

PETRONAS CHEMICALS GROUP BERHAD

CORPORATE PRESENTATION

May 2018



Warranties and Exclusion of Liability

PETRONAS Chemicals Group Berhad ("PCG"), its subsidiaries and related corporations confirm that care has been taken in ensuring the accuracy and correctness of information, statements, text, articles, data, images and other materials contained and appearing in this presentation and the associated slides (hereinafter referred to as "the MATERIALS"). Accordingly PCG, its subsidiaries and related corporations and its or their directors, officers, employees, agents and advisers (hereinafter referred to as "We") represent that, to the best of our knowledge and belief that the MATERIALS which are owned and directly related to us therein are accurate, correct and true.

The MATERIALS is not exhaustive. We do not assume any obligation to add, delete or make any changes to the MATERIALS and we may do so, if we feel necessary, without prior notice.

We expressly disclaim all liabilities whatsoever for any direct, indirect, special or consequential loss or damages howsoever resulting directly or indirectly from the access to or the use of this MATERIALS and the reliance on the MATERIALS contained herein. You should rely on your own evaluation and assessment of the MATERIALS in order to arrive at any decision. Any decision made by you based on the MATERIALS is your sole responsibility.

The MATERIALS may also contain information provided by third parties and we make no representation or warranty regarding the accuracy, reliability, truth and completeness of the said third parties' information.

In no event would the MATERIALS constitute or be deemed to constitute an invitation to invest in PCG, its subsidiaries and related corporations or an invitation by PCG, its subsidiaries and related corporations to enter into a contract with you.

Forward Looking Statements and Associated Risks

The MATERIALS and related discussions, including but not limited to those regarding the petrochemicals environment, anticipated demand for petrochemicals, plant turnaround activity and costs, investments in safety and operational risk, increase in turnaround activity and impact on production, future capital expenditures in general, generation of future receivables, sales to customers, cash flows, costs, cost savings, debt, demand, disposals, dividends, earnings, efficiency, gearing, growth, strategy, trends, reserves and productivity together with statements that contain words such as "believe", "plan", "expect" and "anticipate" and similar expressions thereof may constitute forward looking statements.

Such forward-looking statements are subject to certain risks and uncertainties, including but not limited to, the economic situation in Malaysia and countries in which we transact business internationally, increases in regulatory burdens in Malaysia and such countries, changes in import control or import duties, levies or taxes in international markets or in Malaysia, and changes in prices or demand for products produced by us, both in Malaysia and in international markets, as a result of competitive actions or economic factors. Such forward looking statements are also subject to the risks of increased costs in related technologies and such technologies producing expected results, and performance by third parties in accordance with contractual terms and specifications.

Should one or more of these uncertainties or risks, among others, materialise, actual results may vary materially from those estimated, anticipated or projected. Specifically, but without limitation, capital costs could increase, projects could be delayed, and anticipated improvements in capacity or performance may not be fully realised. Although We believe that the expectations of management as reflected by such forward looking statements are reasonable based on information currently available, no assurances can be given that such expectations will prove to have been correct. Accordingly, you are cautioned not to place undue reliance on the forward looking statements. We undertake no obligation to update or revise any of them, whether as a result of new information, future events or otherwise.

This presentation and its contents are strictly confidential and must not be copied, reproduced, distributed, summarised, disclosed, referred or passed to others at any time without the prior written consent of PCG.



PCG at a glance



Performance



Growth



Outlook

This page is intentionally left blank



PCG at a glance



A leading chemical player in the region

At a glance

- First plant in **1985**
- Made up of **30 subsidiaries, joint ventures & associated companies**
- Over **4,400 employees**

- Listed since **November 2010**
- **~RM67*** billion market capitalisation
- **Top 10** in FBM KLCI, FBM Emas Shariah and Bursa Malaysia FTSE4GOOD Index

- Total **12.7 mil mtpa** of existing production capacity
- Two **integrated petrochemical complexes** in **Kertih**, Terengganu and **Gebeng**, Pahang
- Four **manufacturing complexes** in
 - **Gurun**, Kedah
 - **Bintulu**, Sarawak
 - Federal Territory of **Labuan**
 - **Sipitang**, Sabah
- New integrated complex in **Pengerang**, Johor by 2019

- Largest **Methanol** producer in Asia Pacific and 4th largest in the world
- Largest **MTBE, Butanol, BGE & Ethanolamines** producer in South East Asia**
- 2nd largest **Ammonia, Urea & Butyl Acetate** producer in South East Asia**
- 3rd largest **Ethoxylates, MEG & LDPE** producer in South East Asia**

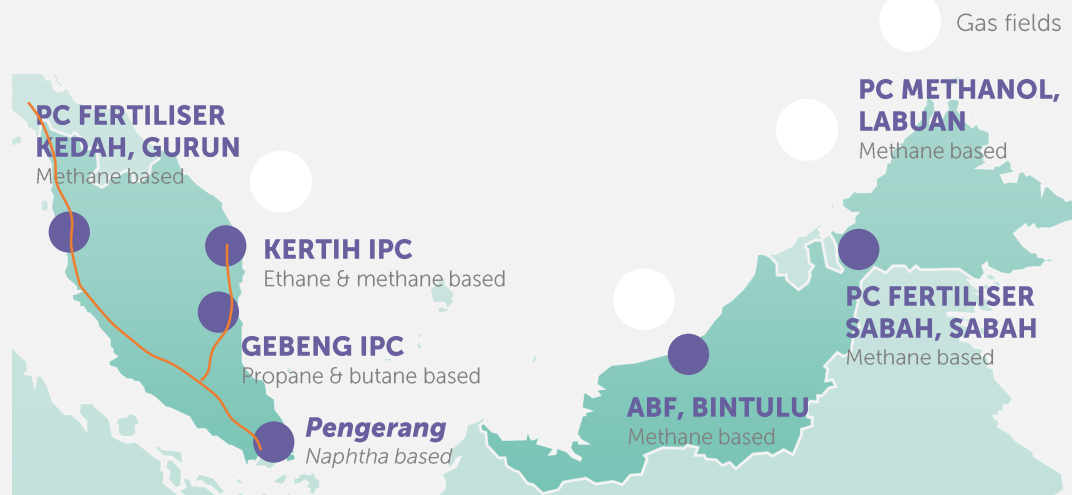
*as at 30 May 2018

**by capacity



Operates world-class production sites

At a glance



4.9 MILLION MTPA PRODUCTION OF OLEFINS AND DERIVATIVES

7.8 MILLION MTPA PRODUCTION OF FERTILISERS AND METHANOL

1 Kertih IPC

- Ethylene
- Polyethylene ⁽¹⁾
- Benzene
- Paraxylene
- Ammonia, Carbon Monoxide & Oxogas ⁽²⁾
- Ethylene Glycols
- Butanol, Ethanolamines, Glycol Ethers, Butyl Acetate, and other performance chemicals
- Acetic Acid ⁽³⁾

2 Gebeng IPC

- MTBE
- Propylene
- Acrylics, Oxo-alcohols, Butanediol ⁽³⁾
- Aroma, 2EHAcid, HR-PIB ⁽³⁾ **44k tpa ***

7 Pengerang

- Polyethylene
- Polypropylene
- Ethylene Glycols
- Isononanol **3.3 mil mtpa ***

