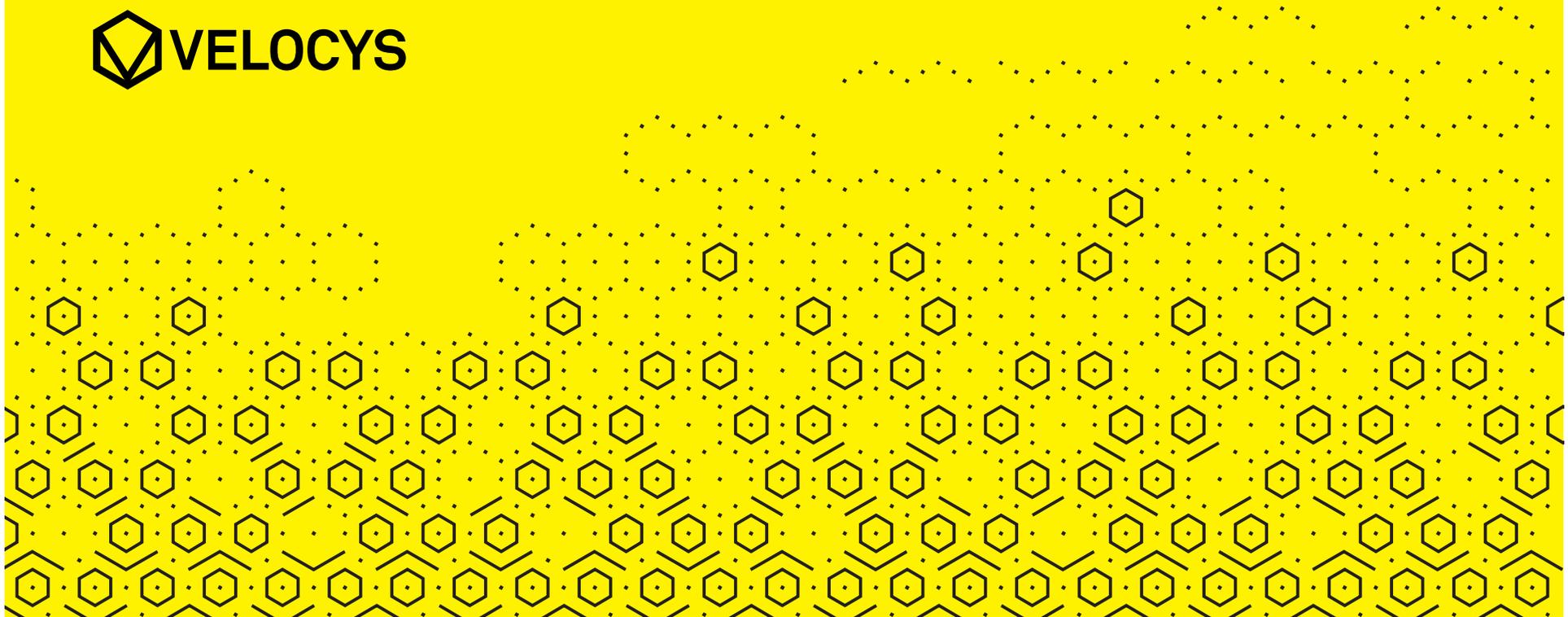


Jeff McDaniel
Zeus GTL North America, June 2014

Smaller scale GTL

The roll-out



Why are we here today?

Snapshots from the past few months

- Articles
 - *“Small gas-to-liquids plants get a huge boost”* Forbes
 - *“Renewable energy: Biofuels heat up”* Nature
 - Bloomberg
- Investor reports
 - *“What if ‘Small-scale gas to liquids’ was the next ‘Shale gas’? Are we on the verge of another energy revolution?”* Bernstein report
- Industry leaders
 - *“We want to work with Velocys because you are the leader in the GTL industry”* VP major oil company
- **Action**
 - **JV formed with two Fortune 500 companies to build GTL plants**

