العالية السوالية SUEZ CANAL ECONOMIC ZONE

INTEGRATED ROUTE ONE DESTINATION INTEGRATED ROUTE ONE DESTINATION INTEGRATED ROUTE & ONE DESTINATION



SOLAR PV

SUZ "49'42"29N "17'18"32E

SCZONE.EG

### EXECUTIVE SUMMARY

#### SOLAR PV AS YOUR INVESTMENT OPPORTUNITY

- Solar PV is forecasted to lead the renewable energy growth with a rate of 8% annually, as it becomes the lowest-cost option for renewable electricity generation
- With Egypt having one of the largest operating solar capacity, as well as - 3000 kWh/M2 of direct solar radiation annually, Solar PV sees a huge potential to satisfy local market needs
- Aligned with Egypt's Vision, Solar PV Manufacturing is an integral part of SCZONE'S planned green fuel production hub, serving both the local and global markets

#### EGYPT AS YOUR LONG-TERM BUSINESS PARTNER

- Strong GDP growth outpacing global markets with an average growth forecast of 5.5% (2022-2025)
- EGP2 3tn invested into infrastructural developments over the past 7 years
- A trade and investment hub that is supported by the country's large domestic market, strategic geographic location, and large and educated talent pool
- The country boasts some of the most competitive labor & electricity prices amongst its peers, alongside various free trade agreements that facilitate profitable production & exports

### SCZONE AS YOUR UNIQUE INVESTMENT DESTINATION

2022

- Well-connected to the modern. road network of Egypt and enjoys direct connection to the new Suezcanal tunnels
- Offers direct financial incentives such as a 0% customs tax, a 0% VAT tax, and an export support program among other indirect incentives
- Enjoys a special customs regime and trade regulations on top of being a one-stop shop for registrations, permits, licenses, and bureaucratic processes in general

SC°ZINE' SOLAR PV

ONE DESTINATION

INTEGRATED ROUTE

ONE DESTINATION

INTEGRATED ROUTE

2022

ONE DESTINATION

001
CHAPTER ONE
WHY INVEST
IN SOLAR PV



INTEGRATED ROUTE 22

Egypt is considered a "sunbelt" country with 2,000 to 3,000 kWh/m² of direct solar radiation annually.

Solar PV Manufacturing Sees a Huge Potential to Satisfy Market Needs.





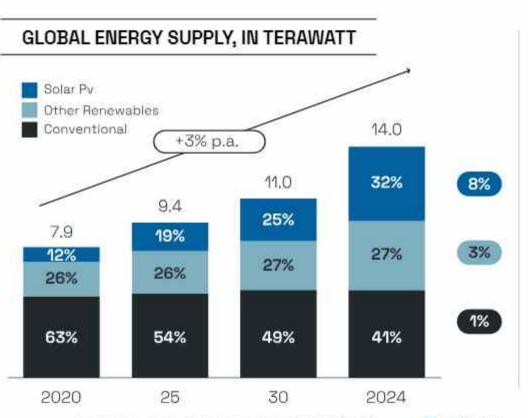
UNIQUE LOCATION

HIGHEST QUALITY STANDARDS

■ RESILIENT ECONOMIC GROWTH

SC°ZINE'

# RENEWABLE ENERGY IS EXPECTED TO GROW AT A LARGE SCALE WITH SOLAR ENERGY LEADING THE WAY

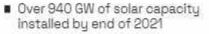


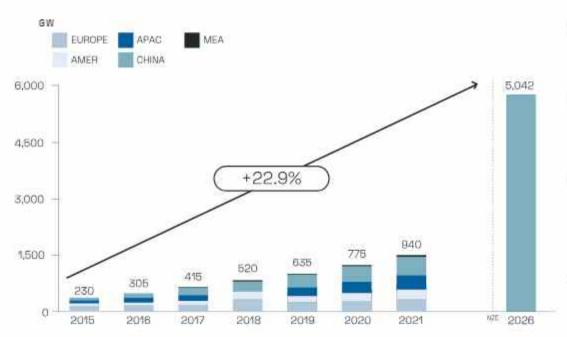
- Global solar PV industry is forecasted to grow at 8% annually; a much higher rate than other renewables
- Solar energy will account for ~32% market share by 2040 compared to 12% today

