close gaps within the fiscal regime, and to ensure it is competitive, equitable, and stable

We have outlined the strategic objectives, key activities and expected outcomes



# Based on our analysis, we have summarized the strategic reforms which we recommend to engage to improve Jordan's mining fiscal framework






## Overview of the proposed fiscal strategic recommendations

### Fiscal Strategic Recommendations

- |    |   |
|----|---|
| F1 | <p><b>Work with the MoI to define mining-specific criteria ensuring the applicability of the investment incentives</b></p> <ul style="list-style-type: none"> <li>The 'Regulating the Investment Environment' regulation provides relevant investment incentives for the mining industry, however it is important to ensure that the pre-define list of 'fixed assets, production requirements, inputs and spare parts' incorporate mining-specific input, to ensure the incentives are applicable to the sector</li> </ul> |
| F2 | <p><b>Work with the MoF to reduce the Rent Fees in line with other competitive jurisdictions</b></p> <ul style="list-style-type: none"> <li>Jordan displays one of the world's highest (land) Rent Fees, significantly above competitive (regional and top-tier) jurisdictions. For the sake of perception, it is recommended to lower the Rent Fees applicable to the mining sector in line with industry benchmarks.</li> </ul>   |
| F3 | <p><b>Enact the proposed copper &amp; gold mineral royalty rates equations within the regulatory framework</b></p> <ul style="list-style-type: none"> <li>Mineral royalty application guidance should be clearly defined in policy – typically the applicable rate (minimum / scaling) as well as relevant deductions (e.g. penalties, by-products, etc.) are defined in bylaws (or higher), with calculation principles detailed in policy as well (although at a lower level, in instructions).</li> </ul>                |
| F4 | <p><b>Insert a fiscal stabilization clause in the Executive Agreement to secure the incentives application</b></p> <ul style="list-style-type: none"> <li>The Executive Agreement should cross-reference clearly the 'Regulating the Investment Environment' regulation to pave the access (provided criteria are met) to the relevant investment incentives, notably the exemption of customs duties and sales tax, as well as the reduction in income tax.</li> </ul>   |
| F5 | <p><b>Define new competitive mineral royalty rates for lithium and rare earths (and other relevant metallic minerals)</b></p> <ul style="list-style-type: none"> <li>Similarly to the exercise conducted for copper and gold, lithium and rare earths mineral royalties should be properly modelled to define the appropriate royalty rates. For consistency (and ease of application), it would make sense to follow a similar price-based sliding royalty scale for any other metallic minerals.</li> </ul>               |

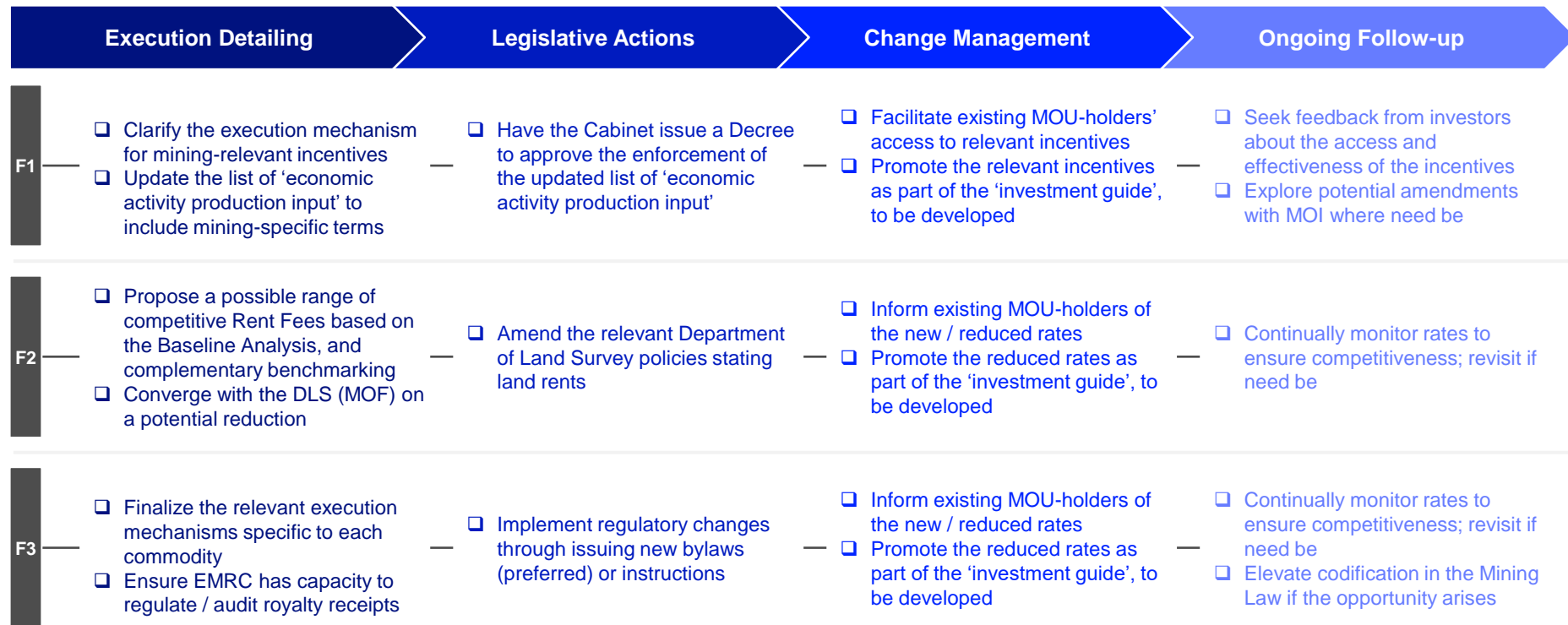
# Based on the fiscal strategic recommendations which were endorsed, we have identified the immediate priorities which rely on MEMR to be launched

Foundational steps are key to demonstrate quick-wins, and to overcome dependency barriers for other changes

Foundational Steps		Key Resources	
		Human	Material
<b>Establish a fiscal taskforce with relevant expertise</b> F1 F2 F3 F4 F5	<ul style="list-style-type: none"> <li>Identify relevant cross-functional experts within MEMR who would form the team</li> <li>Align on key objectives to achieve as per the defined Strategy</li> <li>Align on the desired timeframe for completing relevant initiatives</li> <li>Allocate appropriate financial and human resources</li> <li>Identify relevant counterparts &amp; third-party experts to work with</li> </ul>		
<b>Build alignment on potential fiscal stabilization routes</b> F4	<ul style="list-style-type: none"> <li>Conduct consultations with private stakeholders to capture their concerns regarding the stability of fiscal terms and investment incentives, and brainstorm about potential options to mitigate those</li> <li>Conduct consultations with relevant public stakeholders (e.g. MOI, MOF) to investigate the range of possible fiscal stabilization route which could be considered</li> <li>Converge on the most effective option(s), practically and legally speaking</li> </ul>		-
<b>Engage a fiscal study to bridge any gaps in the regime</b> F2 F3 F5	<ul style="list-style-type: none"> <li>Conduct a benchmarking exercise to define mineral royalty rates for lithium, rare earths and other relevant metallic minerals deemed relevant (e.g. lead, zinc)</li> <li>Define relevant execution mechanisms for the mineral royalty rates (e.g. quoting, invoicing, penalties, charges) including standardized calculation principles</li> <li>Open discussions with MOF to explore a potential reduction in the Rent Fees</li> </ul>		

# The fiscal reforms will be executed concurrently over ~14 months, with selected activities expected to remain ongoing in the longer term (1/2)

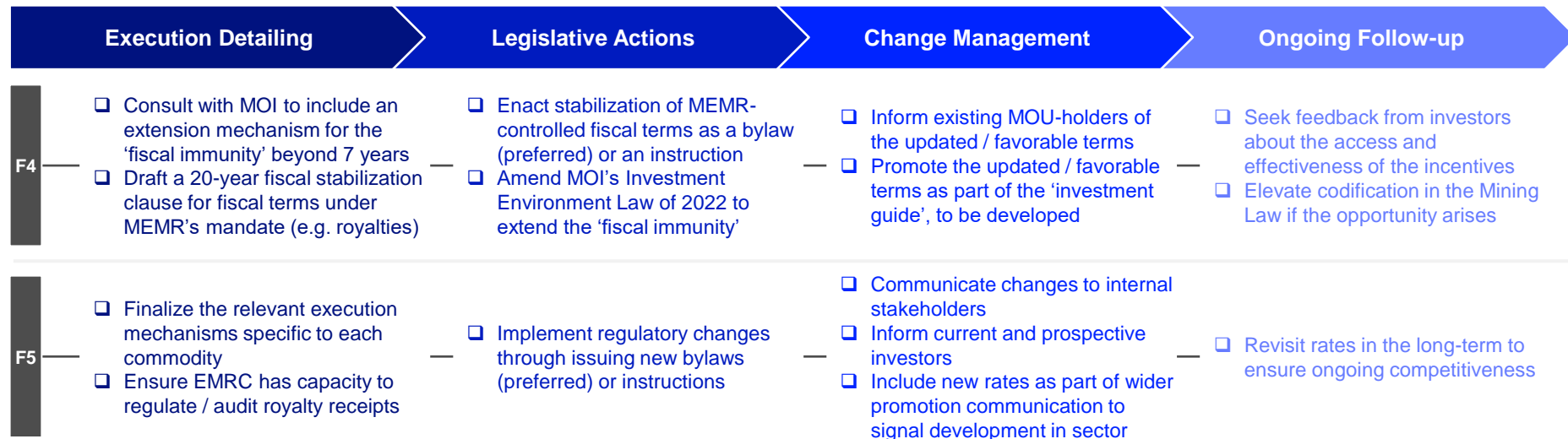
Those activities may require support or decision-making from other government entities





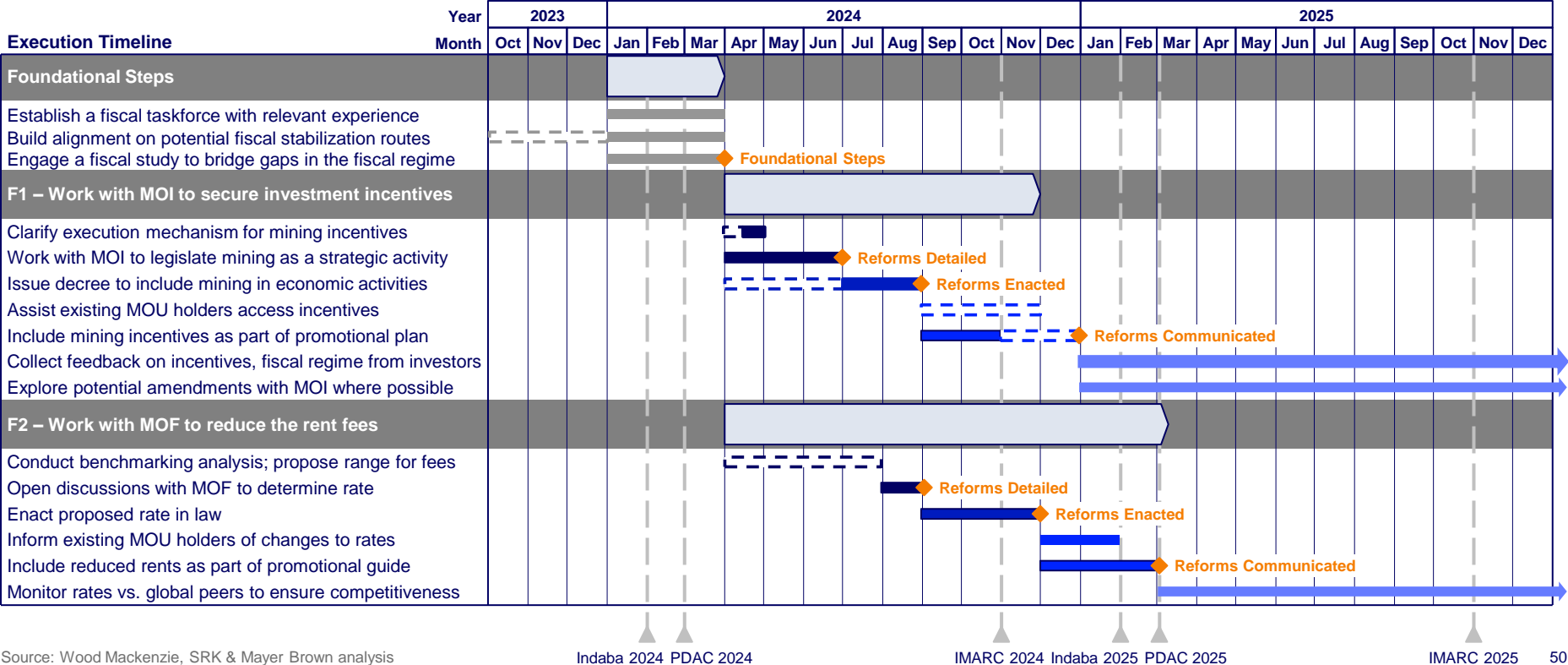
## The fiscal reforms will be executed concurrently over ~14 months, with selected activities expected to remain ongoing in the longer term (2/2)

Those activities may require support or decision-making from other government entities



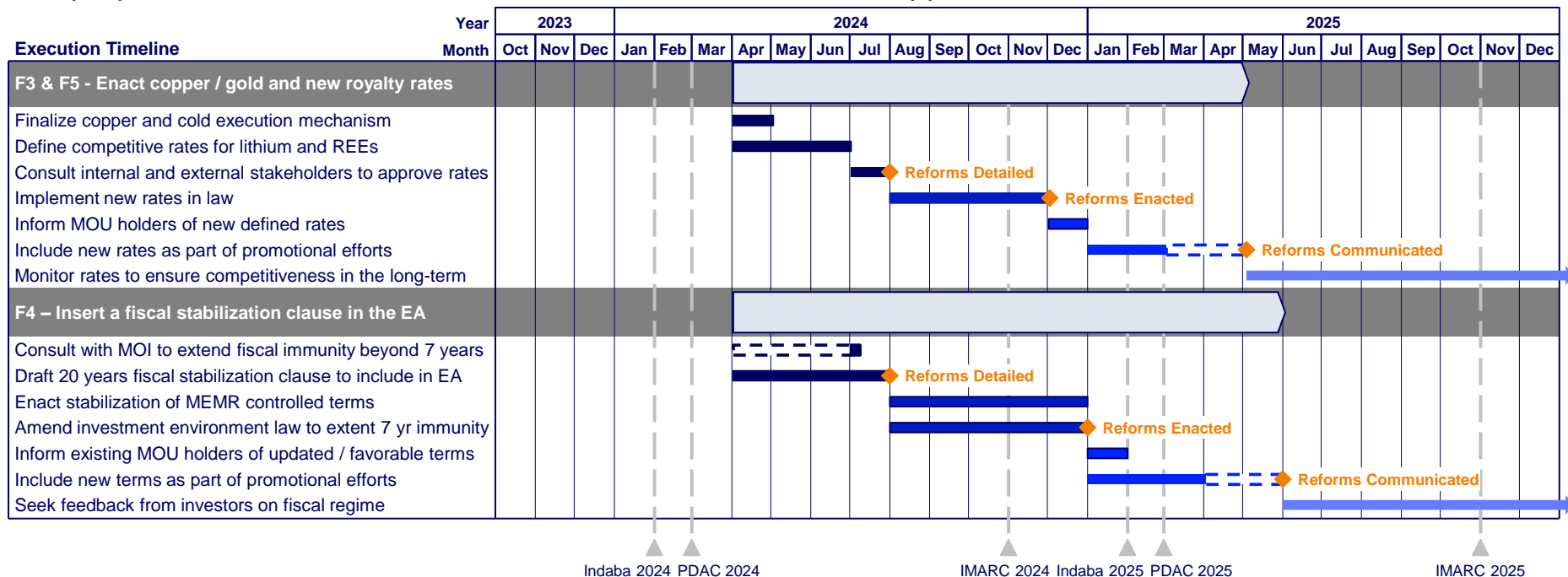
# The full fiscal reform can be implemented in phases, with teams focused on specific fiscal reforms (1/2)

The proposed timeline assumes that MEMR will seek external support to oversee & accelerate the execution



## The full fiscal reform can be implemented in phases, with teams focused on specific fiscal reforms (2/2)

The proposed timeline assumes that MEMR will seek external support to oversee & accelerate the execution

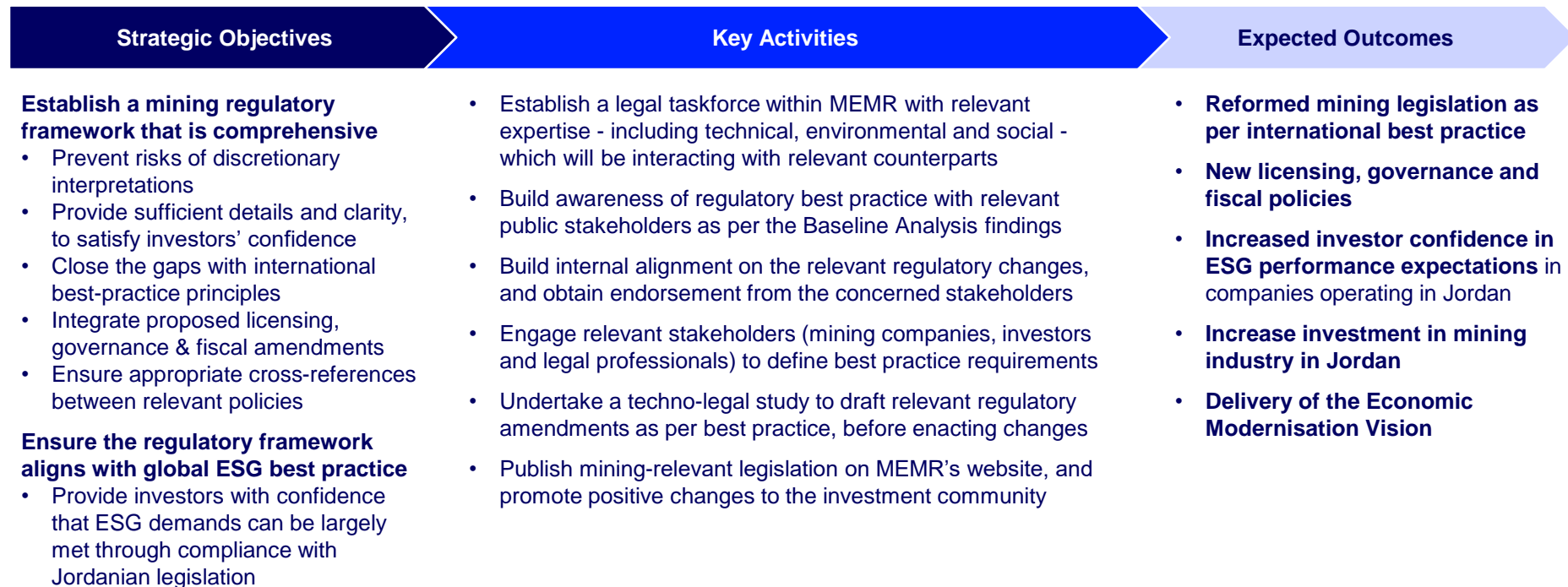


# Regulatory Reform



# The main objective of the regulatory reform is to bring the existing legislation in line with international best-practice in terms of transparency, uniformity & clarity

We have outlined the strategic objectives, key activities and expected outcomes



# Based on our analysis, we have summarized the strategic reforms which we recommend to engage to improve Jordan's mining regulatory framework

## Overview of the proposed regulatory strategic recommendations

### Regulatory Strategic Recommendations

#### Launch a project to propose regulatory adjustments / additions to bring the mining regulatory framework in line with international best-practices:

- Integrate proposed **licensing, fiscal and governance regulatory amendments** as outlined previously as part of the regulatory overhaul
- **Close the gaps with international best-practice** (10 MMC principles as outlined previously) which were identified during the Baseline Analysis
- **Review all relevant legislations** which may impact the Jordanian mining sector (e.g. environmental, investment) to ensure consistent cross-references

Critical topics to be clarified include:




1. **Fair license allocation** License award procedure should be contained in a segregated section of the law & detailed enough to prevent discretionary decision-making
2. **Work it or lose it** Detailed work programmes required from license holders are needed (along with a statement that failure to follow it could lead to forfeiture)
3. **Exploration period sufficient for discovery** Extensions should generally be automatic and not subject to discretion (although the exploration area can be reduced)
4. **Right to mine** Define a clear path for exploration license holders to award of exploitation licence upon successful exploration outcomes, governed by a standard EA
5. **Mining period sufficient for mining discovery** License holders should be permitted to hold on rights until work has ceased; renewals should not be discretionary
6. **Objective, clear & fair grounds for forfeiture** Any breach cannot lead to immediate forfeiture; there has to be a concept of materiality along with a remedy period
7. **Social license to operate to be encouraged** More provisions relating to community engagement should be incorporated, without surrendering a 'community veto'
8. **Transparent & balanced environmental review** The process should define clear criteria, with expert input, within established timeframes, and with a right of appeal
9. **Reserve power of state to encourage development** Provide authority for MEMR to act as coordinating agent to overcome obstacles (regulatory, financial, ...)

Slides 116-125 in the Appendix provide additional specific references to existing policies and potential recommended changes

Note: several of those recommendations have interdependent implications, and relate to related policies; hence, we recommend to address these regulatory reforms in an integrated way, as part of a consistent and comprehensive reform based on industry best-practice.

