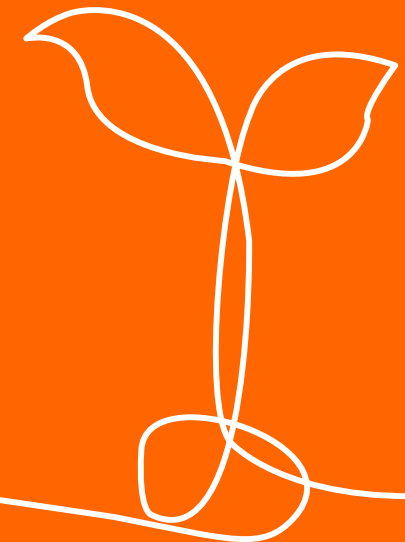


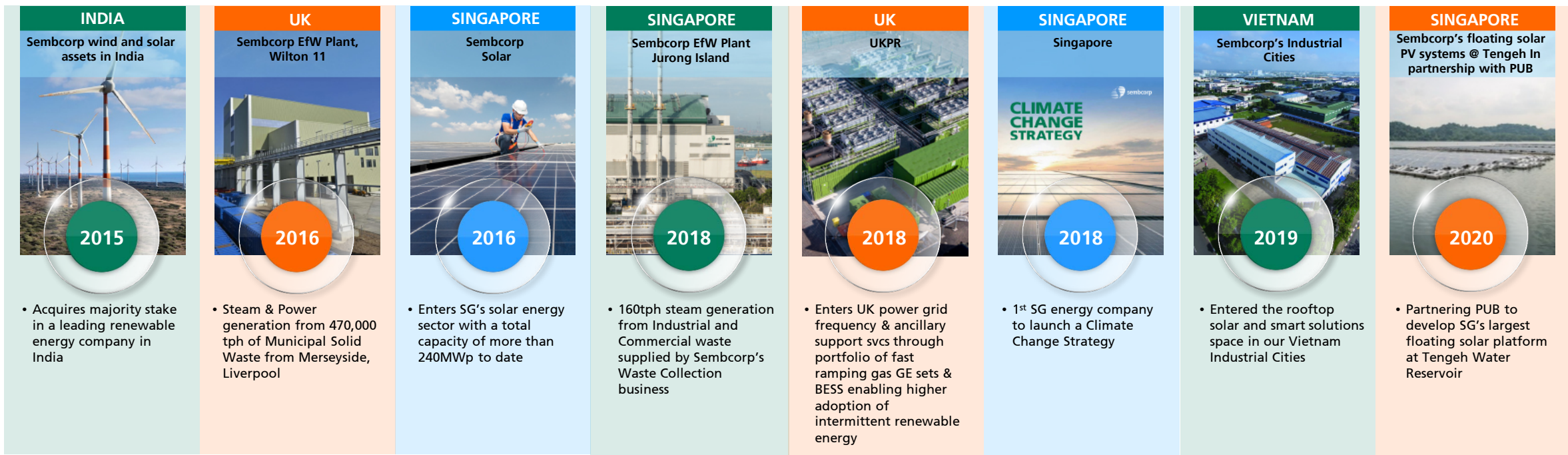
Creating a Low-Carbon Energy Future Together

Tan Cheng Guan
Head, Renewables & Environment
Sembcorp Industries



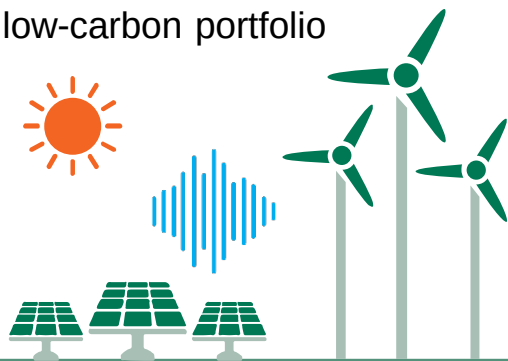
**Sembcorp's journey towards a
low- carbon future started 25
years ago..**





