

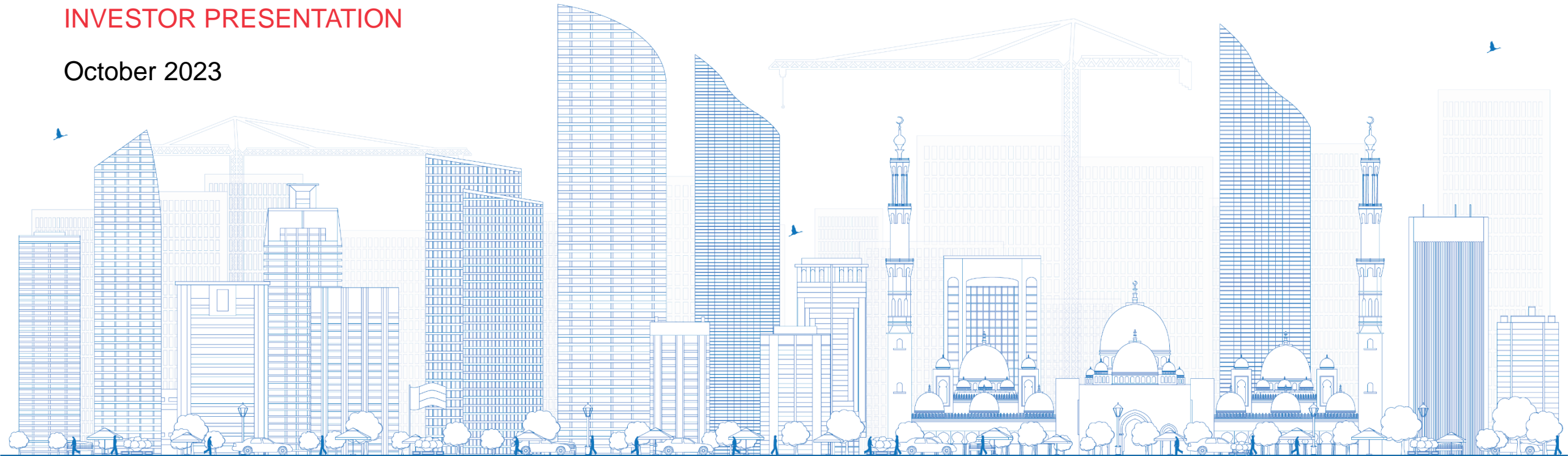


Investing in Abu Dhabi

Investment Teaser: HVAC Systems

INVESTOR PRESENTATION

October 2023



1-pager



Abu Dhabi Government Demand Localization: HVAC Systems Investment Opportunity

Local and regional import substitution potential



Program

- The **Abu Dhabi Government Demand Localization** program aims to **leverage the Government's purchasing power – \$37Bn by 2028** in scope for the program – to Localize high demand products and services and thus further develop the local business ecosystem.
- Access to Government demand** is designed to act as a **springboard for new investors** as they scale to capture local and regional demand.

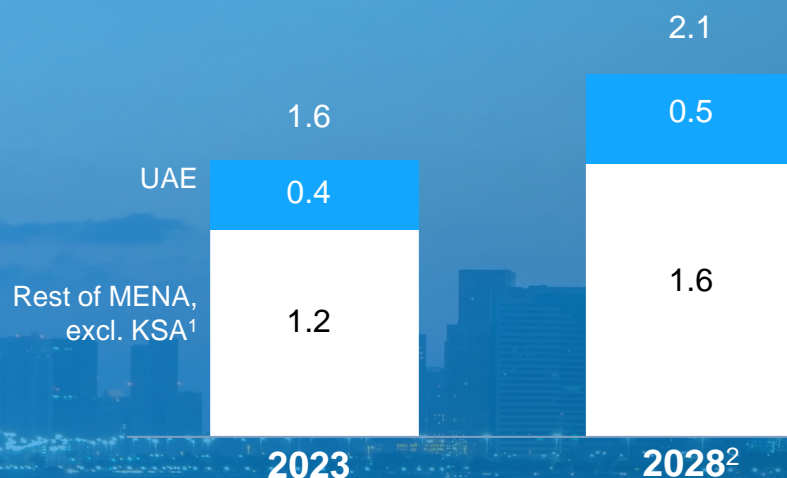


Investment Opportunity

- Establish a **medium-sized facility with parallel assembly and production lines** for a comprehensive HVAC (Heating, Ventilation, and Air Conditioning) product portfolio, focused on Air Conditioning
- Focus on **import substitution** of finished goods, with **additional potential upside** from aftermarket operations (*not accounted for in the calculations*)
- Opportunity to **serve the local UAE market**, as well as to **export to the broader GCC and MENA regions**, with the exception of Saudi Arabia

Target Addressable Market, USD Bn

Imports of assembled AC units for local consumption



Indicative Business Case:

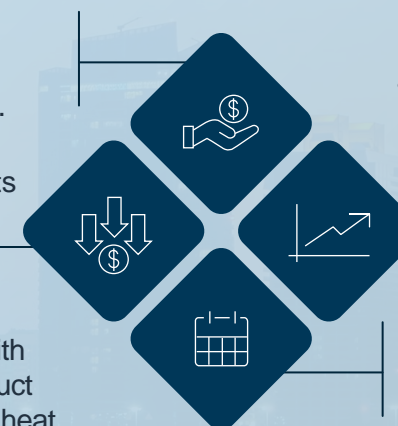
Greenfield Project for Medium-Sized HVAC Assembly and Manufacturing Plant

\$155Mn Revenue Potential

- Substitution of 12-15% of UAE imports of assembled units
- Substitution of 3-5% of regional (MENA, ex. KSA) imports of assembled units
- 50/50% implied split of local sales to exports

\$80Mn CAPEX (60% financed)

- Medium-sized facility (~40,000m²) with assembly capabilities across all product types and in-house manufacturing of heat exchangers



~15% IRR

with further upside potential

- Return on investor's equity contribution, assuming 60% of required CAPEX financed through local banks

7 years Payback

- Estimated time to recover the equity investment



Access to Gov't Demand

- Framework Agreements**
- Preferred Vendor List**

Key Government Buyers (c.a. USD 37Mn p.a.)

هيئة أبوظبي للإسكان
ABU DHABI HOUSING AUTHORITY



طائرة البلديات والنقل
DEPARTMENT OF MUNICIPALITIES
AND TRANSPORT



دائرة التعليم والمعرفة
DEPARTMENT OF EDUCATION
AND KNOWLEDGE



دائرة الثقافة والسياحة
DEPARTMENT OF CULTURE
AND TOURISM



دائرة الصحة
DEPARTMENT OF HEALTH



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Source: UN Comtrade, Abu Dhabi Customs, Abu Dhabi Department of Economic Development, Abu Dhabi Department of Government Enablement

3-pager



Abu Dhabi Government Demand Localization Program

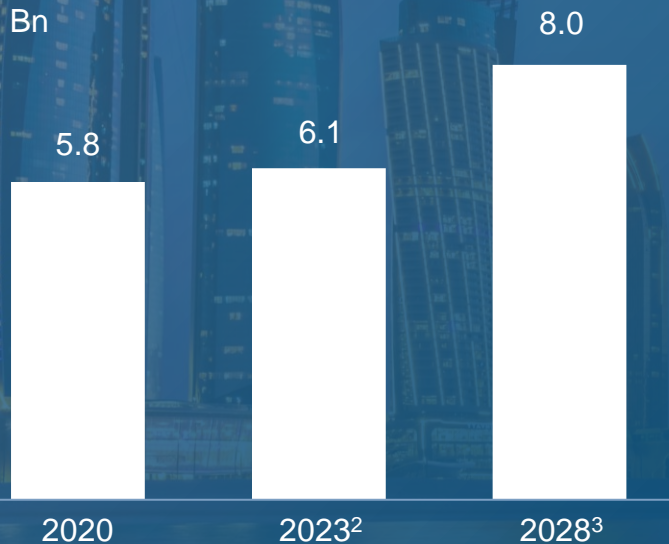
Investment opportunities backed by the Government's purchasing power

The **Abu Dhabi Government Demand Localization** program aims to **leverage the Government's purchasing power** to Localize high demand products and services. This contributes to Abu Dhabi's goals of **expanding non-oil contribution to GDP** and develop **world-class business and talent ecosystems**, while acting as an initial **springboard for investors' sustainable growth** in the UAE and in the region.

