

Conference on Building a Competitive Petrochemical Zone

CTCI Foundation
Taipei

2015

SURBANA JURONG
PRIVATE LIMITED



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BRINGING OUT THE BEST
THROUGH RECOGNITION

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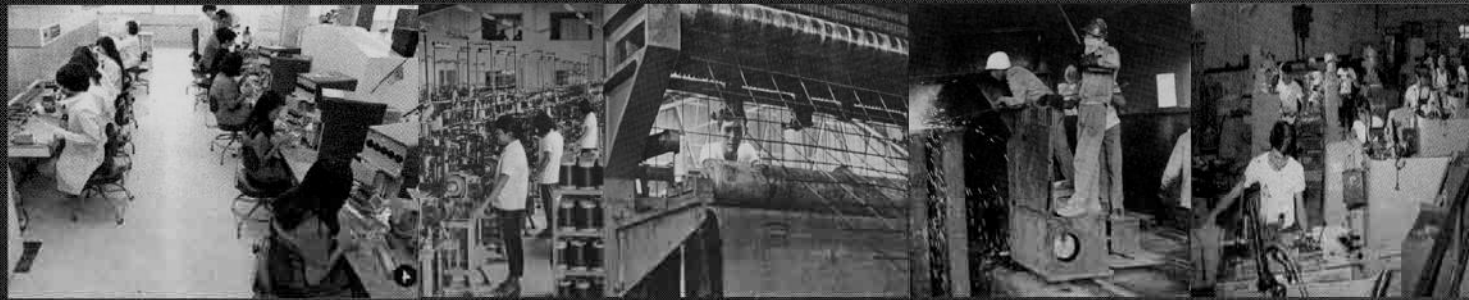
Singapore-Industrial Evolution

JURONG's History



BRINGING OUT THE BEST
THROUGH RECOGNITION

Singapore – Industrial Evolution



60s

Labour-intensive



70 & 80s

Skills/Capital-intensive



90s

Technology-intensive



Today

Knowledge-intensive

Singapore – Industrial Evolution



60s

Labour-intensive

70 & 80s

Skills/Capital-intensive

90s

Technology-intensive

Today

Knowledge-intensive

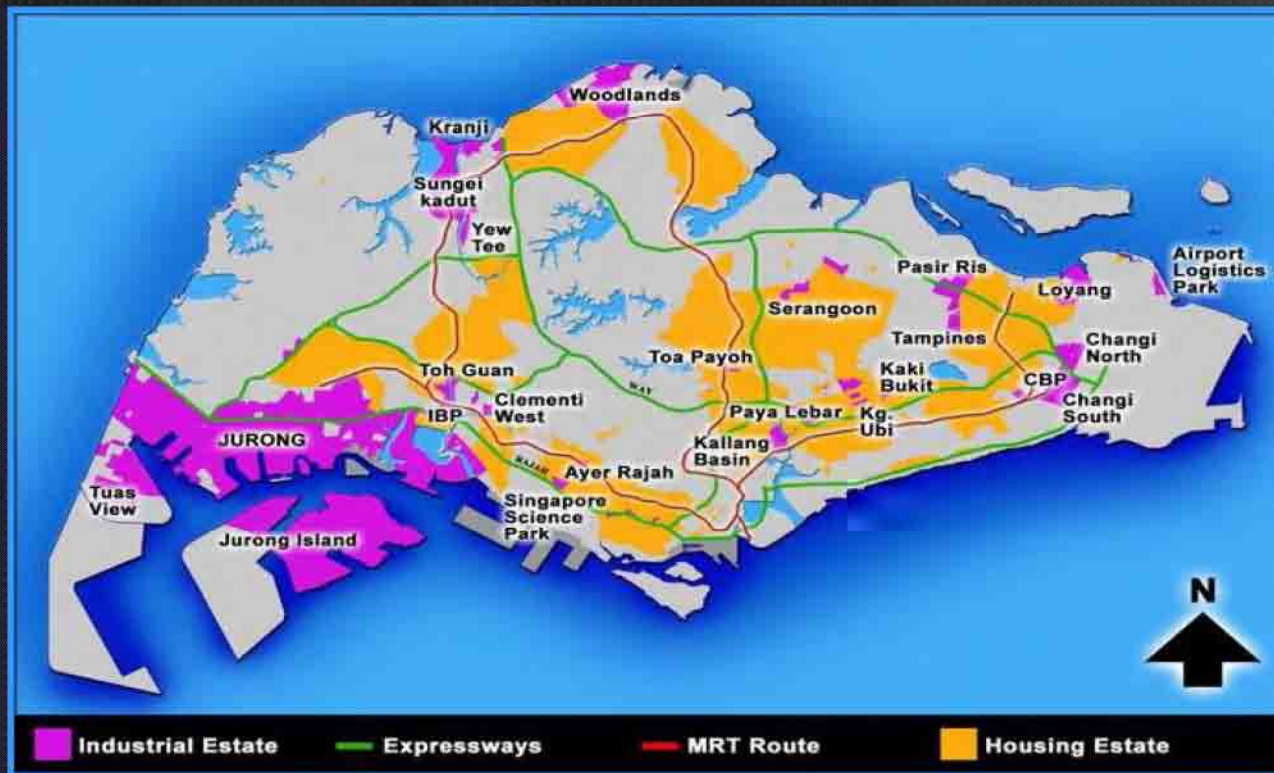
- Total Business Environment
- Live – Work – Learn - Play

Limited Resources, Unlimited Opportunities



PLAN DEVELOPMENT

- Singapore's largest industrial **planner** and **developer**
- Responsible for master planning and development of industrial parks since 1968
- Owns and **manages** 39 industrial and business parks
- Manages more than 7,000 clients (MNCs & SMEs) in Singapore