Our Strategies in Creating a Low Carbon Energy Future

**Move towards
a low-carbon portfolio**



**Leverage technology
for better performance**



**Create novel
sustainable solutions for end-users**



**Collaboration
with partners and stakeholders**

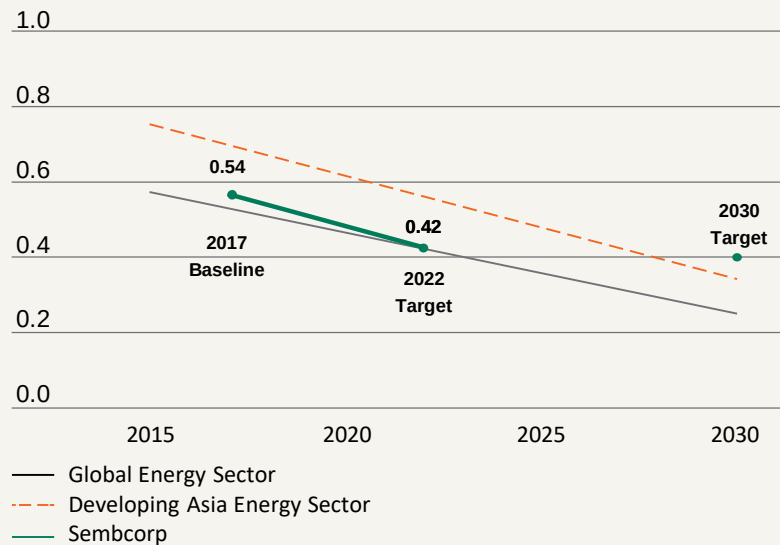


Sembcorp's Carbon Targets

Sembcorp has set aggressive targets to reduce GHG emissions intensity in line with a 2 degree celsius scenario



GHG Emissions Intensity (Current and Targeted)
Compared with IEA's 2°C Scenario (tCO₂e/MWh)



OUR CARBON INTENSITY TARGETS



By 2022
22% reduction
to **0.42 tCO₂e/MWh**
from 2017 baseline

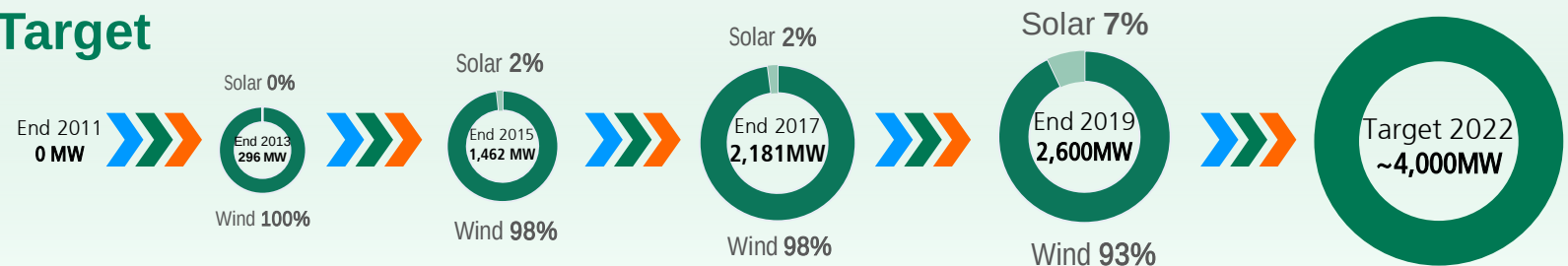


By 2030
>26% reduction
to **<0.40 tCO₂e/MWh**
from 2017 baseline

Our Renewables Capacity Target

>4000MW by 2022

*To be one of the region's
leading independent renewables
energy player*



Leveraging Technology



Sembcorp's Wind Performance Monitoring Centre in Gurgaon, India

- Digitisation of assets enabling the deployment of data analytics and smart algorithms to:
 - Improve Energy Based Availability
 - Better energy generation forecasting
 - Optimise energy generation through corrections on Yaw and Pitch misalignment
 - Predictive maintenance to maximise turbine availability



Sembcorp's Solar Performance Monitoring Centre in Singapore

- Use of advanced and intelligent systems via autonomous drones to:
 - Optimise O&M cost
 - Remote monitoring of panel performance and degradation
 - Remote monitoring of performance of inverters
 - Preventive maintenance of critical equipment such as inverters and sensors

Centralised Utilities – Example of Sustainable Solutions for Industries on Jurong Island



One-stop centralised utilities solution to customers in Jurong Island



About 415,000 metric tonnes of CO₂e avoided annually through efficiency and recycling & reuse of waste energy