USD 37Bn+ in cumulative spend
in the next **5 years** by **Abu Dhabi
Government Entities...**

Evolution of Government Procurement Budget
In Scope for the Program¹,

USD Bn



...across key sectors...



Construction & adjacent industries



Infrastructure



Education



Digital and Technology



Sports



Transportation



...other strategic sectors

...unlocking new investment opportunities



Products (not exhaustive)



HVAC systems

Detailed Next



Lighting systems



Electrical equipment



Pumps



Elevators



Machinery



Furniture



Services (not exhaustive)



Architecture



Engineering



Development

1) Potential for further budget increase from scope expansion. 2) On track to reach or exceed budgeted procurement for 2023. 3) Estimated based on government strategy, project pipeline, and macro-economic forecasts.
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Opportunity Business Case: HVAC Systems

Local and regional import substitution potential

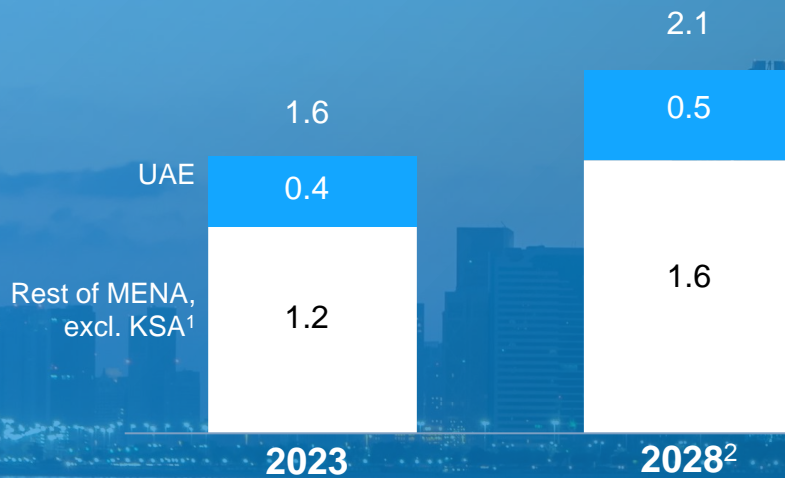


Investment Opportunity

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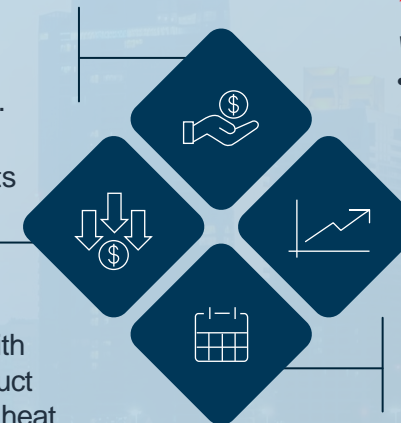
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Access to Government Procurement: HVAC Systems

Additional investor incentives

The **Abu Dhabi Government** is an **end buyer of HVAC systems**, mainly through its development projects of residential, cultural, and educational facilities.

In addition to the incentives offered to all Abu Dhabi investors, the Government can offer **additional incentives to HVAC investors**.

Preferred Vendor List

Inclusion on the preferred vendor list of the Abu Dhabi Government Entities, ensuring **HVAC investors** are **invited to all relevant tenders**.

Framework Agreements¹

Inclusion on an Abu Dhabi Government framework agreement giving HVAC investors **further access to streamlined government HVAC procurement**, with potential for preferred payment terms.

Key Government Buyers

هيئة أبوظبي للإسكان
ABU DHABI HOUSING AUTHORITY



دائرة الثقافة والسياحة
DEPARTMENT OF CULTURE
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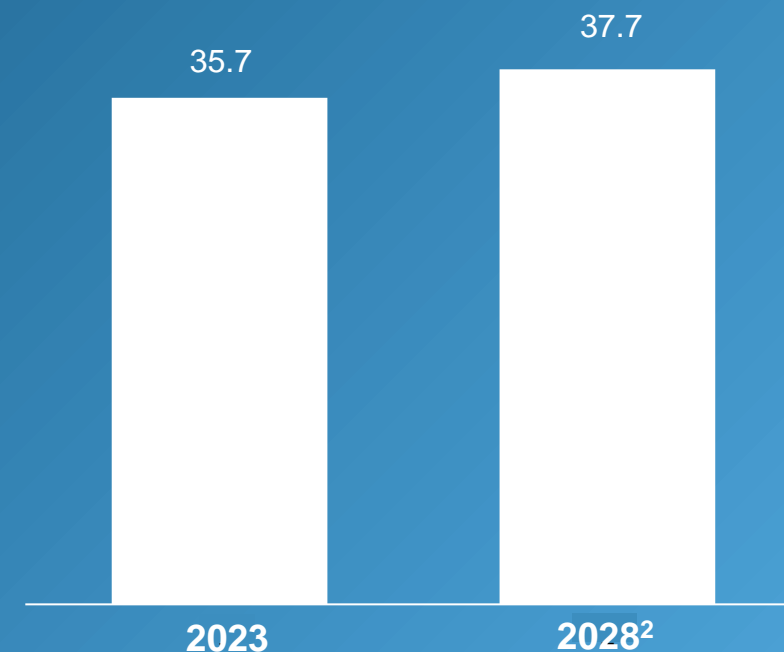


دائرة الصحة
DEPARTMENT OF HEALTH



USD 220Mn+ in cumulative indirect spend in the next **5 years** by **Abu Dhabi Government Entities**

Abu Dhabi Government Indirect Procurement, USD Mn



¹ The Department of Government Enablement (DGE) will lead the implementation of the framework agreement in coordination with the selected investor. DGE's mandate is to put in place government wide framework agreements with access to all government entities.

² Estimated figures, given Government spend is indirect; estimation based on cost breakdown of Tier-1 suppliers of directly procured services covering in-scope product in their value chain.

Source: Abu Dhabi Department of Government Enablement, Abu Dhabi Department of Finance, expert interviews

Extended deck



Executive Summary

1

Abu Dhabi 2030: Economic and Social Powerhouse

- **Economic powerhouse** accounting for half of UAE's GDP
- **World class** digital and physical **infrastructure**
- **Top investment destination** with an established business ecosystem and special investment zones

2

Abu Dhabi Government: Catalyst for Investor Success

- Comprehensive **business incentive schemes**
- **Government-driven investment programs** across strategic sectors
- **Significant government purchasing power**, with **USD 37Bn** in cumulative procurement budget by 2028

3

Investment Opportunity: HVAC¹ Systems

- Opportunity to **substitute local and regional imports** – a total addressable market of **USD 2.1Bn** by 2028 – through the assembly and production of **HVAC systems**
- **Access to government procurement** through Framework Agreements and Preferred Vendor Lists
- **Attractive business case**, with USD 155Mn+ in revenue potential and 15% expected IRR

1

Abu Dhabi at a Glance

GCC's economic and social powerhouse



Abu Dhabi's GDP is USD **299Bn¹**, >50% of UAE's GDP and **53% non-oil contribution**



No.1 in West Asia region by FDI, with USD 21Bn inflows in the UAE in 2021

AA

Abu Dhabi Government credit rating



No. 1 for ease of doing business in the Middle East and **10th globally**



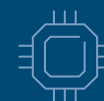
1,000+ global destinations connected to **Khalifa Port**



2nd fastest 5G connection in the world and **Smartest City** in MENA



Global hub - **80% of the world's population** within an eight-hour flight



World-class education - home to the **world's first AI university**



Consistently ranked as the **most livable city in MENA** and **safest city in the world**

Investment Outlook

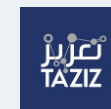
Attractive investment destination with streamlined procedures