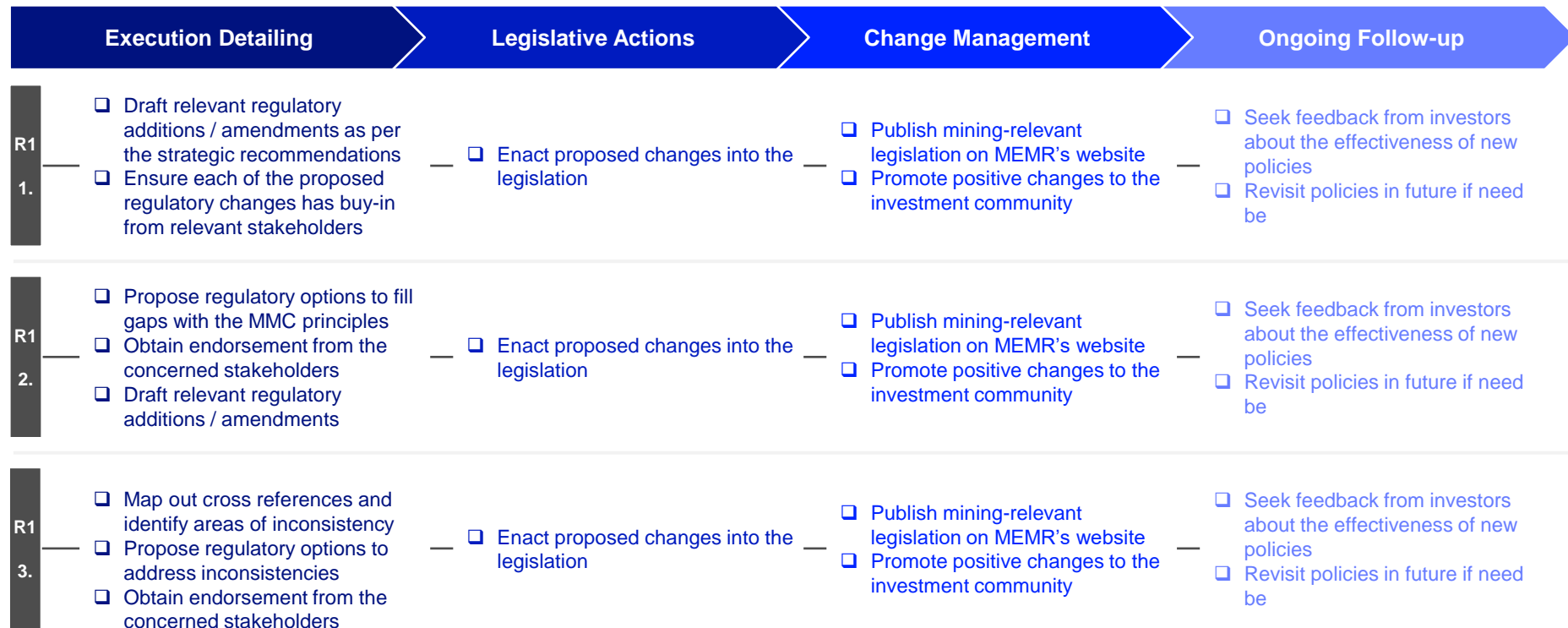
# Based on the regulatory strategic recommendations which were endorsed, we have identified the immediate priorities which rely on MEMR to be launched

Foundational steps are key to demonstrate quick-wins, or to overcome dependency barriers for other changes

Foundational Steps	Key Resources	
	Human	Material
<b>Establish a legal taskforce with relevant expertise</b> <ul style="list-style-type: none"> <li>Identify relevant cross-functional experts within MEMR who would form the team</li> <li>Align on key objectives to achieve as per the defined Strategy</li> <li>Align on the desired timeframe for completing relevant initiatives</li> <li>Allocate appropriate financial and human resources</li> <li>Identify relevant counterparts &amp; third-party experts to work with</li> </ul>		
<b>Build awareness of regulatory best practice</b> <ul style="list-style-type: none"> <li>Identify relevant public stakeholders active in mining sector governance (e.g. EMRC, MOF, MOI)</li> <li>Communicate the findings &amp; recommendations of the Baseline Analysis and the Strategic Vision</li> <li>Brainstorm and build alignment about existing performance (keep doing, stop doing, do more)</li> <li>Build awareness of industry governance best-practice, especially in competitive jurisdictions</li> <li>Build alignment on the key changes which must be made to the institutional framework to align with best-practice</li> </ul>		-
<b>Engage a legal study to bridge any gaps in the regime</b> <ul style="list-style-type: none"> <li>Onboard a third-party consultancy to provide legal expertise (ideally a local firm, with knowledge of the local law)</li> <li>Provide technical, social &amp; environmental expert support to integrate ESG best practice into the legislation</li> <li>Identify all of the relevant policies (across sectors) applicable to the mining sector</li> <li>Cross-check regulatory consistencies between various policies (e.g. environment, water, investment)</li> <li>Map out the regulatory actions resulting from the licensing, governance and fiscal reforms</li> </ul>		

# Upon successful completion, these foundational steps will trigger subsequent implementation activities in order to fulfil the intended regulatory outcomes

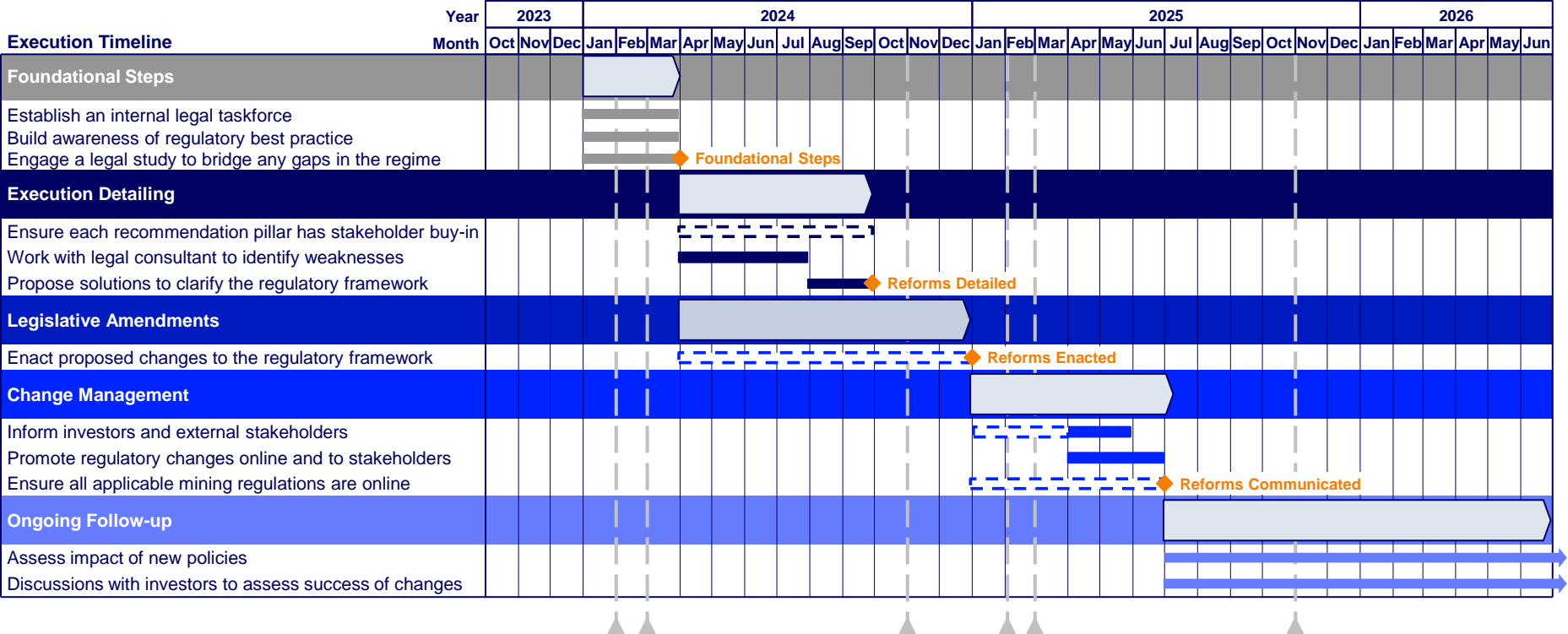
Those activities may require support or decision-making from other government entities



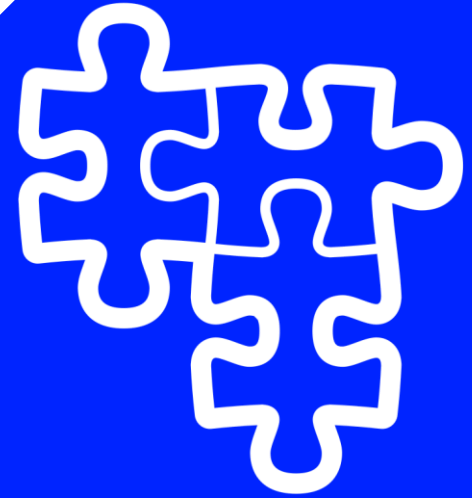


# The full regulatory reform will be dependent on the individual reform pillars, with selected activities expected to remain ongoing in the longer term

The proposed timeline assumes that MEMR will seek external support to oversee & accelerate the execution



# Substrategy Detailing



# The main objective of the sub-strategy detailing is to lay foundations for long-term recommendations, and build provisions for becoming a 'mining country'

We have outlined the strategic objectives, key activities and expected outcomes



# Based on our analysis, we have summarized the strategic reforms which we recommend to engage in the short-term to detail substrategy implications

Overview of the proposed substrategy strategic recommendations in the short-term

## Substrategy Detailing Strategic Recommendations

G4	<p><b>Establish a national geological survey to assume the Database Promotion mandate</b></p> <ul style="list-style-type: none"><li>• In the short-term, MEMR's priority should be to dedicate specialized (GIS) resources to facilitate geoscience data collection, analysis &amp; promotion</li><li>• In the mid-term, as the data volume &amp; complexity increase, having a dedicated geological survey would enable Jordan to systematically promote areas of mineral prospectivity. The geological survey would require diverse skillsets to cope with industry needs (exploration as well as production).</li></ul>
G5	<p><b>Conduct a redesign of the mining institutional governance structure to delineate key functions</b></p> <ul style="list-style-type: none"><li>• In terms of Control &amp; Enforcement, different models exist to govern the relationship between MEMR &amp; EMRC, but retaining ministerial control is critical. Regulations serve policies and if a Ministry owns KPIs for the performance of a sector, it should have a means of control over any agencies enforcing policies.</li><li>• Ultimately, clearly delineating key institutional roles (preventing shared authorities) in the longer term would reflect best-practice of mining sector governance.</li></ul>
S1	<p><b>Foster mining, energy and infrastructure clusters to support downstream value-chain integration and industrialization</b></p> <ul style="list-style-type: none"><li>• Critical enablers must be put in place to foster the development of (selected, where commercially viable) downstream industries, notably: competitive power costs (critical with power-intensive processes such as smelting and refining), access to water (if not fresh, desalinated provided input to competitive power costs), production input feedstock (e.g. nitrogen, ammonia), railway networks (to access landlocked areas, such as the North-East), etc.</li></ul>
S2	<p><b>Conduct a sector-wide capacity and capability development program in line with operational requirements</b></p> <ul style="list-style-type: none"><li>• The acquisition of local knowledge and know-how is critical to developing new value-chains, and expanding existing ones downstream.</li><li>• This will require a closely integrated strategy with relevant public (e.g. Ministry of Education) and private (e.g. JPMC, APC) stakeholders to ensure the alignment of academic curricula with industrial needs, and foster the development of local R&amp;D institutes</li></ul>

# Looking beyond, there are other substrategy implications which will need to be addressed in the mid-to-long term as the mining sector starts scaling-up

Those topics will only become a priority once the initial strategic recommendations have been executed

## Medium Term (within 12-18 months)

### Licensing Speed

- Streamline cross-Ministerial collaboration (optimize inter-dependant workflows and resources allocation) to accelerate the acquisition by prospective investors of relevant licenses (e.g. exploration, mining)

### Permitting Workflows

- Develop detailed process flow diagrams to outline the exact steps and requirements for the obtention of relevant underlying permits necessary to conduct exploration / mining activities (e.g. environment, water)

### Monitoring & Control

- Undertake training programs to ramp-up the capabilities of the relevant public sector entities (e.g. MEMR, EMRC) to enforce policy in the most effective way, such as: fiscal collection, environmental compliance, etc.

### Investment Manual

- Develop a detailed investment manual to elevate Jordan's global profile as a mining investment destination, including: country background, mineral opportunities, fiscal / institutional / legal competitive advantages, etc.

### Mine Reclamation

- Anticipate the mine rehabilitation process (expectations, costs, etc.) early in the development lifecycle as part of the EA – several enforcement vehicles exist, such as reclamation funds or bonds

## Long Term (beyond 18 months)

### Ancillary Services

- Facilitate the development of the broader industrial ecosystem around the mining industry (e.g. geo-chemical laboratories, drilling companies, original equipment manufacturing)

### State incentives

- Investigate relevant government-backed incentives to accelerate sector development especially downstream; for example: public-private partnerships, infrastructure development to access landlocked areas, etc.

### Knowledge localization

- Facilitate the localization of specialized knowledge and know-how through establishing appropriate centres / institutes to foster R&D, attract international talents and ramp-up local capabilities

### Trade barriers




- Foster bilateral cooperations with selected countries and international organizations to promote investment opportunities and channel international capitals

### Tailings management

- Define appropriate policies, based on industry best-practice, to enforce the appropriate management of mining waste and process tailings so as to minimize the environmental impact

# We have identified the immediate priorities which rely on MEMR to be launched following the implementation of the individual reform pillars

Immediate priorities are key to demonstrate quick-wins, or to overcome dependency barriers for other changes

Foundational Steps		Key Resources	
		Human	Material
<b>Assess institutional governance effectiveness</b> <b>G4 G5</b>	<ul style="list-style-type: none"> <li>❑ Monitor the effectiveness of the 'single window' support</li> <li>❑ Evaluate the speed and efficiency of the licensing timeframe</li> <li>❑ Consult with investors to capture improvement opportunities</li> <li>❑ Consult with MEMR / EMRC to assess workload capacity</li> <li>❑ Identify potential improvement opportunities to be applied</li> </ul>		\$
<b>Track the maturity of the mining sector development</b> <b>G4 G5 S1 S2</b>	<ul style="list-style-type: none"> <li>❑ Monitor exploration progresses (licensing process, capital deployment, exploration-driven data / studies, etc.)</li> <li>❑ Monitor mine development progresses (engineering, procurement &amp; construction, mineral production, etc.)</li> <li>❑ Monitor mining socio-economic impacts (foreign direct investments, sector employment, exports, etc.)</li> <li>❑ Monitor ongoing exploration interest (prospective investors interactions, impact of promotional activities, etc.)</li> <li>❑ Conduct 'pulse-check' survey to track investors' perception, and compare progress with baseline results</li> </ul>		\$\$
<b>Secure access to downstream value-chain enablers</b> <b>S1 S2</b>	<ul style="list-style-type: none"> <li>❑ Identify downstream projects which were not actioned yet due to various bottlenecks (utilities, infrastructure, etc.)</li> <li>❑ Build alignment on align on an 'downstream enablers wish-list' to be investigated with relevant public stakeholders</li> <li>❑ Consult with public stakeholders to identify mitigating solutions to unlock the relevant enablers</li> <li>❑ Explore potential public-private partnerships and private-private collaborations within the mining sectors (e.g. phosphate, potash) or across relevant sectors (e.g. mining, utilities) to unlock downstream developments</li> </ul>		\$\$\$

# Upon successful completion, these foundational steps will trigger subsequent implementation activities to fulfil the intended fiscal outcomes

Those activities may require support or decision-making from other government entities

	Execution Detailing	Legislative Actions	Change Management	Ongoing Follow-up
G4	<ul style="list-style-type: none"> <li>Define the roles of the geo-survey in the institutional framework</li> <li>Benchmark and assess functions specifically required in Jordan</li> <li>Secure funding, personnel and equipment</li> </ul>	<ul style="list-style-type: none"> <li>Enact changes to the institutional framework in the regulatory regime</li> </ul>	<ul style="list-style-type: none"> <li>Communicate to public and private stakeholders</li> <li>Include in mining promotional materials</li> </ul>	<ul style="list-style-type: none"> <li>Collect feedback from local companies and stakeholders on the efficacy of the geosurvey</li> <li>Benchmark roles against international best practice</li> </ul>
G5	<ul style="list-style-type: none"> <li>Conduct an institutional redesign study of the governance structure</li> <li>Delineate key functions</li> <li>Review the reporting relationship between MEMR and EMRC</li> </ul>	<ul style="list-style-type: none"> <li>Enact changes to the institutional framework in the regulatory regime</li> </ul>	<ul style="list-style-type: none"> <li>Consult and inform internal stakeholders of changes</li> <li>Inform private stakeholders of changes, and inform how changes will affect them</li> </ul>	<ul style="list-style-type: none"> <li>Collect feedback from employees on how changes effect their roles</li> <li>Conduct long term studies on impact of redesign</li> </ul>
S1	<ul style="list-style-type: none"> <li>Work with MOF to promote infrastructure development for mining; transport, logistics, power</li> <li>Encourage establishment of local partnerships; manufacturing, R&amp;D</li> </ul>	<ul style="list-style-type: none"> <li>Enact changes to support development of downstream clusters</li> </ul>	<ul style="list-style-type: none"> <li>Include advancements in infrastructure development in mining promotional materials</li> </ul>	<ul style="list-style-type: none"> <li>Track long term downstream development KPIs</li> </ul>
S2	<ul style="list-style-type: none"> <li>Consult with operators and MOE to validate expertise requirements vs currently available courses</li> <li>Conduct gap analysis of existing curriculum to establish a roadmap</li> </ul>	None	<ul style="list-style-type: none"> <li>Promote mining education in MOE promotional documents</li> </ul>	<ul style="list-style-type: none"> <li>Address any skills gaps</li> <li>Track long term educational KPIs</li> </ul>

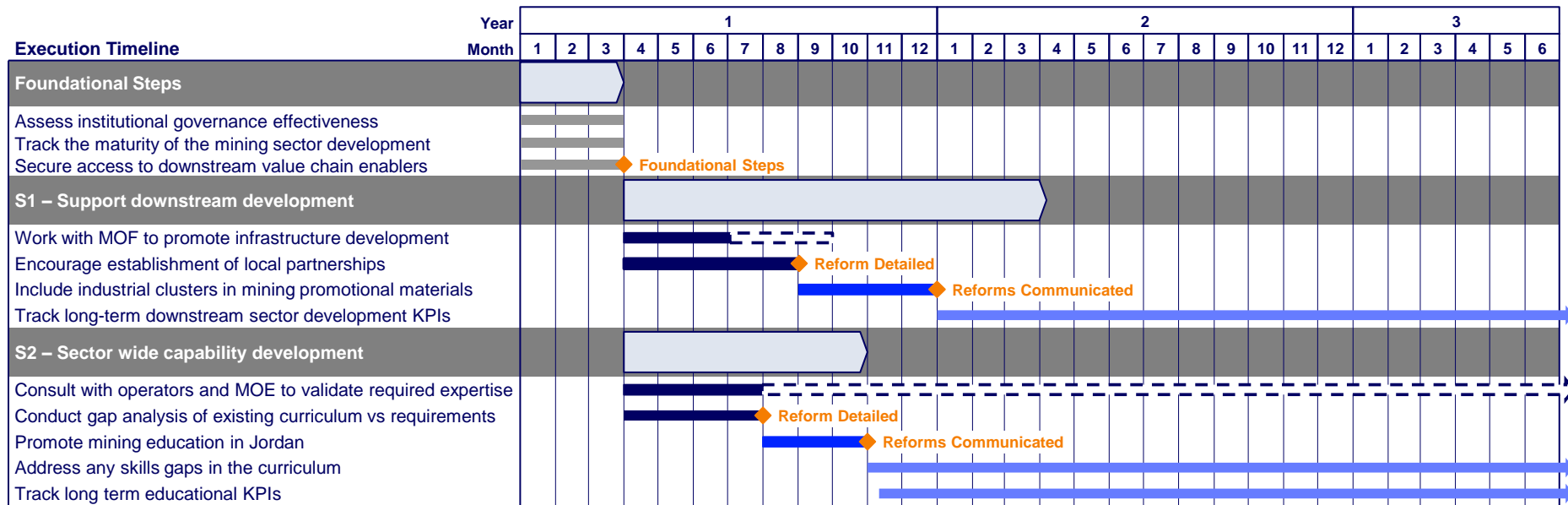
The proposed timeline assumes that MEMR will seek external support to oversee & accelerate the execution





# The substrategy detailing implementation should take place after the four reform pillars have been addressed, and the foundational steps have been engaged (2/2)

The proposed timeline assumes that MEMR will seek external support to oversee & accelerate the execution



# Strategy Management Office







# The main objective of the SMO is to oversee that the execution of the full implementation program is done on time and on budget

We have outlined the strategic objectives, key activities and expected outcomes

Strategic Objectives	Key Activities	Expected Outcomes
<p><b>Achieve the objectives defined in the Strategic Vision</b></p> <ul style="list-style-type: none"><li>• Deliver the strategic recommendations, with a priority on quick-wins</li><li>• Track successful progress towards achieving sector-wide targets</li></ul> <p><b>Deliver a timely and smooth implementation</b></p> <ul style="list-style-type: none"><li>• Manage interfaces between projects and stakeholders</li><li>• Anticipate &amp; mitigate potential implementation obstacles</li></ul>	<ul style="list-style-type: none"><li>• Engage in consultations with public stakeholders to socialize strategic aspirations and obtain endorsement</li><li>• Converge on the most critical strategic recommendations (quick wins + high visibility) to be driven in priority</li><li>• Build alignment on the optimal execution strategy (in-house driven vs. outsourced) to achieve timely results</li><li>• Establish the SMO governance structure, combining local stakeholders with a third-party expert consultancy</li><li>• Define the mandate &amp; responsibilities of the SMO (objectives, timeframe, reporting process, etc.)</li></ul>	<ul style="list-style-type: none"><li>• <b>Timely implementation</b> of the strategic recommendations</li><li>• <b>A performance dashboard</b> to track the implementation progress</li></ul>

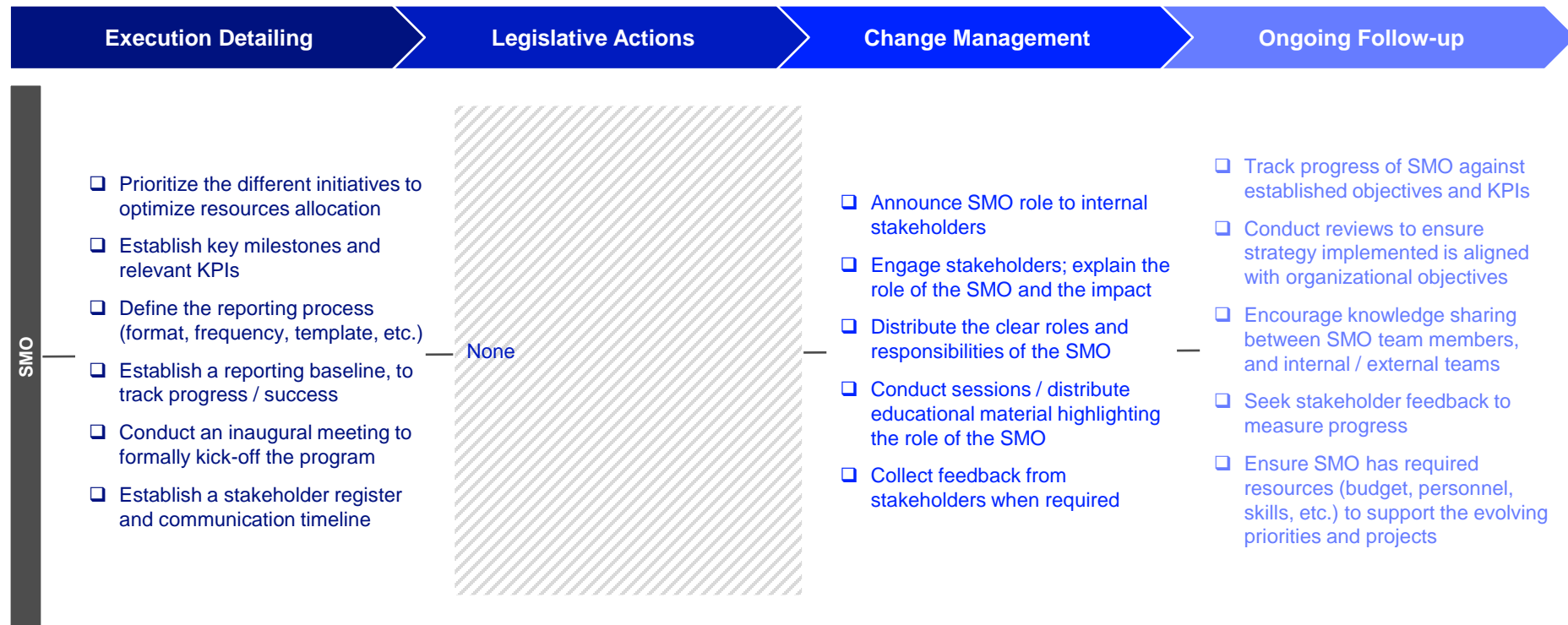
# Before the individual reform pillars are implemented, we recommend MEMR establish a SMO which will oversee the implementation roadmap