# 100

# GROWING GLOBAL DEMAND IS REFLECTED IN THE GROWTH OF SOLAR PV CAPACITY

### TOTAL SOLAR PV INSTALLED CAPACITY



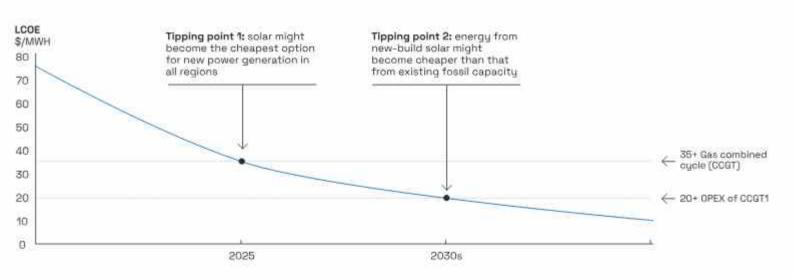


- 2nd largest absolute generation growth of all renewable technologies
- Solar PV is becoming the lowest-cost option for new electricity generation in most of the world
- However, average annual generation growth of 25% in the period 2022-2030 is needed to follow the Net Zero Emissions by 2050 Scenario
- This corresponds to more than a threefold increase in annual capacity deployment until 2030

2022



### TIPPING POINTS MAY LEAD TO SIGNIFICANT INCREASE IN SOLAR PV ADOPTION



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SOLAR PV



2022

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# COSTS OF MANUFACTURING SOLAR PVS ARE DECLINING DUE TO TECHNOLOGICAL IMPROVEMENTS ACROSS THE VALUE CHAIN, INCREASING THE GLOBAL GROWTH POTENTIAL [1/2]

## SOLAR UPSTREAM VALUE CHAIN

Initial ramp-up, but still veru low volume

Standard solution

Technology evolution will lead to future cost reductions

Crucial to understand and anticipate developments

	RELEVANT TECH TRENDS	CURRENT STATE	COMM. READINESS	LCOE RED. POTENTIAL
PRODUCTION	<ul> <li>Shift from relying on std. equipment of ex-ternal vendors towards customized tools, or even captive production equipment</li> </ul>	Business model shifts in evaluation		Medium
EQUIPMENT	<ul> <li>Continuation of productivity &amp; quality enhancement (e.g., throughput, yield)</li> </ul>	Ongoing	n/a	Medium
WAFER LEVEL	<ul> <li>Shift to larger wafer sizes to lower cost (requires new production equipment)</li> </ul>	Ramping at very selective OEMs		Medium
	■ Wafer thickness & Kerf loss reduction	Ongoing	n/a	Low
	■ Commercialization of Cz n-type	Ramping at very selective OEMs		Low
GELL LEVEL	<ul> <li>Cells with n-type base material including bifacial functionality</li> </ul>	Commercially available		Medium
	PERC (rear-side passivation) for p-type	Commercially Available		Medium
	<ul> <li>Continuation of cell eff. increases by process improvements (metallization, doping, texturing) &amp; cell concepts (TopCon)</li> </ul>	Ongoing		Low to Medium

Source: Mckinseg

INTEGRATED ROUTE W ONE DESTINATION

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SC°ZINE' SOLAR PV



2022

Hotel man, Francisco 2005

# COSTS OF MANUFACTURING SOLAR PVS ARE DECLINING DUE TO TECHNOLOGICAL IMPROVEMENTS ACROSS THE VALUE CHAIN, INCREASING THE GLOBAL GROWTH POTENTIAL (2/2)

# SOLAR UPSTREAM VALUE CHAIN

Initial ramp-up, but still very low volume

Standard solution

Technology
evolution will
lead to future
cost reductions
Crucial to
understand

and anticipate developments

1		RELEVANT TECH TRENDS	CURRENT STATE	COMM. READINESS	LCOE RED.
	SOLARCELL LEVEL	<ul> <li>Tandem cell structures based on silicon base with perovskite layer increases cell efficiency up to 28%</li> </ul>	Lab-Scale	Unclear	Medium to High
		<ul> <li>Bifacial modules capturing indirect sunlight through albedo effect</li> </ul>	Commercially Available		Medium to High
	MODULE LEVEL	<ul> <li>High watt class products (&gt; 500/600W) reducing cost of handling &amp; sub-structure</li> </ul>	Ramping at selective OEMs		Medium to High
		Module aesthetics becoming more important	Commercially Available		Zero
		<ul> <li>Product diversification (e.g., flex, color, embedded electronics, form factor)</li> </ul>	Commercially Available		Zero
	SYSTEM LEVEL	■ Pre-fabrication of modules – e.g., CEP mobile tracker solutions	Commercially Available		Low
		Simplified ground-mounting systems – e.g., PEG east/west system	Commercially Available		Low
		Digital planning & engineering process to increase efficiency	Increasing deployment		Medium