The Abu Dhabi Advantage

- 100% foreign ownership of companies
- 94 tax agreements with foreign nations
- 9% corporate and income tax with low VAT rate of 5%
- Special economic zones with up to 100% profit repatriation
- No minimum requirement company setup
- Stable currency pegged to the US Dollar (USD 1 = AED 3.6725)
- UAE FDI inflow climbed to USD 21Bn in 2021
- Readily available capital for state-of-the-art technology
- Electricity generation capability and inexpensive energy
- Capital availability: equity/debt via local market – venture funds, banks, family offices, private equity funds, sovereign wealth funds (among the largest in the world)
- Attractive leasing of office and warehouse space in addition to competitive prices for land and utilities
- AA credit rating¹ for Abu Dhabi's Government, reflecting high GDP per capita and strong fiscal and external metrics

Investment Ecosystem Enablers *(not exhaustive)*

Investment Zones



Key Enabling Government Entities

دائرة التنمية الاقتصادية
DEPARTMENT OF ECONOMIC DEVELOPMENT

مكتب أبوظبي للاستثمار
ABU DHABI INVESTMENT OFFICE

دائرة التمكين الحكومي
DEPARTMENT OF GOVERNMENT ENABLMENT

مكتب تنمية الصناعة
Industrial Development Bureau

UNITED ARAB EMIRATES
MINISTRY OF INDUSTRY
& ADVANCED TECHNOLOGY

مجلس التوازن
TAWAZUN COUNCIL

استراتيجية
أبوظبي الصناعية
ABU DHABI
INDUSTRIAL
STRATEGY

HUB71



Key Enabling Semi-Government Entities *(Not exhaustive)*

MUBADALA

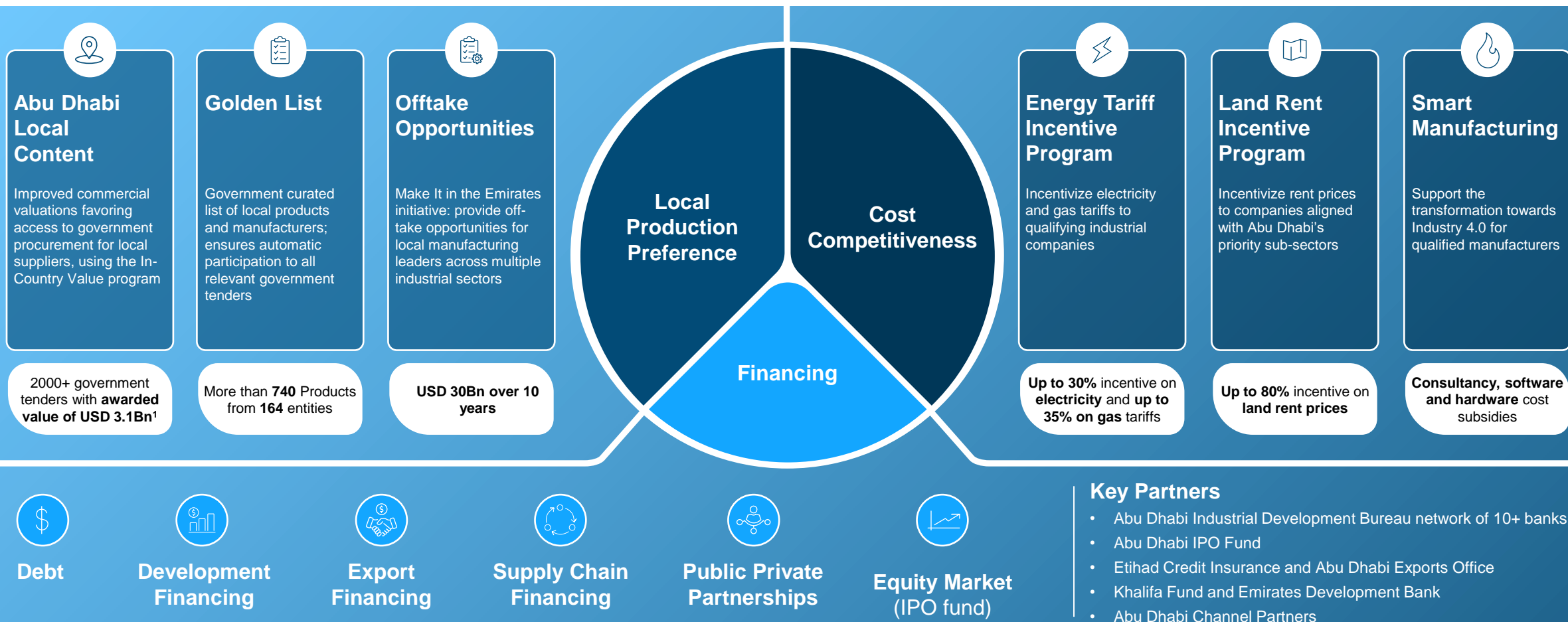


1) Fitch Ratings

Source: UAE Ministry of Economy, Abu Dhabi Department of Economic Development, Abu Dhabi Investment Office

Investor Incentives

Attractive business and regulatory environment



All services are accessible to investors through TAMM, Abu Dhabi's unified digital system for government services and information

1) 2021 statistics.

Source: Abu Dhabi Department of Economic Development, Abu Dhabi Investment Office, Abu Dhabi Department of Government Enablement

Government-Led Investment Programs

Unified effort to identify key investment opportunities in Abu Dhabi

The Abu Dhabi government is committed to identifying and providing attractive investment opportunities for local and international investors

دائرة التنمية الاقتصادية
DEPARTMENT OF ECONOMIC DEVELOPMENT



دائرة التمكين الحكومي
DEPARTMENT OF GOVERNMENT ENABLEMENT



Abu Dhabi Government Demand Localization

Services and end-product manufacturing in sectors with high government spend

- Construction & adjacent industries
(e.g., machinery, electrical equipment)
- Infrastructure
- Education
- Digital & Technology
- Transportation
- Sports
- ...other strategic sectors

Detailed Next

Abu Dhabi Channel Partners

End-product manufacturing in strategic industrial sectors

- Chemicals
- Food processing
- Machinery
- Pharmaceuticals
- Transportation
- Electrical equipment
- Electronics



Investment
Scope



Key Sectors

Abu Dhabi Government Demand Localization

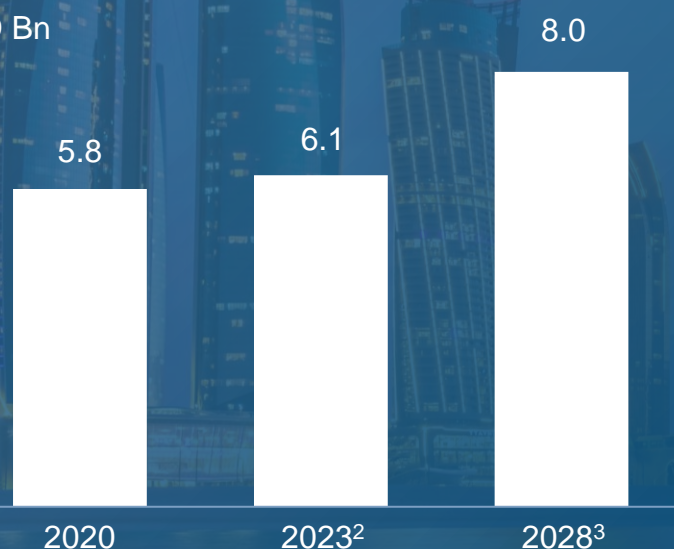
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USD Bn



...across key sectors...