3 Gurun

- Urea
- Ammonia
- Methanol

4 Bintulu

- Ammonia
- Urea

5 Labuan

- Methanol

6 Sipitang

- Ammonia
- Urea

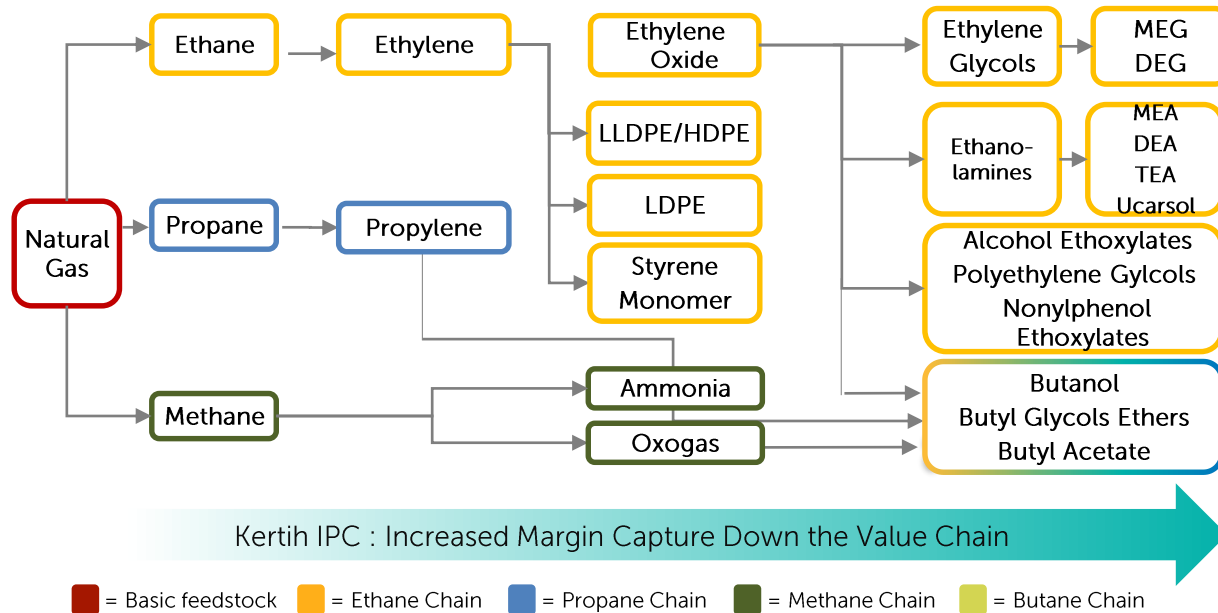
(1) Low Density Polyethylene (LDPE), Linear Low Density Polyethylene (LLDPE), High Density Polyethylene (HDPE)

(2) Products from PC Ammonia, reported under F&M segment

(3) Products from associates (addition to PCG capacity is based on PCG equity) * New capacities

Fully integrated production facilities with significant synergies across the production chain

At a glance



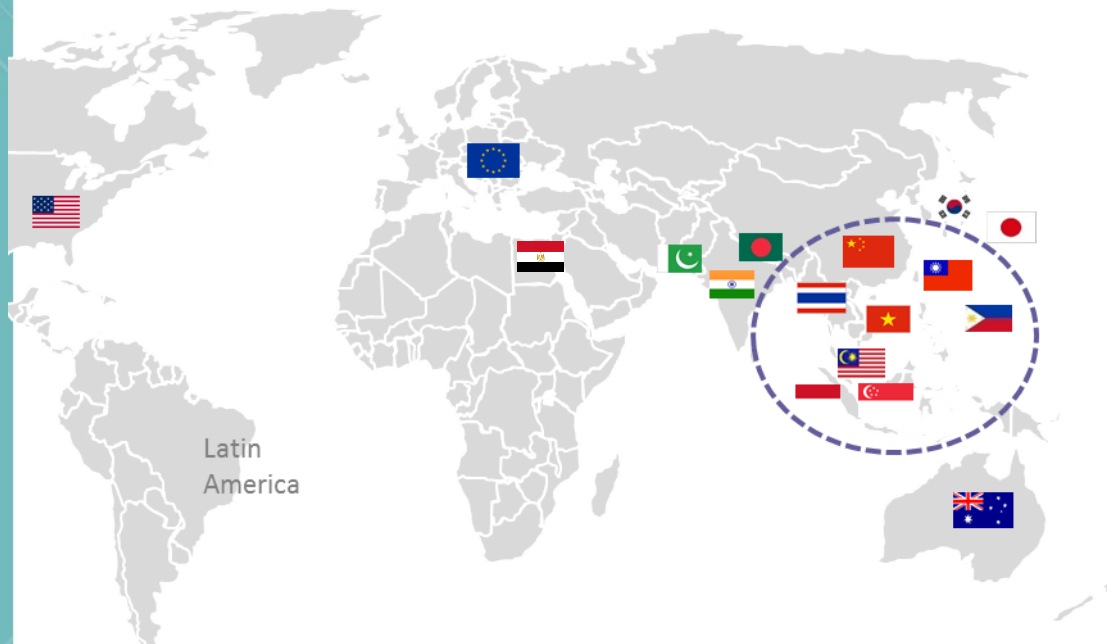
- **Operational flexibility** to modify product mix, minimise molecule loss, and optimise profits across the entire value chain
- **Integrated support and ancillary services** leading to substantial operational and logistic efficiencies



PETRONAS

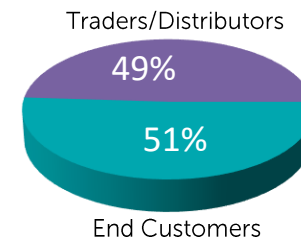
Established market leadership in Asia Pacific

At a glance

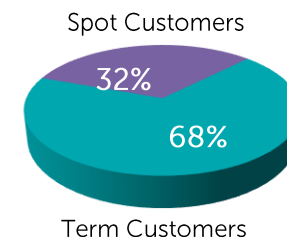


- Physically present in Malaysia, Thailand, China, Indonesia, Vietnam, the Philippines and India
- Gearing towards value-driven customer solutions