Immediate priorities are key to demonstrate quick-wins, or to overcome dependency barriers for other changes

Strategy Management Office		Foundational Steps		Key Resources	
				Human	Material
SMO	<p><b>A Strategy Management Office (SMO) is a team within an organization that is dedicated to overseeing and managing the strategic planning, implementation, and performance measurement processes.</b></p> <ul style="list-style-type: none"><li>• The SMO ensures strategic goals are met efficiently and effectively</li><li>• SMO is often a third-party group, which can provide objective support to the strategic implementation</li></ul> <p><b>The key responsibilities of the SMO include:</b></p> <ul style="list-style-type: none"><li>• Prioritization management</li><li>• Organisation alignment</li><li>• Strategy reviews and strategic planning</li><li>• Strategy communication</li><li>• Initiative management</li><li>• Performance measurement</li></ul>	<p><b>Socialize strategic aspirations with public stakeholders</b></p> <ul style="list-style-type: none"><li>❑ Share the Baseline Analysis findings and build alignment (over workshops) on the gaps to overcome as a sector</li><li>❑ Share the Strategic Vision findings and build alignment (over workshops) on the strategic aspirations for Jordan</li></ul>		-	
	<p><b>Build alignment on the optimal execution strategy</b></p> <ul style="list-style-type: none"><li>❑ Endorse the list of implementation activities</li><li>❑ Align on the governance needed to drive the execution, and seek external support where need be to provide steering</li><li>❑ Allocate appropriate financial and human resources</li></ul>		-		
	<p><b>Establish the SMO governance structure</b></p> <ul style="list-style-type: none"><li>❑ Identify relevant cross-functional experts within MEMR who would form part of the SMO team</li><li>❑ Onboard a third-party consultancy to provide objective guidance and operational support throughout the implementation</li></ul>		\$\$		
	<p><b>Define the mandate and responsibilities of the SMO</b></p> <ul style="list-style-type: none"><li>❑ Align on key objectives to achieve as per the defined Strategy</li><li>❑ Align on the desired timeframe for completing relevant initiatives</li><li>❑ Define the key milestones to be met</li><li>❑ Converge on the KPIs to be monitored for tracking success</li></ul>		-		

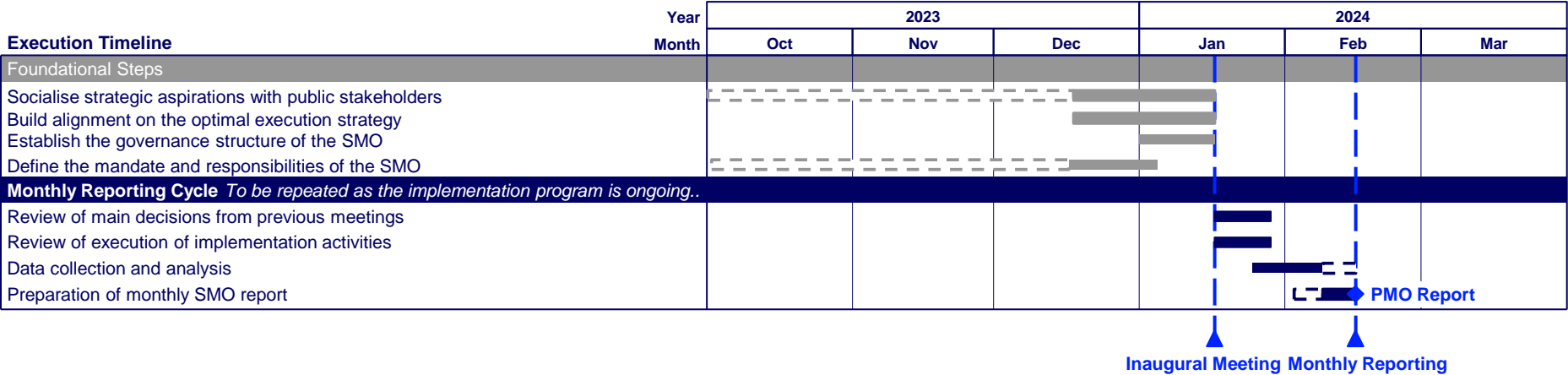
# Upon successful completion, these foundational steps will trigger subsequent implementation activities to fulfil the intended SMO outcomes

Those activities may require support or decision-making from other government entities



# The SMO should stay in place for as long as the strategy takes to be fully implemented by MEMR

The proposed timeline assumes that MEMR will seek external support to oversee & accelerate the execution

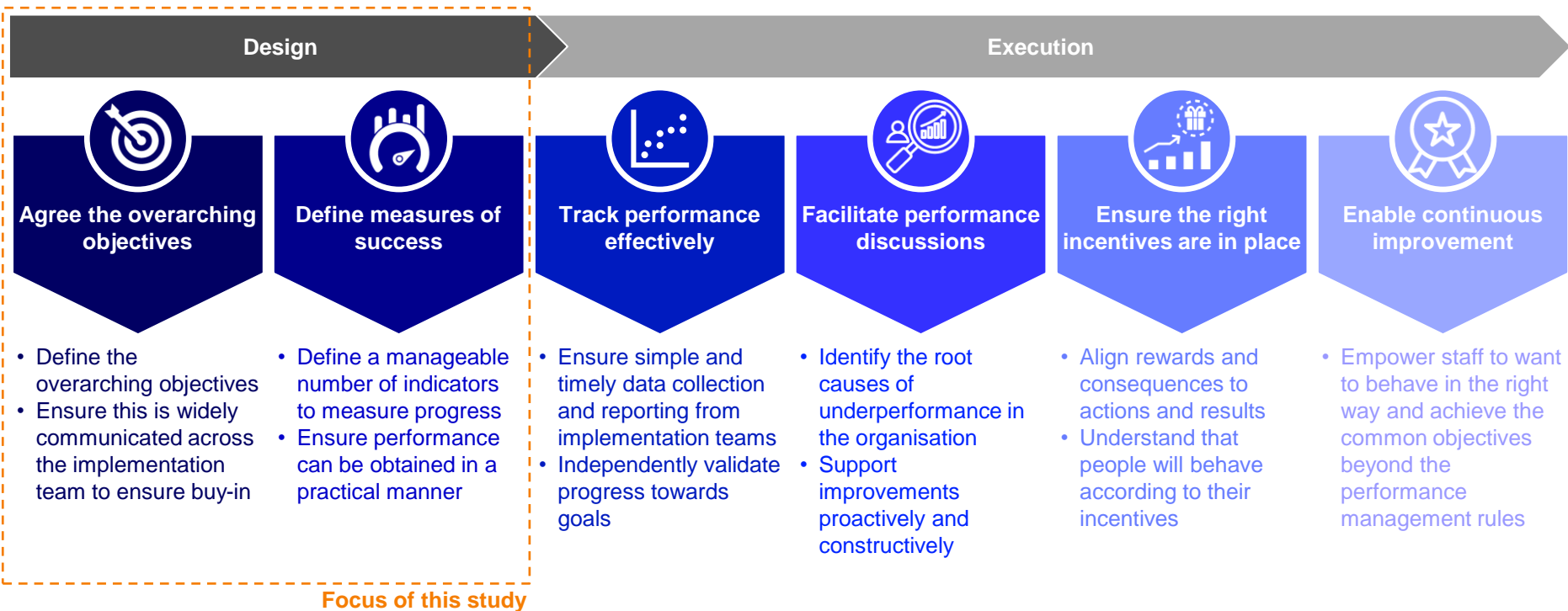


# Success Monitoring



# In order to achieve the intended outcomes, it is critical to establish a well-designed performance management framework, typically owned by the SMO

Several guiding principles should be followed in designing & executing the framework





# Growth Objectives



# Jordan aims to grow its mining sector into a national pillar of the economy, contributing socio-economic value for the generations to come


The mining sector would contribute in terms of foreign direct investment, exports, fiscal receipts & employment

## Overview of the socio-economic impacts of the mining sector



# The different commodities are subject to various technical and commercial drivers, so projects have different chances to succeed, realistically speaking

Some projects may succeed earlier or later than expected, and others may not progress at all

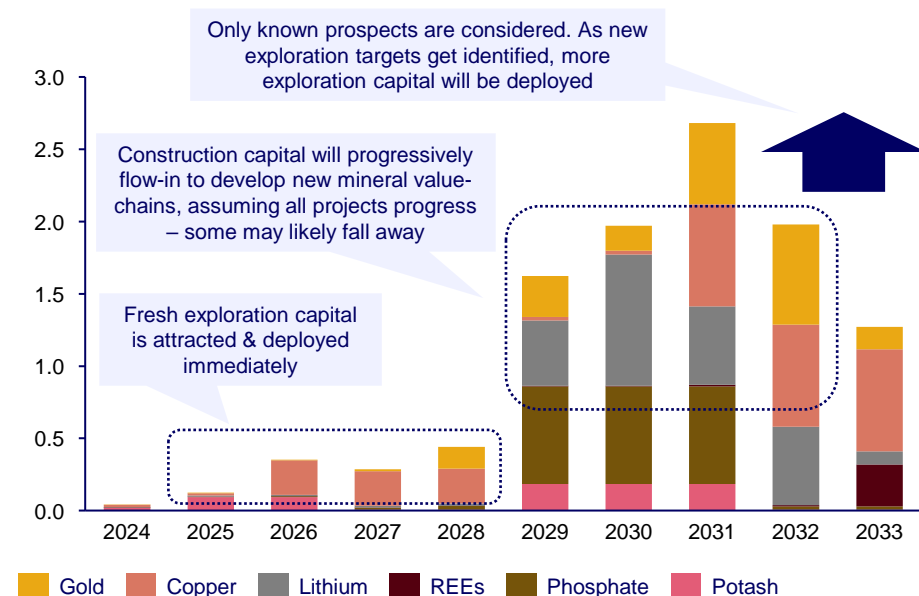
Commodity	Technical Assessment	Commercial Assessment
Phosphate	 <ul style="list-style-type: none"> <li>• <b>Infrastructure (transportation, utilities) availability and cost</b> may act as bottlenecks for AI Risha project</li> <li>• Potential <b>JPMC expansion</b> could come online in the short-term</li> </ul>	 <ul style="list-style-type: none"> <li>• The <b>existing upstream and downstream footprint</b> is beneficial</li> <li>• <b>Robust demand growth</b> is expected to outpace capacity increases resulting in opportunities to <b>augment global supply</b></li> </ul>
Potash	 <ul style="list-style-type: none"> <li>• <b>Brine availability and ESG considerations</b> will need to be taken into account in the Dead Sea</li> <li>• The Lisan project is <b>structurally very complex</b></li> </ul>	 <ul style="list-style-type: none"> <li>• The <b>existing upstream and downstream footprint</b> is beneficial</li> <li>• Undersupply of raw potash compared to <b>projected demand</b>, which are bolstered by the rising <b>potash intensity of use</b>.</li> </ul>
Gold	 <ul style="list-style-type: none"> <li>• <b>Data supporting gold projects is relatively limited</b>, including primarily geochemical data only</li> <li>• Requires <b>capital investment</b> in excess of ~US\$300m / project</li> </ul>	 <ul style="list-style-type: none"> <li>• Ongoing global geopolitical risks and economic volatility are expected to keep <b>driving gold's value as a safe haven</b> currency/investment</li> </ul>
Copper	 <ul style="list-style-type: none"> <li>• Resource evaluations need upgrading and <b>locations within Dana Nature Reserve</b> have social implications</li> <li>• Requires capital investment in excess of ~US\$720m / project</li> </ul>	 <ul style="list-style-type: none"> <li>• <b>Sustained demand growth</b>, driven by the energy transition, will help maintain <b>positive fundamentals</b> and put <b>upward pressure on prices</b></li> </ul>
Lithium	 <ul style="list-style-type: none"> <li>• <b>Geochemical data is not well understood</b> for the Feinan &amp; Lisan deposits, and the Dead Sea project will require <b>staged pilot assessments</b></li> </ul>	 <ul style="list-style-type: none"> <li>• <b>The market immaturity causes long-term uncertainties</b>, especially from a technology perspective, which are expected to <b>negatively impact prices</b></li> </ul>
Rare Earths	 <ul style="list-style-type: none"> <li>• <b>Early-stage exploration</b> evaluation using limited drilling and trench data</li> <li>• Requires <b>capital investment in excess</b> of ~US\$900m / project</li> </ul>	 <ul style="list-style-type: none"> <li>• The REE supply-chain is <b>dominated by China end-to-end</b>, which can make it very risky to establish a competitively stable value-chain in the long-term</li> </ul>

# In order to forecast the potential sector contribution to the economy, we have conducted a high-level & de-risked modelling of the project development funnel

Attracting FDI is a priority to accelerate exploration efforts & help develop new metallic mineral value-chains

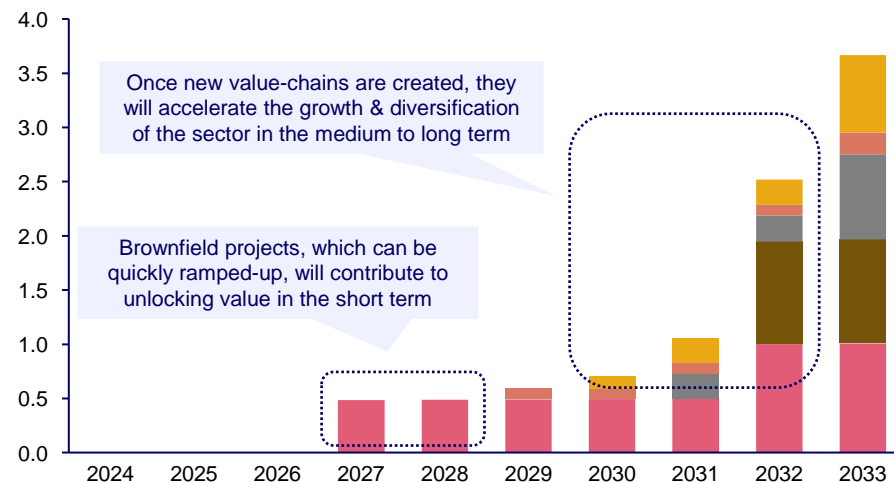
## Incremental Foreign Direct Investments Contribution

10-year forecast (2024 – 2033), US\$Bn, 2023 real



## Incremental International Exports Contribution

10-year forecast (2024 – 2033), US\$Bn, 2023 real

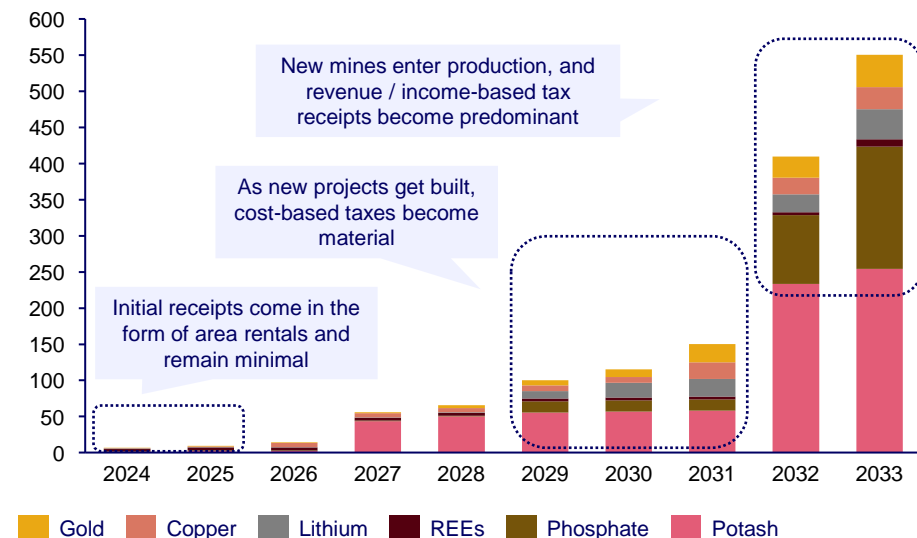


# Ultimately, the mining sector is expected to keep growing and diversifying until it becomes a significant pillar of the Jordanian economy

Cost-based taxes will initially contribute most to fiscal revenues, until revenue and income-based taxes kick-in

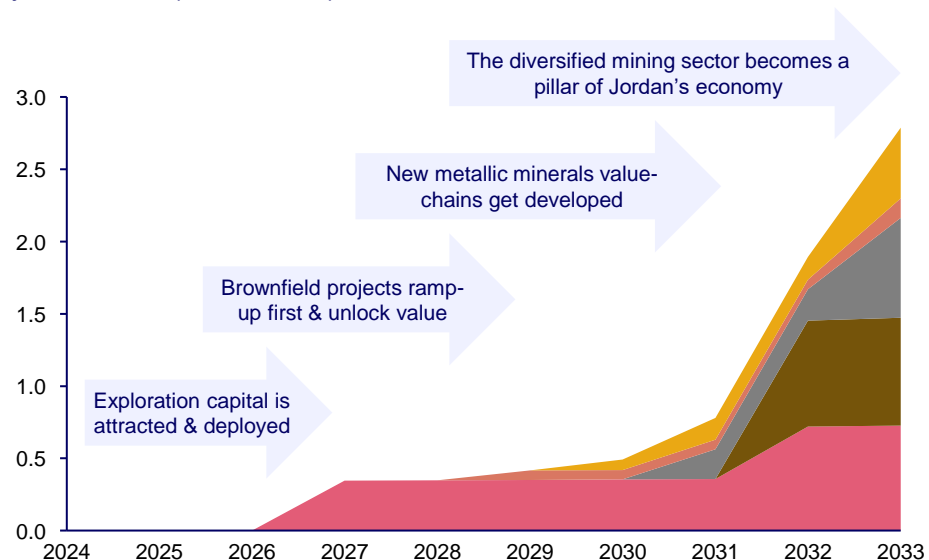
## Incremental Government Take Contribution

10-year forecast (2024 – 2033), US\$Mn, 2023 real



## Incremental Gross Domestic Product Contribution

10-year forecast (2024 – 2033), US\$Bn, 2023 real

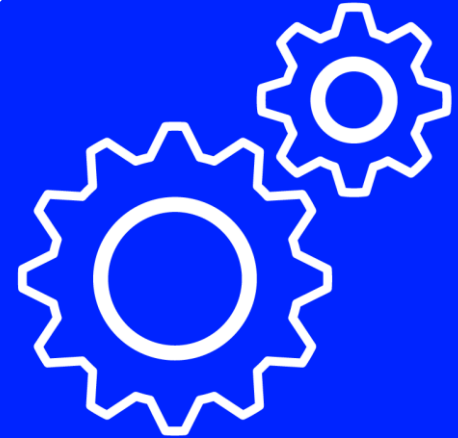


## As a result, we can derive the prospective socio-economic targets, if Jordan manages to attract investors and advance the various projects as expected

While subject to various risks, these targets provide some guidance to track the sector development

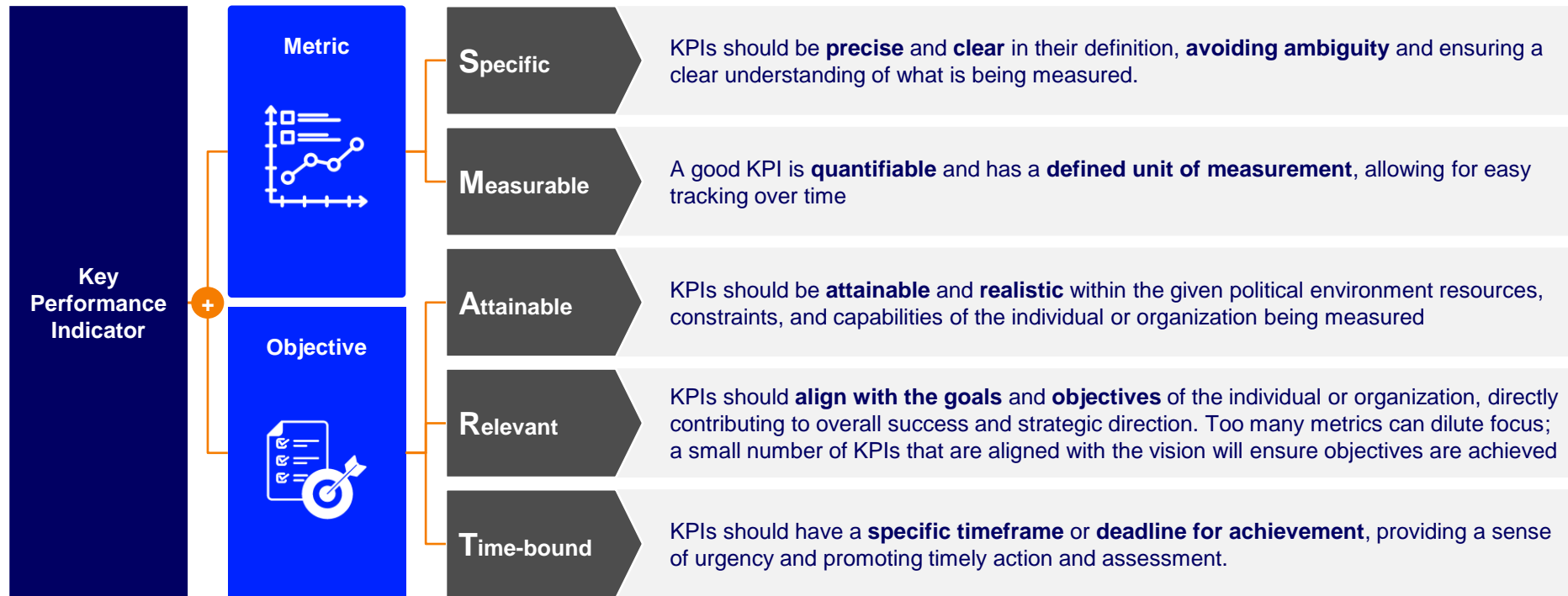
Value Realization Timeframe	Short-term		Mid-term			Long-term					Vision
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2033
 <b>Foreign Direct Investment</b> US\$Mn, 2023, Cumulative	40	150	500	800	1,300	2,800	4,800	7,500	9,500	10,800	-
 <b>Sector Employment</b> Number of direct employees	100	500	1,000	1,500	2,000	3,000	3,500	4,500	7,000	8,000	18,200
 <b>Government Take</b> US\$Mn, 2023, Incremental	5	10	15	60	70	100	120	150	400	550	-
 <b>International Exports</b> US\$Mn, 2023, Incremental	-	-	-	500	500	600	700	1,000	2,500	3,500	3,243
 <b>Gross Domestic Product</b> US\$Mn, 2023, Incremental	-	-	-	350	400	420	500	800	1,900	2,700	1,974

