

# 26<sup>th</sup> World Gas Conference

1 – 5 June 2015, Paris, France



Think Smaller. GTL is an economic way to monetise stranded gas

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Velocys



# Velocys – the company at the forefront of smaller scale GTL

- **Leader** in smaller scale gas-to-liquids technology
  - 15 years and >\$300 million invested in product development
  - Exhaustive global patent protection (>7,600 granted GTL patent claims)
- First class **partners** offering a **complete GTL solution**
  - Haldor Topsøe, Ventech, Hatch, Mourik, SGS, Shiloh
- **Commercial roll-out underway**



- **Well capitalised with strong resources**
  - Commercial centre in Houston; technical centres in Ohio and UK
  - Permanent pilot plant in operation

# Why smaller scale GTL rather than LNG?

- Produces a “drop-in” liquid fuel
  - Fully compatible with existing infrastructure and engines
  - No barrier to switching for consumers
- Demand for diesel increasing
- Diesel production for local market
- Higher value product is produced
- Hedge between oil and gas markets



# The historical face of GTL – mega-scale projects

Conventional Fischer-Tropsch reactor





Think Smaller™



# Smaller is bringing GTL to the mainstream

Conventional Fischer-Tropsch reactor



Velocys Fischer-Tropsch reactor



Velocys smaller scale GTL...

# Improves the economics

Our design leverages standardisation, unlocking opportunities that were previously uneconomic

- Typically from 1,500 to 15,000 barrels per day (15 – 150 mmscfd)
- Our design is specific for smaller scale plants, not just a scaled down large plant
- Components are standardised, reducing costs
- Our strategic partnerships allow us to deliver at volume



Reactor manufacture

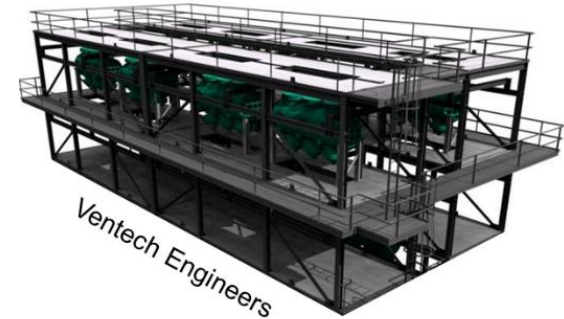




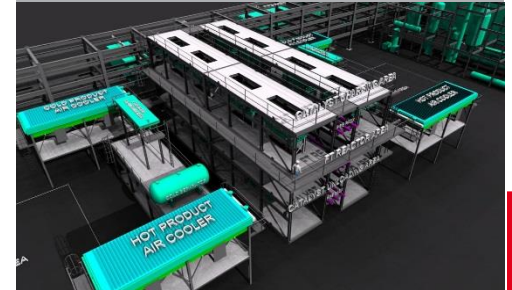
# Works anywhere

Our plants are modular, so they are easier to ship and easier to install, even in the most remote or challenging locations

- Velocys reactors are significantly smaller and lighter than conventional technology
- 70% of a plant can be factory-built before installation
- Modular components fit in standard containers for ease of shipping
- Building is fast, we have reduced the risk of delays, and plants can even be integrated with existing facilities



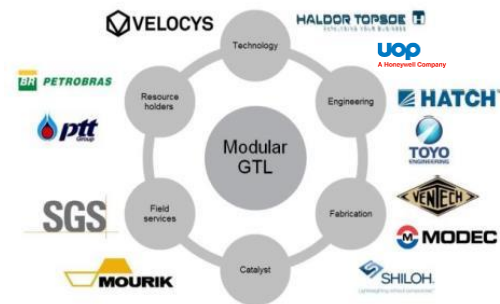
1,400 bpd FT process unit  
designed by Ventech Engineers  
27m L x 14m H x ~12m W



# Works for anyone

Velocys unlocks more business by working flexibly – allowing companies to capitalise on more opportunities

- Smaller projects means more opportunities, accessible to more companies
- We have strong partnerships with key players throughout the value chain
- Velocys can support all aspects of project development and execution



# Manufacturing – ready for mass deployment

- Multi-million dollar state-of-the-art production facility
  - Cost effective mass production
  - Consistent high quality
- Reactors approved as **fit for deployment**
- Catalyst service partner **trained and certified**



Reactor manufacture



Catalyst loading

# Commercial projects

- Joint venture with Waste Management, NRG Energy and Ventech to develop multiple plants (**ENVIA Energy**)
  - **Final Investment Decision (FID)** taken in 2014 to proceed with first project
  - Landfill biogas + natural gas
  - Will be Velocys commercial reference site
  - Commercial operation expected in H1 2016
- Acquisition of leading US GTL project developer
  - Stimulate early market adoption
  - Ashtabula GTL project: initially 4,800 bpd with future expansion planned
  - FID targeted end 2015



Thank you



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