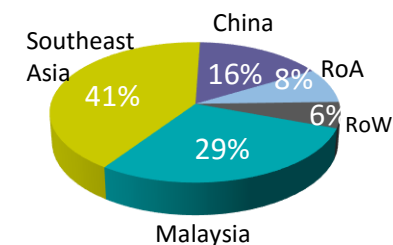
Revenue by Channel



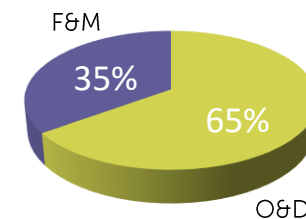
Revenue by Contract



Revenue by Region*



Revenue by Segment*





PETRONAS

Our competitive advantages

At a glance



Fully integrated **facilities and infrastructure**



Secure and competitive **feedstock supply**

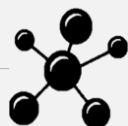


Proximity to **key growth markets**



Greater **market leadership**

**PETRONAS
CHEMICALS GROUP
BERHAD**



Portfolio expansion with **leading edge technology**



Large scale and diversified **product portfolio**



Competitive **world scale plants**



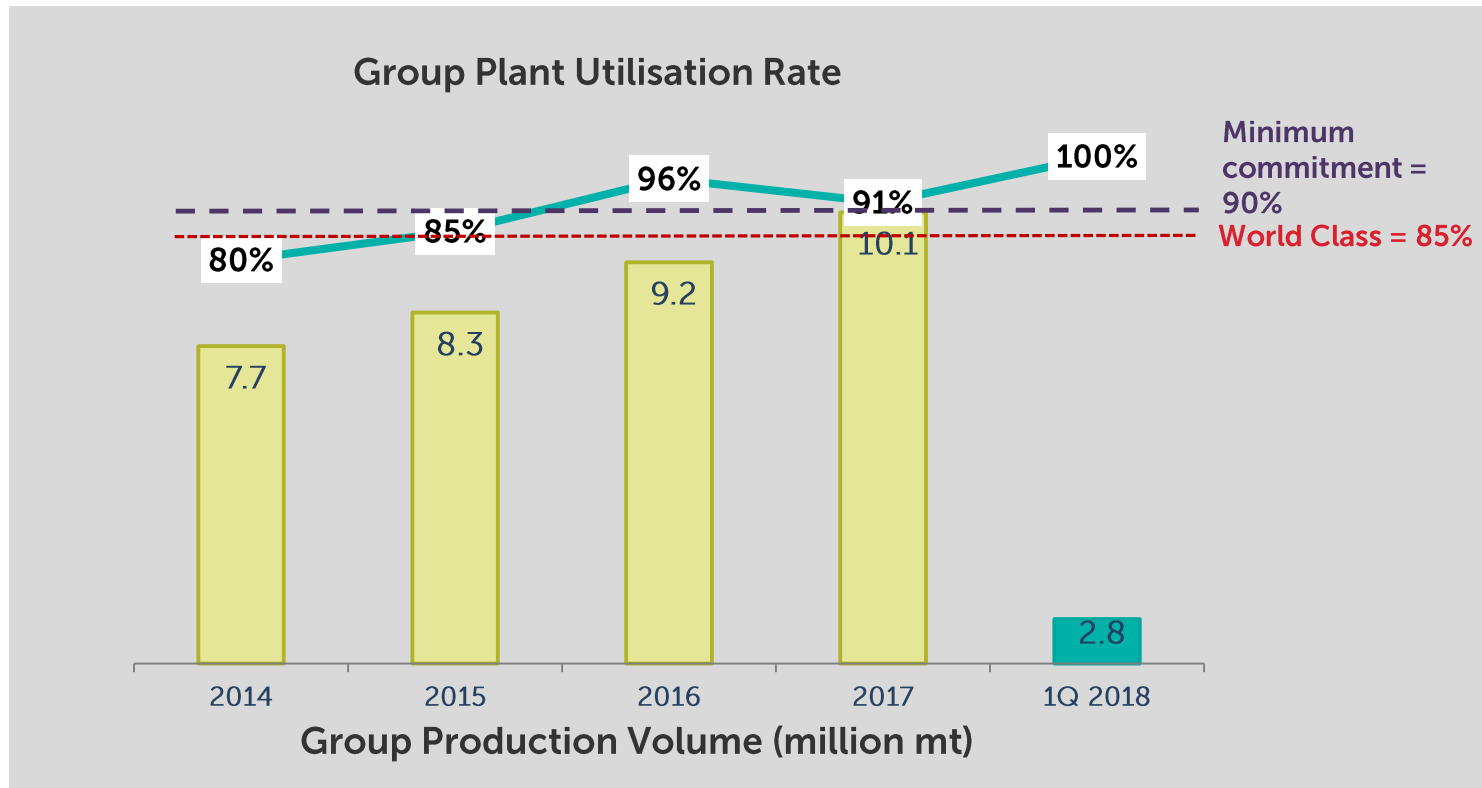
Performance



Sustained world class operational performance



PETRONAS



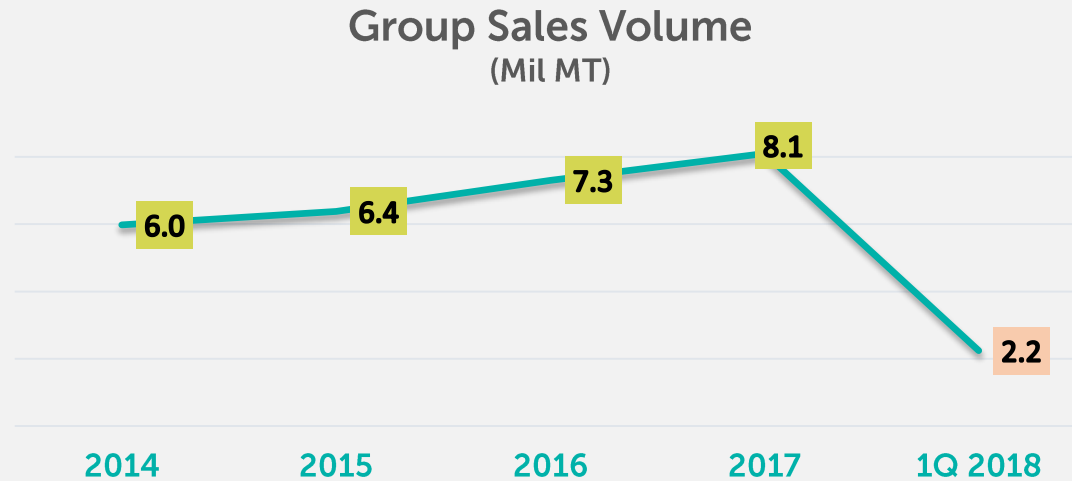
- Group utilisation of **91%** despite heavy turnaround activities
- Improved **feedstock supply** through close relationship with supplier
- Improved **plant reliability** resulting from effective asset management



Maximising sales in higher netback markets

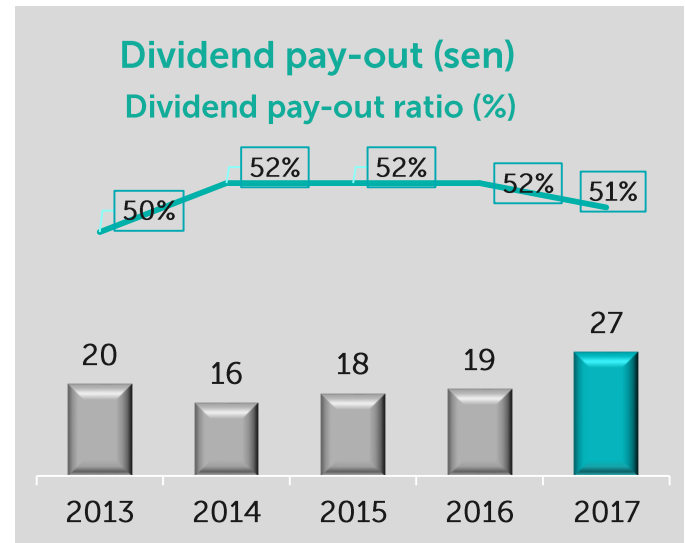
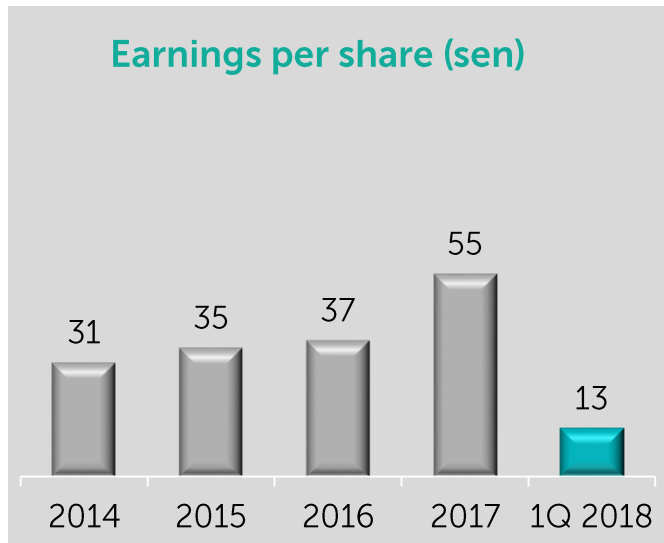
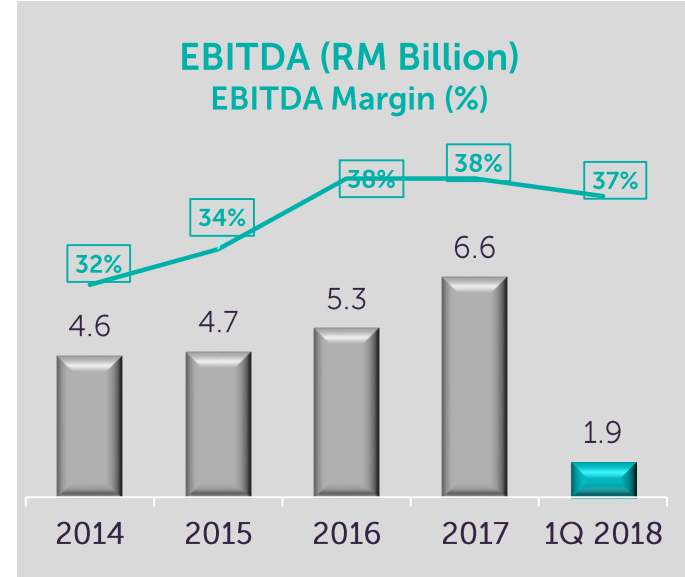
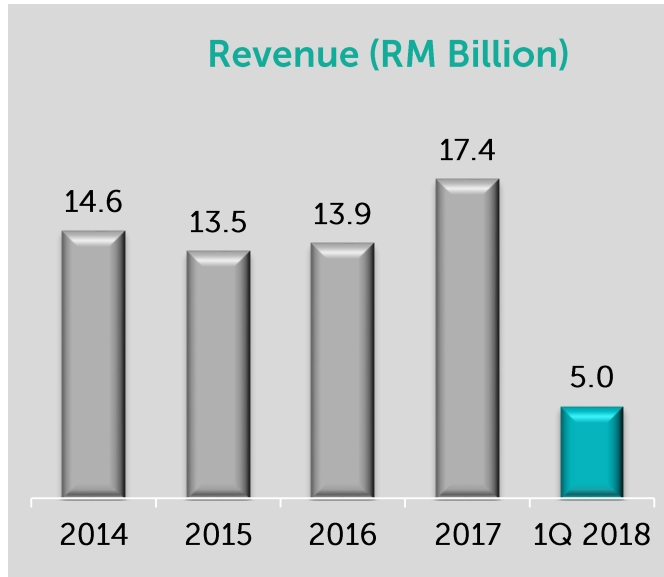