Velocys

Leader in smaller scale GTL

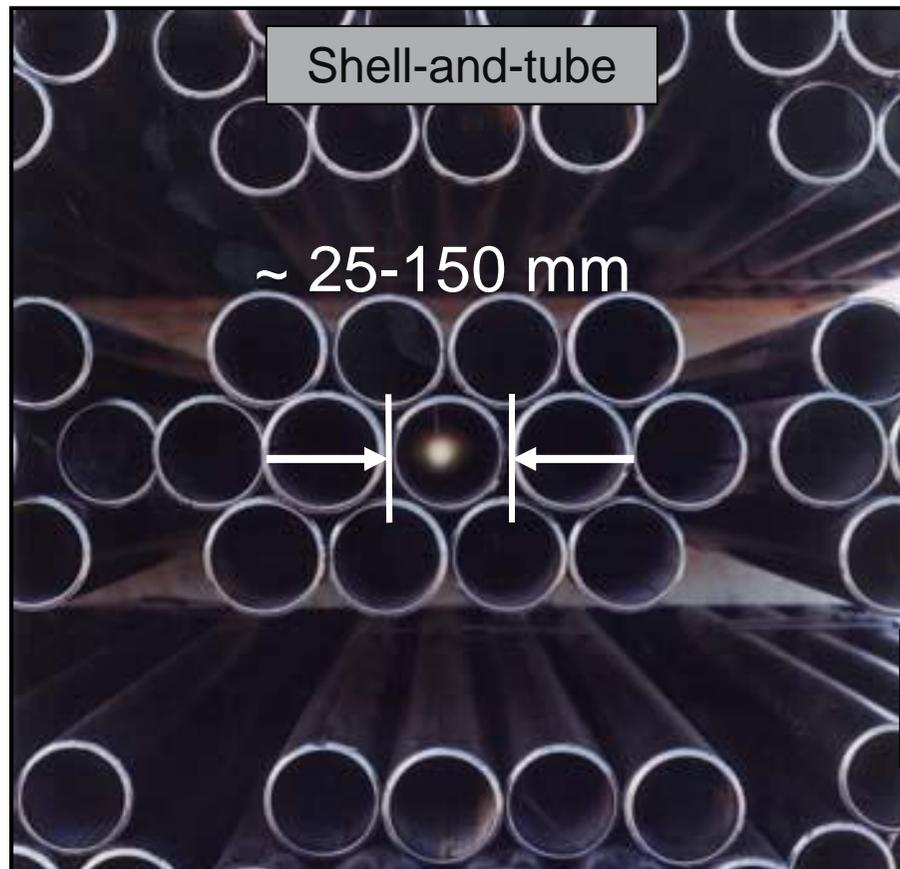
- **Leader** in smaller scale gas-to-liquids technology
 - 15 years and >\$300 million invested in product development
 - Exhaustive global patent protection (>7,500 granted GTL patent claims)
- First class **partners** offering a **complete GTL solution**
 - Haldor Topsøe, Ventech, Hatch, Toyo, Mourik, SGS, Shiloh
- **Commercial roll-out underway**



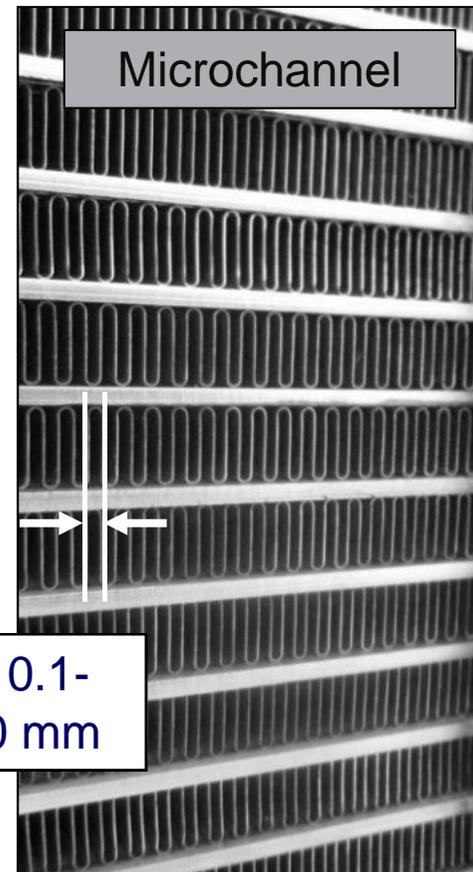
- **Well capitalised with strong resources**
 - Commercial center in Houston, Texas; technical centers near Columbus, Ohio and Oxford, UK
 - Permanent pilot plant in operation