Construction & adjacent industries



Infrastructure



Education



Digital and Technology



Sports



Transportation



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...unlocking new investment opportunities



Products (not exhaustive)



HVAC systems

Detailed Next



Lighting systems



Electrical equipment



Pumps



Elevators



Machinery



Furniture



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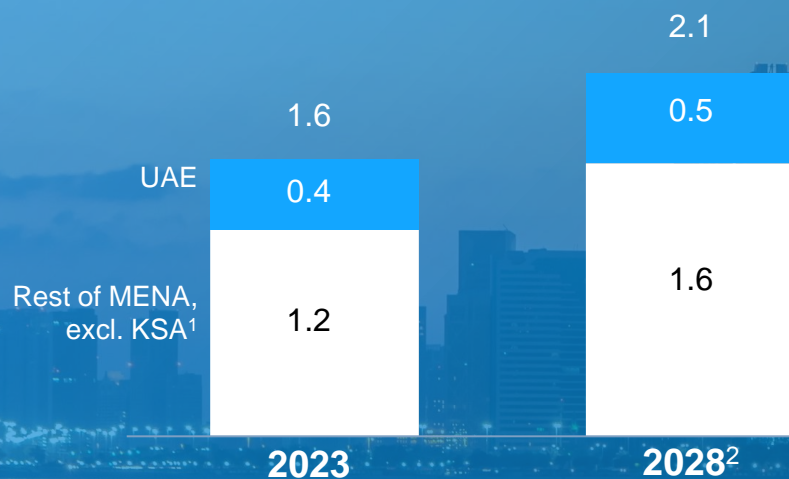


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Indicative Business Case:

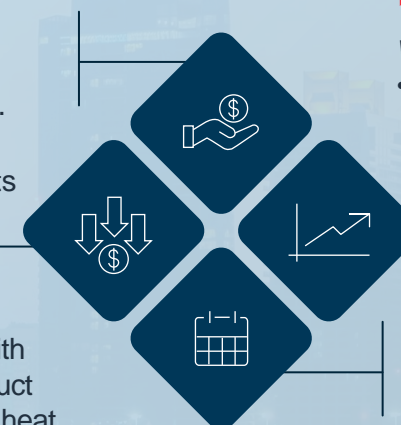
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3 Access to Government Procurement: HVAC Systems

Additional investor incentives

The **Abu Dhabi Government** is an **end buyer of HVAC systems**, mainly through its development projects of residential, cultural, and educational facilities.

In addition to the incentives offered to all Abu Dhabi investors, the Government can offer **additional incentives to HVAC investors**.

Preferred Vendor List

Inclusion on the preferred vendor list of the Abu Dhabi Government Entities, ensuring **HVAC investors** are **invited to all relevant tenders**.

Framework Agreements¹

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Key Government Buyers

هيئة أبوظبي للإسكان
ABU DHABI HOUSING AUTHORITY



دائرة الثقافة والسياحة
DEPARTMENT OF CULTURE
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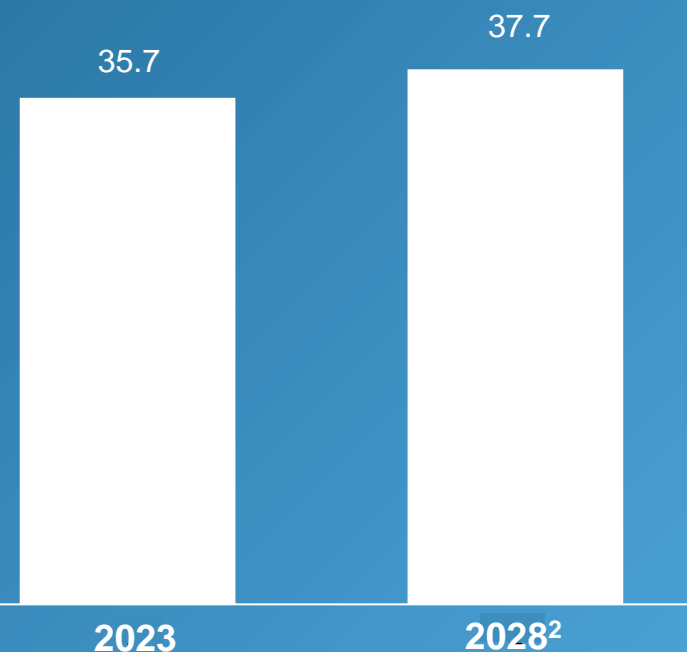


دائرة الصحة
DEPARTMENT OF HEALTH



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² Estimated figures, given Government spend is indirect; estimation based on cost breakdown of Tier-1 suppliers of directly procured services covering in-scope product in their value chain.

Source: Abu Dhabi Department of Government Enablement, Abu Dhabi Department of Finance, expert interviews

Take your first steps into Abu Dhabi



Next Steps

1. Review investment materials
2. Meet ADIO
3. Confirm interest (MoU)
4. Start feasibility analysis

Indicative Timeline

October 20th – October 27th

October 27th – November 3rd

November 3rd – November 10th

November 10th – November 17th



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InvestAbuDhabi



Abu Dhabi Investment Office

APPENDIX

HVAC Systems

Detailed Opportunity Card

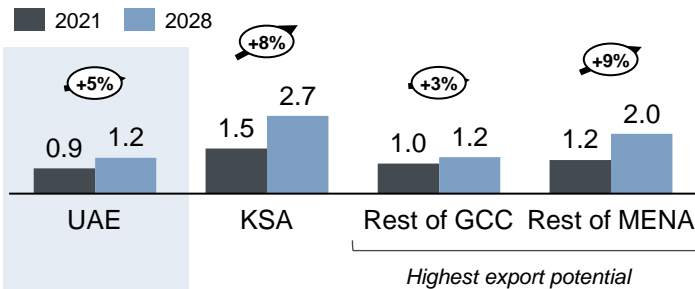


Executive Summary

Backward integration of HVAC systems, with standalone assembly or assembly and manufacturing of select components, with the objective to fill local and regional supply gaps through import substitution.

Market Insights

Imports for Local Consumption, Assembled Units and Parts, USD Bn



- Significant **local and regional supply gaps**, with **import substitution** potential across MENA expected to reach **USD 7Bn** by 2028; **USD +35Bn cumulative** in the next 5 years
- Demand from Abu Dhabi Government entities** is expected to reach **USD ~38Mn** by 2028; **USD 180Mn cumulative** in the next 5 years

UAE Overview

High Potential for Incremental Localization

Current Localization Levels, Assembly and Manufacturing



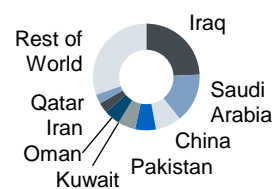
Available Local Players for Potential JVs

Assemblers / Manufacturers



Established Regional Logistics Hub

UAE HVAC Exports and Re-Exports by Country, 2021, %



- Global HVAC supply chains are well established, with production in low-cost hubs (Asia, Latin America) and service teams in buyer countries, including the UAE
- Local assemblers supply only ~15% of the market demand, mostly in small, lower complexity residential split systems (both indoor and outdoor units)
- Established local and regional developers prefer foreign suppliers given perceived quality, speed of delivery and project size requirements

Business Case

Focus of this opportunity

Base Scenario

R&D and Design

Manufacturing

Assembly

Services

- Heat exchangers
- Blower motors

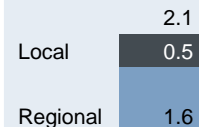
- Outdoor systems
- Indoor systems



Sample Case: Greenfield Project for Medium-Sized HVAC Assembly and Manufacturing Plant

High Potential: Imports of Assembled Units, 2028, USD Bn

Market capture:



\$155Mn
Revenue Potential

- Substitution of 12-15% of UAE imports of assembled units
- Substitution of 3-5% of regional (MENA, ex. KSA) imports of assembled units
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\$80Mn
CAPEX (60% financed)