# Performance Indicators



# Key Performance Indicators (KPIs) are quantifiable metrics that measure how well an organization is achieving its intended objectives



A KPI's metric & objective should be SMART: specific, measurable, attainable, relevant and time-bound





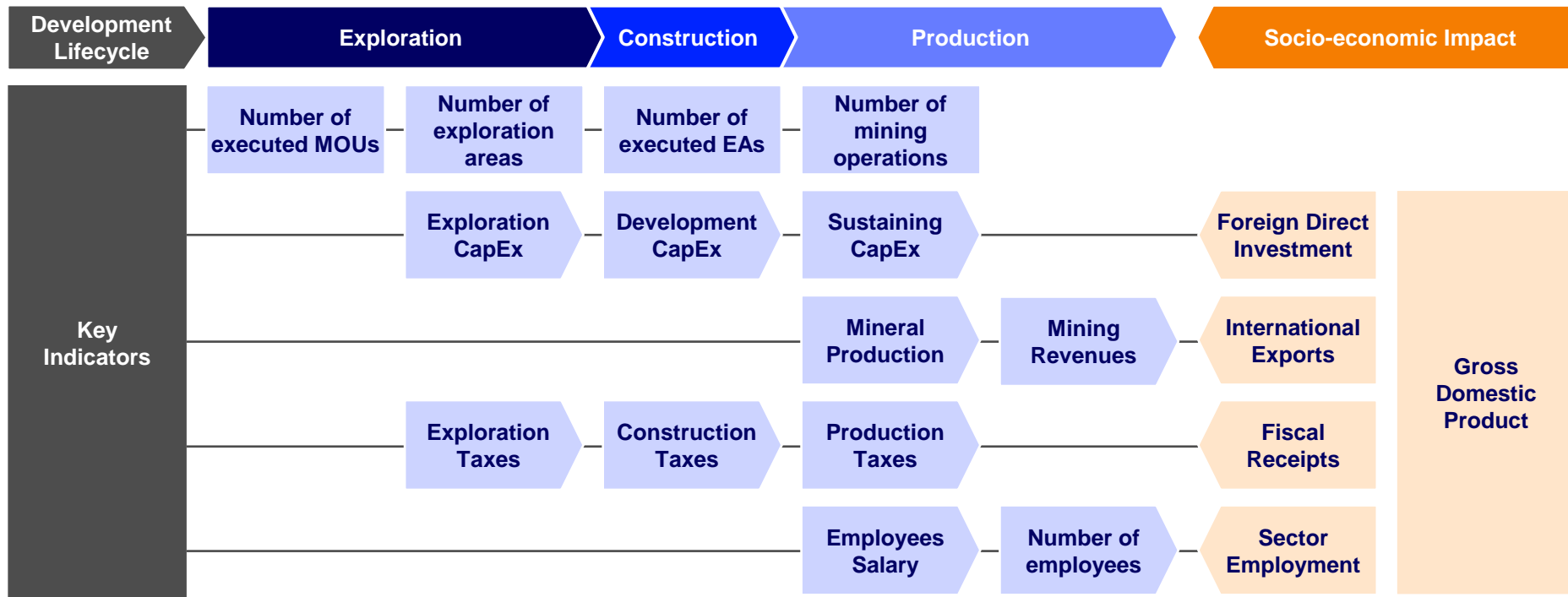
# There are two main types of KPIs: leading (forward-looking) or lagging (past-looking), each with its own advantages & disadvantages

Leading indicators can influence change and lagging indicators can only record what has happened

Type of KPIs	Definition	Pros	Cons
 <b>Leading</b>	<p><b>A leading indicator is a predictive measurement</b>, e.g.; the percentage of people wearing hard hats on a building site is a leading safety indicator</p>	<ul style="list-style-type: none"> <li>▲ Offers early predictive insights by forecasting future trends</li> <li>▲ Proactively identifies issues to guide decision-making</li> <li>▲ Enables timely corrective actions</li> </ul>	<ul style="list-style-type: none"> <li>▼ Requires accurate modelling to provide useful insights</li> <li>▼ Highly dependent on assumptions</li> </ul>
 <b>Lagging</b>	<p><b>A lagging indicator is an output measurement</b>, e.g.; the number of accidents on a building site is a lagging safety indicator.</p>	<ul style="list-style-type: none"> <li>▲ Relatively easier to measure</li> <li>▲ Provides data to allow for industry benchmarking; allowing alignment to best practice</li> <li>▲ Validates effectiveness of past strategies</li> </ul>	<ul style="list-style-type: none"> <li>▼ Limited timeliness to make corrective actions</li> <li>▼ Reactive approach, will provide slower results and may not motivate rapid organisational changes</li> </ul>

# We have mapped out relevant indicators across the mine project development lifecycle, and how each contribute towards tracking socio-economic impacts

The mining sector would contribute in terms of foreign direct investment, exports, fiscal receipts & employment



# MEMR can track several indicators to monitor the pace of development and maturity of the industry, some of which are under its direct influence

An effective licensing process is critical to accelerate initial exploration efforts and drive the sector development

Performance Indicator	Relevant Metrics	Information Source	Tracking Frequency	Key Observations
Number of executed MOUs	Total number of executed MOUs to assess investors' interest in Jordan and continuous sector growth momentum	<ul style="list-style-type: none"> <li>Direct reports</li> <li><b>Government entities</b></li> <li>Online search</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly</li> <li>Biannually</li> <li><b>Annually</b></li> </ul>	<ul style="list-style-type: none"> <li>MEMR owns this data, and should publish the numbers on its website and make public announcements to drive a positive momentum</li> </ul>
Number of exploration areas	Total number of active exploration areas to track exploration activity, and ensure MOUs do not remain idle	<ul style="list-style-type: none"> <li>Direct reports</li> <li><b>Government entities</b></li> <li>Online search</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly</li> <li>Biannually</li> <li><b>Annually</b></li> </ul>	<ul style="list-style-type: none"> <li>Reports will be provided to MEMR/EMRC</li> <li>Cross-check reports with site visits</li> <li>Exploration activities should reflect pre-agreed work schedules</li> </ul>
Number of executed EAs	Total number of executed EAs per year to track exploration successes and assess the conversion rate from MOU to EA	<ul style="list-style-type: none"> <li>Direct reports</li> <li><b>Government entities</b></li> <li>Online search</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly</li> <li>Biannually</li> <li><b>Annually</b></li> </ul>	<ul style="list-style-type: none"> <li>MEMR owns this data, and should publish the numbers on its website and make public announcements to drive a positive momentum</li> </ul>
Number of mining operations	Total number of active operations to assess activity within the mining sector, including breakdown by commodity	<ul style="list-style-type: none"> <li>Direct reports</li> <li><b>Government entities</b></li> <li><b>Online search</b></li> </ul>	<ul style="list-style-type: none"> <li>Quarterly</li> <li>Biannually</li> <li><b>Annually</b></li> </ul>	<ul style="list-style-type: none"> <li>This indicator will not be tracked until the first mine becomes operational</li> <li>Reports will be provided to MEMR/EMRC</li> <li>Cross-check reports with site visits</li> </ul>

# In terms of foreign direct investment, the objective is to attract an increasing amount of capital across the various stages of the mine project lifecycle

Capital investments can take the form of equipment or services

## Foreign Direct Investment

Performance Indicator	Relevant Metrics	Information Source	Tracking Frequency	Key Observations
Capital Expenditure	Amount of capital being deployed over a specific period of time (in JOD) to ensure consistent capital inflows	<ul style="list-style-type: none"> <li>Direct reports</li> <li>Government entities</li> <li>Online search</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly</li> <li>Biannually</li> <li>Annually</li> </ul>	<ul style="list-style-type: none"> <li>Market conditions should be considered</li> <li>Cross check public sources &amp; reports</li> <li>Track location and nature of capital spend</li> </ul>
	Evolution of capital deployment from one period to another (in %) to ensure ongoing activity & positive trend	<ul style="list-style-type: none"> <li>Direct reports</li> <li>Government entities</li> <li>Online search</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly</li> <li>Biannually</li> <li>Annually</li> </ul>	<ul style="list-style-type: none"> <li>Increasing capital deployment should be in line with sector growth</li> <li>Cross check public sources &amp; reports</li> </ul>
	Exploration capital deployment relative to the pre-defined work schedule (in %) to ensure timely progress in activities	<ul style="list-style-type: none"> <li>Direct reports</li> <li>Government entities</li> <li>Online search</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly</li> <li>Biannually</li> <li>Annually</li> </ul>	<ul style="list-style-type: none"> <li>MOU work program will be required to compare deployment vs. schedule</li> <li>Cross check public sources &amp; reports</li> </ul>
	Construction capital deployment relative to the pre-defined work schedule (in %) to ensure timely progress in activities	<ul style="list-style-type: none"> <li>Direct reports</li> <li>Government entities</li> <li>Online search</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly</li> <li>Biannually</li> <li>Annually</li> </ul>	<ul style="list-style-type: none"> <li>EA work program will be required to compare deployment vs. schedule</li> <li>Cross check public sources &amp; reports</li> </ul>
	Mining capital expenditures as a proportion of national FDIs (in %) to track sector contributions to national targets	<ul style="list-style-type: none"> <li>Direct reports</li> <li>Government entities</li> <li>Online search</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly</li> <li>Biannually</li> <li>Annually</li> </ul>	<ul style="list-style-type: none"> <li>MEMR can provide mining figures</li> <li>The Central Bank can provide aggregated FDI figures at the national level</li> </ul>

# In terms of international exports, the objective is to increase the volume and value of exports resulting from mining operations

Increased exports contribute to improving the national trade balance of Jordan

## International Exports

Performance Indicator	Relevant Metrics	Information Source	Tracking Frequency	Key Observations
Mineral Production	<b>Volume of mineral produced over a specific period of time (in t)</b> to ensure consistent production activities	<ul style="list-style-type: none"> <li>• Direct reports</li> <li>• Government entities</li> <li>• Online search</li> </ul>	<ul style="list-style-type: none"> <li>• Quarterly</li> <li>• Biannually</li> <li>• Annually</li> </ul>	<ul style="list-style-type: none"> <li>• Volumes should be reported to MEMR / EMRC on a frequent (pre-defined) basis to calculate royalty payments</li> <li>• Cross-check reports with site visits</li> </ul>
	<b>Evolution of production volumes from one period to another (in %)</b> to ensure ongoing activity & positive trend	<ul style="list-style-type: none"> <li>• Direct reports</li> <li>• Government entities</li> <li>• Online search</li> </ul>	<ul style="list-style-type: none"> <li>• Quarterly</li> <li>• Biannually</li> <li>• Annually</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure sector-wide global trends and local operational conditions are factored into the assessment</li> <li>• Cross-check reports with site visits</li> </ul>
Mining Revenues	<b>Value of mineral produced over a specific period of time (in JOD)</b> to ensure consistent value creation	<ul style="list-style-type: none"> <li>• Direct reports</li> <li>• Government entities</li> <li>• Online search</li> </ul>	<ul style="list-style-type: none"> <li>• Quarterly</li> <li>• Biannually</li> <li>• Annually</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure market conditions are factored into the assessment</li> <li>• Customs can provide export figures, to be cross-checked with company sales figures</li> </ul>
	<b>Value of mineral exports as a proportion of national exports (in %)</b> to monitor sector-wide contributions to national targets	<ul style="list-style-type: none"> <li>• Direct reports</li> <li>• Government entities</li> <li>• Online search</li> </ul>	<ul style="list-style-type: none"> <li>• Quarterly</li> <li>• Biannually</li> <li>• Annually</li> </ul>	<ul style="list-style-type: none"> <li>• MEMR can provide mining figures</li> <li>• The Department of Statistics can provide aggregated export figures by source / type</li> </ul>

# In terms of fiscal receipts, the objective is to increase the contribution of the mining sector to government revenues

Fiscal receipts can take the form of cost, revenue or profit-based taxes

## Fiscal Receipts

Performance Indicator	Relevant Metrics	Information Source	Tracking Frequency	Key Observations
Government Take	<b>Total government take from mining (in JOD)</b> to assess the contribution of the mining sector to government revenues	<ul style="list-style-type: none"> <li>• Direct reports</li> <li>• Government entities</li> <li>• Online search</li> </ul>	<ul style="list-style-type: none"> <li>• Quarterly</li> <li>• Biannually</li> <li>• Annually</li> </ul>	<ul style="list-style-type: none"> <li>• The Ministry of Finance can provide aggregated tax figures</li> <li>• Cross check with company reports</li> </ul>
	<b>Government take from mining by type e.g. cost, revenue, profit (in JOD)</b> to assess the ongoing fairness of the regime	<ul style="list-style-type: none"> <li>• Direct reports</li> <li>• Government entities</li> <li>• Online search</li> </ul>	<ul style="list-style-type: none"> <li>• Quarterly</li> <li>• Biannually</li> <li>• Annually</li> </ul>	<ul style="list-style-type: none"> <li>• The Ministry of Finance can provide aggregated tax figures</li> <li>• Cross check with company reports</li> </ul>
	<b>Evolution of government take from mining from one period to another (in %)</b> to ensure ongoing growth	<ul style="list-style-type: none"> <li>• Direct reports</li> <li>• Government entities</li> <li>• Online search</li> </ul>	<ul style="list-style-type: none"> <li>• Quarterly</li> <li>• Biannually</li> <li>• Annually</li> </ul>	<ul style="list-style-type: none"> <li>• Tax revenue should grow in line with the sector's growth ambition</li> <li>• Factor in market conditions into analysis</li> </ul>
	<b>Mining revenues to total government revenues (in %)</b> to assess the significance of mining revenues in government revenue	<ul style="list-style-type: none"> <li>• Direct reports</li> <li>• Government entities</li> <li>• Online search</li> </ul>	<ul style="list-style-type: none"> <li>• Quarterly</li> <li>• Biannually</li> <li>• Annually</li> </ul>	<ul style="list-style-type: none"> <li>• A high ratio in unfavourable market conditions could result in fiscal instability for the government</li> </ul>
	<b>Tax compliance rate (in %) of mining companies</b> to evaluate the efficacy of tax enforcement processes	<ul style="list-style-type: none"> <li>• Direct reports</li> <li>• Government entities</li> <li>• Online search</li> </ul>	<ul style="list-style-type: none"> <li>• Quarterly</li> <li>• Biannually</li> <li>• Annually</li> </ul>	<ul style="list-style-type: none"> <li>• The Ministry of Finance can provide aggregated tax figures</li> <li>• Cross check with company reports</li> </ul>

# In terms of sector employment, the objective is to increase the contribution of the mining sector towards providing a greater amount of well-paid jobs

Higher quality employment contributes to increased livelihoods

## Sector Employment

Performance Indicator	Relevant Metrics	Information Source	Tracking Frequency	Key Observations
Number of Employees	<b>Total number of employees in the mining sector</b> to ensure the sector is growing and being adequately resourced	<ul style="list-style-type: none"> <li>• Direct reports</li> <li>• Government entities</li> <li>• Online search</li> </ul>	<ul style="list-style-type: none"> <li>• Quarterly</li> <li>• Biannually</li> <li>• Annually</li> </ul>	<ul style="list-style-type: none"> <li>• The Department of Statistics can provide aggregated employment figures by activity</li> <li>• Cross check with company reports</li> </ul>
	<b>Ratio of local vs. foreign vs. expatriates in-country staff</b> to track impact on job creation and staffing in country	<ul style="list-style-type: none"> <li>• Direct reports</li> <li>• Government entities</li> <li>• Online search</li> </ul>	<ul style="list-style-type: none"> <li>• Quarterly</li> <li>• Biannually</li> <li>• Annually</li> </ul>	<ul style="list-style-type: none"> <li>• Company direct can be cross checked with data from Ministry of Labour</li> <li>• Ratio can be compared with other sectors</li> </ul>
	<b>Productivity per employee (in t / employee)</b> to assess employee efficiency and productivity in the mining operations	<ul style="list-style-type: none"> <li>• Direct reports</li> <li>• Government entities</li> <li>• Online search</li> </ul>	<ul style="list-style-type: none"> <li>• Quarterly</li> <li>• Biannually</li> <li>• Annually</li> </ul>	<ul style="list-style-type: none"> <li>• Productivity should consider both the quantity and quality of output</li> <li>• Can be compared with other sectors</li> </ul>
Employees Salary	<b>Average salary of the mining sector (in JOD) vs. national average</b> to monitor sector-wide salary competitiveness	<ul style="list-style-type: none"> <li>• Direct reports</li> <li>• Government entities</li> <li>• Online search</li> </ul>	<ul style="list-style-type: none"> <li>• Quarterly</li> <li>• Biannually</li> <li>• Annually</li> </ul>	<ul style="list-style-type: none"> <li>• The Department of Statistics can provide aggregated salary figures by activity</li> <li>• The spread should be consistently rising</li> </ul>
	<b>Evolution of the average mining sector salary from one period to another (in %)</b> to ensure positive trend in quality jobs	<ul style="list-style-type: none"> <li>• Direct reports</li> <li>• Government entities</li> <li>• Online search</li> </ul>	<ul style="list-style-type: none"> <li>• Quarterly</li> <li>• Biannually</li> <li>• Annually</li> </ul>	<ul style="list-style-type: none"> <li>• The Department of Statistics can provide aggregated salary figures by activity</li> <li>• The evolution should follow sector trends</li> </ul>







# Conclusion





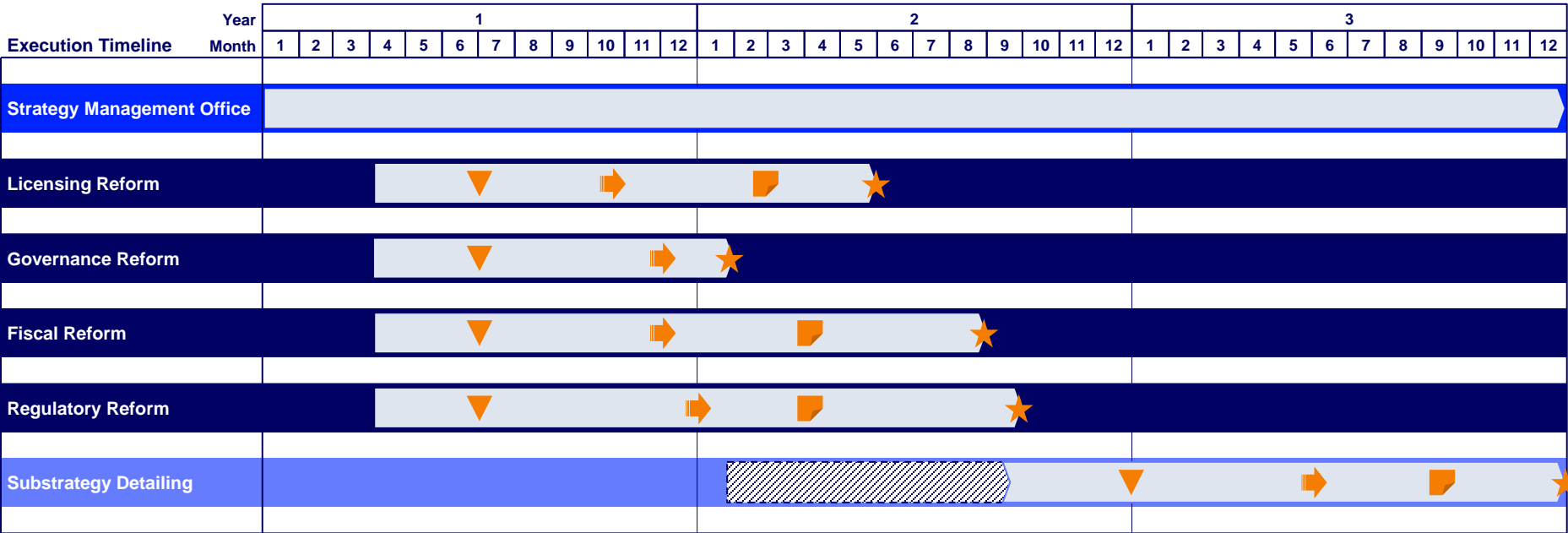
# Delivering on the expected outcomes will require to allocate appropriate implementation resources early-on in order to kick-start the foundational steps

The foundational steps are critical to establish a positive momentum early-on

Roadmap Architecture	Foundational Steps	Implementation Resources		Expected Outcomes
		Human	Material	
<b>SMO</b>	<ul style="list-style-type: none"> <li>Social aspirations &amp; build alignment on the execution</li> <li>Establish the SMO governance structure</li> <li>Define the mandate and responsibilities of the SMO</li> </ul>		\$\$	<ul style="list-style-type: none"> <li>Set up SMO to oversee implementation of strategy</li> <li>Timely implementation of the recommendations</li> <li>A performance dashboard to track progress</li> </ul>
<b>Licensing Reform</b>	<ul style="list-style-type: none"> <li>Establish a licensing taskforce with relevant expertise</li> <li>Conduct open-forum discussions with MOU-holders</li> <li>Build alignment on potential licensing routes to consider</li> </ul>		\$\$	<ul style="list-style-type: none"> <li>A comprehensive and transparent licensing framework</li> <li>A licensing route that is consistent and timebound</li> <li>"Right to mine" is secured for investors</li> </ul>
<b>Governance Reform</b>	<ul style="list-style-type: none"> <li>Align on a 'database promotion' execution roadmap</li> <li>Accelerate the development of the 'single window'</li> <li>Build awareness of governance best-practice</li> </ul>		\$\$\$	<ul style="list-style-type: none"> <li>Clear delineation of institutional governance functions</li> <li>Active and effective single-window support function</li> <li>Improved perception of mining investment in Jordan</li> </ul>
<b>Fiscal Reform</b>	<ul style="list-style-type: none"> <li>Establish a fiscal taskforce with relevant expertise</li> <li>Build alignment on potential fiscal stabilization routes</li> <li>Engage a fiscal study to bridge any gaps in the regime</li> </ul>		\$\$	<ul style="list-style-type: none"> <li>A comprehensive and transparent fiscal framework</li> <li>Defined, comprehensible and published royalty rates</li> <li>Competitive and stable fiscal terms and incentives</li> </ul>
<b>Regulatory Reform</b>	<ul style="list-style-type: none"> <li>Establish a legal taskforce with relevant expertise</li> <li>Build awareness of regulatory best practice</li> <li>Engage a legal study to bridge any gaps in the regime</li> </ul>		\$\$\$	<ul style="list-style-type: none"> <li>Reformed mining legislation guided by best practice</li> <li>Increased investment in mining industry in Jordan</li> <li>Increased investor confidence in ESG expectations</li> </ul>
<b>Substrategy Detailing</b>	<ul style="list-style-type: none"> <li>Assess the institutional governance effectiveness</li> <li>Track the maturity of the mining sector development</li> <li>Secure access to downstream value-chain enablers</li> </ul>		\$	<ul style="list-style-type: none"> <li>A successful mining industry creating local value</li> <li>Thriving downstream industries</li> <li>An institutional structure which supports growth goals</li> </ul>