Jurong Island



Jurong Industrial Estate

PLAN DEVELOPMENT JOURNAGE



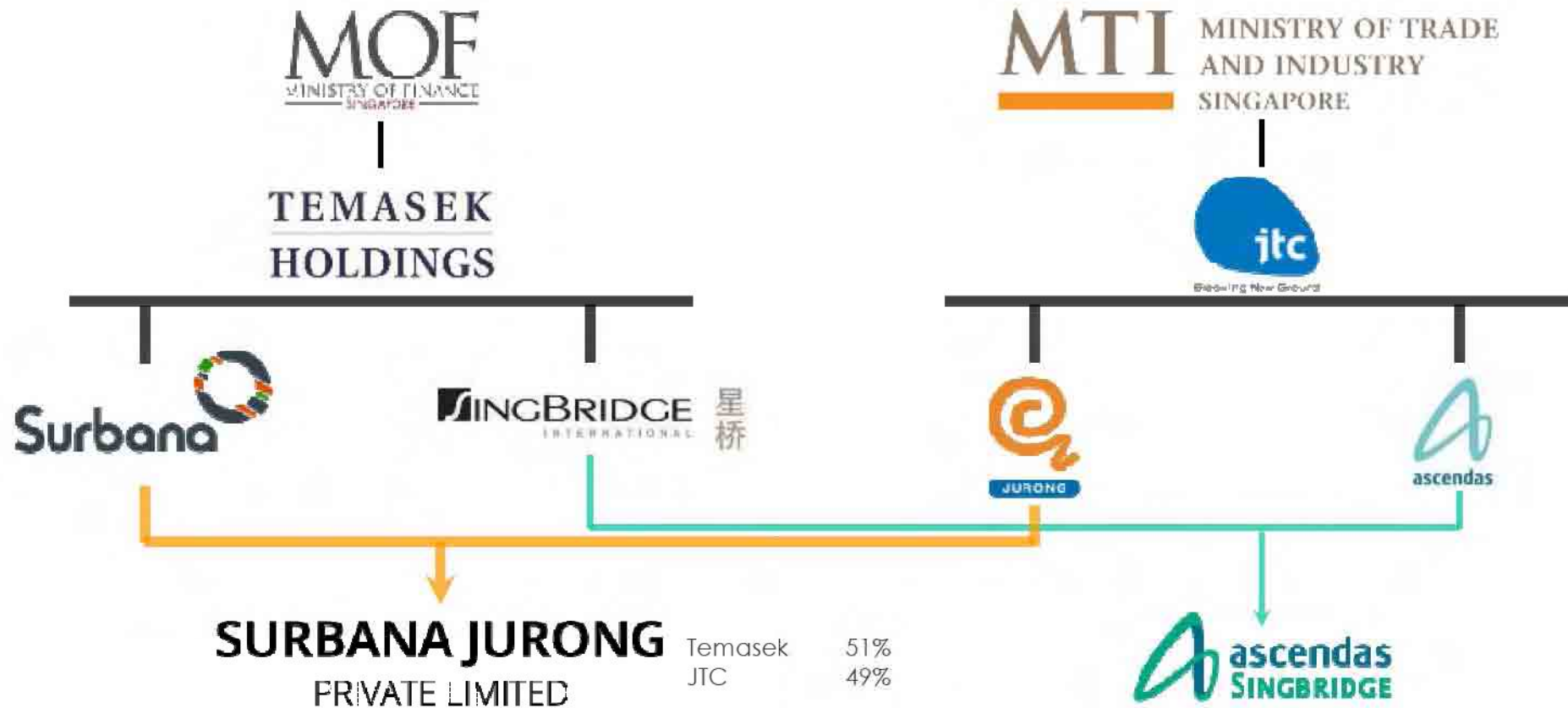
Singapore-Industrial Evolution


JURONG's Position



BRINGING OUT THE BEST
THROUGH RECOGNITION

Where we are





Asia's
Powerhouse for
**Urban &
Infrastructure**
Developments

Shaping **urban & industrial** landscapes



Jurong International

- JTC roots
- Integrated industrial township approach
- Full-suite integrated facilities mgmt – emphasis on asset enhancement
- Specialised engineering (oil & gas, underground)
- Strong G-to-G
- Int'l industrial township consultant

Surbana

- HDB roots
- Housing for 80% of SG population
- Township, masterplanning, building consultancy, infrastructure, reclamation
- International housing
- Strong G-to-G
- Int'l urbanisation consultant