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7 years
Payback

- Estimated time to recover the equity investment

Abu Dhabi Value Proposition

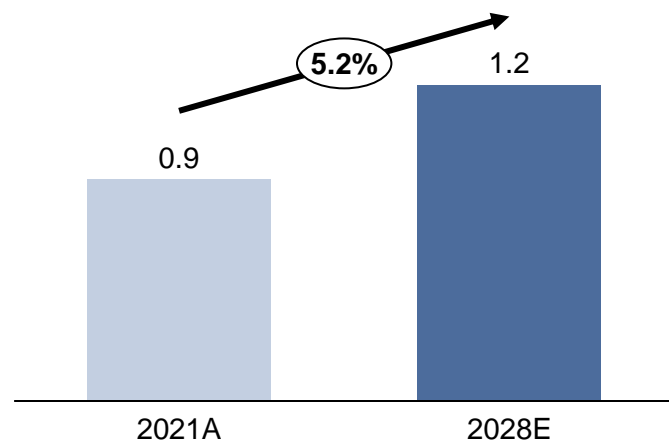
- Preferential treatment** for local production through Abu Dhabi Golden List and access to local and federal **indirect government procurement**
- Enhanced **cost competitiveness** through various **incentive schemes**, such as Energy Tariff, Land Rent, Smart Manufacturing programs
- Access to **low-cost financing for operations and trade** through the Abu Dhabi Industrial Development Bureau banks network, Abu Dhabi Exports Office, Emirates Development Bank, Khalifa Fund, among others
- Global and regional market access** through Economic Partnership Agreements and GAFTA agreements, supported by Abu Dhabi's **global logistics hub**

3

Abu Dhabi is uniquely positioned to ensure investor access to both local and regional markets, all with the full support of the Abu Dhabi Government ecosystem

Access to UAE Demand

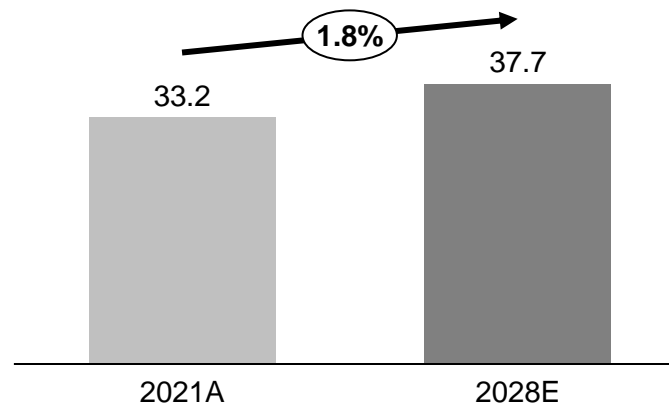
UAE HVAC Imports for Local Consumption, USD Bn



- Imports are estimated to account for ~85% of the local demand for HVAC systems in the UAE, leading to a significant import substitution opportunity
- The imports are roughly balanced between assembled units and parts
- Opportunity to establish JVs with local UAE players, such as SKM or Trosten

Access to Government Procurement

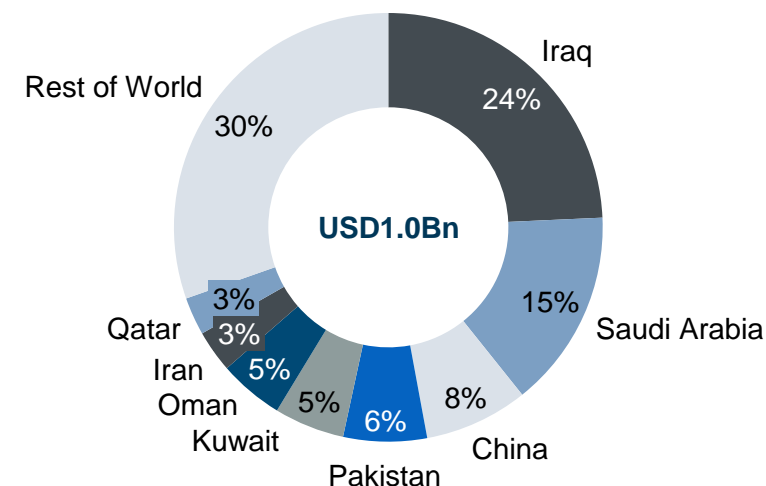
Abu Dhabi Government Indirect Procurement, USD Mn



- USD33Mn in annual spend from Abu Dhabi Government Entities, such as ADHA¹ and DCT²
- In addition to the Abu Dhabi-specific opportunity above, investors could leverage MoIAT³ Product Offtake Initiative at federal level to tap into the USD80Mn in cumulative procurement over 5 years dedicated to HVAC products from key semi-government buyers (e.g., Aldar, ADNOC)

Access to Regional Markets

UAE HVAC Exports and Re-Exports by Country, 2021, USD Bn



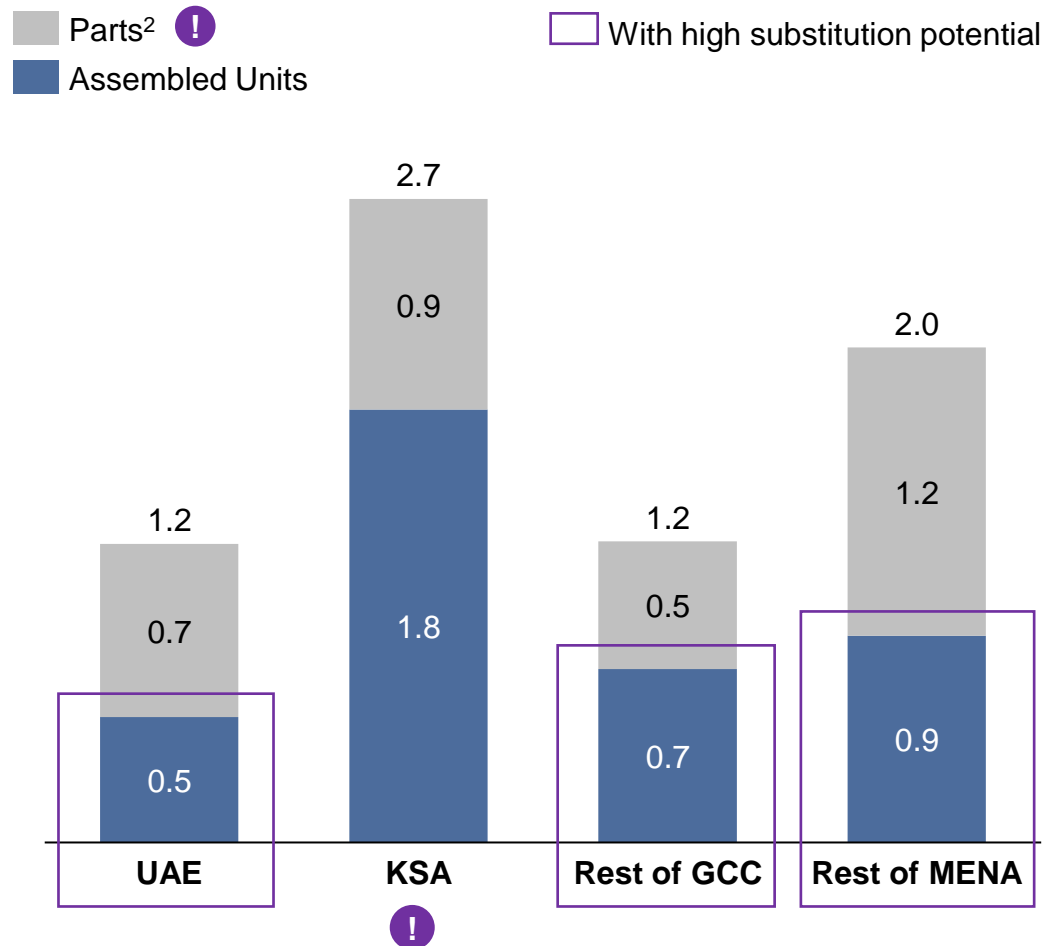
Opportunity to leverage UAE's and Abu Dhabi's regional status as a competitive advantage to substitute HVAC imports in MENA

- UAE and Abu Dhabi is a major logistics hub, with established supply chains into the GCC and MENA
- In addition, regional market access is supported by existing trade agreements (e.g., GAFTA)