Source: Mckinsey

INTEGRATED ROUTE W ONE DESTINATION

2022

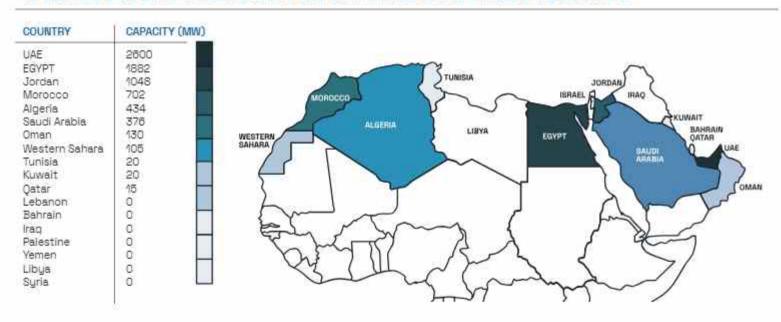
# AVERAGE AUCTION PRICES FOR SOLAR PV ARE DECLINING, WITH MENA BEING ONE OF THE MOST COST-EFFICIENT REGIONS



- Recent bid prices for Solar PV technologies for projects to be commissioned by 2023 range from \$20/MWh to \$50/MWh, corresponding to a 45-50% reduction in contract prices since 2017
- Trends in regional average auction prices differ based on tender designs, funding mechanisms, and government policies on auctions
- The average auction prices in the Middle East have fallen below global averages, particularly due to Solar PV projects in the UAE
- All in all, falling auction prices are expected to increase solar PV investments, leading to increasing demand for solar panel installations

# EGYPT'S OPERATING SOLAR CAPACITY IS ONE OF THE LARGEST IN THE MENA REGION

### OPERATING UTILITY SCALE SOLAR CAPACITY IN ARAB SPEAKING COUNTRIES



Increasing domestic solar energy capacity indicates growing demand, showing large potential for offtake of solar PV manufacturing

# EGYPT'S OPERATING SOLAR CAPACITY IS ONE OF THE LARGEST IN THE MENA REGION

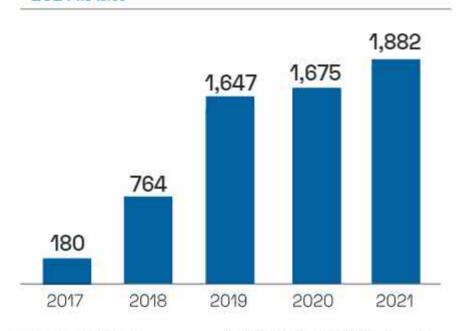
1,882

OPERATING SOLAR CAPACITY

2nd

LARGEST OPERATING SOLAR CAPACITY IN THE MENA REGION

# TOTAL SOLAR ENERGY CAPACITY IN EGYPT, -2017



# EGYPT'S VISION TO BECOME A GLOBAL ENERGY LEADER BY 2030 SIGNALS HUGE POTENTIAL FOR SOLAR PV MANUFACTURING

2022

SOLAR ENERGY IS INCENTIVIZED BY THE GOVERNMENT'S VISION...

Up to 53%

Of Egypt's electricity could be generated from renewable sources by 2030 22%

Solar PV is set to be reached in the fuel mix for electricity production by 2035

# Egypt's Solar Plan

Targets to Install 3500 MW of solar power plants by 2027

# ... AND SUPPORTED BY RENEWABLE ENERGY REGULATIONS

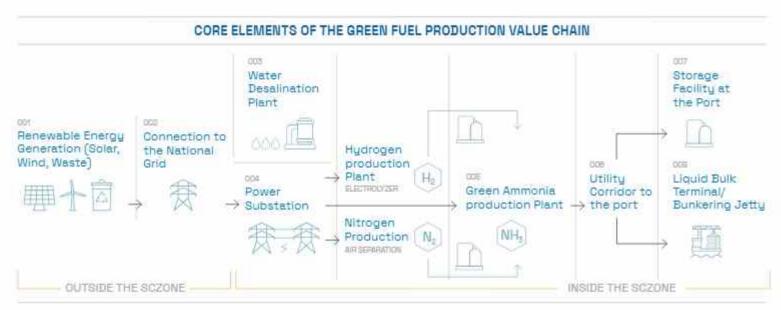
The recent growth of solar capacity in Egypt has been driven by government support

