



وزارة الاستثمار  
Ministry of Investment

# Waste Investment Opportunities

Investor promotion pack –  
**Engineered landfill**

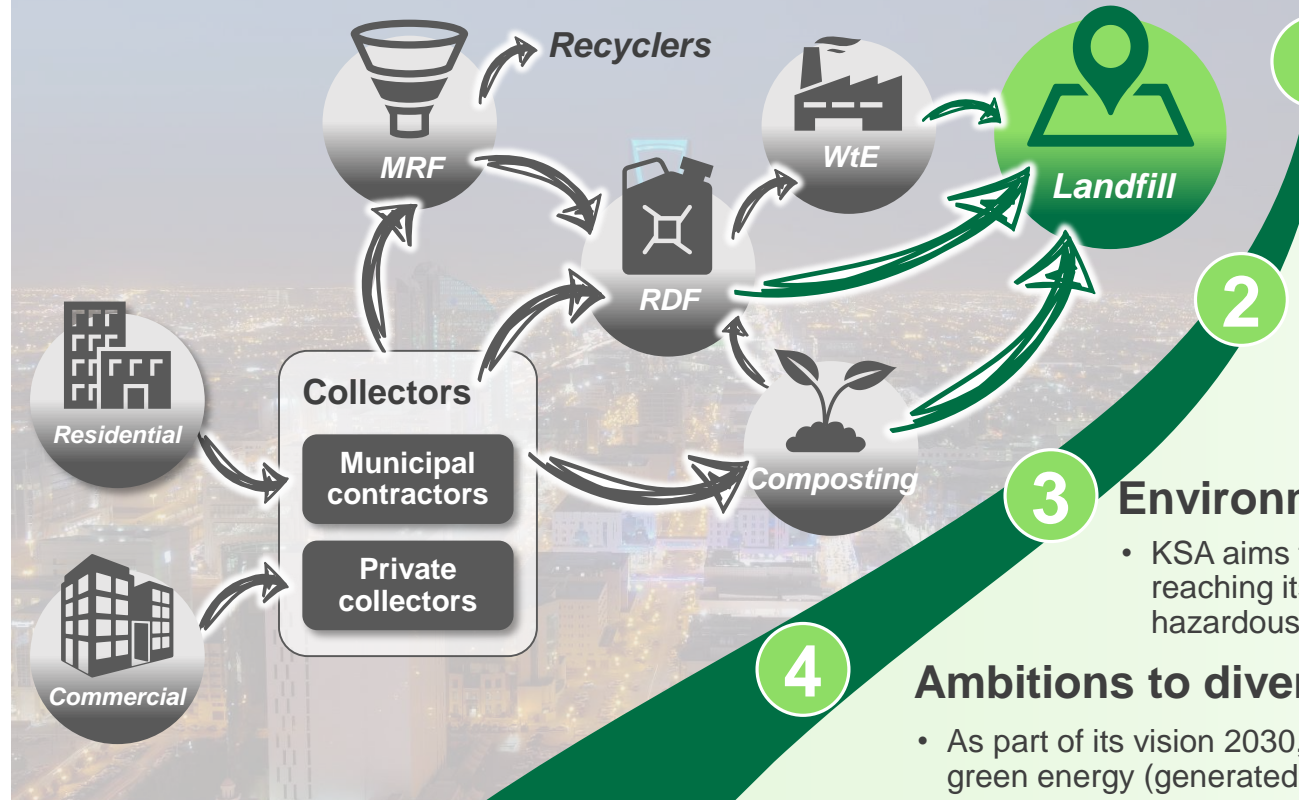
Riyadh, March 2022

# Engineered landfill – Overview & value proposition

## Opportunity overview

Develop and operate an **engineered landfill (total size of 5,000 sq km)** to dispose **municipal and hazardous waste** generated in the Kingdom

## KSA envisioned value chain



## KSA value proposition

### 1 Large and growing waste market

- With a population of around 35 million, the Kingdom now generates over 15 m tons/y of municipal solid waste
- ~33 m tons/y of hazardous waste are generated due to high industrialization in line with National Industrial Development program of the vision 2030

### 2 Government commitment to unlock the sector

- Testimony to the government's strong commitment to unlock the sector, the National Center for WM and the Saudi Investment Recycling Company have been established with mandate to support the transformation of the Kingdom's industry

### 3 Environmentally friendly landfilling objectives

- KSA aims to landfill waste generated in line with environment best practices before reaching its landfill diversion target of >94% of municipal solid waste and >85% of hazardous waste by 2035