Projects in 51 countries, 207 cities

Over 4,000
Employees

40
Nationalities

26
Offices



66
Master Planners

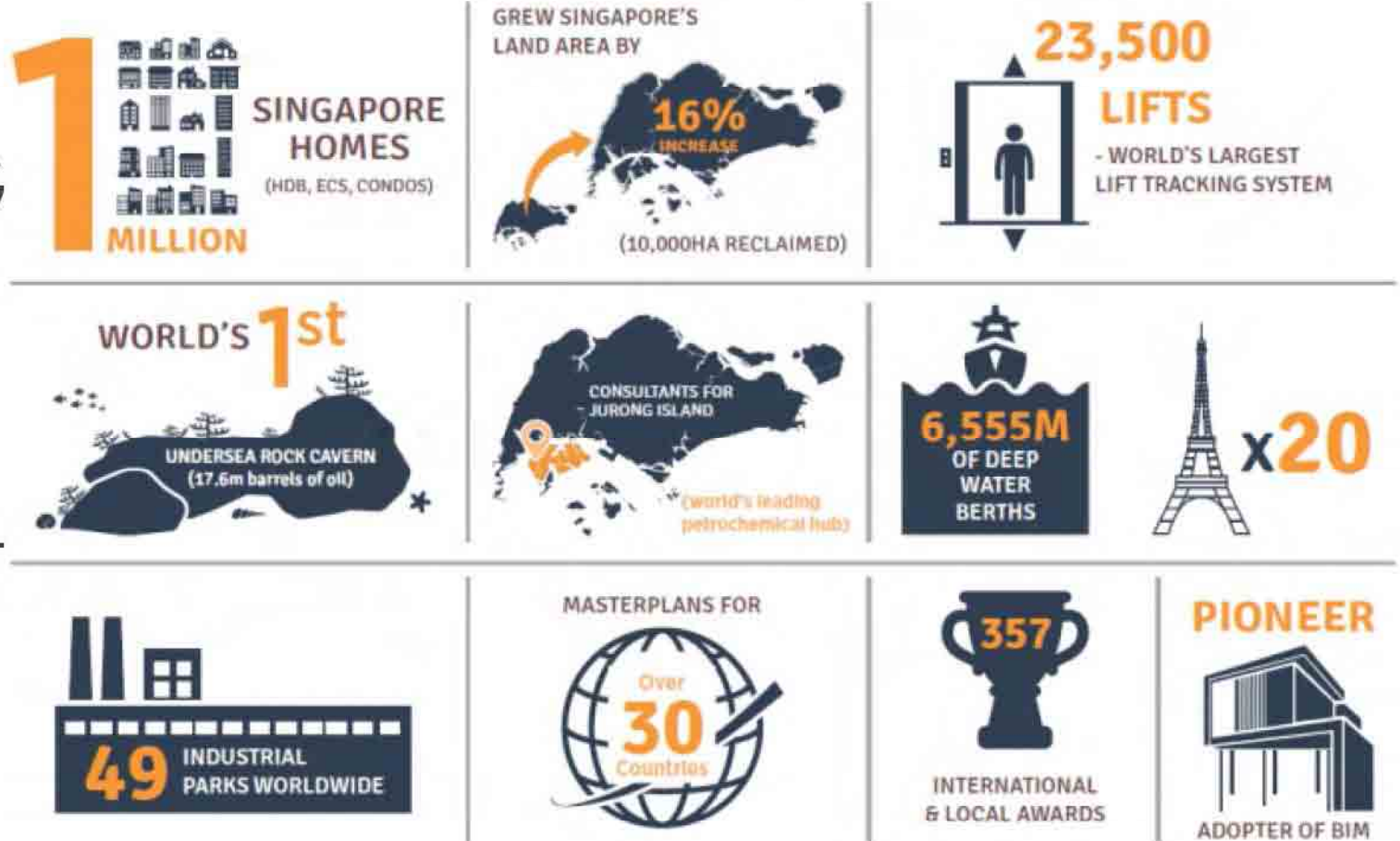
479
Architects

937
Engineers

194
Project Managers

105
Quantity Surveyors

A LEADING PARTNER FOR GLOBAL URBAN & INDUSTRIAL SOLUTIONS



Completed Projects Worldwide

Brasilia 2060 (Brazil)



Aegean Petrochemical Hub (Turkey)



Moglino SEZ (Russia)



ITP Bangalore (India)



Tianjin Eco City (China)



Suzhou Industrial Park (China)



Biopolis



Jurong Island Chemicals Hub



Industrial City Abu Dhabi (UAE)

Panama

Ecuador

Brazil

Local offices

Moglino SEZ (Russia)

