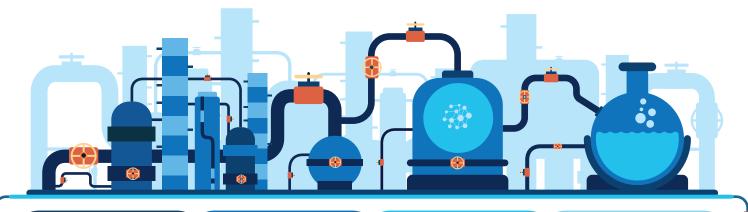
## **ENERGY & CHEMICALS INDUSTRY TRANSFORMATION MAP**

## **Building a Globally Competitive Energy & Chemicals Hub**







**REFINERIES** 

**CRACKERS** 

**PETROCHEMICALS** 

**SPECIALTY CHEMICALS** 

million barrels/day

million tonnes/ annum of ethylene Wide range of petrochemicals

(E.g. Elastomers, Polyolefins, Oxo-chemicals) **Across different** end markets

(E.g. Oilfield & Water, Consumer, Lube Additives, AgroChem, Animal Nutrition)

## **TRANSFORM**

Transform existing base through the adoption of innovative technologies **DIVERSIFY & GROW** 

Diversify into new growth markets and develop innovation capabilities to capture growth



Boost productivity, rejuvenate assets and optimize resources through the adoption of automation and digital technologies

Manufacturing activities

Anchor high value-added Advanced

Target at least 20 plants, including all refineries and crackers to adopt Advanced Manufacturing technologies by 2020

**ENSURING GOOD JOBS** FOR SINGAPOREANS

> Deliver government programmes and initiatives to help Singaporeans over the course of their career, such as Skills Framework, Earn & Learn and **Professional Conversion Programmes**



Diversify and upgrade product slate towards high value-added petrochemicals and specialty chemicals

Grow and develop innovation capabilities to help companies accelerate and shorten innovation cycles



Target at least 20 new or expanded application development centres by 2025 with an increase of \$55 million in business expenditure on R&D

## TRADE ASSOCIATIONS & CHAMBERS AS KEY PARTNERS



Foster closer collaborations with trade associations and chambers such as Singapore Chemical Industry Council (SCIC) and Association of Process Industry (ASPRI) to further develop the industry