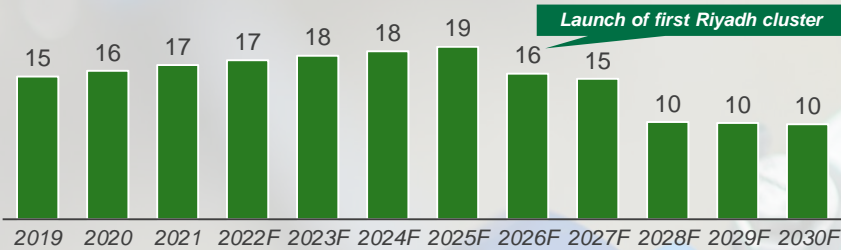
### 4 Ambitions to diversify energy mix

- As part of its vision 2030, the Kingdom has clear ambitions to diversify its energy mix, for which green energy (generated from methane collected from landfills) could be a viable contributor

# Engineered landfill – Market outlook

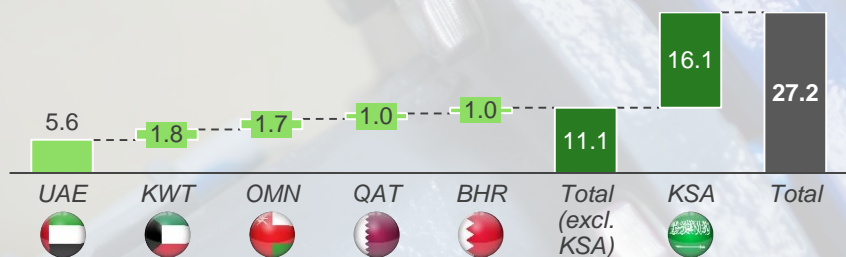
## Municipal Solid Waste volumes landfilled in KSA 2019-2030 [m tons]

~35 m tons of hazardous waste are also being landfilled every year in KSA



## GCC Municipal Solid Waste generated per country 2020 [m tons]

KSA generated ~60% of total MSW in GCC – it is also the largest HW generator in GCC with ~35 m ton/year<sup>1)</sup>



## Local market drivers

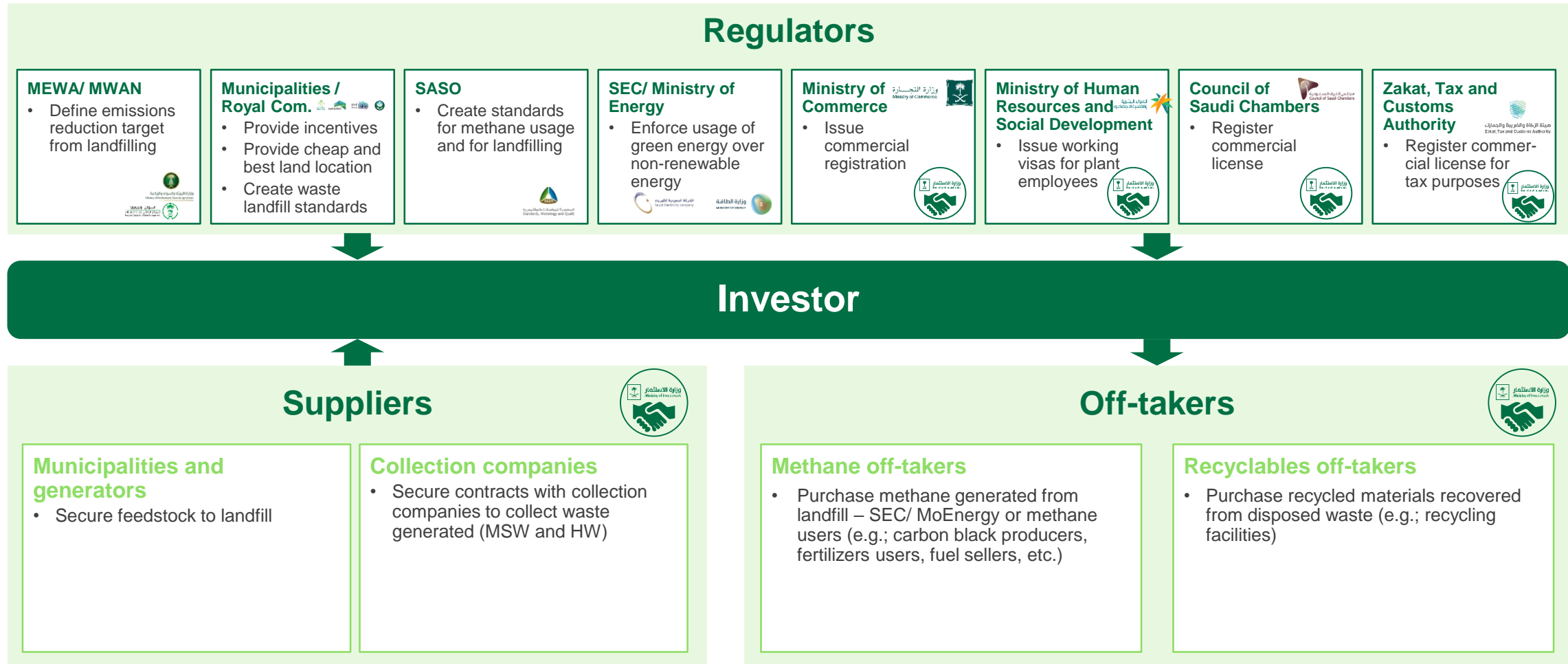
- 1 Growing population**  
Population of c.35 m with highest growth rate (2.5% p.a.) among G20
- 2 Urbanization & industrialization**  
One of the highest global urbanization indices (84% vs. 57% global avg.) and ranked 3<sup>rd</sup> highest industrial production index
- 3 Growing standard of living**  
One of the highest GDP/ Capita at USD c.24 k growing at a rate of ~2%
- 4 Tourism development**  
Fully opened for tourism to host millions of visitors incl. c.8 m pilgrims for Hajj & Omrah – 100+ m tourists expected to visit by 2030
- 5 Landfill diversion targets**  
Landfill diversion target of MSW by 2035 – Unavailability of treatment method for HW (need for HW landfill)