Russia

Kazakhstan

Italy

Macedonia
Turkey

Malta

Algeria

Libya

Egypt

Kuwait

Pakistan

Jordan

Bahrain

Qatar

UAE

ABU DHABI

INDIA

Myanmar

Taiwan

Vietnam

Philippines

SINGAPORE

Indonesia

Thailand

Malaysia

Sri Lanka

South Africa

Nigeria

Ghana

Equatorial Guinea

Congo

Saudi Arabia

Yemen

Djibouti

Kenya

Cameroon

Kenya

To-date, we have projects in 159 major cities located in 47 countries



Europe

- Turkey
- Malta

Asia

- China
- India
- Kazakhstan
- S. Korea

South America

- Ecuador
- Brazil
- Panama

Africa

- E. Guinea
- Cameroon
- Djibouti
- Nigeria
- Ghana

Middle East

- UAE
- Qatar
- Egypt
- Saudi Arabia
- Oman
- Libya

South East Asia

- Singapore
- Malaysia
- Brunei
- Vietnam
- Philippines
- Indonesia



Our Global Oil & Gas Footprint



Chinese Garden
Japanese Garden



International
Business Park



Kranji Golf Course



Woodlands Spectrum



UMCi
Wafer Fab Plant



Loyang Marine Base



Airport Logistic Park



Jurong Bird Park



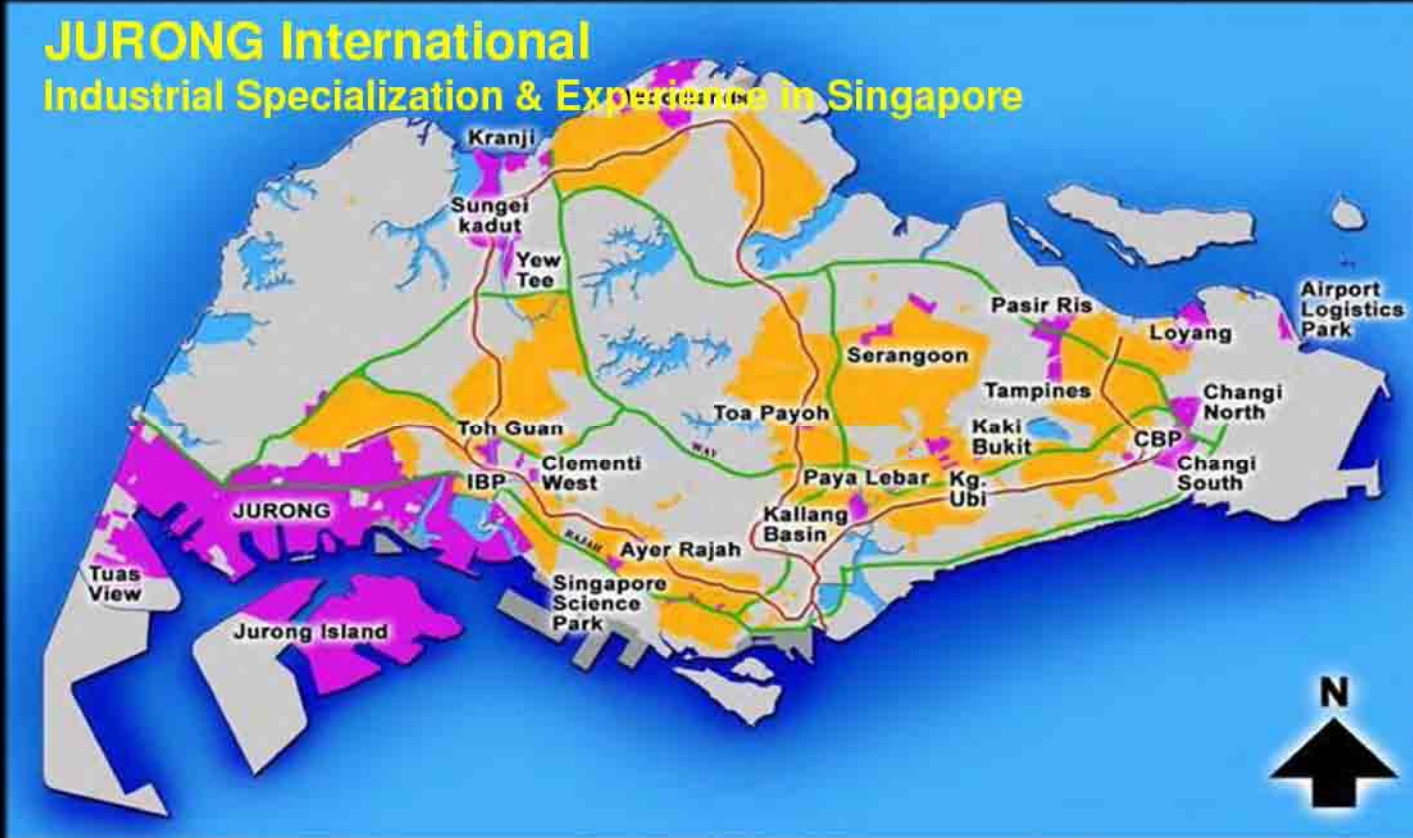
Jurong Industrial Park



Jurong Marine Base



Tuas View Biomedical
Park



■ Industrial Estate
 — Expressways
 — MRT Route
 ■ Housing Estate



Banyan LogisPark



Jurong Island
Petrochemical Hub



Jurong Port



Sentosa Newater
Pipelines



Singapore
Science Parks I & II



Formula One Pit Bldg



Changi Business Park

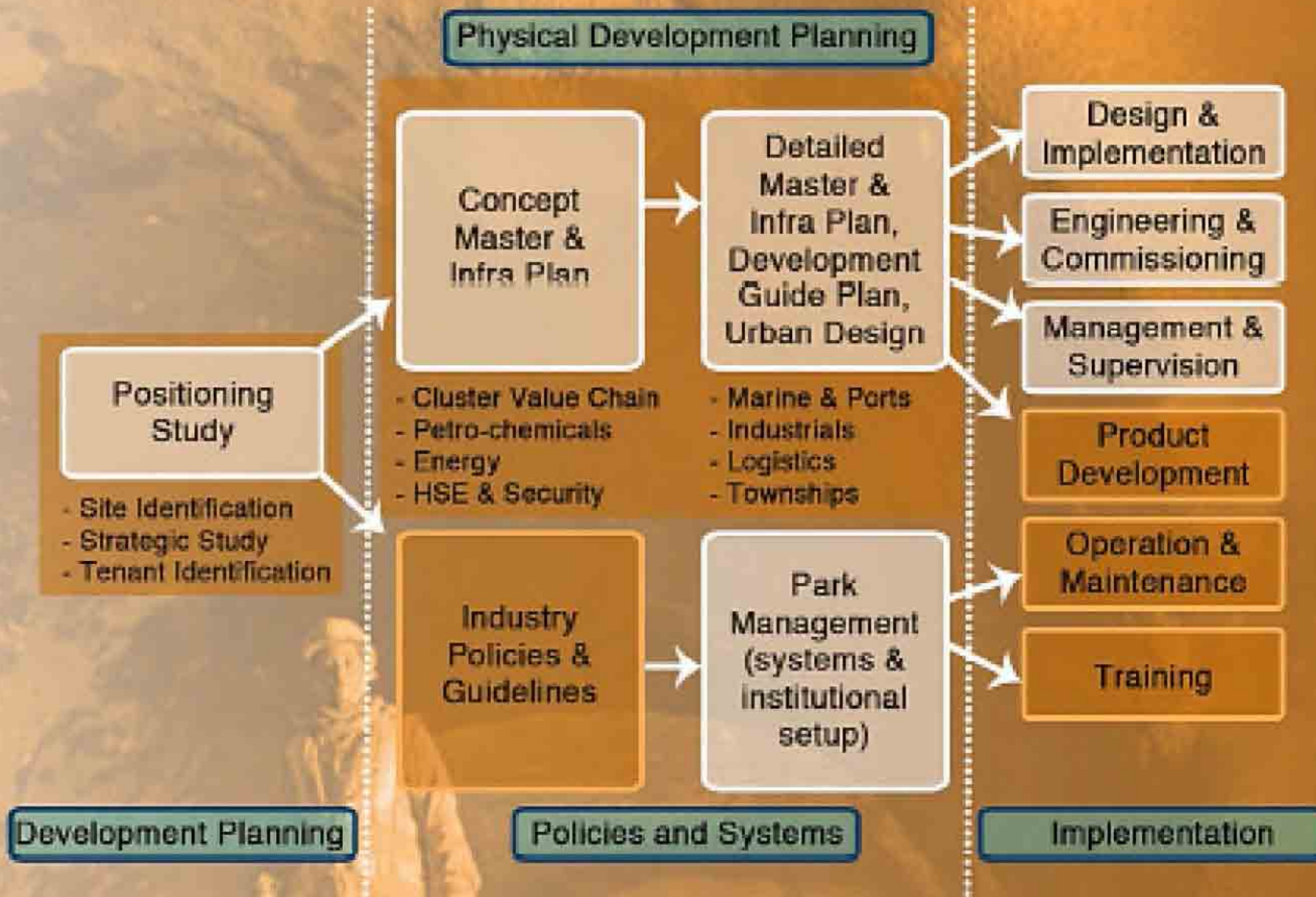


One-North Multimedia
IT FusionPolis



One-North
Life Sciences
Biopolis

One-Stop Service (from planning to implementation)