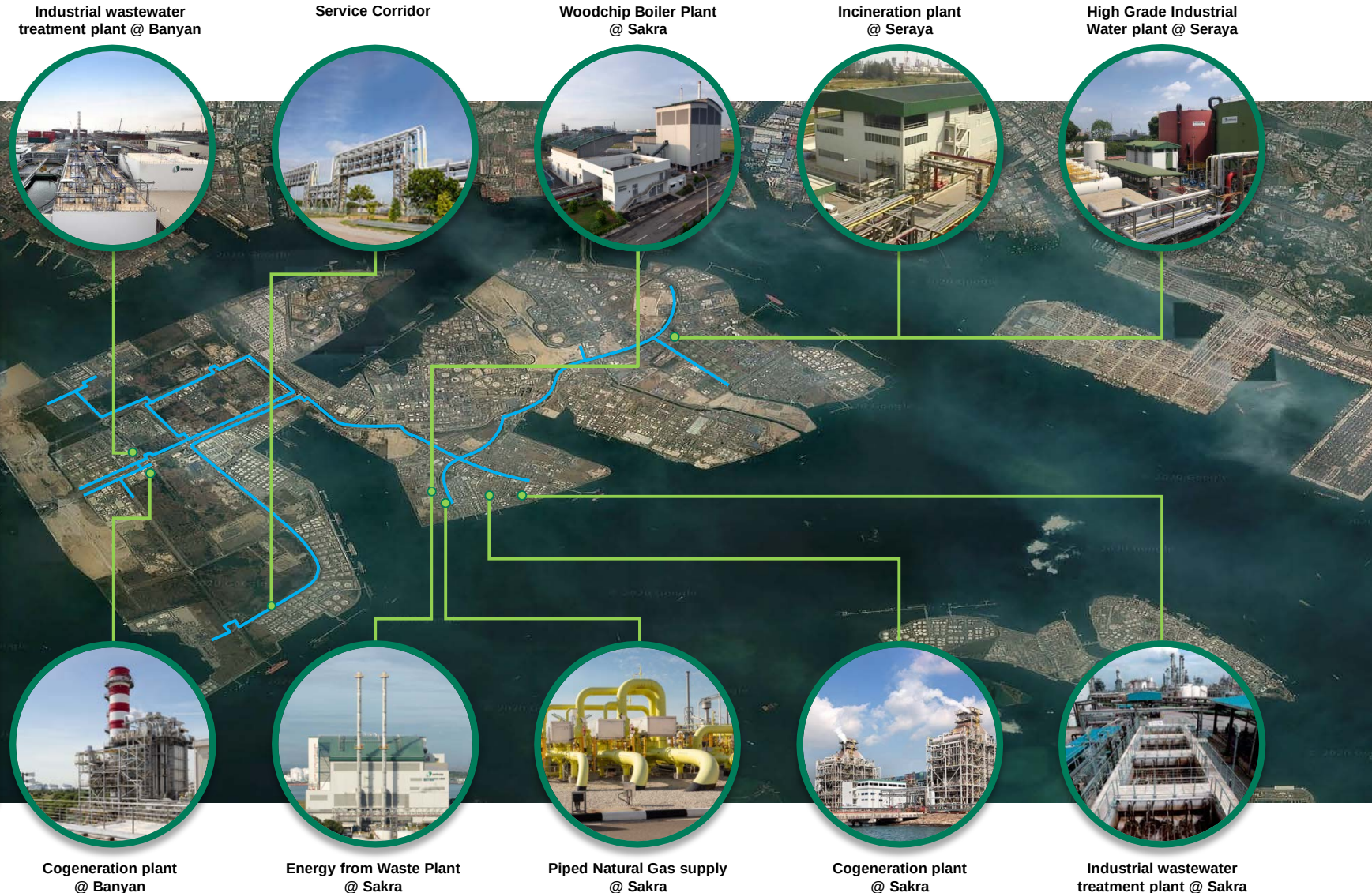
Over 30,000 cubic metres of water recycled for industrial use



Energy recovered from >300,000 tonnes of municipal solid waste annually

Sustainability benefits

- Lower carbon footprint for Utilities supply
- Scale and multi-utilities created opportunities for recycling economically
- Efficient use of land leading to higher unit investment per sqm of land in Jurong Island