Large-scale economics at smaller scales

Velocys enables smaller plants



Conventional FT reactor

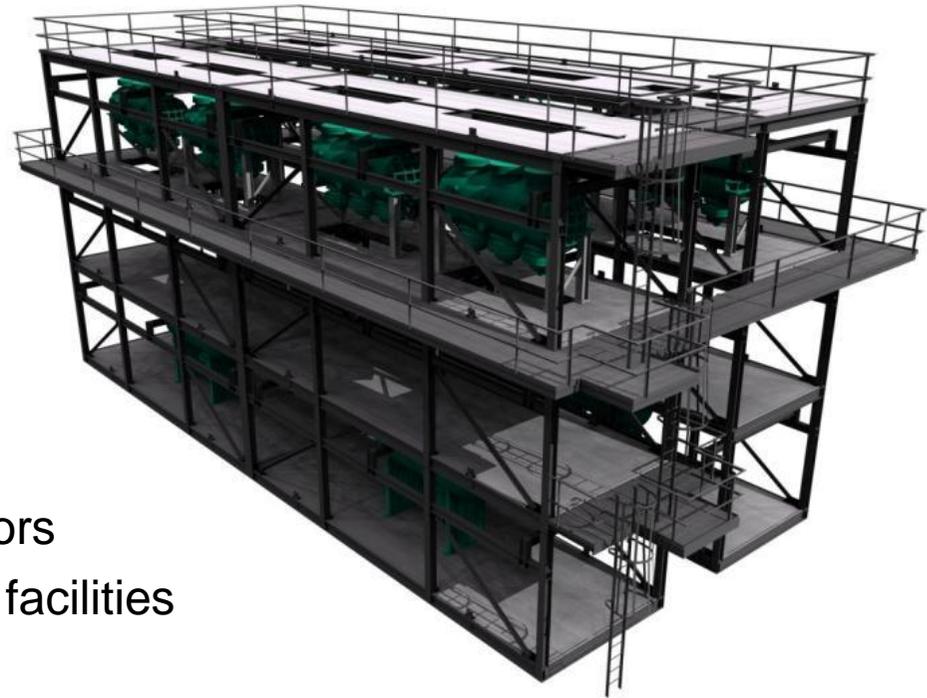


Velocys FT reactor

GTL for the mainstream of the industry

Velocys modular GTL

- **Broader range of sites**
 - 1,500-15,000 barrels per day
 - Suitable for remote locations
- **Lower risk**
 - Smaller investments
 - Less risk of cost over-runs
- **Reduced costs**
 - Standardized modules and reactors
 - Possible integration with existing facilities
- **Easier to execute and expand**
 - Quicker plant construction (18-24 months)
 - Easier to permit, supply, build and operate
 - Additional trains can be added later



1,400 bpd FT process unit
designed by Ventech Engineers
90 ft L x 46 ft H x ~40 ft W