Consultancy Services – Master Planning



Dalian Lingang Industrial Park, PRC



Cybercity, Jakarta, Indonesia



Aerial View of Changi Business Park, Singapore



China-Singapore Suzhou Industrial Park, China

- Strategic & Economic Study
- Market & Feasibility Study
- Oil & Gas Planning
- Petrochemicals Planning
- Industrial Planning
- Marine & Port Planning
- Town Planning
- Urban Design Planning
- Transportation Planning
- Logistics/ Pipelines Planning
- Landscape Planning

Our Experiences

Overseas

BRINGING OUT THE BEST
THROUGH RECOGNITION

Structure Plans
Township Plans
Economic/Trade Zones
Industrial Parks

REFINERY

PETROCHEMICAL

PORT

LOGISTICS

LNG

JURONG ISLAND

150 MNCs

5 Crackers – 4 MMtpa

30,000 employment

USD 25 Billion investment

Key Feedstocks

- ❖ Natural Gas
- ❖ Crude Oil
- ❖ Naphtha
- ❖ Condensate
- ❖ LPG

Main Mode of Logistics

- ❖ Sea Port
- ❖ Land Transportation
- ❖ Pipelines

Project Composition

- ❖ Upstream Refining and cracking
- ❖ Intermediate Petrochemicals
- ❖ Downstream petrochemicals
- ❖ Specialty Chemicals
- ❖ LNG
- ❖ Bunker & Storage terminals

Key Features

- ❖ Refinery 1,300,000BPD
- ❖ Ethylene 4,000,000 TPA
- ❖ Largest Bunkering Port
- ❖ Asia Product pricing center
- ❖ World's top petrochemical hub

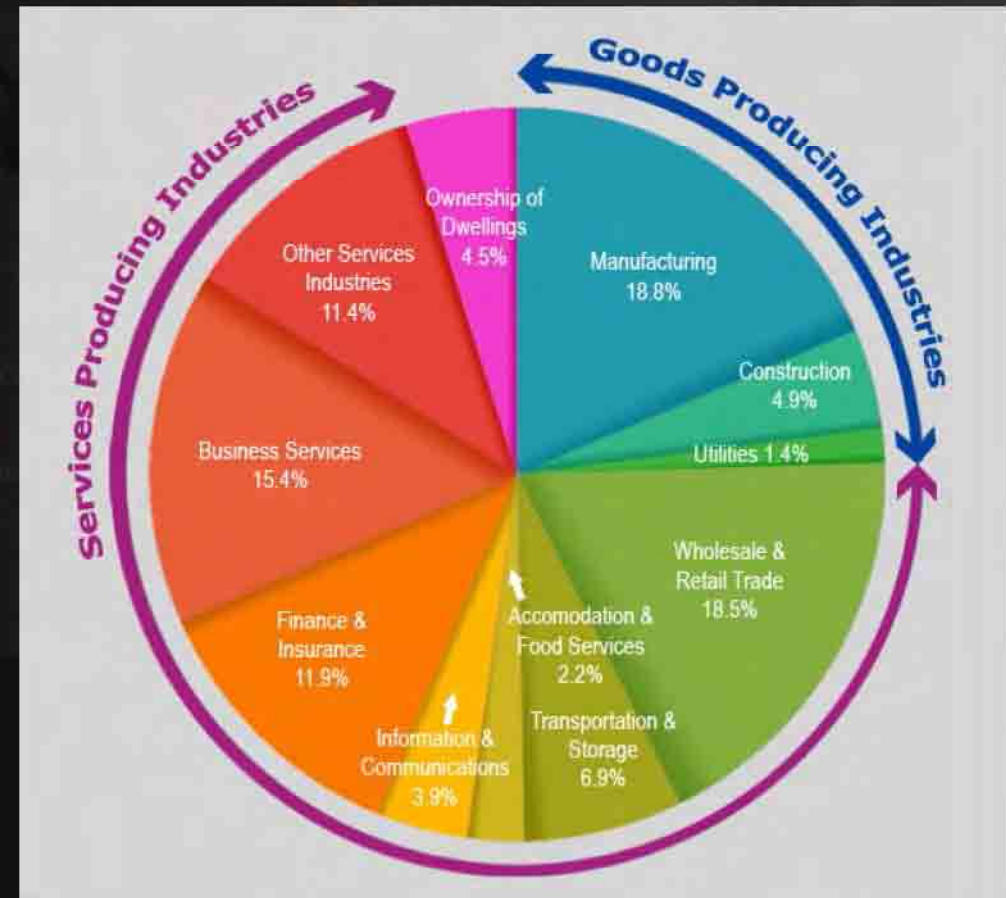


In 2013, Singapore's GDP reached SGD373 billion

Singapore's Economy 1960s to 2000s



Manufacturing Sector
contributes about 19% to the GDP



Energy & Chemicals

contributed about SGD100 billion (2012) to the total manufacturing output (equiv. 35% of total)