## Global market trends

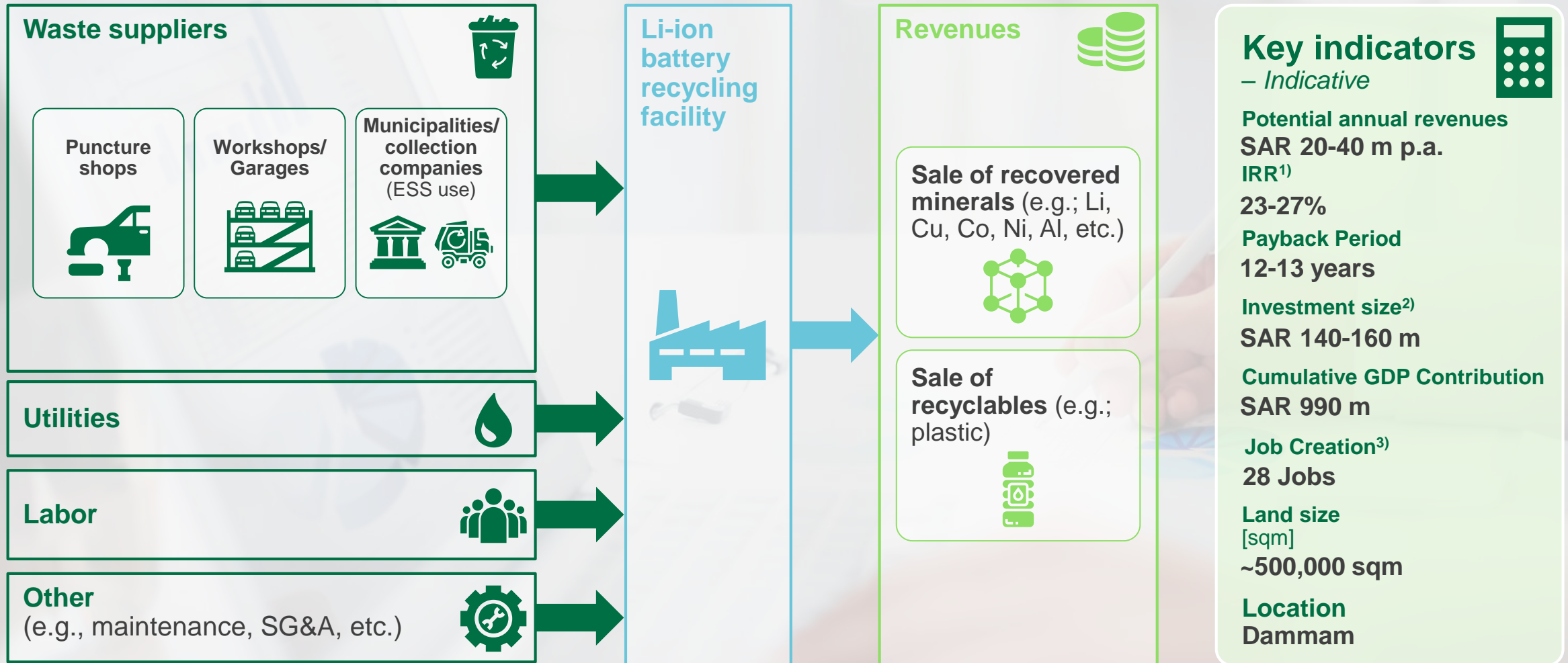
- 1 Mounting pressure to reduce landfilled volumes**  
There is a general and increasing pressure to reduce landfilling – landfill tax for hazardous and non-hazardous waste imposed in some countries
- 2 Biogas collection system integration**  
Integration of biogas collection and treatment systems into engineered landfill is getting more popular as more use-cases are being discovered for biogas and more specifically methane
- 3 Growing emissions reduction regulations**  
Increasing stringency on emissions from waste, forcing operators to deploy the right equipment to reduce landfill gas emissions – implying a reduction in carbon tax to be paid