PETRONAS



- **Higher sales volume** despite lower utilisation.
- **Optimisation** of cost-to-serve through **logistics** and **inventory management**
- Efficient **delivery planning** and **channel management helped in strategic volume shift** to higher value market

Strong results despite challenging market

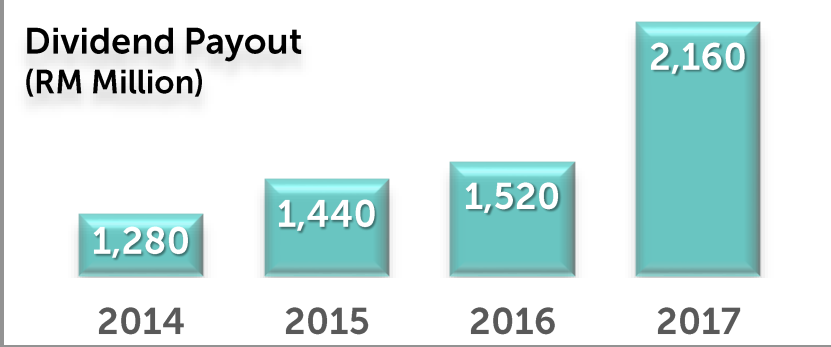
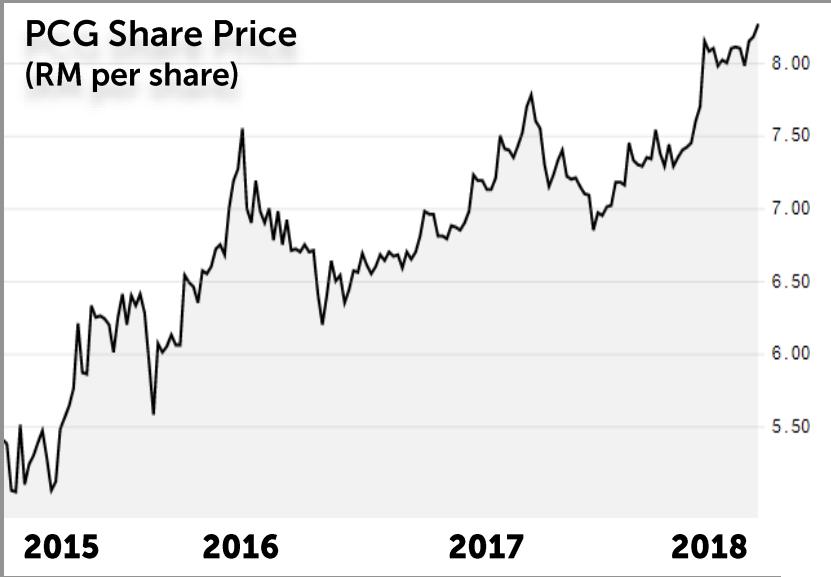




Shareholder's fund grew in line with profits



PETRONAS



1st Interim Dividend **RM0.12**
 paid on 8 Sep 2017

2nd Interim Dividend **RM0.15**
 paid on 21 Mar 2018

Dividends (per ordinary share) **RM0.27**

Dividend Payout (RM Million) **RM2,160 mil**

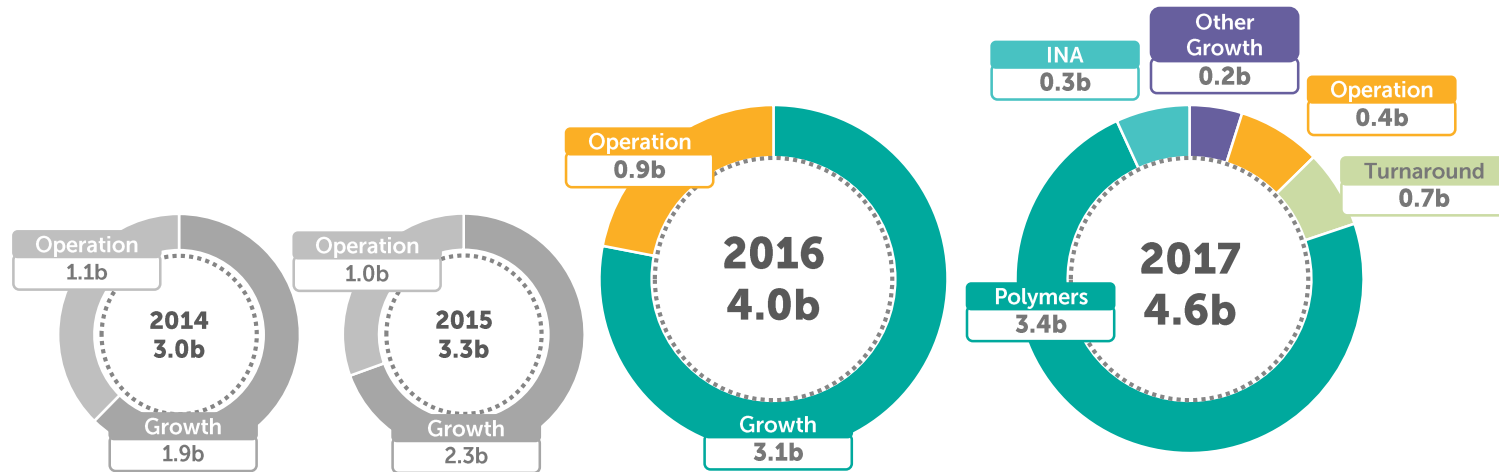
Dividend Payout Ratio **52 %**

Focused on existing assets and future growth



PETRONAS

Capital Expenditure (RM Billion)



- Growth CAPEX mainly for **Pengerang Integrated Complex (PIC) Petrochemical Projects**
- Operation CAPEX consist **of reliability and integrity projects, turnaround activities**, value improvements and other operational requirements