PLANNING & CONCEPT

150
companies

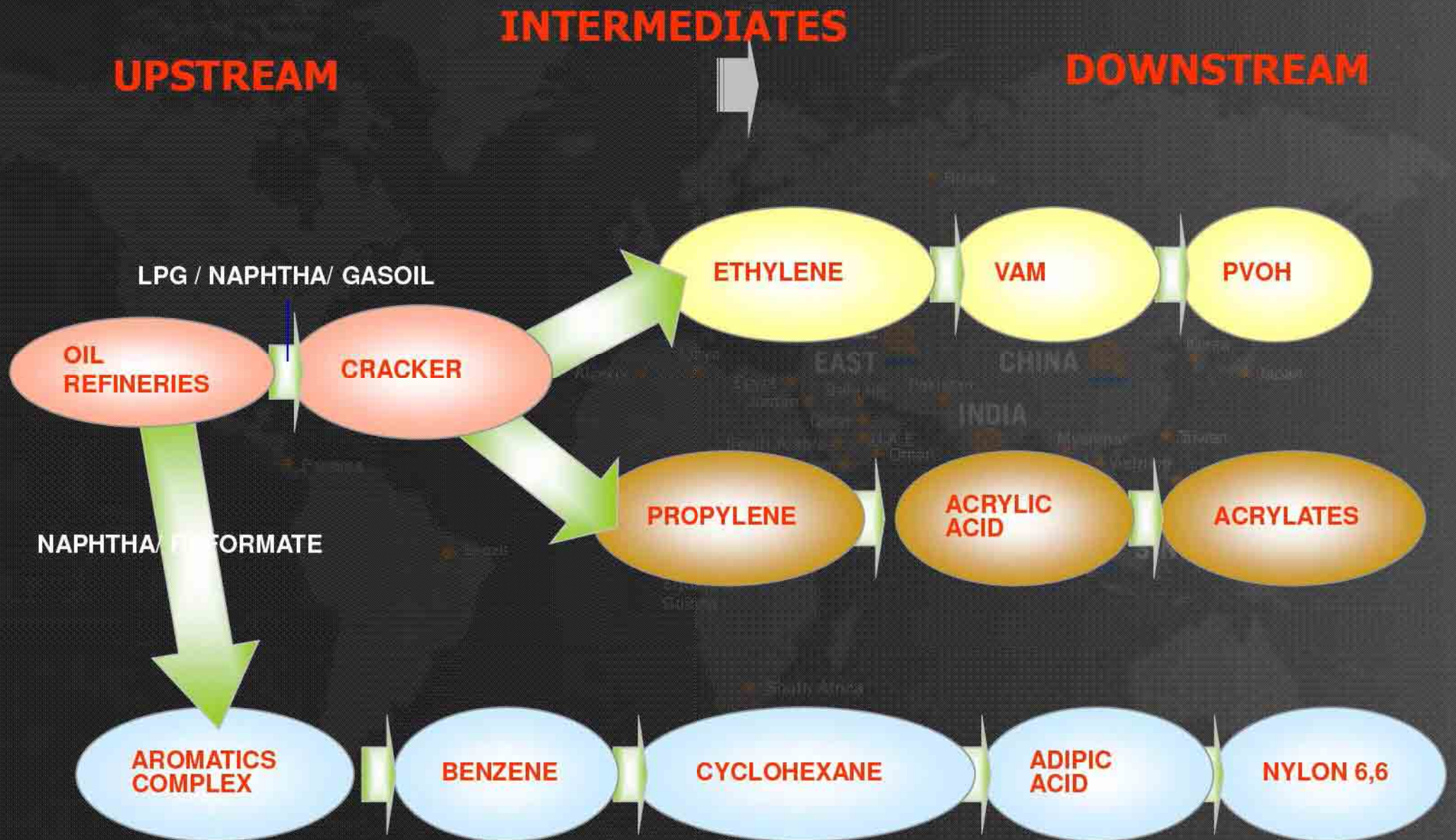
5
crackers



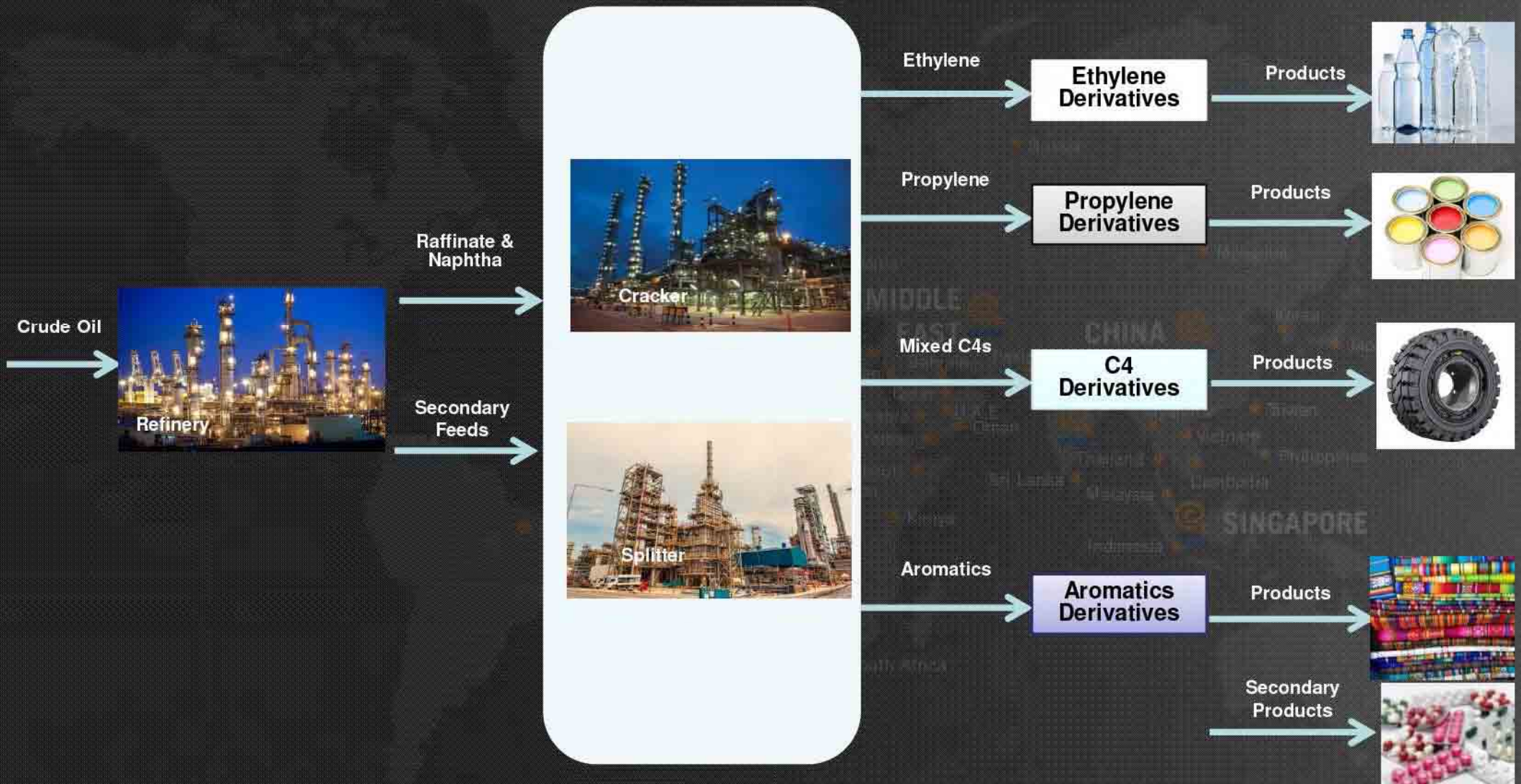
30,000
workers

Total estimated
investment of
USD\$25 billions

DEEP INTEGRATION ACROSS CHEMISTRY CHAINS



INTEGRATED REFINERY AND PETROCHEMICAL COMPLEX