# Engineered landfill – Stakeholder ecosystem

Illustrative logos – non-exhaustive



# Engineered landfill – Business model & financials



# Engineered landfill – Enablers & incentives

## Existing enablers & incentives

Financial	<b>Facility<sup>1)</sup></b> 	<ul style="list-style-type: none"> <li>• <b>Competitive land costs</b> relative to other countries (USD 0.3 per sqm)</li> <li>• Provision of <b>soft loans</b> through SIDF – up to 75% of project financing</li> </ul>	
	<b>Utilities</b> 	<ul style="list-style-type: none"> <li>• <b>Low power and water costs</b> set for industrial cities – Lowest in the region</li> </ul>	
	<b>Equipment</b> 	<ul style="list-style-type: none"> <li>• <b>Customs duty exemption</b> for machines used in production process and for spare parts not available locally</li> </ul>	
	<b>Labor</b> 	<ul style="list-style-type: none"> <li>• <b>Nationalization incentives</b> set; HRDF covers a share of the salary</li> <li>• <b>Facilitative procedures<sup>3)</sup></b> for foreigners with specialized skills</li> </ul>	
Non-financial	<b>Foreign businesses</b> 	<ul style="list-style-type: none"> <li>• Allows <b>foreign entities</b> and individuals to have 100% <b>ownership of properties in the kingdom</b> such as plants/ facilities, businesses, etc.</li> </ul>	
	<b>Feedstock and Offtake</b> 	<ul style="list-style-type: none"> <li>• Development of <b>appropriate technical and marketing studies</b> to increase exposure to <b>potential feedstock providers</b> and <b>off-takers</b></li> </ul>	

### Additional MISA support

- 
**Facilitate the registration process** of companies in KSA
- 
**Establish connection** with local market players
- 
**Introduce investor to relevant public stakeholders**


**Additional enablers and incentives can be discussed with MISA on case-by-case basis**

1) Includes land, facility construction costs and equipment; RCYJ in case the project in Jubail or Yanbu 2) Water and electricity costs; 3) Procedures could include work permits and salary coverage

# Engineered landfill– Cost of Doing Business



- 1 Electricity tariffs for industrial players**
  - USD 48/MWh
- 2 Productivity adjusted wages**
  - USD 3.3/hour
- 3 Logistics Performance Index (1-5)**
  - 3.2
- 4 Construction Costs (Indexed to US, % 0 is cheapest)**
  - 74
- 5 Ease of getting credit (0-100)**
  - 50

# Engineered landfill – Next steps

## Phase 1: Initiation

- Submit expression of interest concerning the opportunity to MISA.
- Discuss with MISA the opportunity and organize site visit
- Communicate with involved entities (off-takers, feedstock providers, partners, etc.)
- Conduct pre-feasibility study and due-diligence before final investment decision
- Secure enablers and incentives
- Secure MISA investment license



## Phase 2: Set up license requirements

- Secure commercial registration from Ministry of Commerce
- Secure working visas and labor working files from Ministry of Human Resources and Social Development & Ministry of Internal Affairs
  - Register at the Council of Saudi Chambers
  - Register at Saudi Banks
  - Register at Zakat, Tax, and Customs Authority.
  - Secure waste management license from MWAN.

## Execution steps

## Phase 4: Launch production

- Launch engineered landfill project, waste disposal and start gas and leachate collection
- Initiate sale of methane and recyclable materials



## Phase 3: Construct facility

- Launch engineered landfill project engineering procurement and construction (for biogas, leachate and sorting line)

## Recommended project type

Private investment

JV w/ local company

PPP

## Start your journey with MISA



[WasteManagement@misa.gov.sa](mailto:WasteManagement@misa.gov.sa)



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