Growth

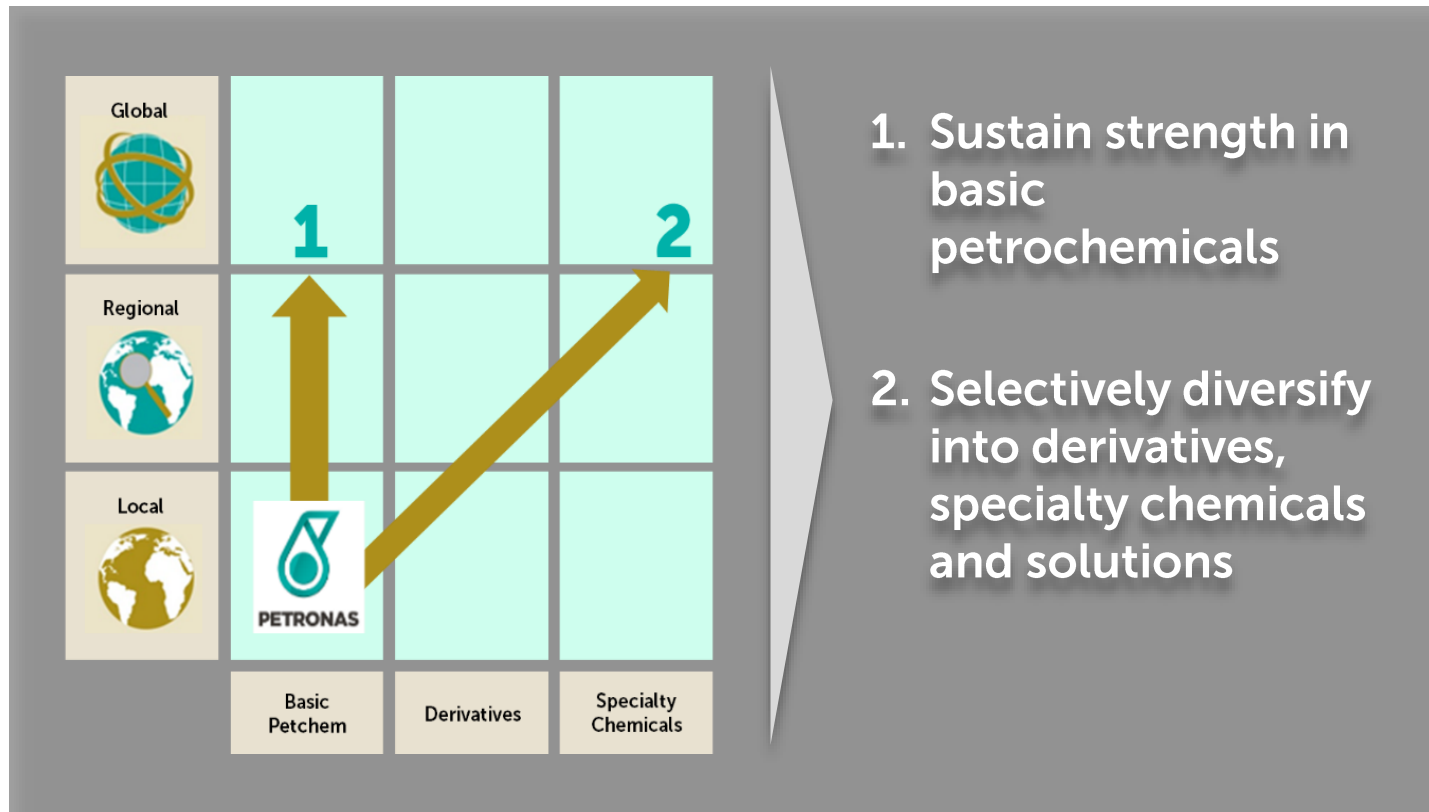
To strengthen basic petrochemicals and selectively diversify into specialty chemicals



PETRONAS

Growth

The Preferred Chemical Company Providing Innovative Customer Solutions



Integrated Aroma Ingredients Complex has begun commissioning, in stages



PETRONAS

Location

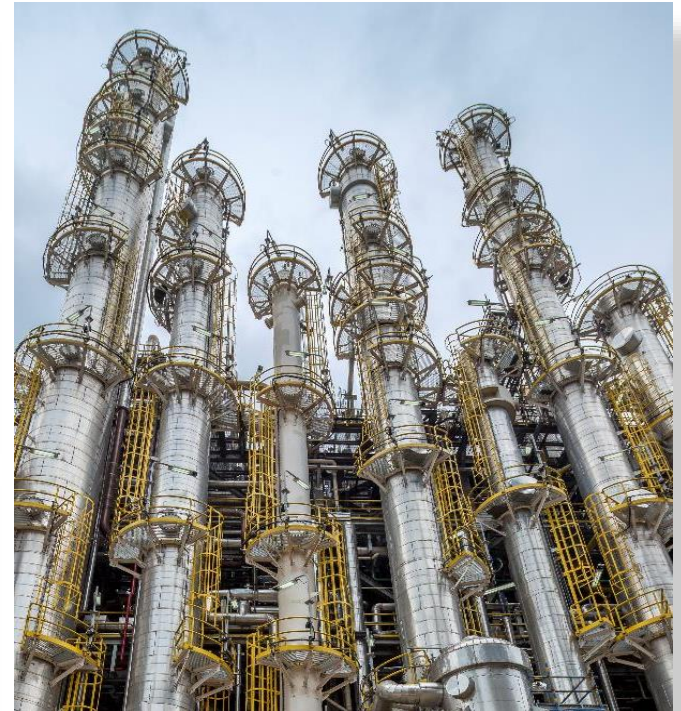
- Gebeng, Pahang

Product

- Citral, Citronellol & L-Menthol

Position

- The **1st plant in Southeast Asia** to produce intermediate for flavours and fragrances



citral | menthol | citronellol

- Stable Isoprenol, Citral & Citranellol in 1Q 2018.
- L-menthol plant is progressing planned and will be coming on stream in phases this year.



HR-PIB, came on-stream in January 2018

Growth

Location

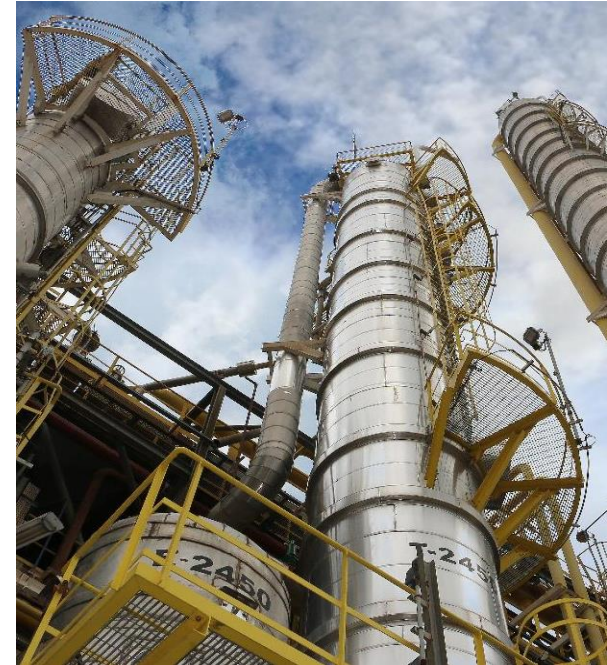
- Gebeng, Pahang

Product

- Highly Reactive Polyisobutene (HR-PIB)

Position

- The 1st and only HR-PIB plant in Southeast Asia



Highly Reactive Polyisobutene is an intermediate product used for the manufacturing of high performance fuel and lubricant additives, such as fuel detergent or dispersants for engine oils

Overall Pengerang Integrated Complex (PIC)

Petchem progress is on schedule at 78%*



PETRONAS

Location

- Pengerang, Johor

Product

- **Glycols:** Feedstock for manufacturing polyester fiber
- **Polymers:** Feedstock for manufacturing plastic products
- **Isononanol (INA):** Feedstock for plasticizer

Position

- **Largest Glycols and Polypropylene producer in Southeast Asia**
- **Largest HDPE producer in Southeast Asia**