Prime Ministerial Decree no. 104/2022 Revised incentives for feeding industries for new and renewable energy projects such as solar panels and their components, and solar power plants' components

Investment projects established after the entry into force of the law will benefit from a "special investment incentive" by way of deduction from their net taxable income, as follows:

50% deduction from the Investment costs

## ALIGNED WITH EGYPT'S VISION, RENEWABLE ENERGY IS AN INTEGRAL PART OF SCZONE'S NEW GREEN FUEL CLUSTER WITH PV MANUFACTURING IN FOCUS



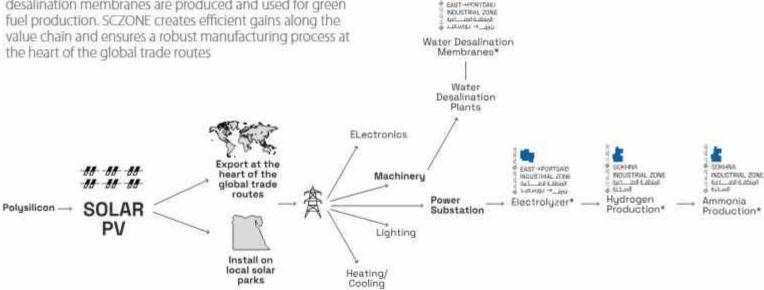
#### FEEDING INDUSTRIES AND SERVICES

Wind turbines manufacturing	Solar PV manufacturing	Water Desalination Membranes Manufacturing	Electrolyzer Manufacturing
Maintenance	Training		

SCZONE plans to host a complete green fuel production hub supported the feeding industries, where wind turbines, solar panels, electrolyzers, and water desalination membranes are produced to create efficient gains the value chain and ensure a robust manufacturing process at the global trade routes

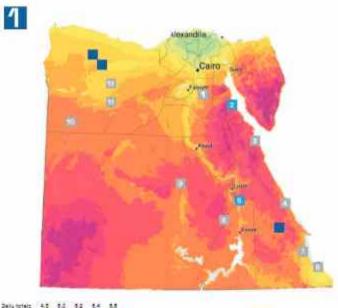
# SOLAR PANELS PRODUCED IN THE SCZONE CAN BE EXPORTED OR INSTALLED DOMESTICALLY TO POWER EGYPT'S NATIONAL GRID

The SCZONE aims to build a complete ecosystem, where solar panels, electrolyzers, wind turbines and water desalination membranes are produced and used for green fuel production. SCZONE creates efficient gains along the value chain and ensures a robust manufacturing process at the heart of the global trade routes



# INCREASING DOMESTIC RENEWABLE ELECTRICITY DEMAND IN THE INDUSTRY SECTOR SHOWS LARGE POTENTIAL FOR SOLAR PV MANUFACTURING

PHOTOVOLTAIC POWER POTENTIAL INCREASES
ATTRACTIVENESS OF NEW SOLAR PV INSTALLATION, INDICATING
DOMESTIC DEMAND FOR SOLAR PV MANUFACTURING



PROJECT	8IZE
Kuraymat	20 MW
2 Zeaferna	*50 MW
Hurghada	20 MW
Marsa Alam	6 MW
Kom Ombo	*200 MW
	*50 MW
	26 MW
[] Benban	1800 MW
Bhalateen	5 MW
Abu Ramad	2 MW
Darb al arbaeen	0.5 MW
Biwa	10 MW
M Abu Mingar	0.5 MW
IR Al Farafa	5 MW

SELECTIVE MARKET PLAYERS

Entablished	Porterytie?
Under Development	
 name of DUTCT country for	YOO A 19000