# The four key reform pillars can be implemented concurrently once the SMO has been established, and provided appropriate resources are put in place

The substrategy detailing implementation should take place after the four reform pillars have been addressed



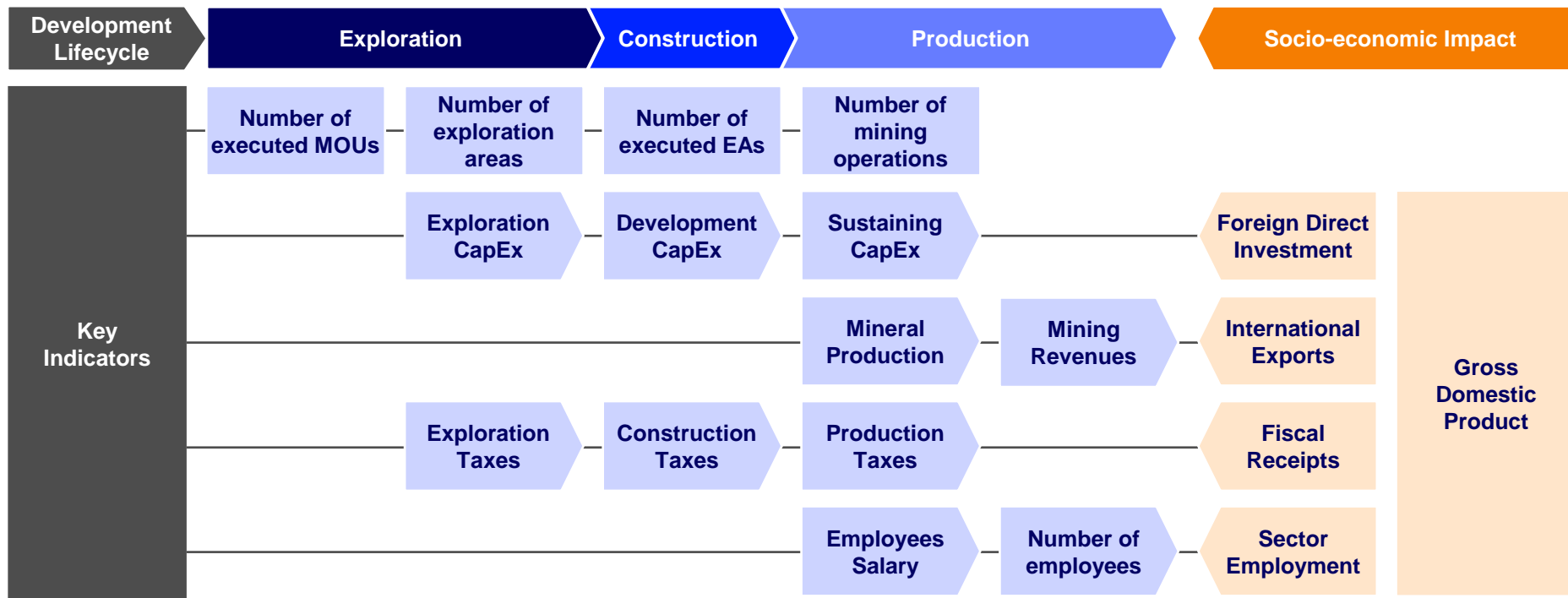
## Several of the proposed licensing, governance, fiscal and regulatory strategic recommendations imply legislative actions to officialize changes

We have summarized the main legislative action which will eventually be required

	Legislative Action		Legislative Vehicle					Action Required
	Change	New	Law	Bylaw	Instruction	Agreement	Initiative	
L1		✓			★			Issue bylaws describing the <b>pre-defined terms licensing terms</b>
L2-A	✓						★	Issue a decree outlining changes to <b>strategic minerals categorization</b>
L2-B		✓		←	★			Issue bylaws formulating <b>exploration companies' right of first refusal</b>
F1	✓				★			Issue a decree updating the list of <b>'economic activity production input'</b>
F2	✓				★			Amend the relevant Department of Land Survey policies stating <b>land rents</b>
F3		✓	←	★	→			Issue bylaws stating mineral <b>royalty rates &amp; calculation mechanism</b>
F4		✓				★		Amend the Executive Agreement to include a <b>fiscal stabilization clause</b>
F5		✓	←	★	→			Issue bylaws stating mineral <b>royalty rates &amp; calculation mechanism</b>
G4		✓			★			Issue bylaws outlining the roles & responsibilities of the <b>geological survey</b>
G5		✓			★			Issue bylaws to delineate <b>governance functions across institutions</b>
S1					★			Issue instructions to facilitate the development of <b>downstream clusters</b>

# MEMR can track several indicators to monitor the pace of development and maturity of the industry, and the subsequent socio-economic impacts generated

The mining sector would contribute in terms of foreign direct investment, exports, fiscal receipts & employment

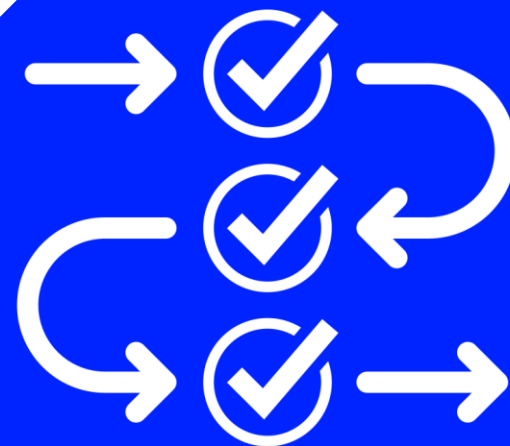


# Appendix



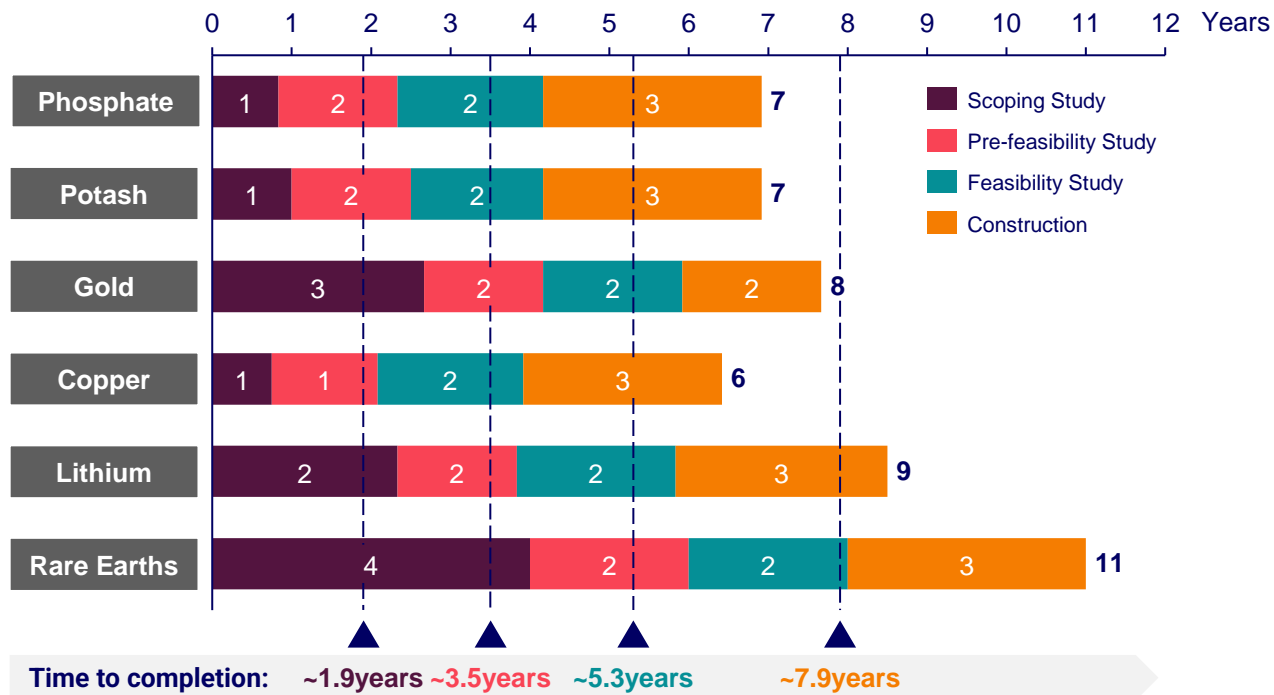
# Licensing Reform

Relevant supporting material



# Typically, mine project development from exploration to production is a time consuming process when best-practice standards are followed

Projects development lifecycle are expected to range between 7 to 11 years, depending on the commodity



## Scoping Study

- 50% cost estimation accuracy
- Inferred / Indicated resource estimate
- Preliminary Economic Assessment

## Pre-feasibility Study

















- 70% cost estimation accuracy
- Indicated / Measured resource estimate
- Preliminary ESIA study

## Feasibility Study

- 80% cost estimation accuracy
- Proven / Probable reserve statement
- Approved ESIA study

# Standardizing as many exploration & production licensing terms in the law as reasonably possible will help de-risk the approval process (1/2)

















Reduced discretionary negotiations bring more stability and increase confidence for prospective investors

Licensing Terms	Typical Codification		Operational Relevance		Rationale	Implications
	Legislation	Agreement	Exploration	Production		
 <b>Duration &amp; Renewal Terms</b>					▲ Simplifies administration, encourages investment ▼ Ignores geological diversity, hinders adaptability	• Establish the initial term period of the license • Define clear criteria for automated renewal
 <b>Capital Deployment Schedule</b>					▲ Enables tailored investment based on project complexity ▼ Does not accounts for investment environment	• Review and acceptance of the Feasibility Study as a basis for responsible project development
 <b>Environment &amp; Social Obligations</b>					▲ Ensure commitment to sustainability ▼ Does not adapt to stakeholder needs	• Require the production of agreed ESIA / ESMP • Stipulate that those plans must be followed
 <b>Dispute Resolution Mechanisms</b>					▲ Reduces legal uncertainties and potential costs / delays ▼ May not suit all disputes, lacks customization	• Stipulate that disputes are subject to negotiation first, then submitted to local arbitration to settle if need be



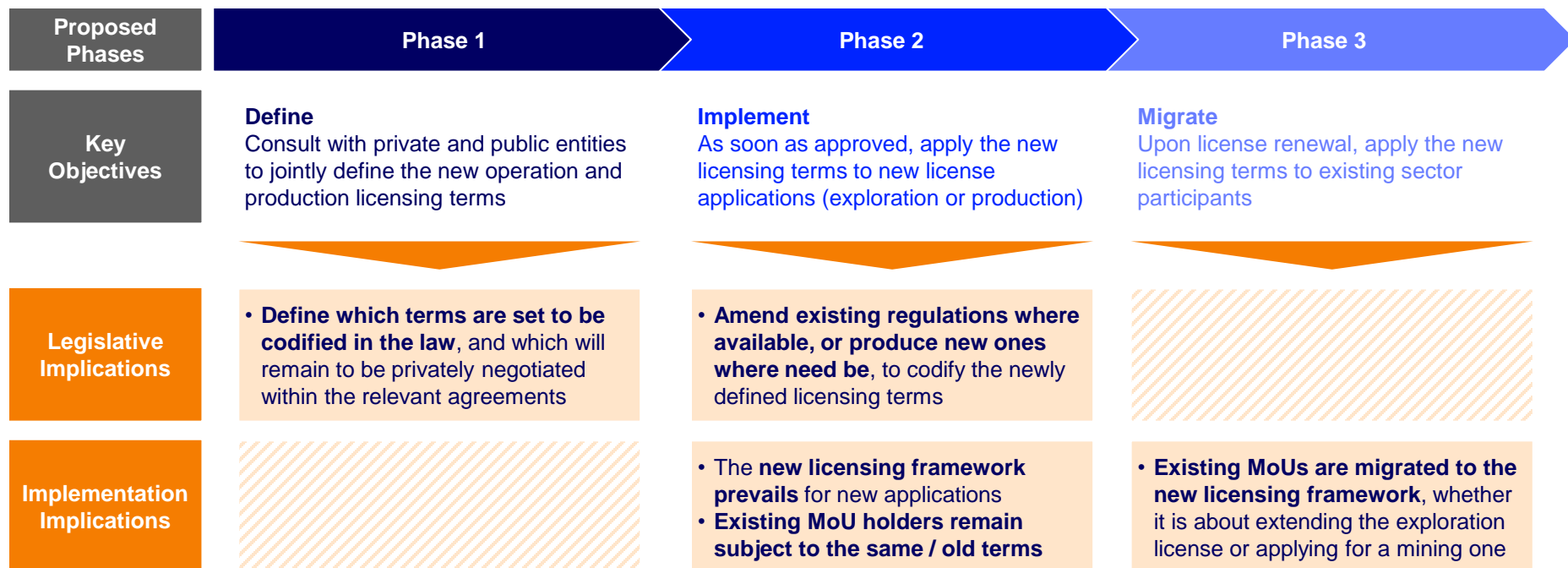
# Standardizing as many exploration & production licensing terms in the law as reasonably possible will help de-risk the approval process (2/2)

Reduced discretionary negotiations bring more stability and increase confidence for prospective investors

Licensing Terms	Typical Codification		Operational Relevance		Rationale	Implications
	Legislation	Agreement	Exploration	Production		
 <b>Fiscal Terms &amp; Investment Incentives</b>					▲ Ensures equity and terms / incentives stabilization ▼ Reduces customization to specific project needs	• Establish fiscal stabilization provisions to prevent sudden & significant changes to the pre-agreed fiscal terms
 <b>Operational Data Sharing &amp; Reporting</b>					▲ Builds geo-database for future promotion ▼ May not adapt to operational constraints	• Define information reporting mechanisms (frequency, format, ...) with provisions for sensitive data treatment
 <b>Change of Control &amp; Transfer</b>					▲ Prevents abrupt changes and maintains continuity ▼ May not address project / stakeholder concerns	• Stipulate the conditions under which the license can be transferred or assigned to another entity
 <b>Community &amp; Stakeholder Engagement</b>					▲ Ensures uniform treatment, avoids inconsistencies ▼ Ignores unique needs, preferences, and concerns	• Require the production of agreed ESIA / ESMP • Stipulate that those plans must be followed

# We recommend a three-phase approach to define the new licensing framework and apply it to the relevant sector participants, whether new or prospective

Current MoU-holders need to be consulted in order to collaboratively settle on the new licensing terms



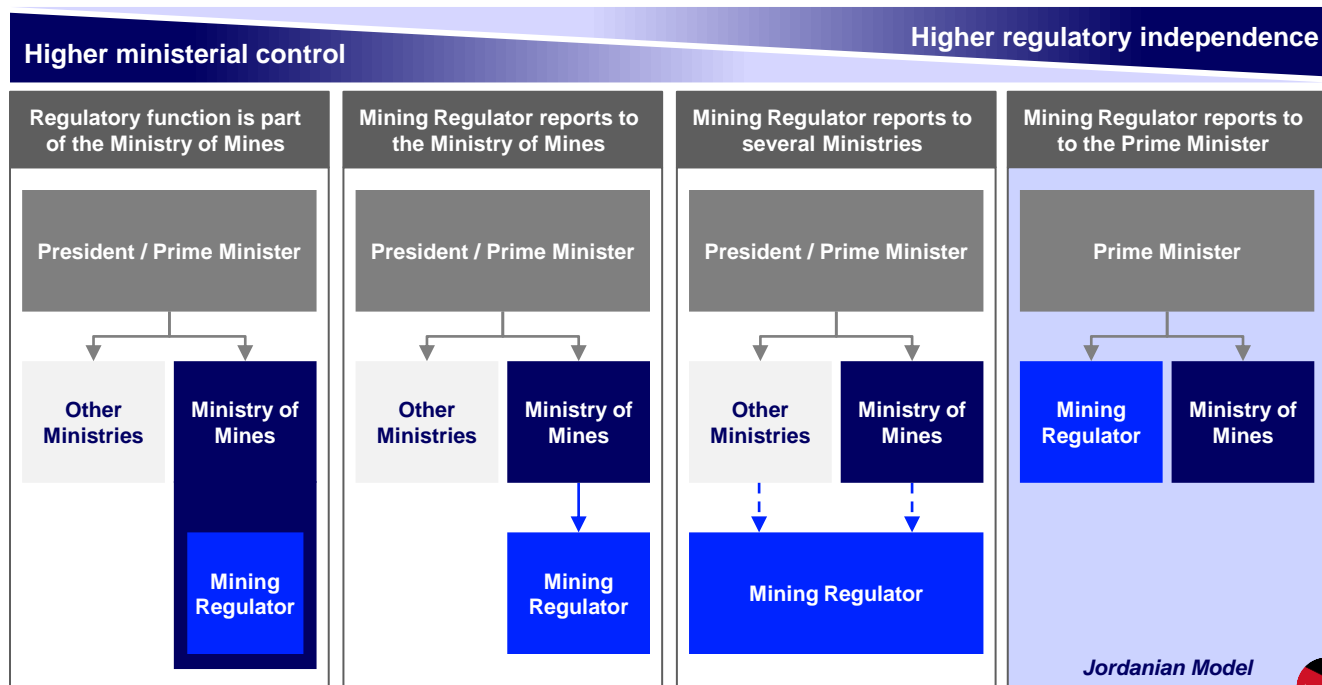
# Governance Reform

Relevant supporting material



# In terms of Control & Enforcement, different models exist to govern the relationship between MEMR & EMRC, but retaining ministerial control is critical

Governmental hierarchy helps ensure that policies get consistently & efficiently translated into regulatory actions

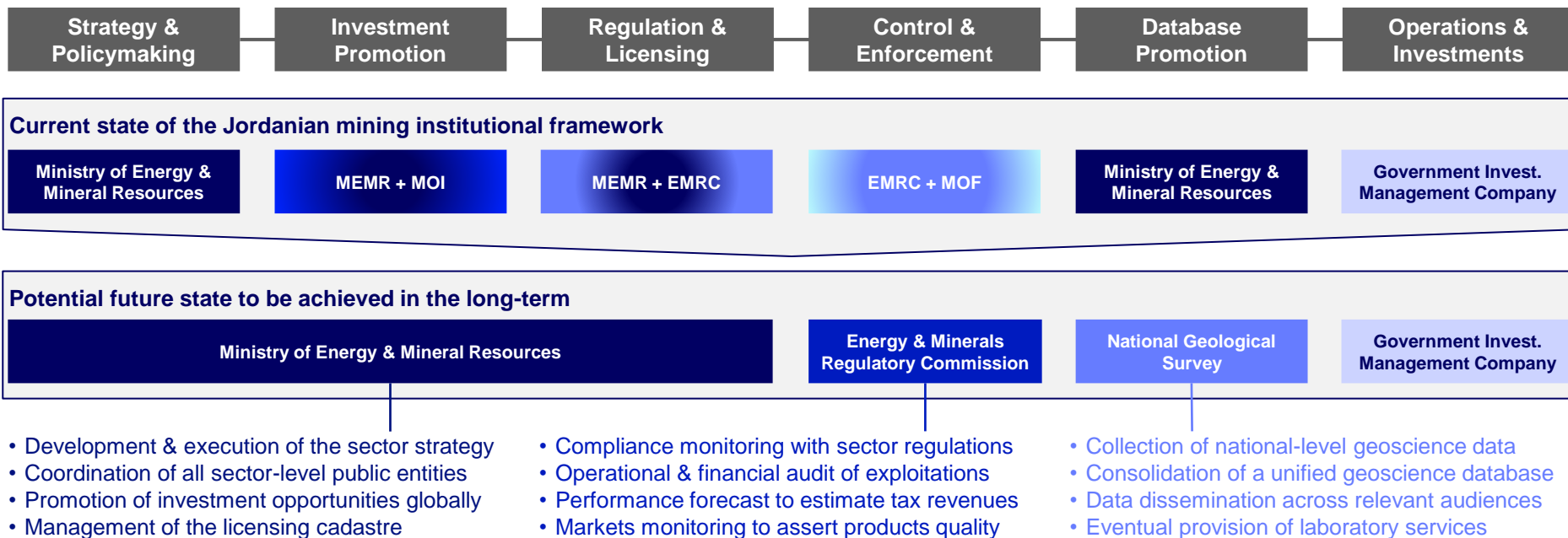


## Implications

- Regulations serve policies so **regulatory bodies should report to / be accountable to a policy-making Ministry**, in some shape or form
- If a Ministry owns KPIs for the performance of a sector, it should have a **means of control over any agencies enforcing policies**
- A **regulatory body should report to one ministry only**. Where lines of authority are blurred, bodies may seek to unilaterally shape their mandate

## Ultimately, separating key institutional roles in the longer term would reflect best-practice of mining sector governance worldwide

The potential future state represents a long-term goal for MEMR to achieve in line with international peers



# In terms of Database Promotion, Jordan may consider establishing a formal geological survey in the mid-to-long term, to cope with its growth ambitions

It is typical best practice for mining-focused jurisdictions to establish a dedicated geological survey

## Typical return (exploration & mining licenses issued) on geoscience data generation profile

### Ministry highlights the potential

Timeframe: short-term

Exploration: early-stage prospecting

Production: none

### Private sector scales-up exploration

Timeframe: medium-term

Exploration: large-scale exploration studies

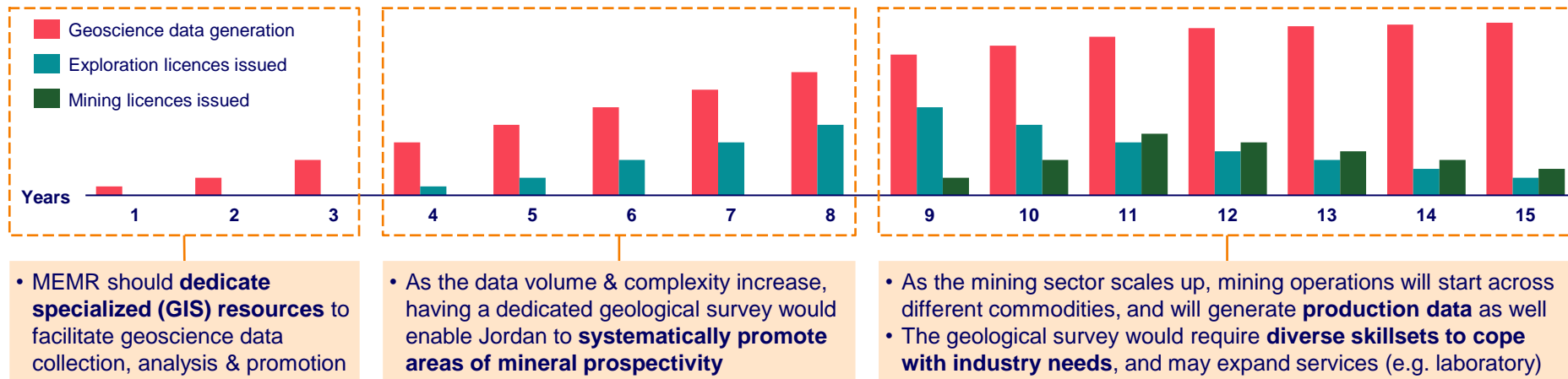
Production: none

### Mining operations get developed & exploration continues

Timeframe: long-term

Exploration: ongoing exploration work

Production: active generation of production data



## Potential investors rely on a quality geoscience database in order to ascertain the geological prospectivity, and decide whether to pursue exploration efforts