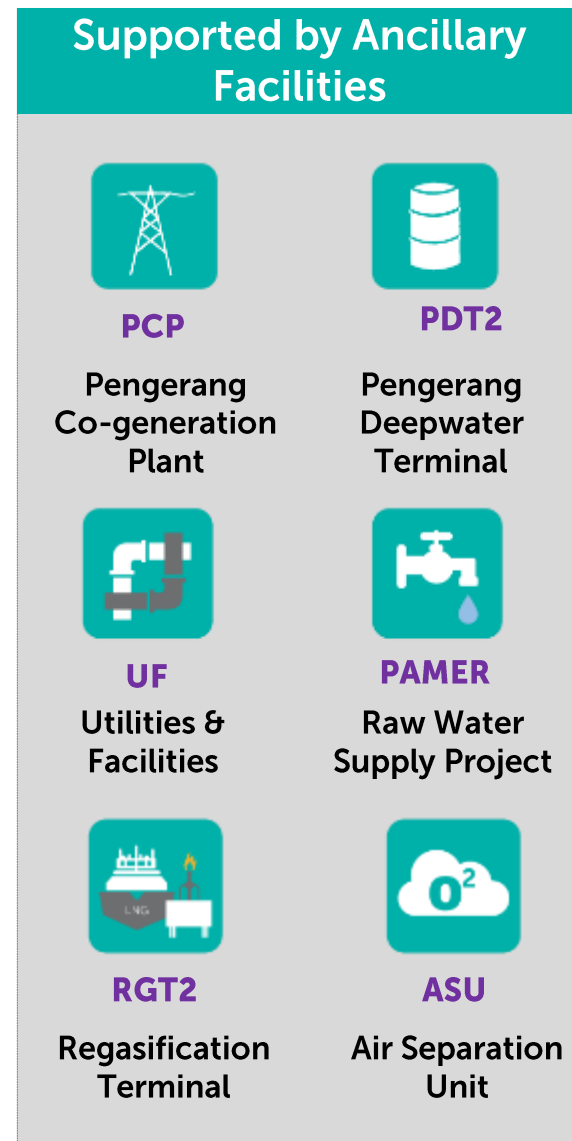
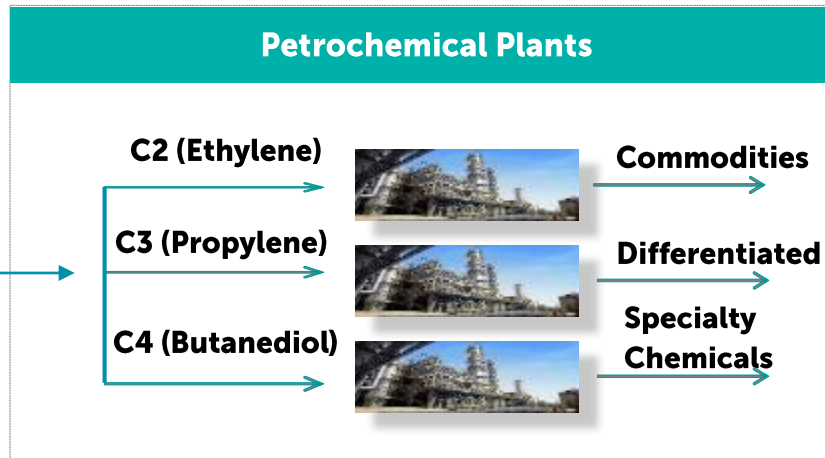
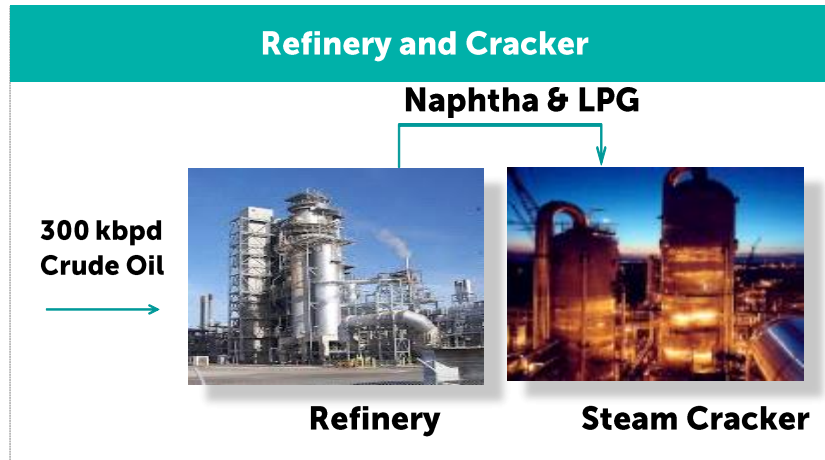
*as at end April 2018

New JV: PRefChem Petrochemical Company Sdn Bhd



PETRONAS

Growth





PC Isononanol further extends our foray into specialty chemicals

Growth

Location

- Pengerang, Johor

Product

- INA used in the production of plasticizer

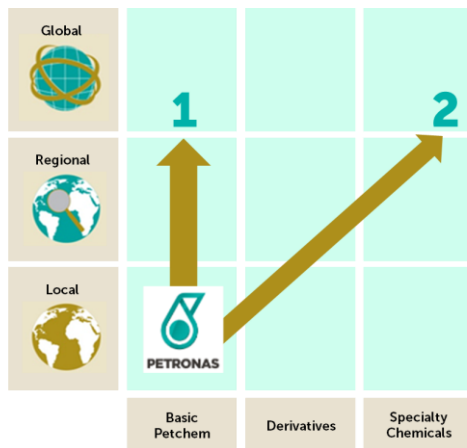
Position

- The 2nd largest INA plant in Southeast Asia



Growth

PCG has a clear strategy to grow specialty chemicals portfolio and future proof our business



1. Strong in basic petrochemicals
2. Selectively diversify into derivatives, specialty chemicals and solutions

Market-backed Portfolio

Growth Levers

1 **Extend Value Chain**

Maximise value from RAPID molecules & PCG existing complexes

2 **Build Specialty Platform**

Venture into attractive segments based on megatrends

3 **Create Optionality for Growth**

Invest in innovative and breakthrough technologies through seed capital

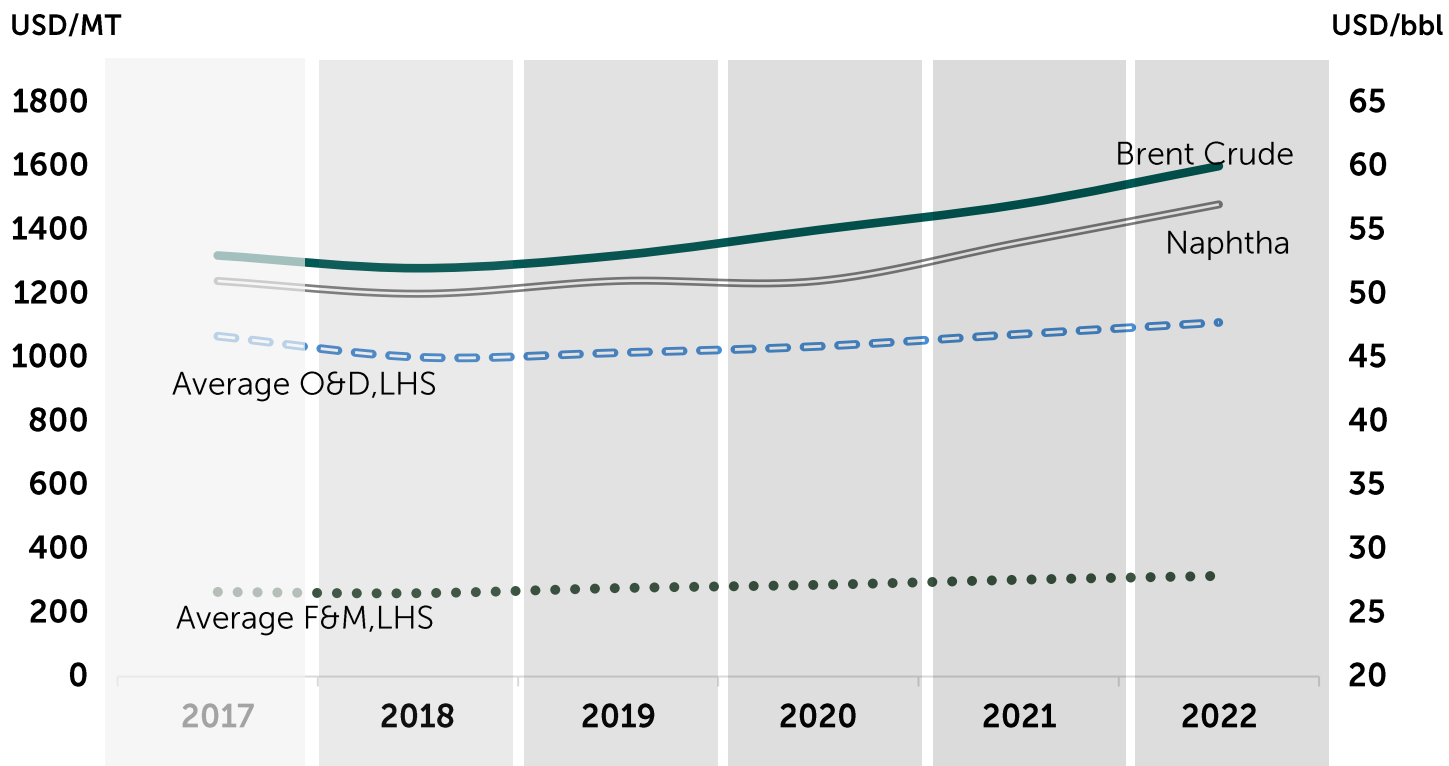


Outlook



Stable prices, demand remains strong

Outlook



Focus areas for 2018

Outlook

- 1 Sustain world class **operational excellence**
- 2 Deliver **commercial & innovation excellence**
- 3 Execute **growth** projects effectively
- 4 Grow portfolio and **future-proof** business