Larry Nove Accessor of PVOsT, period from 1994 (1999) in the flux (1994) to 2018



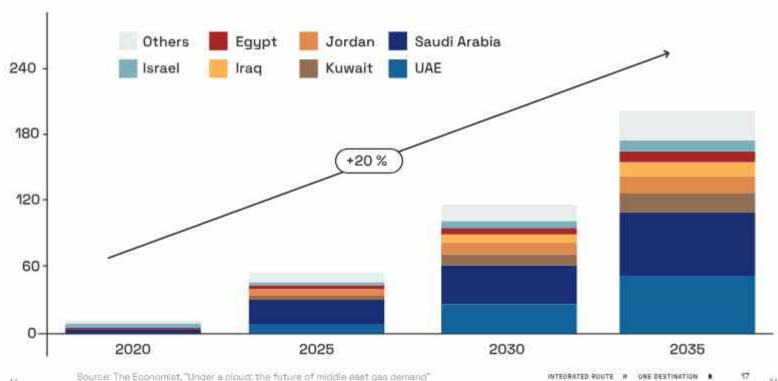
- New solar PV projects were launched in recent years with Benban (2018) being one of the largest operating solar parks worldwide
- Potential solar projects see large opportunities due to increasing investments in renewable energy generation with large areas of high PVOUT still untapped
- There are \$37bn+ investments in the SCZONE in renewable energy generation
- Renewable electricity demand for the industry sector is increasing
- In the SCZONE specifically, renewable energy demand is increasing to power electrolyzers

Egypt has a negative trade value of Photosensitive /photovoltaic/LED semiconductor devices of -\$70 M indicating a domestic demand gap that needs to be filled

having Terials 1988 1888 1889 1872 8546

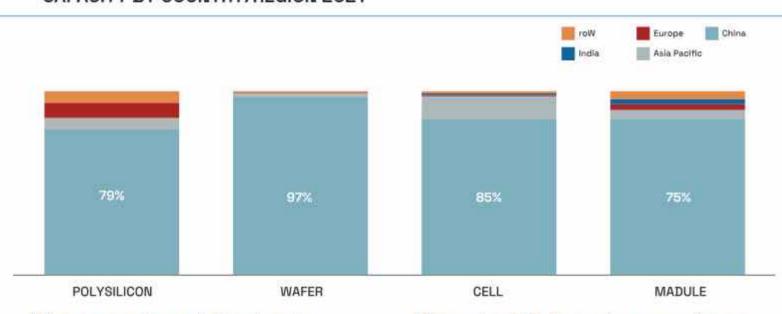
# IN ADDITION TO THE DOMESTIC EFFORTS, PLANNED INSTALLATIONS IN THE MIDDLE EAST ARE GROWING AT A FAST PACE

## MIDDLE EAST, PROJECTED SOLAR CAPACITY IN GW



# EVEN THOUGH CHINA CURRENTLY DOMINATES THROUGHOUT THE PV VALUE CHAIN...

### SHARE OF MANUFACTURING CAPACITY BY COUNTRY/REGION 2021

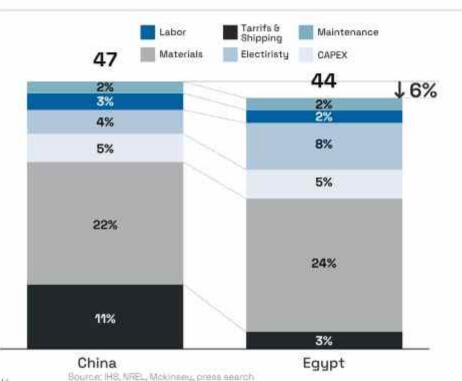


 The total value of global solar PV related trade increased by more than 70% YOY to reach \$40B in 2021.  China made up 55% of global solar panel manufacturing capacity in 2010, increasing to a share of 84% in 202.1

INTEGRATED ROUTE W ONE DESTINATION #

# EGYPT IS ~6% MORE COST COMPETITIVE THAN CHINA IN SOLAR PV MANUFACTURING, GIVEN O IMPORT TARIFFS FOR EGYPT AND REDUCED LOGISTICS COST

#### TOTAL MANUFACTURING COST, US CENTS/WATT



#### EGYPT'S COMPETITIVE ADVANTAGE

- No tariffs combined with lower shipping costs offsets the other (energy, materials) advantages that China has vs Edupt
- This is primarily driven by 0 import tariffs for Egyptian goods, compared to ~15-20% tariffs on Chinese products in Africa.
- Potential to offer country diversification opportunity for manufacturers
- Creating export opportunities