While the existing database builds on quality historical information, several information gaps exist

Geoscience Data Type		Database Promotion Recommendations	Frequency		Achievability	
			One-off	Recurrent	Ease	Cost
Geological	Geological Maps	Geo-reference, translate & digitize all available datasets (maps, reports, etc.) & complement with public Arabian Peninsula data	✓	✓	▼	\$\$\$
	Alteration Patterns	Acquire multispectral remote sensing public imagery (Sentinel 2, Landsat 8, Aster, etc) and apply a band ratio to visualize alterations	✓		▲	\$\$
	Drilling Data	Digitize the existing drillhole database (geo-location, logging, analysis results, etc.) and ensure future drillholes are digitized too	✓	✓	▼	\$\$\$
Geochemical	Mineral Occurrences	Compile mineral occurrences from existing reports & maps and conduct focused country-wide geo-chemical sampling	✓	✓	▼	\$\$
Geophysical	Magnetic Surveys	Overlay country-wide geophysical survey (magnetic and radiometry) which was conducted in the past	✓		▲	\$
Geographical	Administrative Data	Overlay publicly available administrative data (roads, railways, airports, cities, etc.)	✓	✓	▲	\$
Environmental	Protected Areas	Maintain environmentally protected areas up-to-date (national parks, protected & prohibited areas, etc.)		✓	▲	\$
Cadastre	Open Blocks	Ensure existing licence details are completed (owner, status, etc.) and maintain open blocks for exploration up-to-date	✓	✓	▲	\$

## Prioritizing will result in a short-term impact on prospective investors, and trigger a positive change momentum for other recommendations

Given its resource constraints, MEMR may consider outsourcing some of these activities to execute faster


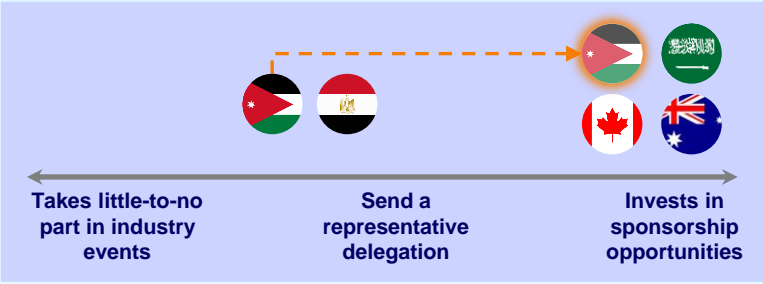

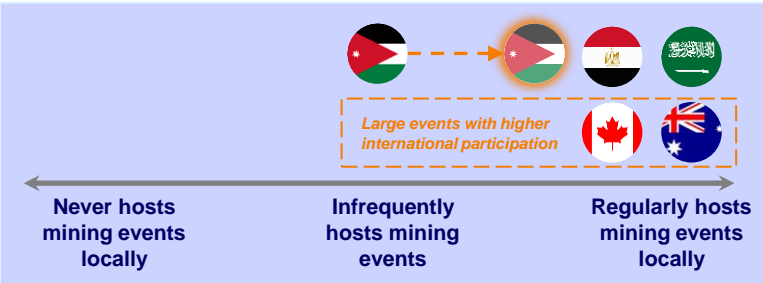
Ranked Database Promotion Recommendations	Achievability	
	Ease	Cost
<b>Overlay publicly available administrative data</b> (roads, railways, airports, cities, etc.)	▲	\$
<b>Overlay country-wide geophysical survey</b> (magnetic and radiometry) which was conducted in the past	▲	\$
<b>Ensure existing licence details are completed</b> (owner, status, etc.) and <b>maintain open blocks for exploration</b> up-to-date	▲	\$
<b>Maintain environmentally protected areas up-to-date</b> (national parks, protected & prohibited areas, etc.)	▲	\$
<b>Acquire multispectral remote sensing public imagery</b> (Sentinel 2, Landsat 8, Aster, etc) and apply a band ratio to visualize alterations	▲	\$\$
<b>Compile mineral occurrences from existing reports &amp; maps and conduct focused country-wide geo-chemical sampling</b>	▼	\$\$
<b>Digitize the existing drillhole database</b> (geo-location, logging, analysis results, etc.) and <b>ensure future drillholes are digitized too</b>	▼	\$\$\$
<b>Geo-reference, translate &amp; digitize all available datasets</b> (maps, reports, etc.) & <b>complement with public Arabian Peninsula data</b>	▼	\$\$\$

Implications
<ul style="list-style-type: none"> <li>• <b>Prioritize</b> recommendations which are relatively easy to implement and require minimal budget</li> <li>• Consider <b>outsourcing selected recommendations</b> to specialized companies to accelerate their execution</li> </ul> <p><b>In parallel, improve the capabilities &amp; performance of the geoportal, including:</b></p> <ul style="list-style-type: none"> <li>• Collate all of the available geoscience data in a <b>consistent and unified view</b></li> <li>• Integrate a <b>license management system</b> to check-in status or apply for a license</li> <li>• Provide <b>multilingual support</b>, for navigating the portal &amp; accessing data</li> <li>• Maintain <b>optimal speed and a user-friendly interface</b></li> </ul>



# In parallel, Jordan will need to be more proactive about its promotional efforts towards the investment community in order to trigger a positive momentum

There is an opportunity to scale-up local and international investment promotion to elevate Jordan's profile

Platforms	Promotional Ambitions	Key Objectives	Strategic Enablers
<b>Attending Mining Events</b> 		<ul style="list-style-type: none"> <li>• <b>Elevate Jordan's profile globally</b> as an up-and-coming mining investment destination</li> <li>• <b>Unlock global networking opportunities</b> with industry stakeholders (investors and beyond: lenders, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Increase domestic awareness</b> of the benefits of participating in industry events</li> <li>• <b>Obtain backing from key stakeholders</b> to unlock the necessary support and resources</li> </ul>
<b>Hosting Mining Events</b> 		<ul style="list-style-type: none"> <li>• <b>Expose local private and public stakeholders</b> to the broader mining industrial ecosystem</li> <li>• <b>Showcase Jordan's investment opportunities</b> to shortlisted high-potential investors</li> </ul>	<ul style="list-style-type: none"> <li>• Obtain <b>endorsement from the government</b> to actively host mining events in-country</li> <li>• <b>Build partnerships with industry stakeholders</b> to garner sponsorship, support &amp; expertise</li> </ul>

# Fiscal Reform

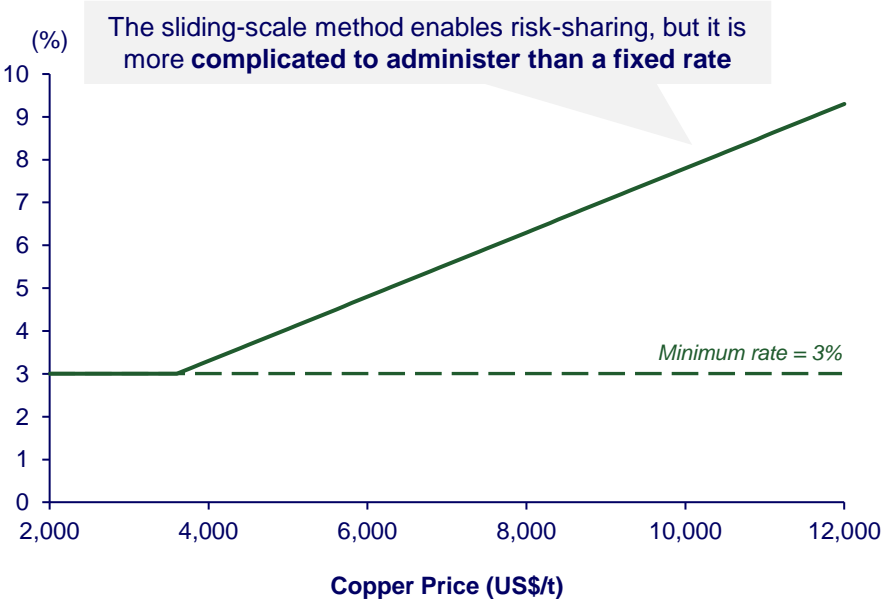
Relevant supporting material



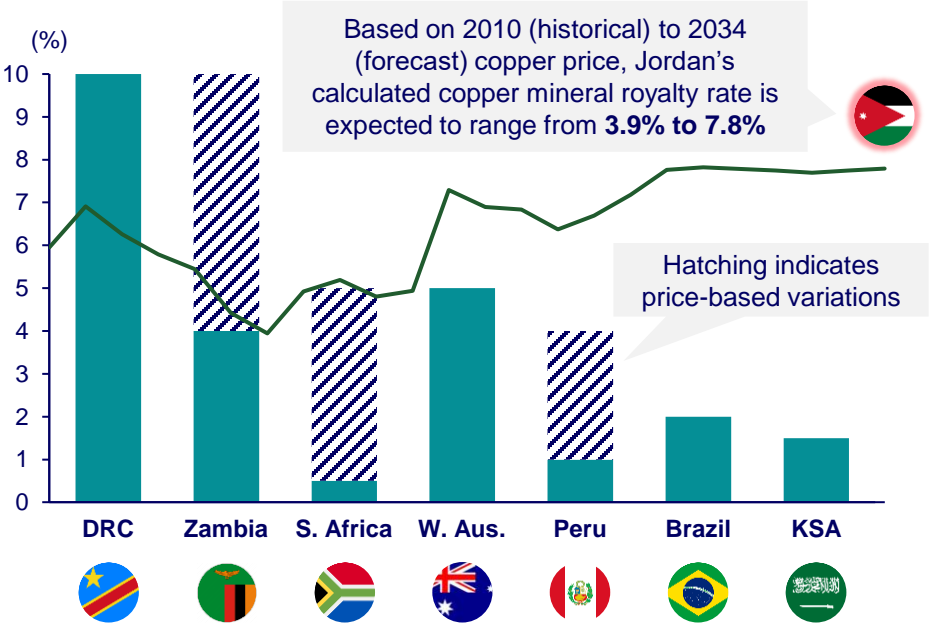
# For copper, we recommend adopting the proposed price-based formula, but more clarity is required regarding the execution mechanism

Clarifications are necessary for the quotation period, administration process, deductions, invoicing process etc.

## Jordan copper royalty calculation methodology\*



## Copper mineral royalty rate benchmarking

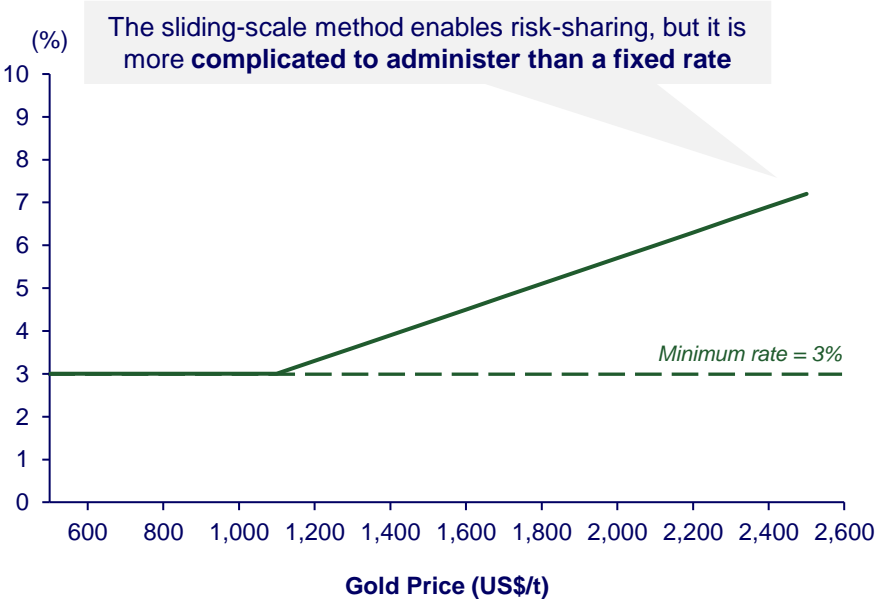


Source: Wood Mackenzie, SRK & Mayer Brown analysis. Note: Copper royalty rate is calculated by the following formula:  $\text{royalty Rate} = 0.75 \times \text{Copper Price } (\$/t) + 0.3$

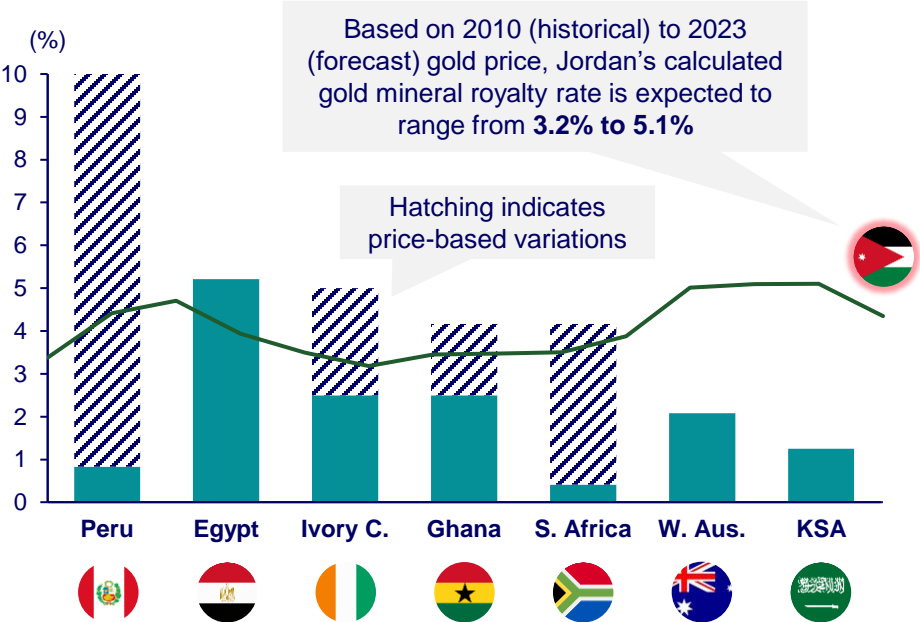
Similarly for gold, we recommend adopting the proposed price-based formula as long as more clarity is provided regarding the execution mechanism

Clarifications are necessary for the quotation period, administration process, deductions, invoicing process etc.

Jordan gold royalty calculation methodology\*



Gold mineral royalty rate benchmarking

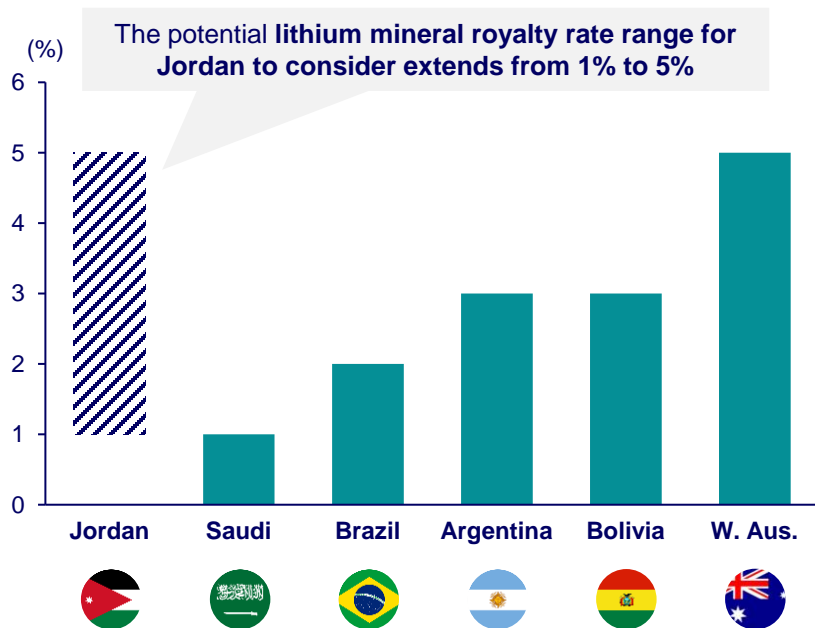


Source: Wood Mackenzie, SRK & Mayer Brown analysis. Note: Gold royalty rate is calculated by the following formula: royalty R (%) = 3 x (Price of gold \$/oz) - 0.3

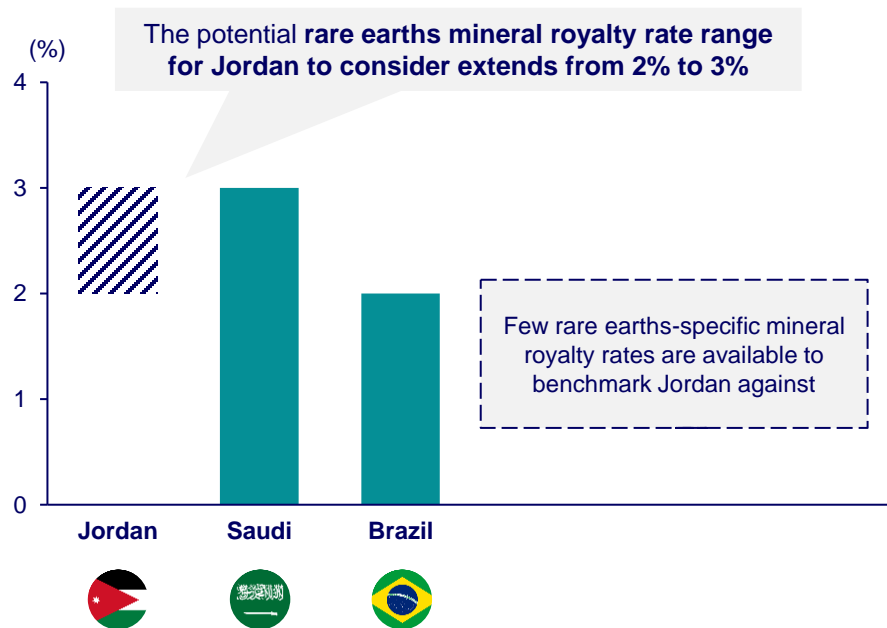
## For lithium and rare earths, we recommending defining mineral royalty rates which are aligned with competitive jurisdictions globally

We have provided relevant benchmarks for Jordan to consider to help define the rates

### Lithium mineral royalty rate benchmarking









### Rare earths mineral royalty rate benchmarking



# The 'Regulating the Investment Environment' regulation prescribes a range of incentives which can be obtained through a discretionary application

The 'basic incentives' includes provisions for customs duties, sales tax and income tax

Tax Category	Basic Incentives	Project Economics Materiality		Commodities Eligibility					
		Pre-Production	Production	P	K	Au	Cu	Li	RE
Import Duty	<b>Art. 14A</b> Fixed assets, production requirements, inputs, and spare parts shall be <b>exempted from customs</b> duties by means of a decision issued by the Minister			✓	✓	✓	✓	✓	✓
VAT	<b>Art. 14B</b> Fixed assets, production requirements and inputs, and spare parts shall be <b>subject to zero-rate sales tax</b> by means of a decision issued by the Minister			✓	✓	✓	✓	✓	✓
Income Tax	<p>[...] employ at least 250 Jordanian [...] <b>exemption from the income tax for 4 years</b> from the date of the actual operation, and a <b>reduction [...] by 50% the following year</b></p> <p><b>Art. 19</b> <b>exemption from income tax for a period of 5 years</b> [...] in category A areas [...] reduction by 75% [...] in category B areas [...] reduction by 50% [...] in category C areas</p> <p><b>Art. 21</b></p> <p><b>Art. 22A</b></p> <p>[...] phosphate, potash [...] and any other natural ores <b>determined by the Council of Ministers</b> are excluded [...]</p>			✗	✗	?	?	?	?