3

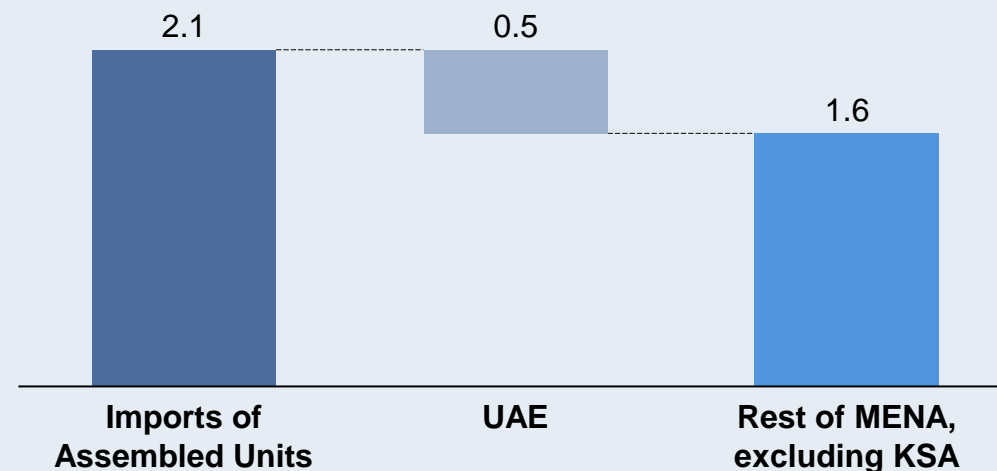
Local and regional segments with high substitution potential are expected to reach USD 2.1Bn by 2028

Estimated Total Imports¹ for Local Consumption, USD Bn, 2028



High Potential Segments: Imports of Assembled Units in Select Geographies, USD Bn, 2028

Imports of Assembled Units in UAE and MENA, but excluding KSA given high barriers to entry and competing localization efforts

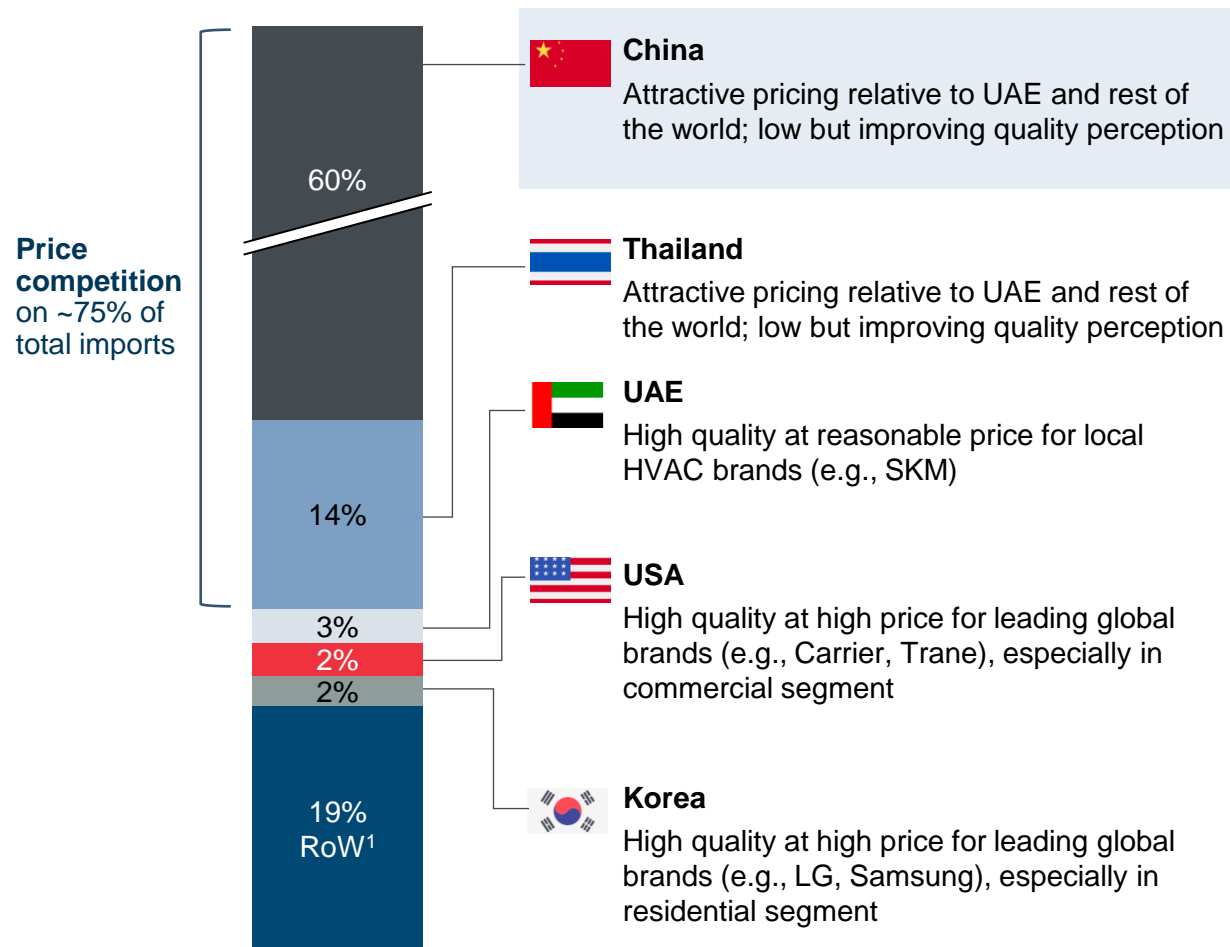


Exclusions:

- ! **Parts:** high barriers to entry in main estimated use case, severe price competition, high volume requirements for profitability, and technological requirements for select components.
- ! **KSA Market:** demand difficult to capture given country's own localization agenda and trade barriers in place
Note: KSA localization focus is mainly on internal demand

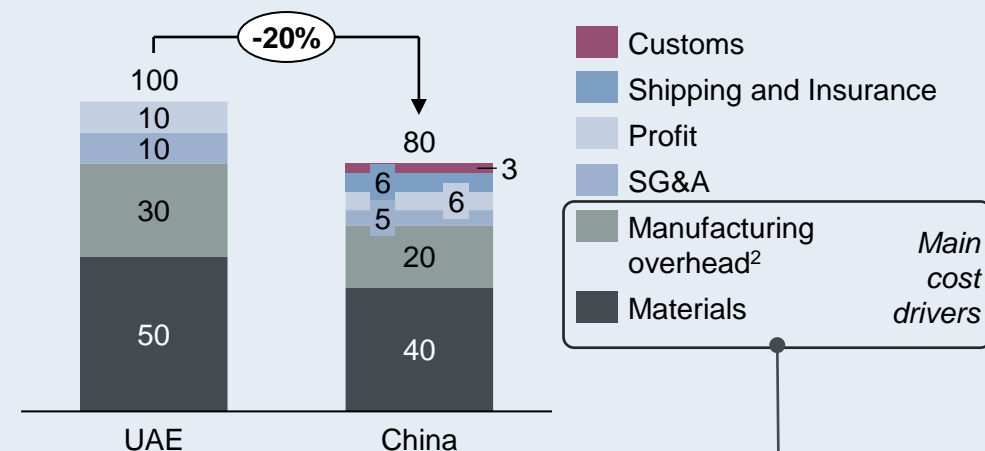
Successful import substitution will require narrowing the price gap with lower cost suppliers, achievable through Abu Dhabi government support and economies of scale

MENA Imports of Assembled Units by Source Country, 2021, AED Bn



Example: Estimated Cost Comparison of HVAC Unit
UAE production vs. Import from China

The cost of a shipped HVAC unit from China is ~15-20% lower than one currently assembled locally