TOP IMPORTERS OF PHOTOSENSITIVE/ PHOTOVOLTAIC/LED

Import value 2020, in \$

10 bn 2-35 bn 1-2 bn 0.03-1 bn 2022

# HENCE LOCAL MANUFACTURING IN EGYPT PROVIDES THE OPPORTUNITY TO SATISFY THE GLOBAL MARKET NEEDS [1/2]



### SC°ZINE'

# HENCE LOCAL MANUFACTURING IN EGYPT PROVIDES THE OPPORTUNITY TO SATISFY THE GLOBAL MARKET NEEDS [2/2]



- The US imported Photosensitive/ photovoltaic/LED semiconductor devices in 2020 worth \$10 bn
- Duty-free entry into the USA



- The European Union imported Photosensitive/ photovoltaic/LED semiconductor devices in 2020 with an import value of more than \$13 bn
- Egypt is one of 4 countries in Africa and 8 in the MEA region that have FTA with EU
- Elimination of customs duties on almost all industrial products



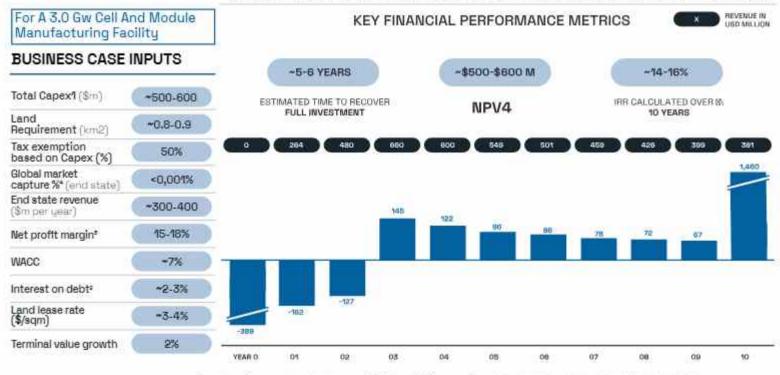
- GAFTA countries imported Photosensitive/ photovoltaic/LED semiconductor devices worth \$940 mn in 2020\*
- Elimination of tariffs



- Brazil alone imported more than \$1.1 bn worth of Photosensitive/ photovoltaic/LED semiconductor devices
- Egypt is one of only 2 countries in the MEA region that has an FTA with Mercosur countries
- Reduction of customs duties on agricultural commodities

# ILLUSTRATIVE BUSINESS CASE FOR INDIVIDUAL COMPANIES INDICATES NPV OF ~ \$550M WITH CAPEX OF ~\$500-\$600M OVER A 10 YEAR INVESTMENT SCHEDULE.

### INVESTMENT PROFITABILITY PROFILE, NET CASH FLOW OVER 10 YEARS (\$M)



Essed on a Capeu requirement at a range of \$800 and \$1000 per square meter and Capex apending split 33%, 33% and 33% in the first three years respectively.

<sup>50%</sup> deat to equity ratio

Aligned with financial incentives offered by the SCZone Assumed full ospeptty of the plant delivered equal to approx. 0.0003% of global market share

SC°ZTINE' SOLAR PV 2022

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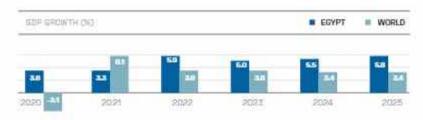
002 **CHAPTER TWO** WHY EGYPT



#### 2022 HUSER DAMAL EGONOMIC ROME

## EGYPT IS ONE OF THE LEADING ECONOMIES AND GROWING INVESTMENT HUBS IN AFRICA AND THE MIDDLE EAST

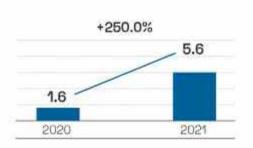
#### GROWTH RATE EXCEEDING GLOBAL AVERAGES.

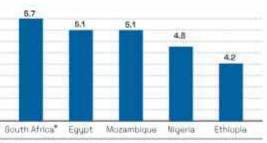


 Strong GDP growth outpacing global markets with an average growth forecast of 5.5% until 2025