Partnerships for Sustainability



Sustainability Solutions



Energy

Green energy and energy efficiency management, microgrids, BESS



Water

Wastewater treatment, reuse & energy recovery



Solid Waste

Waste to energy & recycling

Partners & Customers



Containers Printers Pte Ltd



Agility



Tiger



HETAT



APB SINGAPORE



Micron



facebook



UBS



BERTSCHI



CACHE LOGISTICS TRUST



Stolthaven



3M Science. Applied to Life.™



Oiltanking



SINGAPORE AIRLINES



KIM SOON LEE ONE-STOP Transportation & Moving Specialist



experia events that influence



ascendas Reit



HALLIBURTON



FRANKLIN OFFSHORE



WINSTON ENGINEERING



CHANGI EXHIBITION CENTRE



sats



SSMC



VF



WOH HUP BUILDING WITH INTEGRITY



STAMFORD tyres



jtc Breaking New Ground



EDB singapore



PUB SINGAPORE'S NATIONAL WATER AGENCY

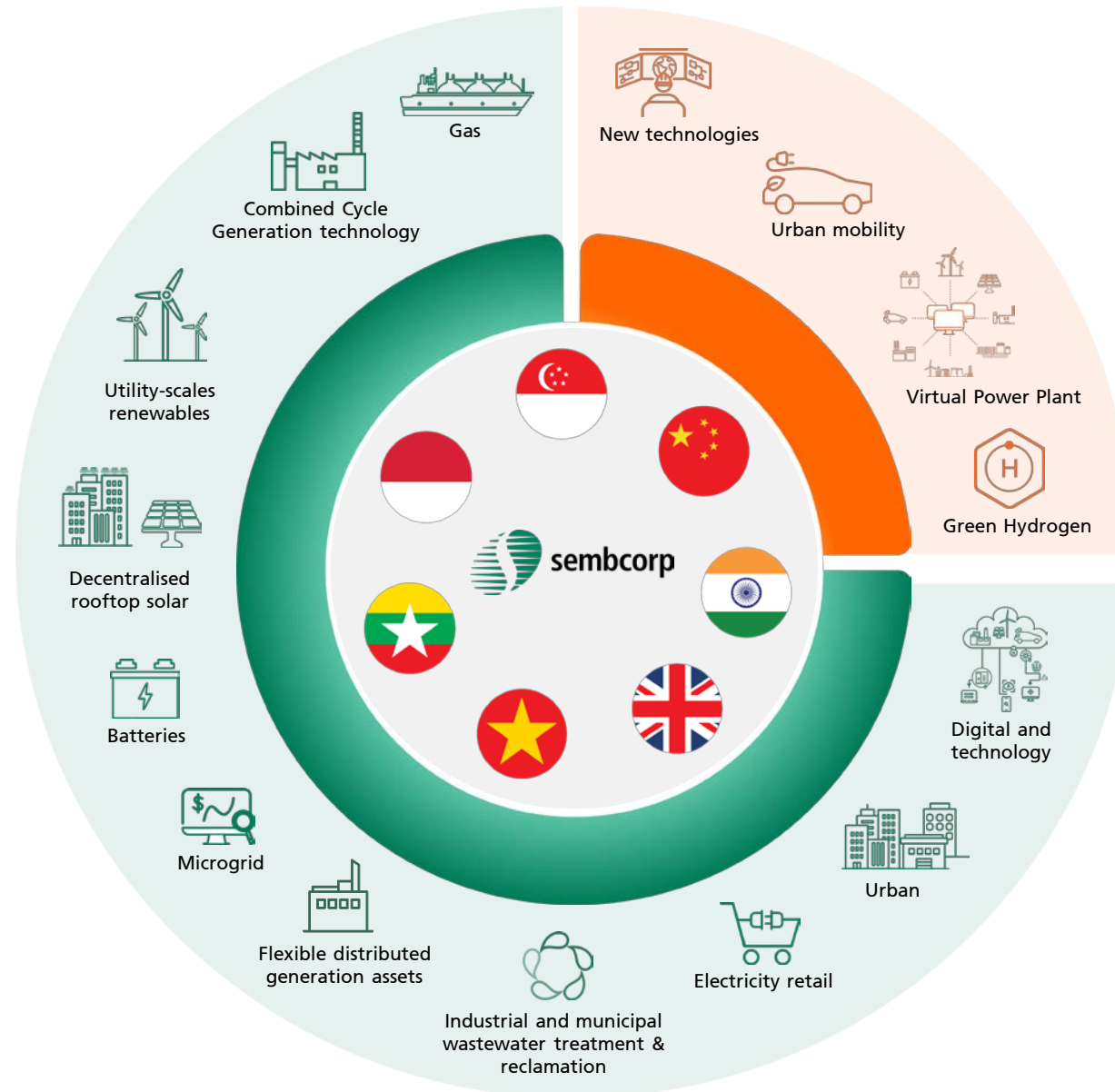


HOUSING & DEVELOPMENT BOARD



Amicus

A strong foundation for a sustainable future



Thank you