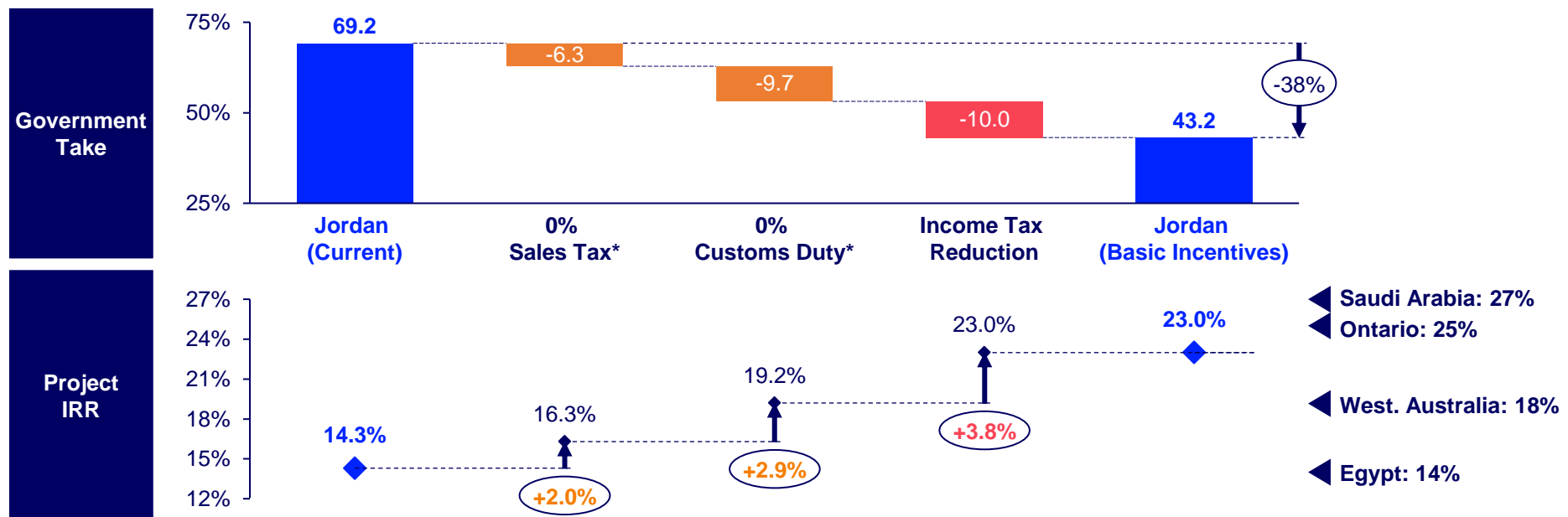


# Our analysis indicates that with the 'basic incentives' applied, the Jordanian mining fiscal regime would become very competitive against other jurisdictions

The government take naturally decreases and the project IRR increases subsequently to be competitive

## Impact of the basic incentives on the Government Take and Project IRR in Jordan

% of net cash flows, illustrative gold project (real 2023 terms, 1,550\$/oz Au price, undiscounted)



## Article 26 of the regulation sets out eight other criteria which may allow companies to access ‘additional incentives’, on top of the ‘basic incentives’

The applicability of these incentives to the mining industry and their achievability varies for each criteria

### 1 [...] employing not less than 350 Jordanians

- Mid-scale mining projects should be able to achieve hiring 350+ Jordanians across operational functions

### 2 [...] employing female employees of not less than 50%

- Although the mining industry has been making great progress towards gender equity, such target is unlikely to be reached

### 3 [...] targeting export markets with of not less than 50%

- Most metallic commodities are aimed at export markets, so this threshold should be easily achievable

### 4 [...] with local added value of not less than 50%

- Companies investing in downstream industries will be able to achieve this criteria, which is unlikely in early years

### 5 [...] transfer of knowledge, technology & digital transformation

- Mining companies increasingly capitalize on digital technologies (software and hardware) and may achieve this objective

### 6 Strategic Economic Activities [...]

- Must have an investment >75 million JOD and meet two other criteria listed, which is potentially achievable

### 7 Public-Private Partnership Projects [...]

- May be possible for phosphate or potash companies which the government have a vested interest in

### 8 [...] targeting distant areas and areas of poverty













- Remote mines may qualify for this incentive, and some active MOUs are currently located in such areas





## Assuming a company meets the criteria to be defined as a Strategic Economic Activity (#6), it would become eligible for six ‘additional incentives’

While some incentives relate to fiscal terms, others provide operational incentives

Additional Incentives Provisions	Mining Tax Implications	Pre-production Materiality	Production Materiality
<b>75% exemption on charges of selling the lands</b> owned by public treasury for the purposes of establishing the Economic Activity, providing the project is operational within 3 years	Not relevant		
<b>5-year exemption from land rent</b> for land owned by the public treasury for the purposes of establishing the Economic Activity	Rent Fees		
<b>50% contribution to the cost of the electric energy bill</b> or allowing it to be deducted from the receivables due on the Economic Activity towards the Official Entity for a period of 5 years	Not relevant		
<b>10-year exemption from taxes on buildings and lands</b> as well as the regulatory revenues that are due on the Economic Activity for a period of 10 years from the date of the decision	Not relevant		
<b>50% exemption on fees for registering lands and tax</b> on selling the real-estate on which the Economic Activity will be constructed, provided there are 25 Jordanian employees	Not relevant		
<b>Deduction of costs of establishing the infrastructure services</b> to the Economic Activity from the dues to the Official Entity within 5 years after the date of actual operation	Income Tax		

# Regulatory Reform

Relevant supporting material



# A comprehensive legal analysis must be undertaken to review in detail the current mining regulatory framework and bring it in line with best-practices

While the current framework addresses key topics defined in the Model Mining Code, it lacks clarity & gaps exist

- 1 Fair license allocation** The license award procedure should be contained in a segregated section of the law and detailed enough to **prevent discretionary decision-making**
- 2 Work it or lose it** Detailed work programmes required from license holders are needed (along with a statement that failure to follow it could lead to forfeiture following a remedy period)
- 3 Exploration period sufficient for discovery** Extensions should generally be automatic and **not subject to discretion** (although the exploration area can be reduced)
- 4 Right to mine** Exploration license holders need a **clear path to award of exploitation licence** following successful exploration outcomes, governed by a standard form of Executive Agreement
- 5 Mining period sufficient for mining discovery** License holders should be **permitted to hold on rights until work has ceased or the known ore has been exhausted**; renewals should not be discretionary
- 6 Objective, clear and fair grounds for forfeiture** Any breach cannot lead to immediate forfeiture of the license; there has to be some concept of **materiality along with a remedy period**
- 7 Social license to operate to be encouraged** More provisions relating to **community engagement** should be incorporated, without surrendering a 'community veto' over the approval of a project
- 8 Transparent & balanced environmental review** The process should **define clear & objective criteria**, with the assistance of expert input, within established time frames, and with a right of appeal or review
- 9 Reserve power of state to encourage development** Provide authority for **MEMR to act as coordinating agent** for other government approvals to overcome obstacles (regulatory, financial, ...)
- 10 Fiscal freedom** The **transfer of a mining licence** is permitted, with approval of the Cabinet, but there are no apparent provisions relating to an exploration licence; those should be added

# In addition to the core 10 MMC principles, there are additional provisions which must be accounted for when conducted the relevant regulatory reforms (1/10)

The regulatory framework should be clarified to improve administration for investors

Provision Overview	Jordanian Context	Quick Wins
<b>Administration</b> <ul style="list-style-type: none"><li>Codes frequently start with multiple sections outlining the administrative architecture behind the regulation and administration of mining activity</li><li>This helps an investor to understand which entity is responsible for which aspect of that activity. Invariably this starts with the overall authority of the Minister followed by the appointment of a committee or individuals – usually operating within the relevant Ministry - to oversee day to day activity</li><li>In addition, the establishment and operation of both a geological survey and a cadastre might be addressed</li></ul>	<ul style="list-style-type: none"><li>Articles 3 – 5 of the current Jordan describes in some detail the functions of MEMR, the EMRC and the Board of Commissioners of EMRC</li><li>Law No. 8 of 2017 addresses the establishment of the EMRC and its intended function. However, the administration of mining activity in Jordan is disconnected and requires various approvals from the Cabinet/Parliament</li><li>There are multiple types of laws and regulations to consider (laws, bylaws, regulations, instructions, etc including apparently separate regulations applicable to the EMRC) as well as the MoU procedure which appears to operate outside the scope of the principal mining code</li><li>Many of the relevant regulations are not available in English</li></ul>	<ul style="list-style-type: none"><li>Nothing immediately necessary in relation to the organisation of the Ministry</li><li>Establish something outside the formal legislative/regulatory environment which describes the overall architecture of the legislative/regulatory structure so that potential investors understand how to apply for and obtain an exploration/exploitation license, MoU, etc. and how that process interacts with the current legislation and regulation.</li></ul>

# In addition to the core 10 MMC principles, there are additional provisions which must be accounted for when conducted the relevant regulatory reforms (2/10)

The regulatory framework should be clarified to improve administration for investors

Provision Overview	Jordanian Context	Quick Wins
<div><b>Administration</b><ul style="list-style-type: none"><li>Codes frequently start with multiple sections outlining the administrative architecture behind the regulation and administration of mining activity.</li><li>This helps an investor to understand which entity is responsible for which aspect of that activity. Invariably this starts with the overall authority of the Minister followed by the appointment of a committee or individuals – usually operating within the relevant Ministry - to oversee day to day activity.</li><li>In addition, the establishment and operation of both a geological survey and a cadastre might be addressed.</li></ul></div>	<div><ul style="list-style-type: none"><li>The MoU alternative appears to be governed by a Bylaw (No. 76) which was issued in 2020. That in turn relied on a provision in the mining code (Article 8 (c)) which permits anybody to approach the Ministry with a proposal for the exploitation of strategic minerals</li><li>This may then lead to the negotiation of an “executive agreement” to be approved by the Cabinet and “ratified” in accordance with Article 117 of the Constitution (see Article 9)</li><li>The Bylaw also seems to contemplate the establishment of a specific committee within the Ministry to review and decide upon such direct proposals</li><li>A further “Projects Committee” is contemplated in order to assist specifically in connection with strategic minerals (direct proposals are also possible in connection with petroleum, oil shale and coal but each of these have separate projects committees)</li><li>The Bylaw does go on to specify the qualifications required in order to benefit from the award of an executive agreement (which we assume to be the same as an MoU).</li></ul></div>	<div><ul style="list-style-type: none"><li>Nothing immediately necessary in relation to the organisation of the Ministry</li><li>Establish something outside the formal legislative/regulatory environment which describes the overall architecture of the legislative/regulatory structure so that potential investors understand how to apply for and obtain an exploration/exploitation license, MoU, etc. and how that process interacts with the current legislation and regulation.</li></ul></div>

## In addition to the core 10 MMC principles, there are additional provisions which must be accounted for when conducted the relevant regulatory reforms (3/10)

State Ownership and Large / Strategic Mines are well covered within the existing regulatory framework

Provision Overview	Jordanian Context	Quick Wins
<b>State Ownership</b>  A statement that minerals in the ground are owned by the state and that a license is required to undertake exploration/exploitation activity (together with a description of who is eligible to apply for a license).	<ul style="list-style-type: none"> <li>This seems to be covered by the current code (see Article 6)</li> </ul>	<ul style="list-style-type: none"> <li>No changes required</li> </ul>
Provision Overview	Jordanian Context	Quick Wins
<b>Large / Strategic Mines</b>  <ul style="list-style-type: none"> <li>This might be included where a tender or similar process involving a negotiated mining investment agreement would be appropriate for the development of a particularly important strategic mine is involved</li> </ul>	<ul style="list-style-type: none"> <li>There is some mention of this in the mining code in connection with “strategic minerals” as determined by the Cabinet but no real detail behind what is involved (see Articles 8 &amp; 9)</li> </ul>	<ul style="list-style-type: none"> <li>Query whether anything is required here in the immediate future</li> </ul>

**In addition to the core 10 MMC principles, there are additional provisions which must be accounted for when conducted the relevant regulatory reforms (4/10)**

Exploration Rights are well covered within the existing regulatory framework

Provision Overview	Jordanian Context	Quick Wins
<p><b>Exploration rights</b></p> <ul style="list-style-type: none"><li>• A detailed explanation of the process for applying for an exploration license</li><li>• This may include; timetable for making an application and receiving the grant, the term of the license and the procedure for any permitted renewal</li><li>• The rights attaching to an exploration license should also be set out in addition to the any grounds for forfeiture</li><li>• Reporting obligations might also be included</li></ul>	<ul style="list-style-type: none"><li>• This seems to be covered by the current code (see Article 6)</li><li>• Reporting obligations in connection with exploitation activity are included in Article 25 but in less detail than we have seen in other codes)</li></ul>	<ul style="list-style-type: none"><li>• No changes required</li></ul>

# In addition to the core 10 MMC principles, there are additional provisions which must be accounted for when conducted the relevant regulatory reforms (5/10)

When it comes to Mining Rights, an investment guide should be produced to improve the clarity of the law

Provision Overview	Jordanian Context	Quick Wins
<p><b>Mining Rights</b></p> <ul style="list-style-type: none"><li>• Similar provisions as those described above in connection with exploration rights</li><li>• The right to mine should also be included here</li><li>• The entire process for the grant of an exploration or exploitation license seems to be covered in a single article of the current mining code (Article 14)</li></ul>	<ul style="list-style-type: none"><li>• There is no mention of specified procedure, etc so the level of discretion is exceedingly high and there is no guide with respect to timing and other essential aspects of license awards (in the case of exploitation licenses</li><li>• Article 20 does refer to a maximum license area of 5 sq km and a maximum term of 30 years (renewable - albeit on discretionary terms)</li><li>• Fees payable in connection with the award of licenses are stated to be determined in accordance with a regulation (see Article 18)</li><li>• There are a number of “instructions” which address various technical documents to be submitted in connection with applications for various licenses, but they do not appear to be organized in any systematic manner</li><li>• The entire process for the granting of an exploration or exploitation license seems to be covered in a single article of the current mining code (Article 14)</li></ul>	<ul style="list-style-type: none"><li>• Produce a guide to those bylaws, regulations, instructions, etc which do exist and detail the current road map for obtaining licenses</li><li>• The right to mine should also be included here</li></ul>



# In addition to the core 10 MMC principles, there are additional provisions which must be accounted for when conducted the relevant regulatory reforms (6/10)

While Ancillary Rights & Obligations are addressed, MEMR should seek to further detail these

Provision Overview	Jordanian Context	Quick Wins
<div><b>Ancillary Rights &amp; Obligations</b><ul style="list-style-type: none"><li>• This addresses the necessary rights to develop a project beyond pure exploration and exploitation activity</li><li>• As well as surface and access rights this might extend to infrastructure construction (access roads, power supply, etc), emissions, waste, export, import and other ancillary permits. This is effectively an offshoot of key principle 9 described above.</li></ul></div>	<div><ul style="list-style-type: none"><li>• Article 19 of the Jordan code appears to grant a license holder a right to “...perform all necessary activities...” in the license area. This wording is extremely vague and does not, for example, address any necessary ancillary rights outside the license area</li><li>• Also included in this section of the model code is the right to transfer an exploration license to a third party with minimal grounds for refusal.</li><li>• As mentioned above this is not permitted in the current code (Article 23 provides that a mining license may be transferred after 2 years operation with the consent of the Cabinet – it is not clear from the translation whether “mining license” includes an exploration license).</li></ul></div>	<div><ul style="list-style-type: none"><li>• See if ancillary rights can be further defined in a bylaw, instruction, etc. Also see if advance Cabinet consent to transfers of exploration licenses can be secured (for example, where the transferee can perform any obligations in the original license, etc).</li></ul></div>

**In addition to the core 10 MMC principles, there are additional provisions which must be accounted for when conducted the relevant regulatory reforms (7/10)**

Environmental Approvals require to be detailed further, with definitions aligned as per best practice

Provision Overview	Jordanian Context	Quick Wins
<p><b>Environmental Approvals</b></p> <ul style="list-style-type: none"><li>• This is a placeholder in the model code as it is accepted that environmental requirements / approvals may be addressed in separate legislation.</li></ul>	<p><b>Environmental Protection Act:</b></p> <ul style="list-style-type: none"><li>• Definitions in the EPA are unclear</li><li>• Increased stakeholder engagement opportunities throughout the environmental licensing processes is required</li></ul> <p><b>Natural Resources Law:</b></p> <ul style="list-style-type: none"><li>• No clear standards for the rehabilitation plans required by mining companies</li><li>• Requires more appropriate financial guarantee obligations for mining companies, aligned with benchmarked countries</li><li>• No current requirement for MOU holders to comply with management plans for the nature reserves within which the activities will be undertaken</li></ul> <p><b>Water Authority Law:</b></p> <ul style="list-style-type: none"><li>• No clear criteria for the adjudication of competing applications to use the same water source</li><li>• No existing framework for private companies to access desalinated water, either from the National Conveyance Project or their own supply scheme</li></ul>	<ul style="list-style-type: none"><li>• Align on definitions and terms used in the EPA</li><li>• Ensure that supporting regulations / instructions are issued and available</li><li>• Conduct a detailed assessment against international best practice and address the recommendations</li></ul>

**In addition to the core 10 MMC principles, there are additional provisions which must be accounted for when conducted the relevant regulatory reforms (8/10)**

Community Approvals are not accounted for in the existing regulatory framework

Provision Overview	Jordanian Context	Quick Wins
<p><b>Community Approvals</b></p> <ul style="list-style-type: none"><li>• This is a placeholder in the model code as it is accepted that community requirements/approvals may be addressed in separate legislation.</li></ul>	<ul style="list-style-type: none"><li>• No requirement to assess social impacts as part of the mandated EIA process</li><li>• Must develop appropriate adjudication criteria to evaluate the social aspects of environmental license applications</li></ul>	<ul style="list-style-type: none"><li>• Ensure that supporting regulations / instructions are issued and available</li><li>• Conduct a detailed assessment against international best practice and address the recommendations</li></ul>

**In addition to the core 10 MMC principles, there are additional provisions which must be accounted for when conducted the relevant regulatory reforms (9/10)**

Fiscal Terms are currently detailed outside the mining code within the general investment regulatory regime

Provision Overview	Jordanian Context	Quick Wins
<p><b>Fiscal Terms</b></p> <ul style="list-style-type: none"><li>• Covers the any obligation to pay royalties. The amount of those royalties are reserved to and defined in the underlying regulations (therefore making any change in the rate or calculation relatively easy to implement – this is not the approach adopted in Jordan).</li><li>• There are also provisions relating to the possibility of granting tax relief and/or tax stability.</li></ul>	<ul style="list-style-type: none"><li>• These fundamental provisions are located outside the mining code</li></ul>	<ul style="list-style-type: none"><li>• Figure out a way to address these fundamental conditions to offshore investment in relevant legislation</li></ul>

# Both offences and miscellaneous provisions are covered within the regulatory framework; both should be codified in the Mining Law if the opportunity arises

Both Offences and Miscellaneous Provisions are somehow covered within the regulatory framework

Provision Overview	Jordanian Context	Quick Wins
<b>Offences</b> <ul style="list-style-type: none"><li>This includes the description of penalties for a breach of the code or any underlying regulation (either by way of monetary fine or otherwise).</li></ul>	<ul style="list-style-type: none"><li>The Jordan code contains certain financial penalties for breach (Articles 32 to 36) but the conditions under which a license may be revoked do not seem to be specified (see Article 31)</li></ul>	<ul style="list-style-type: none"><li>Not significantly important.</li><li>Pending opportunity for comprehensive overhaul of Mining Law</li></ul>
Provision Overview	Jordanian Context	Quick Wins
<b>Miscellaneous Provisions</b> <ul style="list-style-type: none"><li>Most importantly providing for the implementation of regulations to support the basic principles behind the code and to provide for day-to-day administration.</li></ul>	<ul style="list-style-type: none"><li>Some provisions provided for in Mining Law</li></ul>	<ul style="list-style-type: none"><li>Not significantly important.</li><li>Pending opportunity for comprehensive overhaul of Mining Law</li></ul>

# Investors demand assurance that ESG risks are well understood by recipients of investment (mining companies) and are appropriately managed

Many requirements of these standards are common and convergence between the standards is in progress

Overarching	Lender Standards	Disclosure	Responsible Mining	Issue Specific
<b>United Nations Initiatives</b> <ul style="list-style-type: none"> <li>• UN Global Compact</li> <li>• UN Sustainable Development Goals</li> <li>• UN Guiding Principles on Business and Human Rights</li> <li>• UN CEO Water Mandate</li> </ul>	<b>Equator Principle Financial Institutions</b> <ul style="list-style-type: none"> <li>• Equator principles</li> <li>• IFC performance standards</li> </ul>	<b>ESG Reporting Initiative</b> <ul style="list-style-type: none"> <li>• Global Reporting Initiative</li> <li>• Sustainability Accounting Standards Board (SASB)</li> <li>• IFRS S1</li> </ul>	<b>Industry Led Initiatives</b> <ul style="list-style-type: none"> <li>• ICMM Principles and Performance Expectations</li> <li>• Towards Sustainable Mining (TSM)</li> <li>• Responsible Gold Mining Principles (RGMPs)</li> </ul>	<ul style="list-style-type: none"> <li>• Global Industry Standard on Tailings Management</li> <li>• International Cyanide Management Code</li> <li>• Conflict Free Gold Standard</li> <li>• Voluntary Principles on Security and Human Rights</li> <li>• Minamata Convention on Mercury Management</li> <li>• LMBA Responsible Gold Guidance</li> <li>• IAEA Safety Standards</li> <li>• World Health Organisation Standards</li> <li>• Business and Biodiversity Offsets Programme Standard on Biodiversity Offsets</li> </ul>
<b>Other International Bodies</b> <ul style="list-style-type: none"> <li>• International Labour Organisation</li> <li>• Fundamental conventions</li> <li>• OECD due diligence for responsible supply chains</li> </ul>	<b>Specific Requirements for Development Banks</b> <ul style="list-style-type: none"> <li>• AfDB Environmental and Social Assessment Procedures</li> <li>• EBRD Performance Requirements</li> <li>• Asian Development Bank guidelines</li> </ul>	<b>Climate Specific Disclosure</b> <ul style="list-style-type: none"> <li>• Taskforce on Climate-related Financial Disclosures (TCFD)</li> <li>• IFRS S2</li> <li>• Carbon Disclosure Project Science Based Target Initiative</li> </ul>	<b>Supply Led Initiatives</b> <ul style="list-style-type: none"> <li>• RMI Standards for Smelters and Refiners</li> <li>• Copper Mark for responsible production</li> <li>• RMI draft RRA Criteria</li> </ul>	
<b>ISO Standards and Guides</b> <ul style="list-style-type: none"> <li>• ISO Standards (14000 environment, 45000 H&amp;S)</li> <li>• ISO Guidelines (26000 social responsibility and 31000 risk)</li> </ul>		<b>Other Initiative</b> <ul style="list-style-type: none"> <li>• Extractives Industry Transparency Initiative</li> <li>• Global Tailings Portal</li> </ul>	<b>Third Party Initiatives</b> <ul style="list-style-type: none"> <li>• IMRA</li> <li>• Responsible Mining Foundation</li> </ul>	

# Jordan can embed appropriate requirements of these standards into legislation, giving investors comfort that miners are legally obligated to meet expectations

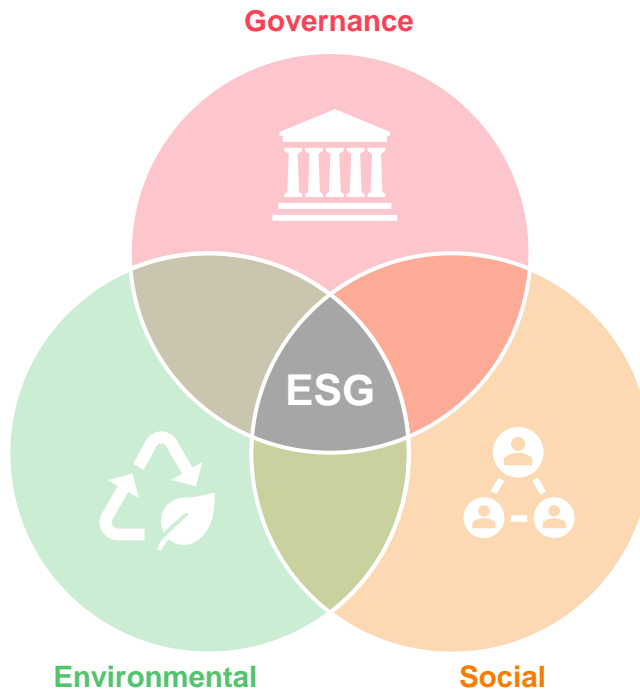
## ESG Summary:

### Governance – The Basics

- Top level commitment
- Human rights – respect and due diligence
- Stakeholder engagement and grievance mechanism
- Compliance with law and permit conditions
- Indigenous title and consent agreements
- ESG principles and disclosure
- Ongoing risk assessments
- Functional management systems
- Inflation and volatility

### Environmental

- Pollution prevention
- Sustainable resource use
- Biodiversity and ecosystems protection
- Decarbonisation and energy efficiency
- Responsible mine closure
- Water stewardship
- Responsible tailings and waste management
- Hazardous material stewardship
- Renewable energy stewardship



### Governance – Special Topics

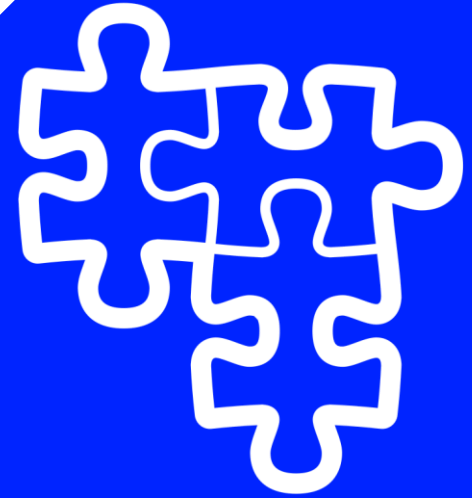
- Payment of taxes
- Disclosure of payments to government
- Fair transfer pricing
- Responsible political involvement
- Anti-bribery and corruption controls
- Anti-competitive action controls
- Responsible sourcing
- Market access for artisanal miners
- Independence of external auditors and oversight of geopolitical stability