Integrated refinery and petrochemical complex leads to **Improved Efficiency, Lower Costs, Enhanced Competitive Advantages**, adding value to investors

PLANNING & CONCEPT

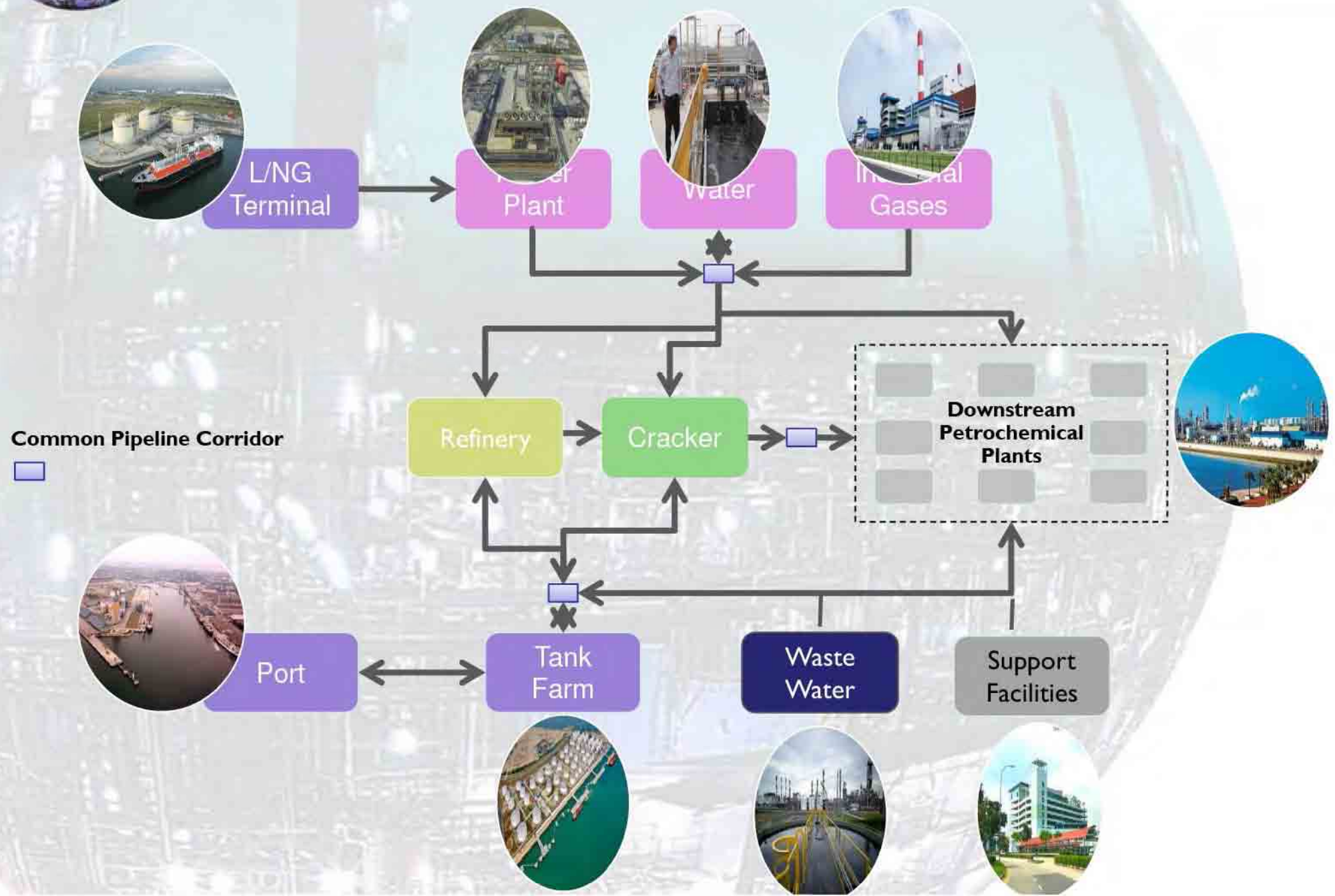
Five Cluster Development:

1. Petroleum / Petrochemical Upstreams
2. Petrochemical Intermediates
3. Performance Materials
4. Specialty Chemical
5. Bio & Consumer Chemical