This page is intentionally left blank



Appendices

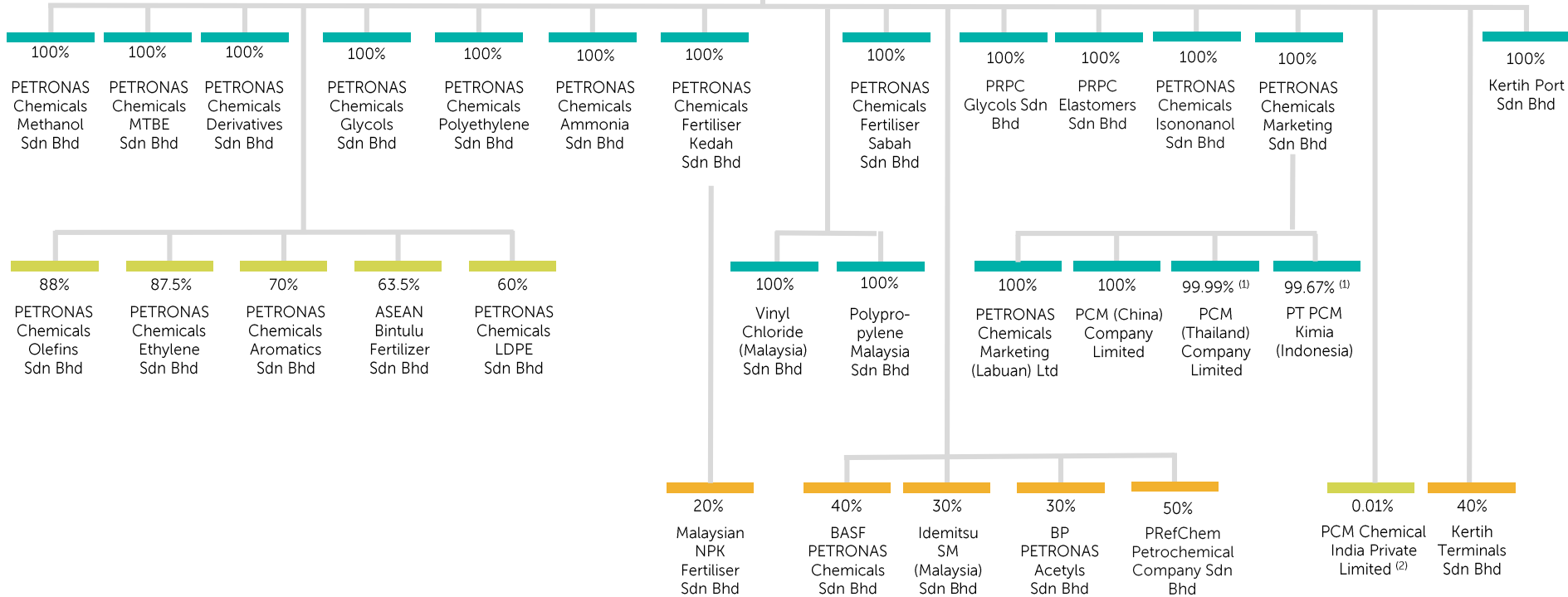
PCG Corporate Structure



PETRONAS

64.35%

PETRONAS Chemicals Group Berhad



- █ Wholly-owned subsidiaries
- █ Partly-owned Subsidiaries
- █ Joint ventures and associates

(1) Wholly-owned subsidiary as remaining shareholding is held through other subsidiaries within PCG
 (2) Subsidiary pursuant to Malaysian Financial Reporting Standard 10

PCG Key Management

Significant experience in the industry with proven track records



Datuk Sazali Hamzah

**Managing Director /
Chief Executive Officer**

- Responsible for the overall operational, financial, and sustainable management of PCG and its subsidiaries
- Chartered Fellow of the Institution of Chemical Engineers (IChemE), UK
- Previously MD/CEO of PETRONAS Penapisan (Melaka) Sdn. Bhd.



Rashidah Alias

**Chief
Financial Officer**

- Responsible for the management of all financial and fiscal aspects of PCG
- Fellow of the Institute of Chartered Accountants Australia and New Zealand
- Member of the Malaysian Institute of Accountants
- Previously Senior General Manager of Group Treasury in PETRONAS



Mahadzir Rani

**Head of
Manufacturing**

- Responsible for PCG's overall operational excellence inclusive of plant management and centralised services
- Previously CEO of PETRONAS Chemicals Methanol Sdn. Bhd.
- Prior appointments at PETRONAS Chemicals Fertiliser Kedah, PETRONAS Chemicals MTBE and PETRONAS Penapisan Terengganu Sdn. Bhd.



Shamsairi M Ibrahim

**Head of
Commercial**

- Responsible for PCG's overall commercial excellence
- CEO of PETRONAS Chemicals Marketing Sdn. Bhd. and PETRONAS Chemicals Marketing (Labuan) Ltd.
- Previously Head of Olefins & Derivatives, PCG.
- Prior appointments at PCOGD, MITCO Japan and Malaysia LNG Sdn. Bhd.



Akbar Md Thayoob

**Head of Strategic
Planning and Ventures**

- Responsible for PCG's overall strategic planning, business development and ventures development
- Involved in various operations, strategy and business planning within PETRONAS
- Previously Head of Retail Business, PETRONAS Dagangan Berhad

PCG Production Capacity

Olefins & Derivatives

Plant	Ownership	Location	Product	Nameplate Capacity
PETRONAS Chemicals Ethylene Sdn Bhd	87.5%	Kertih	Ethylene	400,000 mtpa
PETRONAS Chemicals Polyethylene Sdn Bhd	100%	Kertih	HDPE/LLDPE, pipe-grade PE	300,000 mtpa
PETRONAS Chemicals Olefins Sdn Bhd	88%	Kertih	Ethylene Propylene	600,000 mtpa 84,720 mtpa
PETRONAS Chemicals Glycols Sdn Bhd	100%	Kertih	Ethylene oxide Ethylene glycols	385,000 mtpa 380,000 mtpa
PETRONAS Chemicals Derivatives Sdn Bhd	100%	Kertih	Ethoxylates Ethanolamines Glycol ethers Butanol Butyl acetate Nonylphenol ethoxylates Polyethylene glycol Polyalkaline glycol	30,000 mtpa 75,000 mtpa 60,000 mtpa 140,000 mtpa 50,000 mtpa 30,000 mtpa 15,000 mtpa 10,000 mtpa
PETRONAS Chemicals LDPE Sdn Bhd	60%	Kertih	LDPE	255,000 mtpa
PETRONAS Chemicals Aromatics Sdn Bhd	70%	Kertih	Paraxylene Benzene	500,000 mtpa 187,700 mtpa
PETRONAS Chemicals MTBE Sdn Bhd	100%	Gebeng	MTBE Propylene n-butane	300,000 mtpa 380,000 mtpa 135,000 mtpa