### Social

- Fundamental human rights at work
- Safe and healthy workplace
- Diversity and inclusion
- Human development & training in work
- Community development
- Avoiding displacement and responsible settlement
- Respecting indigenous peoples' rights
- Manage in-migration
- Social transition at closure

# Substrategy Detailing

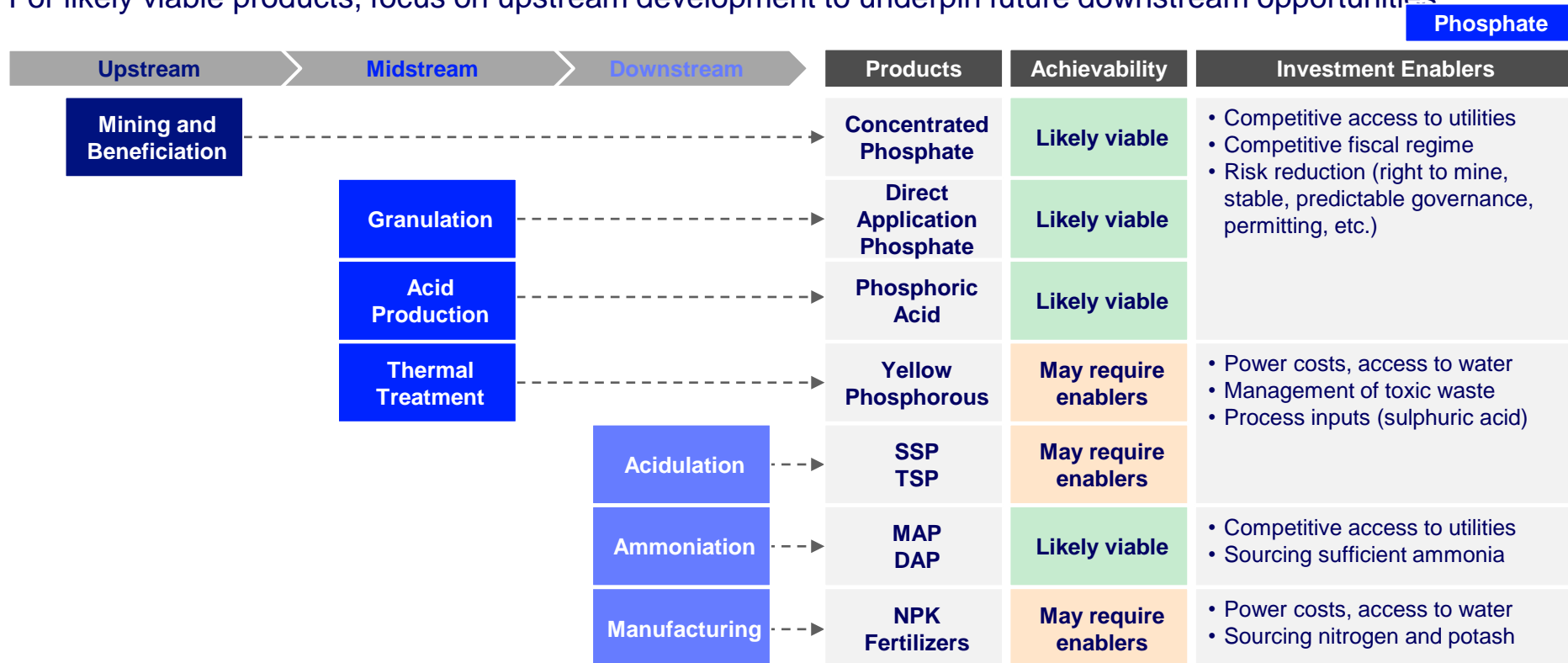
Relevant supporting material





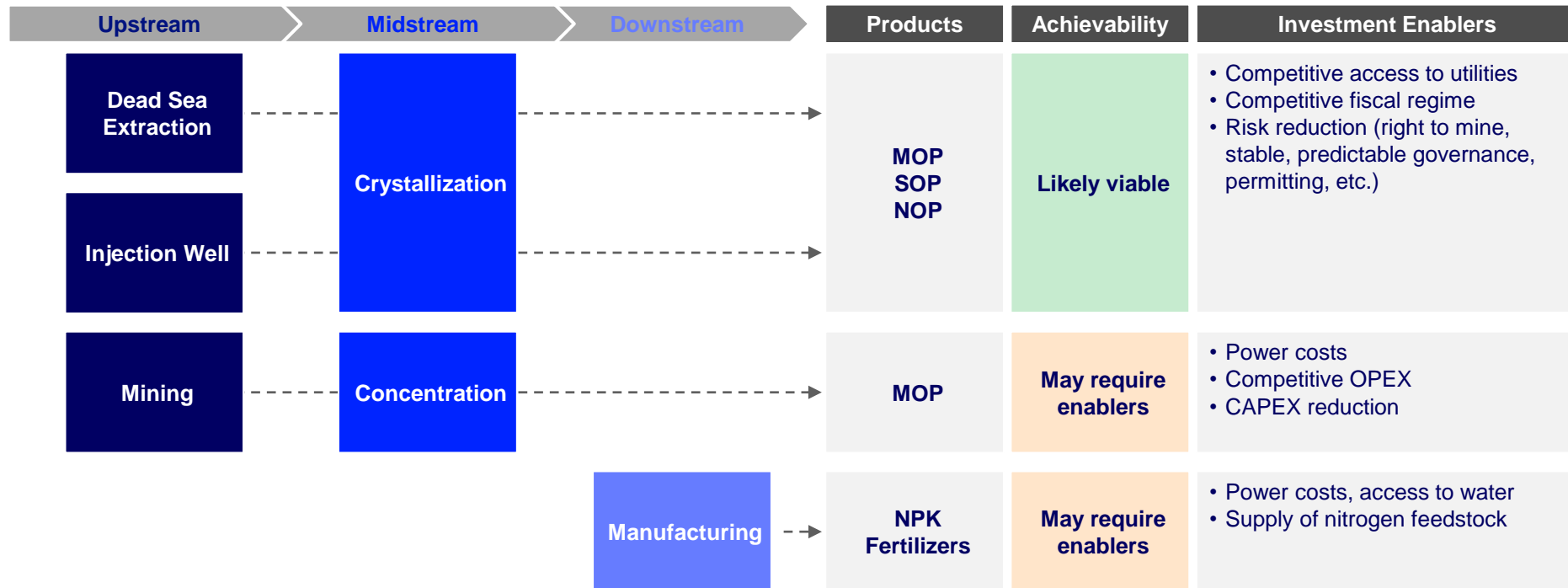
## Jordan's experience could be leveraged to expand the sector, with enablers required to promote development of some downstream products

For likely viable products, focus on upstream development to underpin future downstream opportunities



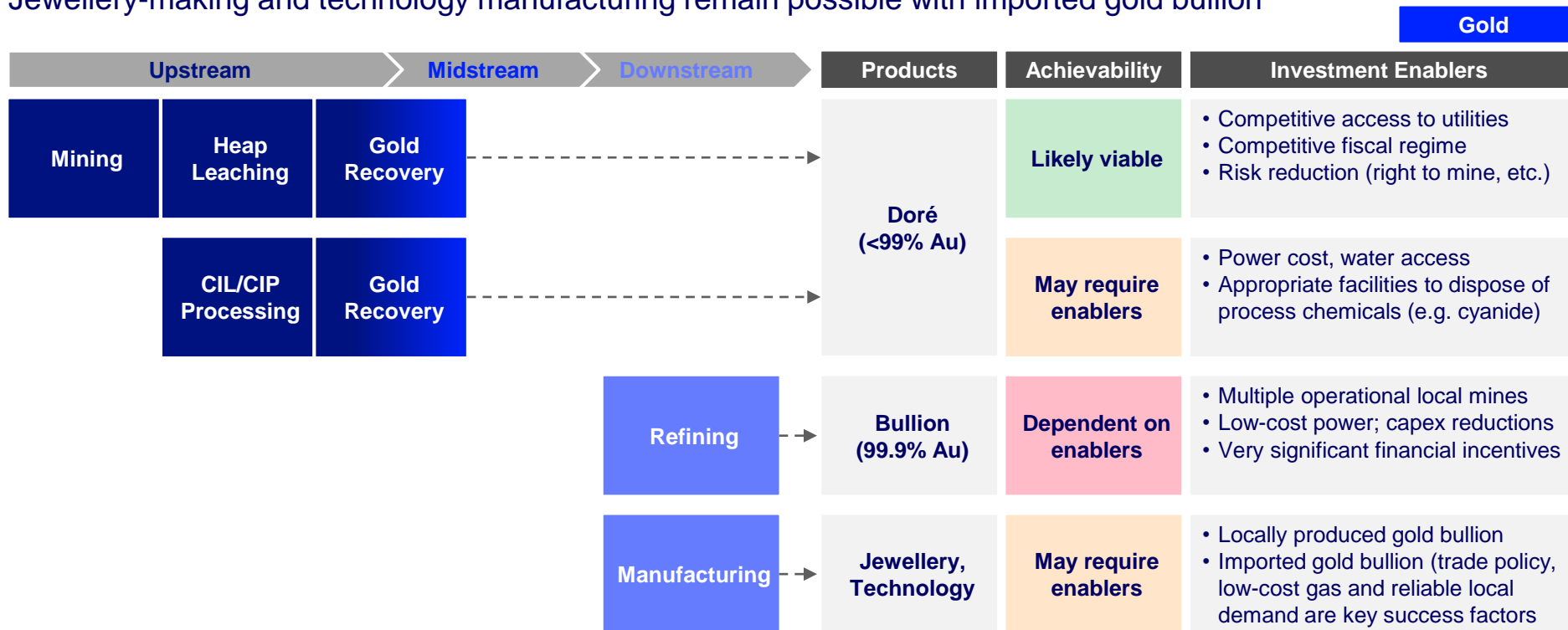
# Mining and concentration, and manufacturing NPK fertilizers will require enablers to unlock these parts of the value chain

For likely viable products, focus on upstream development to underpin future downstream opportunities

**Potash**


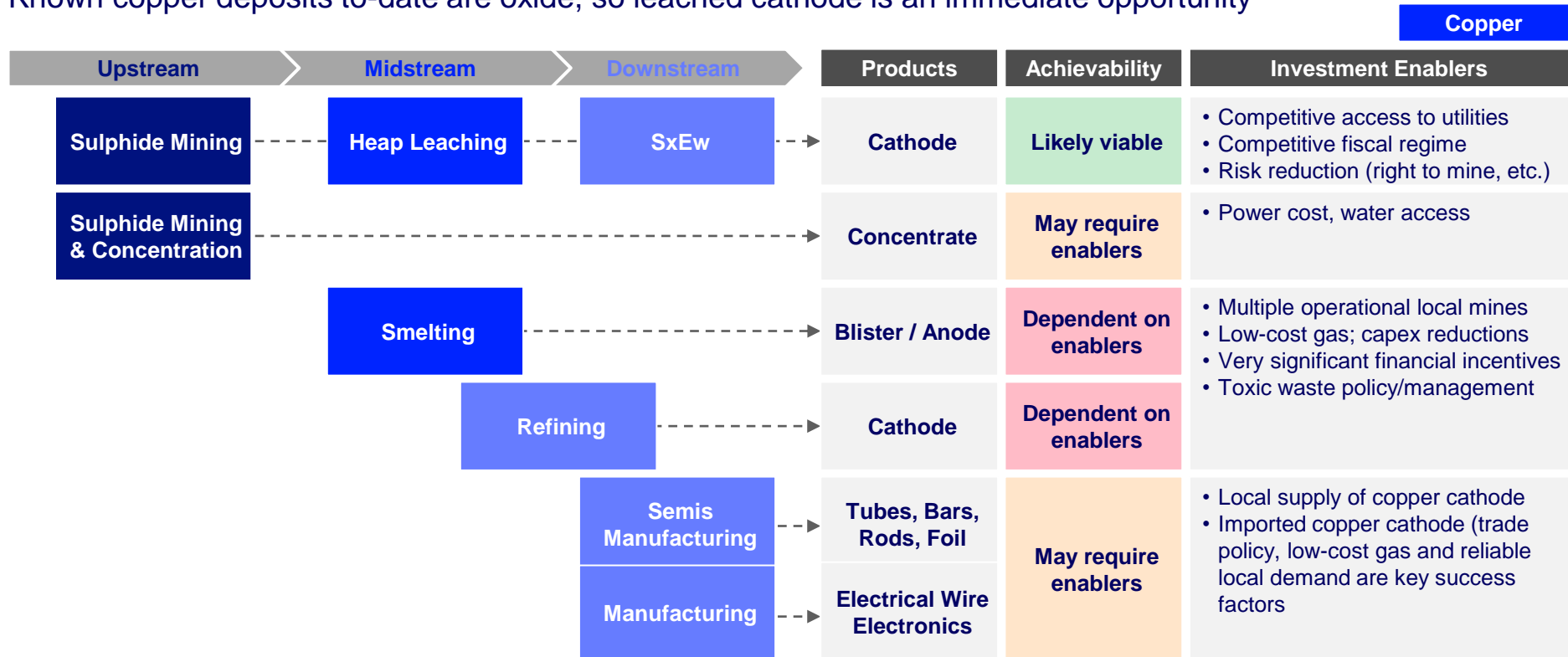
# Producing doré could be achievable if certain enablers are addressed, mainly power costs, access to water and managing disposal of harsh process chemicals

Jewellery-making and technology manufacturing remain possible with imported gold bullion



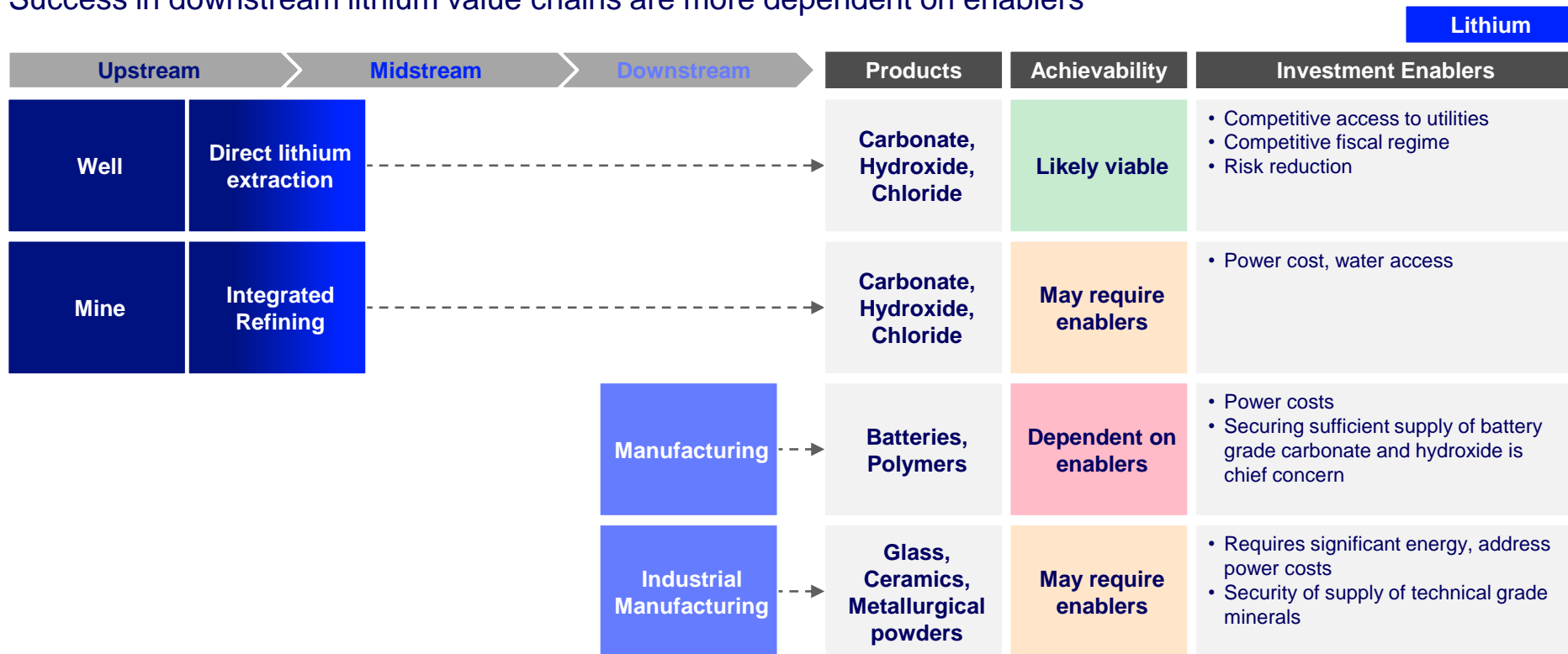
## While copper semis and manufacturing opportunities may be possible without mines, development of copper mines will help unlock downstream segments

Known copper deposits to-date are oxide, so leached cathode is an immediate opportunity



# DLE from brines is likely viable so long as companies have competitive access to utilities and a competitive fiscal regime

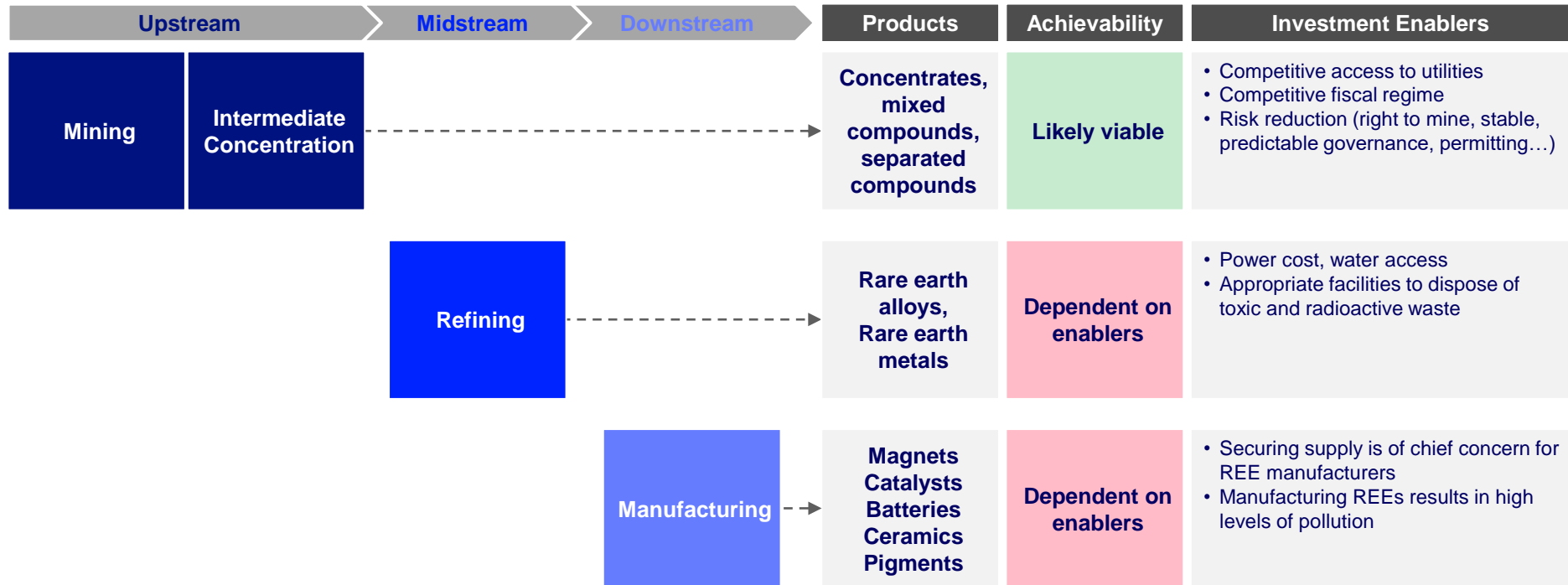
Success in downstream lithium value chains are more dependent on enablers



# Unlocking the downstream value chains for REEs will be highly dependent on enablers, including security of supply, power costs and management of waste

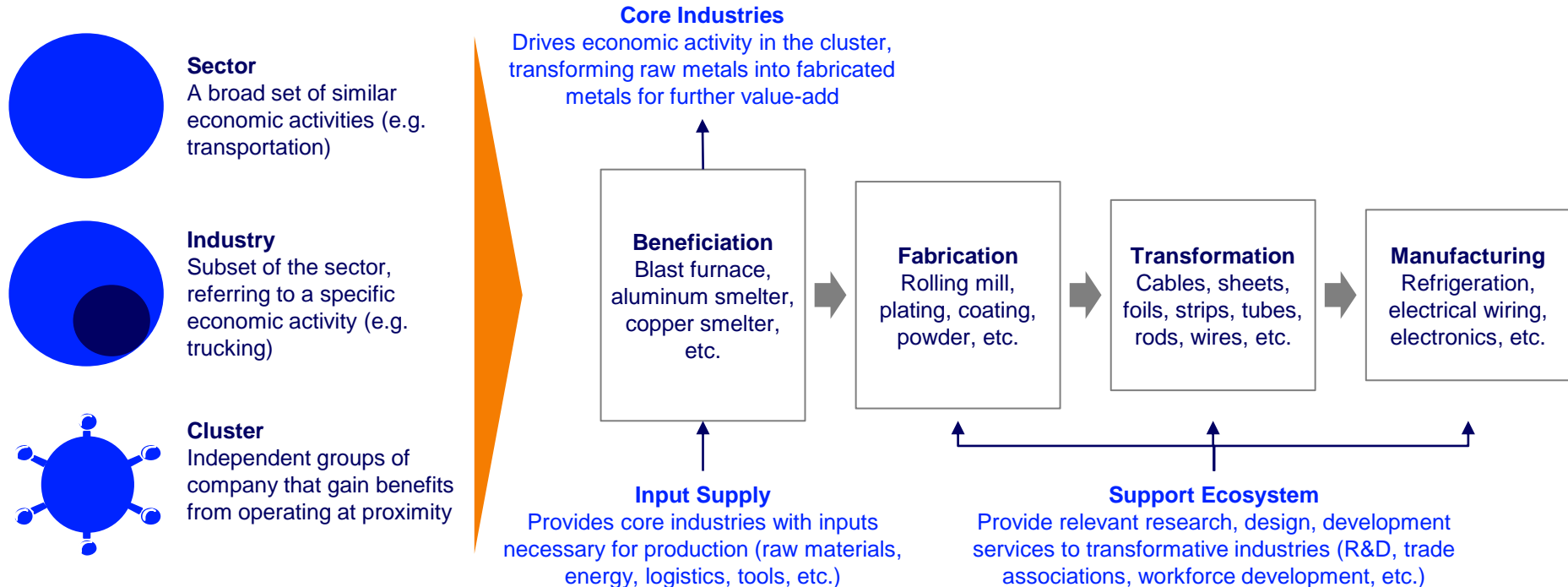
It is likely that mining and intermediate concentration will be viable

## Rare Earths



# Developing industrial clusters has proven effective to allow related industries to benefit from operating at close proximity, feeding into one-another

Metals clusters are driven by a core metals transformation plant around which satellite industries are created



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