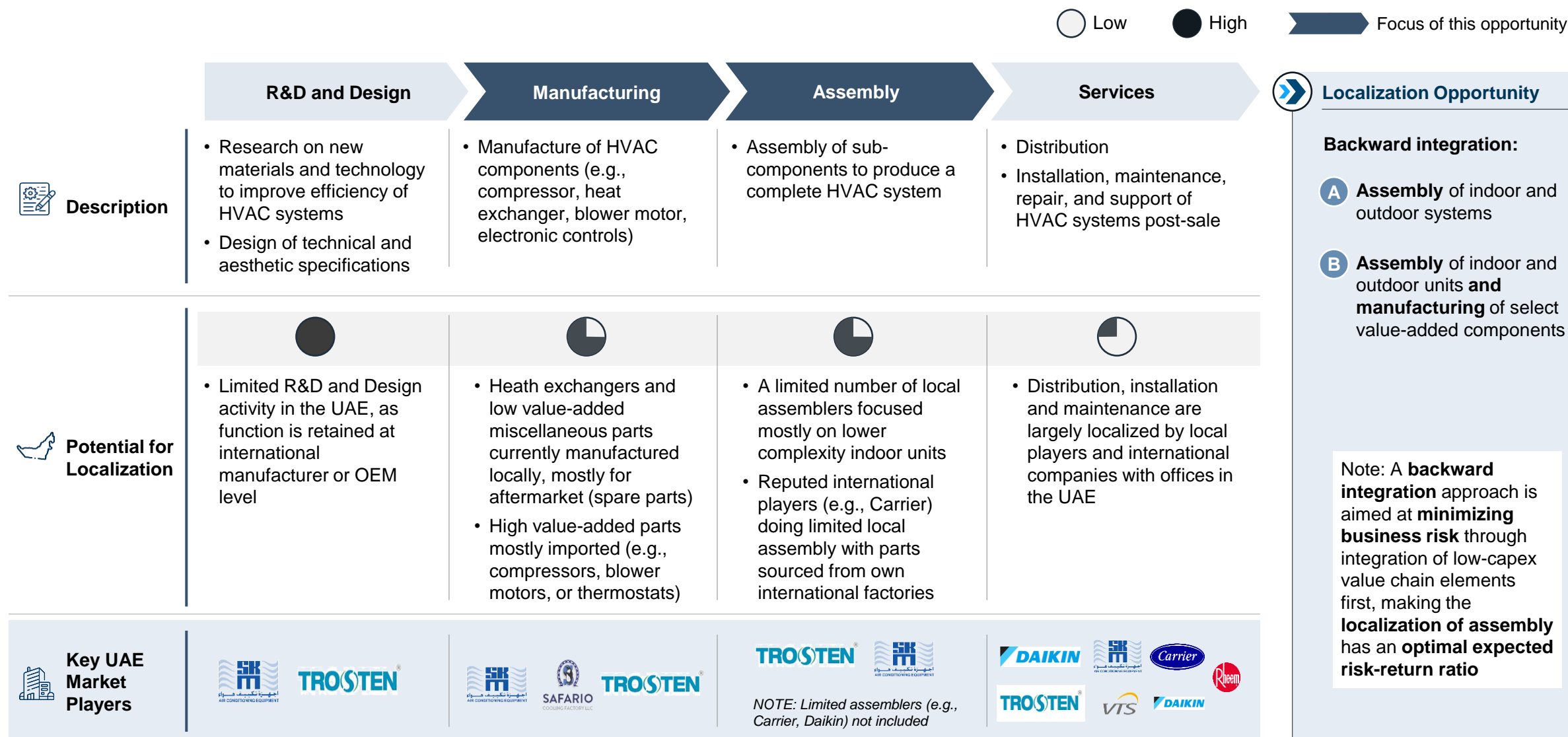


Potential Cost Offsetting Levers

- Manufacturing overhead:** Abu Dhabi government incentive schemes, such as (i) the Energy Tariff Incentive Program (energy and gas offsets of 30% and 35%), (ii) Land Rent Incentive Program (up to 80% offset of land rent costs) or (iii) Smart Manufacturing Program, among others
- Materials:** levers such as (i) duty exemptions for raw materials, and (ii) economies of scale, made possible by local manufacturers' enhanced regional market access

3

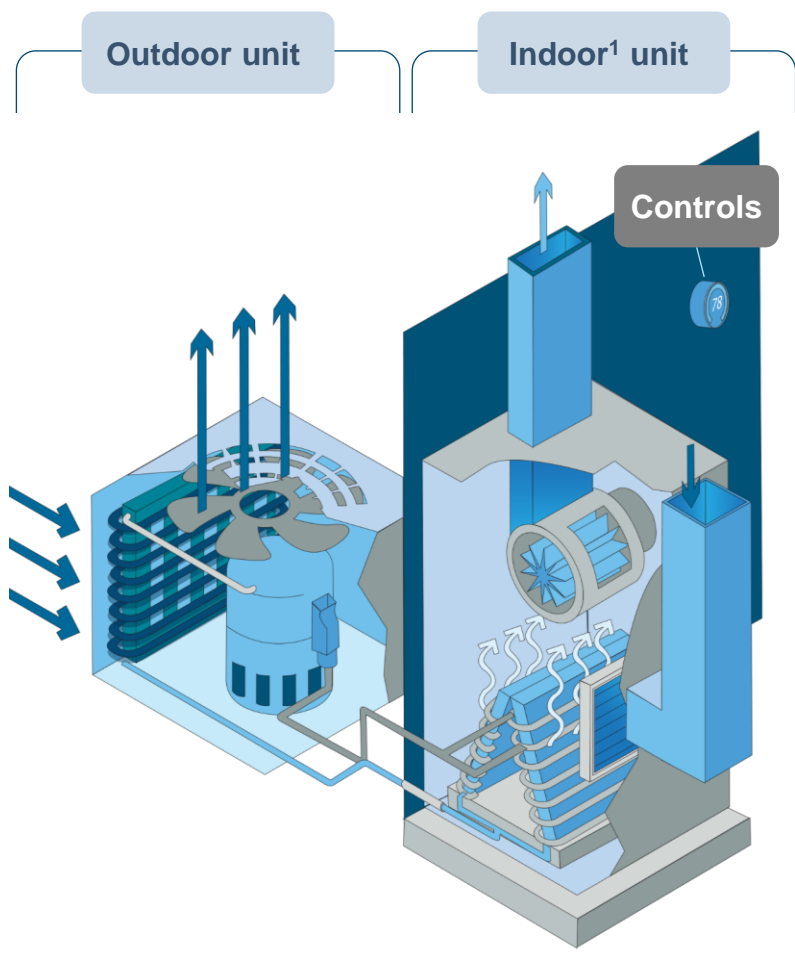
The opportunity focuses on backward integration of HVAC systems: standalone assembly or combined with manufacturing of select components



The localization opportunity spans outdoor and indoor systems, including controls

Key Elements

Representative scheme; may vary across HVAC system types



%

Share of complete HVAC system cost

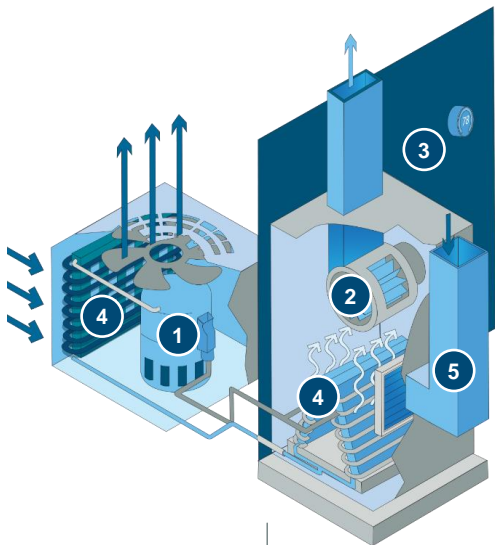
	Outdoor unit	Indoor ¹ unit	Controls
Description	65-70% Dissipates heat and cools refrigerant	20-25% Circulates the air in and out of interior spaces	~10% Regulates flow of air to achieve target settings (temperature and/or humidity)
End products	<ul style="list-style-type: none"> Chiller systems Direct expansion systems Variable refrigerant flow systems 	<ul style="list-style-type: none"> Fan coil units Air handling units 	<ul style="list-style-type: none"> Thermostats (can include humidistats and astats)
Key buying criteria	<ul style="list-style-type: none"> Building area and height (i.e., required tonnage) 	<ul style="list-style-type: none"> Type of room Aesthetics 	<ul style="list-style-type: none"> User interface “Smart” component

Note: 1) Combined with outdoor in some HVAC system types (e.g., Packaged HVAC)
 Source: Expert interviews, PwC analysis, desktop research

Assemblers can source locally up to 40% of a complete HVAC system, with further localization potential of blower motors