#### GREENFIELD INVESTMENTS (\$BN)

### FOREIGN DIRECT INVESTMENT (\$BN)

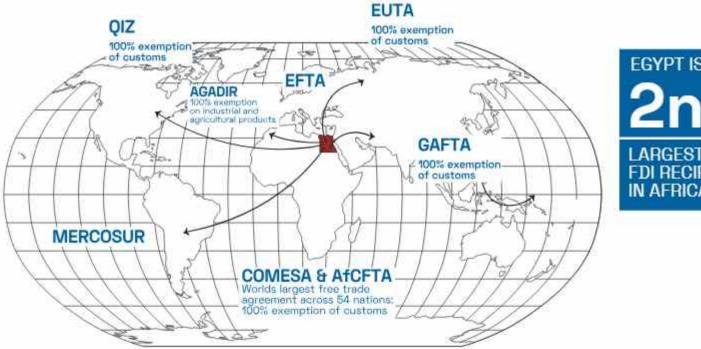




<sup>\*</sup>South Africa FDI excludes Naspers & Prosus 535 BN deal

 A trade and investment hub. that is supported by the country's large domestic market, strategic geographic location, and large and educated talent pool

# WITH 12% OF GLOBAL TRADE PASSING THROUGH THE SUEZ CANAL. EGYPT IS STRATEGICALLY LOCATED AND SUPPORTED BY REGIONAL FREE TRADE AGREEMENTS





2022

# THE GOVERNMENT'S RECENT ECONOMIC AND STRUCTURAL REFORMS ARE BEARING FRUIT

# LEGISLATIVE AND

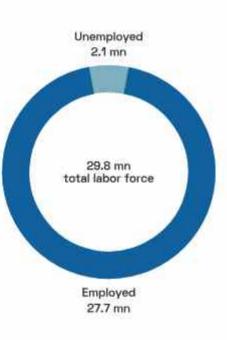
- Facilitating trade by automated customs system "Nafeza" [2021]
- Online system for filing and paying taxes [2020]
- Strengthening minority investors protection [2020]
- One-stop investor shops to obtain necessary approvals and licenses

EASE OF DOING BUSINESS SCORE



#### LABOR MARKET AND TALENT DEVELOPMENT

- Large and skilled labor force of 29.8 million people
- 85.8K graduates from higher technical institutes
- >150,000 teachers registered in TVET system
- >2 million students enroll in the Technical Education & Vocational Training (TVET) program annually



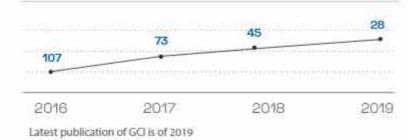
# EGYPT HAS ACHIEVED HISTORICAL AND UNPRECEDENTED ACHIEVEMENTS IN THE FIELD OF INFRASTRUCTURE PROJECTS

#### INFRASTRUCTURE AND CONNECTIVITY

- EGP2.3tn invested into infrastructural developments over the past 7 years
- EGP1.1tn designated for road network development between 2014-2024, resulting in the construction of 7000km of newly developed roads and maintenance of 5000km of existing roads
- EGP38/bn invested into the energy sector between 2014-2021, which saw Egypt achieving an electricity production surplus of >25% in 2022
- EGP50bn invested in upgrading existing airports, alongside the construction of 5 new airports in key areas across Egypt
- \$12.4bn allocated to the "National Ports Development Plan" launched in 2017 to increase total cargo tonnage handled per year from 120mn tons to 370mn tons by 2030
- 28% of total government investments allocated to the transportation sector in FY 2022/2023, of which EGP1/6bn are earmarked for the National Authority for Tunnels
- National high speed electric train spanning 1000 km, connecting sea- and land ports to cities and industrial areas, set to have its first phase completed in early 2023 at an investment cost of about \$8.7bn



### QUALITY OF ROADS INFRASTRUCTURE, RANK



SC°ZINE' 80LAR PV 2022

INTEGRATED ROUTE

003
CHAPTER THREE
WHY SCZONE

ONE DESTINATION



INTEGRATED ROUTE 22

ONE DESTINATION

INTEGRATED ROUTE

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# THE SCZONE PROVIDES AN INVESTOR-FRIENDLY BUSINESS ENVIRONMENT THAT IS A CORNERSTONE FOR EGYPT'S NATIONAL DEVELOPMENT PLANS

455 MILLION SOM2 TOTAL LAND AREA INDUSTRIAL ZONES SEA PORTS MAIN OPERATORS IN INDUSTRIAL THE PORT DEVELOPERS >95 >300 **OPERATIONAL** OPERATIONAL COMPANIES IN THE **ESTABLISHMENTS** PORTS 100K+ DIRECT JOBS CREATED