PCG Production Capacity

Fertilisers & Methanol

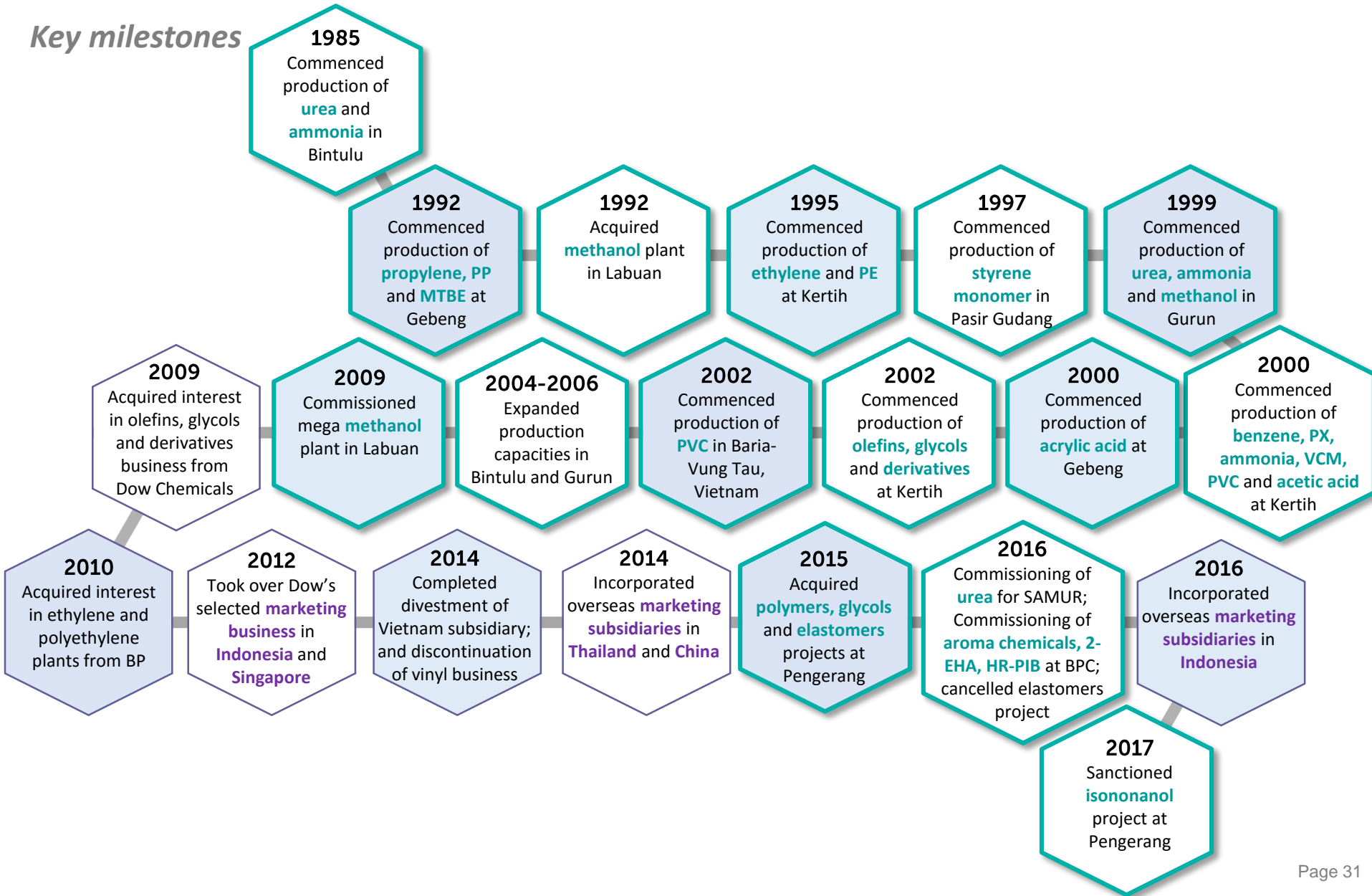
Plant	Ownership	Location	Product	Nameplate Capacity
ASEAN Bintulu Fertilizer Sdn Bhd	63.47%	Bintulu	Urea Ammonia	750,000 mtpa 450,000 mtpa
PETRONAS Chemicals Fertiliser Kedah Sdn Bhd	100%	Gurun	Urea Ammonia Methanol	683,000 mtpa 400,000 mtpa 66,700 mtpa
PETRONAS Chemicals Sabah Sdn Bhd	100%	Sipitang	Urea Ammonia	1,200,000 mtpa 740,000 mtpa
PETRONAS Chemicals Ammonia Sdn Bhd	100%	Kertih	Ammonia Oxogas Carbon Monoxide	450,000 mtpa 435,700 mtpa 246,700 mtpa
PETRONAS Chemicals Methanol Sdn Bhd	100%	Labuan	Methanol	666,000 mtpa 1,665,000 mtpa
Malaysian NPK Fertilizer Sdn Bhd ⁽¹⁾ <i>(associate company of PETRONAS Chemicals Fertiliser Kedah)</i>	20%	Gurun	NPK	310,000 mtpa

⁽¹⁾ Associate company

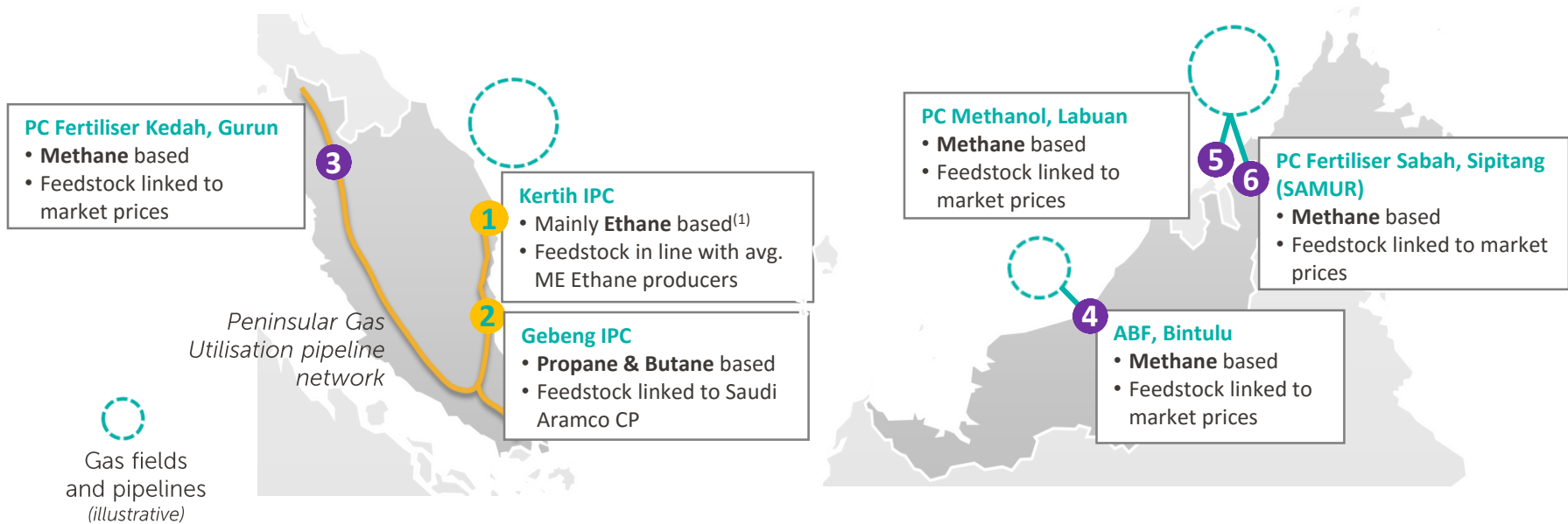
Over three decades of experience in the industry



Key milestones



Advantageous arrangements for gas feedstock



	Ethane (as feedstock)	Methane (as feedstock)	Methane (as fuel gas)
Use	<ul style="list-style-type: none"> • By-product of gas separation and processing • Used in production of olefins and its derivatives • PCG is only user and customer 	Raw material in production of methane based products	Process (furnace), Utilities and power generation
Pricing volatility	<ul style="list-style-type: none"> • Broadly fixed prices in long term, negotiated contracts • Relatively low cost base 	<ul style="list-style-type: none"> • Linked to end-product market prices and moves accordingly-margin protection 	<ul style="list-style-type: none"> • Regulated prices • Subject to removal of subsidy and moving towards market prices

⁽¹⁾ Other feedstock in Kertih IPC: Butane, Methane and Heavy Naphtha



Thank You

For enquiries please contact us at:

**PETRONAS Chemicals Group Berhad
Level 14, Tower 1, PETRONAS Twin Towers
KUALA LUMPUR CITY CENTRE,
50088 KUALA LUMPUR, MALAYSIA**

**petronaschemicals_ir@petronas.com
www.petronaschemicals.com.my**