Overview

Representative scheme; may vary across HVAC system types



- Chiller systems
- Direct expansion systems
- Variable refrigerant flow systems
- Fan coil units
- Air handling units

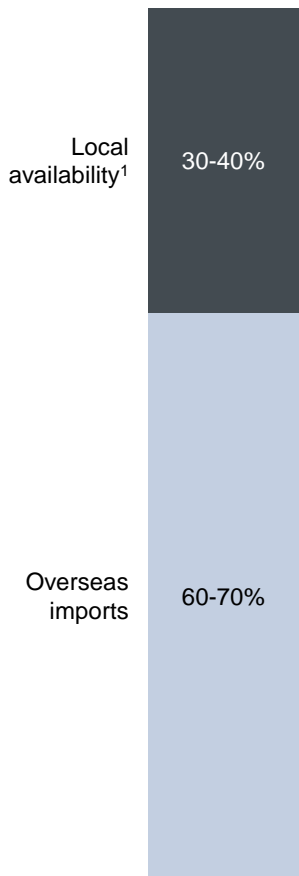
End Products

Value chain breakdown by key components

Components	Function	% Value of Assembled Unit	Potential Sourcing
1 Compressors / Chillers	Compresses refrigerant / moves water to chill air	35-45%	<ul style="list-style-type: none"> Imported as a whole from countries with established foundries, given it requires iron casting Overseas Imports
2 Blower Motor	Disperses air	15-20%	<ul style="list-style-type: none"> Imported mainly from specialized motor manufacturers Low production complexity, but high volume requirement to operate profitably Overseas Imports
3 Controls (Thermostats)	Controls temperature and air flow intensity	<10%	<ul style="list-style-type: none"> Imported from specialized controls manufacturers Not produced by traditional HVAC manufacturers Overseas Imports
4 Heat exchanger (condenser, evaporator)	Transfers heat between cooling liquid and air	15-20%	<ul style="list-style-type: none"> Established HVAC systems players typically manufacture this component in-house Produced locally in the UAE by coil manufacturers, mainly for aftermarket spare parts Local availability
5 Ducts / Terminal	Distributes heated or cooled air	<10%	<ul style="list-style-type: none"> Produced locally in the UAE by general engineering companies or pipe manufacturers; readily available for assembly Local availability
Other (e.g., tubing, casing, wires)		<10%	<ul style="list-style-type: none"> Produced locally in the UAE by general engineering companies; readily available for assembly Local availability

Potential for in-house production (detailed next)






Value chain breakdown by sourcing, %



3

In addition to assembly, in-house manufacturing of blower motors and heat exchangers should be considered

Ease-of-Localization: ● High ● Low ✓ Available in the UAE

Component	Production Complexity	Supply Chain Complexity	Main Raw Materials	Global Manufacturers and OEMs
 <p>Blower motors</p>	<p>●</p> <ul style="list-style-type: none"> Low production complexity Uses automated assembly lines and simple machining processes 	<p>●</p> <ul style="list-style-type: none"> Low supply chain complexity Raw materials available locally (can be provided by EGA and Emirates Steel). Plastics and Silicon Steel can be easily imported from China 	<ul style="list-style-type: none"> ✓ Copper wires ✓ Steel/ Aluminium ✓ Silicon Steel ✓ Plastics 	  
 <p>Heat exchanger (condenser, evaporator)</p>	<p>●</p> <ul style="list-style-type: none"> Low complexity in production and assembly Uses automated or semi-automated processes in both manufacturing and assembly 	<p>●</p> <ul style="list-style-type: none"> Low supply chain complexity Raw materials supplied locally (e.g., Emirates Global Aluminium; Emirates Float Glass) 	<ul style="list-style-type: none"> ✓ Aluminium ✓ Stainless steel ✓ Copper ✓ Fiberglass (For insulation) 	<p>-</p> <p><i>Typically localized production given coil fragility at transportation</i></p>
<p>INCLUDED IN BASE SCENARIO</p> <p>Established HVAC players are expected to manufacture heat exchangers in-house to support the required scale for this opportunity and meeting buyer expectations</p>				

Business Case

Sample Case: Greenfield Project for Medium-Sized HVAC Assembly and Manufacturing Plant

Overview

- Establish a **medium-sized facility with parallel assembly and production lines** for a comprehensive HVAC product portfolio
 - Covers all key types of indoor and outdoor units
 - Serves all customer segments (commercial/industrial and residential)
- Opportunity to **serve the local UAE market, as well as to export to the broader GCC and MENA regions**, with the exception of Saudi Arabia

Business Case Triangulation

Expert input

- Market capture potential
- CAPEX requirements for (i) property, (ii) assembly line, (iii) manufacturing line
- Margins and IRR sanity checking

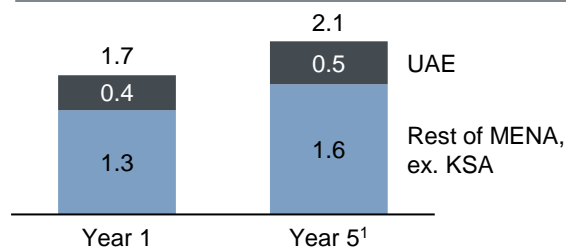
Public comparables

- Companies:** Carrier, Trane, Midea, Daikin
- Benchmarks:** EBITDA margin, EBIT margin, FCF conversion, Asset Turnover assumptions

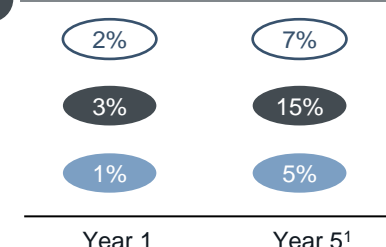
Business Cases

Market Capture

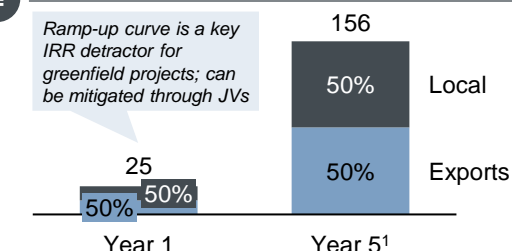
High Potential Segments: Assembled Units Imports for Local Consumption, USD Bn



Share Capture Ramp-up, %



Expected Revenues, USD Mn



Operations

Production Overview

Considerations

Investment Case

CAPEX Requirement

Expected IRR

Payback Period

IRR Upside Potential

Base Scenario: Limited Manufacturing

- Assembly and quality control lines
- In-house manufacturing of heat exchangers (~20% of the value chain)

- + Lower upfront costs (and business risk)
- + More price-efficient
- Higher supply chain risk
- Worse commercial positioning for large buyers

Key Assumptions

- Facility size of ~40,000 m² (~\$30Mn)
- Assembly and manufacturing (~\$50Mn)
- 60% financing of required CAPEX (can go up to 80% with government support)
- EBITDA: ~15%
- Free-Cash-Flow conversion: ~50%
- Assumes FCF ramp-up to stabilization in year
- Assumes equipment cost of replacement as TV

\$75-80Mn

~15%

~7 years

Alternative Scenario: Comprehensive Manufacturing

- Assembly and quality control lines
- In-house manufacturing of heat exchangers (~20% of the value chain)
- Manufacturing of blower motors (~15% of value chain)

- + Better control of supply chain
- + Better commercial positioning with large buyers
- Higher upfront risk
- More expensive to produce high-value add parts inhouse

Key Assumptions

- Facility size of ~50,000 m² (~\$35Mn)
- Assembly and manufacturing (~\$75Mn)
- 60% financing of required CAPEX (can go up to 80% with government support)
- EBITDA: ~14% (in-house production of blower motors more expensive than imports)
- Free-Cash-Flow conversion: ~50%
- Assumes FCF ramp-up to stabilization in year
- Assumes equipment cost of replacement as TV

\$105-110Mn

~11%

~9 years

- Brownfield / synergistic project (e.g., JV with local supplier; capacity expansion)
- Increasing financing up to 80% (with government support)
- Faster market capture
- Additional revenue from services / aftersales

Thank you