# SCZONE IS A PROMISING INVESTMENT ZONE LOCATED AROUND THE GLOBAL TRADE ROUTE [SUEZ CANAL] WITH

REGIONAL CONTEXT

1.3 BN

**GROSS CARGO** TRAFFIC/YEAR

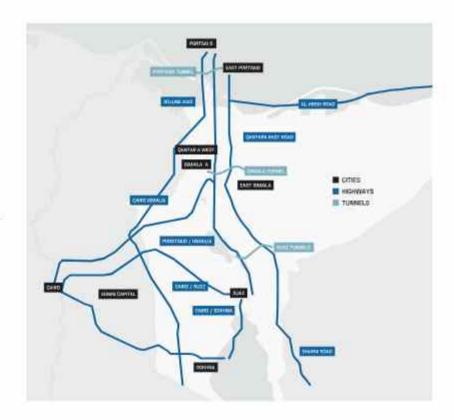
12% INTERNATIONAL TRADE/YEAR

>20K SHIPS/YEAR



# THE SCZONE IS WELL CONNECTED TO EGYPT'S MODERN ROADS, RAIL AND AIRPORT NETWORK

SCZONE IS WELL CONNECTED TO THE MODERN ROADS NETWORK OF EGYPT AND ENJOYS DIRECT CONNECTION TO THE NEW SUEZ CANAL TUNNELS, FACILITATING TRANSPORTATION BETWEEN ITS TWO BANKS



# THE SCZONE'S SERVICES FACILITATE KEY PROCEDURES FOR INVESTORS



#### SPECIAL CUSTOMS REGIME AND TRADE REGULATIONS

- Create an integrated industrial community
- Establish a logistic platform to serve international trade
- Reduce costs and time of shipments release
- Simplify and ease import/export regulations

#### ONE-STOP SHOP

### Providing convenient integrated services under one ceiling

- New Establishments & Companies registrations
- Issuing all Licenses (construction & operation... etc)
- Extracting the work permits
- Issuing residency permits for the foreign investors

# ATTRACTIVE INCENTIVES AND BENEFITS FOR GLOBAL INVESTORS BUILD A CONDUCIVE BUSINESS ENVIRONMENT IN THE SCZONE [1/2]

#### DIRECT FINANCIAL INCENTIVES

#### 0% CUSTOM TAX





CORPORATE TAX REFUND (INCENTIVES FOR 7 YEARS)

Discount on Tax (net profit) equivalent to 50% of

does not exceed 80% of the paid-in capital

the project investment costs such that the incentive



- 0% customs on all projects' components imported from abroad under the condition of exporting the final products
  - Custom tax applied on imported components only when exporting to the local market

#### 0% VALUE ADD TAX



#### EXPORT SUPPORT PROGRAM



- 0% VAT applied on all local and foreign imports required for manufacturing, production and operation
- 1496 VAT is only applied when exporting final products from SCZONE to the domestic market

- Industrial manufacturers for export purposes at SCZONE will benefit from the program
- Enhancing the price competitiveness at foreign markets

# ATTRACTIVE INCENTIVES AND BENEFITS FOR GLOBAL INVESTORS BUILD A CONDUCIVE BUSINESS ENVIRONMENT IN THE SCZONE [2/2]

#### INDIRECT INCENTIVES

#### "THE LEGAL FRAMEWORK"



 SCZONE established and empowered by the special economic zones Law No. 83/2002 which gave a legal framework that reinforces; Flexible, Autonomous and Decision in a single place

#### "ONE-STOP-SHOP SERVICES"



- New Establishments & Companies registrations
- Issuing all Licenses (construction & operation.. etc)
- Extracting work permits
- Issuing residency permits for foreign investors

#### EXPORT & IMPORT REGULATION



- Special rules governing imports and exports from the SCZONF
- Reduced cost & time of regulatory examination of shipments
- Treating end industrial products as local products

### NEW CUSTOMS GUIDE 2020 & DIGITAL TRANSFORMATION



- Creating an integrated industrial community
- Establishing a logistic platform to serve international trade
- Reducing release time of shipments

### 5-YEAR RESIDENCY PERMIT FOR THE FOREIGN INVESTORS.



 Foreign investors have the right to obtain residency for a period of 5 continuous years, renewable for similar periods throughout the duration of the project

# CONTACT US TO LEARN MORE ABOUT INVESTMENT OPPORTUNITIES

WE WILL SUPPORT YOU EVERY STEP IN THE WAY, FROM CONCEPTUALIZATION TO IMPLEMENTATION

CONSIDER

OCZ EXPLORE

DO3 PLAN

CONTACT US
INVEST@SCZONE.EG