**ACHIEVING INDUSTRIES INTEGRATION
THRU
SYNERGISING & VALUE CHAINING**



Integrated Oil/ Petrochemical/ Energy Park



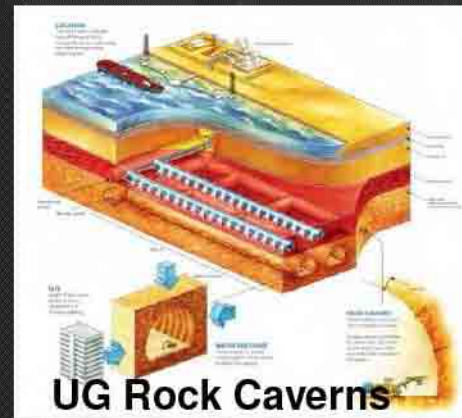


INFRASTRUCTURE INTEGRATION



World Class Infrastructure

- Basic Infrastructures
- Common Pipelines and Linkages
- Shared services - supporting industries like utilities, terminalling, tankages, maintenance centres, pipelines
- Comprehensive supporting services and infrastructure



AMENITIES INTEGRATION



Manpower Development



Safety & HAZMAT



R&D

NATIONAL LEVEL

Centro Energetico De Las Americas, Panama

Atyrau Petrochemical Park, Kazakhstan

RDP Manta Petrochemical SEZ, Ecuador

TARAZ Chemicals Park, Kazakhstan



JURONG Island Chemicals Hub

REGIONAL LEVEL

PETROBRUNEI Sungei Tujoh, Brunei

LIAOBIN Panjin Petrochemical Park, China

West Bengal Haldia PCPIR, India

Huizhou Dayawan Petrochemical Base, China

AL AHSAA Energy City, Saudi Arabia

HUAI AN Salt Chemical Park, China

YULONG Petrochemical Park, China

Tg Piai Maritime & Industrial Base, Malaysia

DaNanHai Petrochemical Hub, China



AEGEAN Petrochemical Hub, Turkey

PLANT LEVEL

JURONG Island Land Intensification, Singapore

Halul Crude Processing Island, Qatar

PA/DOP Plant, Zhuhai

Tobruk Refinery, Libya

Batangas Bulk Storage Terminal, Philippines

Pulau Panjang, Indonesia



MESAIEED Refinery, Qatar

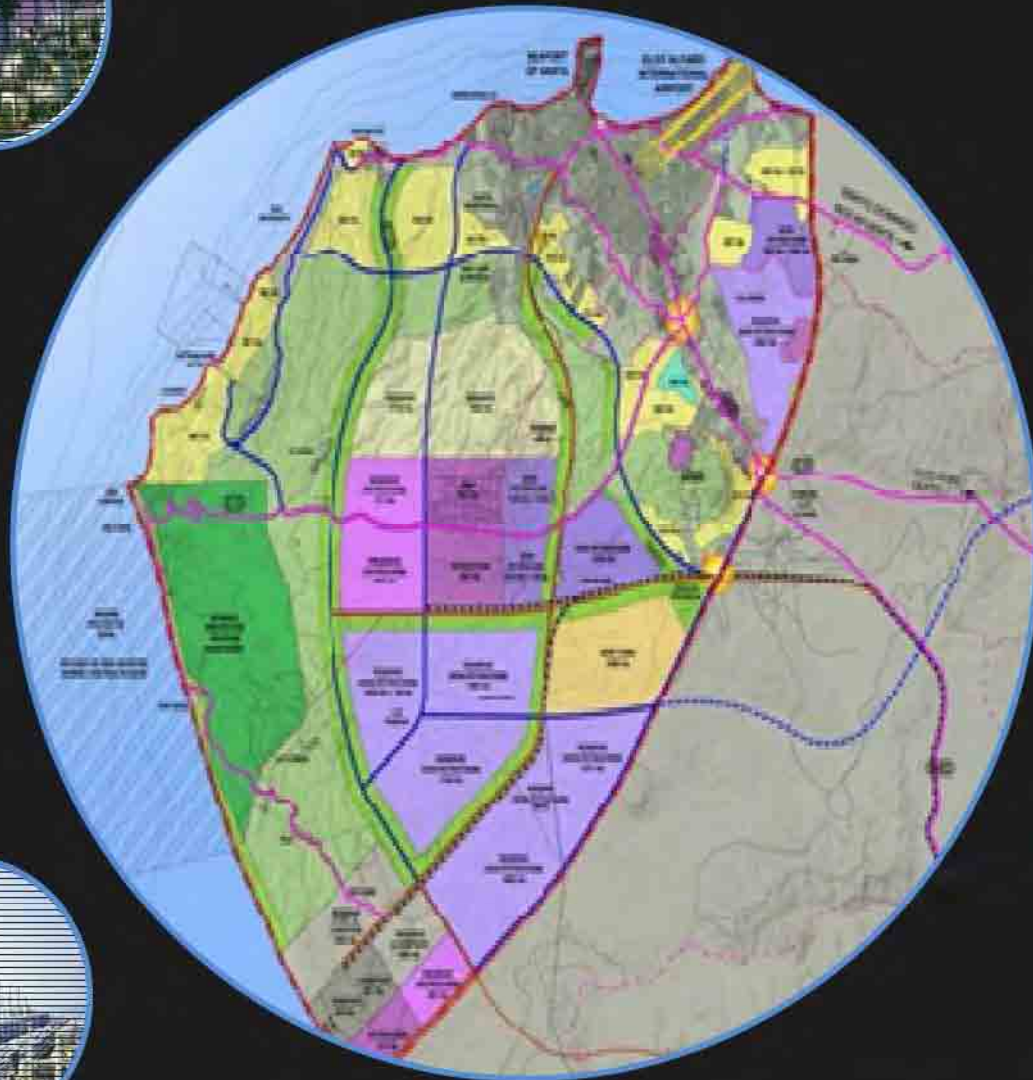
PARK DEVELOPMENT

PETROBRUNEI Sungei Tujoh, Brunei

TARAZ Chemicals Park, Kazakhstan

Ayrau Petrochemical Park, Kazakhstan

Gulei Zhangzhou Petrochemical Base, China



RDP Manta Petrochemical SEZ, Ecuador

THANK YOU
谢谢

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