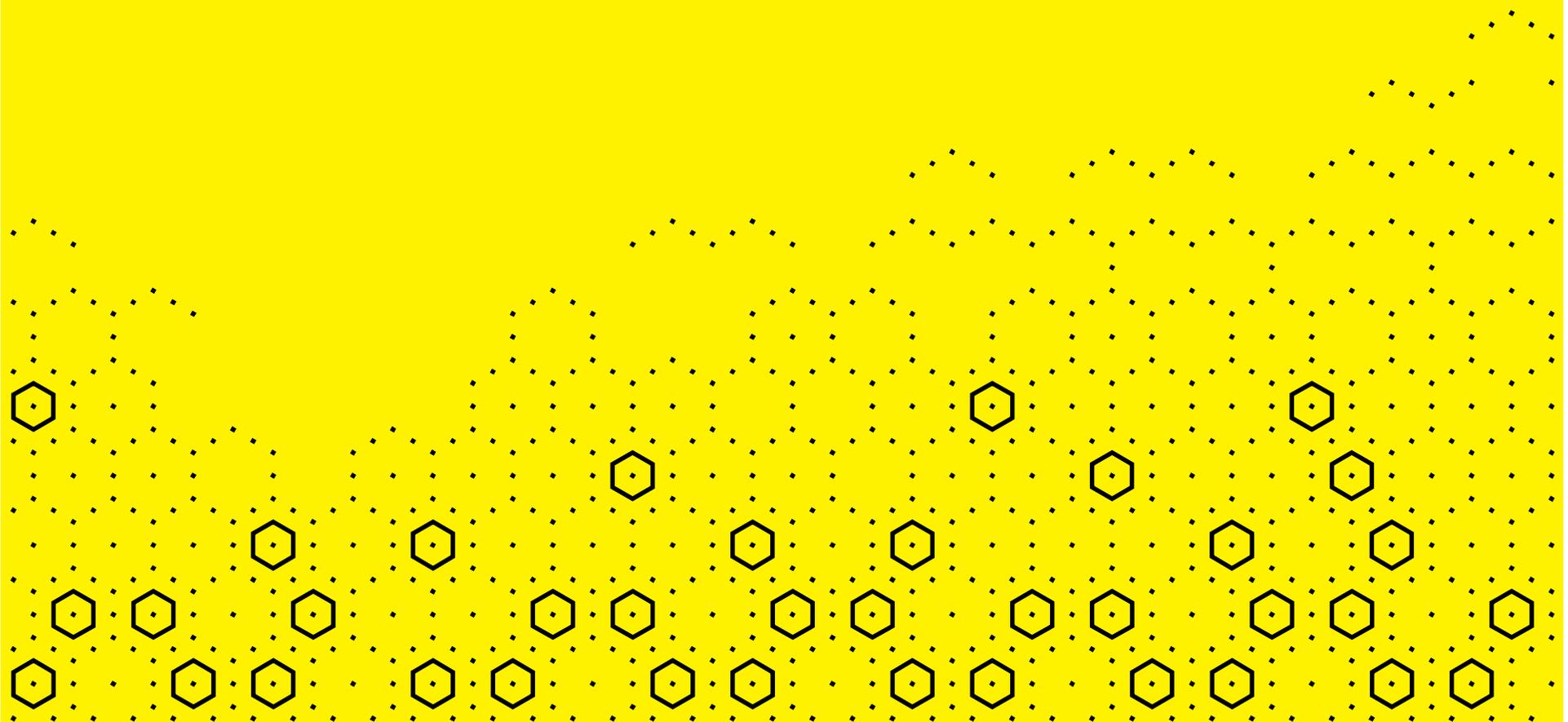
Many applications

From low-value gas to high-value fungible products

- Source of new demand for abundant **shale gas** in North America
- Economic route to market for **stranded gas** (over 30% of world reserves are otherwise uneconomic to bring to market)
- Solution to problem of **associated gas** (5% of natural gas production is flared)
- **Valuable products** for existing and new applications
 - Ultra low-sulfur diesel (70 cetane) & jet
 - Waxes, lubricants and solvents
- Not just gas: also **biomass** and **coal**



Commercial projects Selection



Highlights

Commercial progress

- Entered **GTL joint venture** with Waste Management, NRG Energy and Ventech
 - First project in advanced stages
- Pinto Energy Ashtabula project **secured** air and industrial storm water **permits**
 - Notice to proceed expected in 2014
- **Sale of 175 bpd reactor** to a CIS customer
- PTT began **FEED study for 1,000 bpd GTL plant** using Velocys technology
- Received **final success milestone** for Petrobras demonstration



JV with Waste Management, NRG Energy and Ventech

Monetizing renewable gas with natural gas through GTL

- **WM** (Fortune 500)
 - North America's leading provider of comprehensive waste management services
 - Role: renewable gas and certain locations
- **NRG** (Fortune 500)
 - Owns largest independent power generation portfolio in US
 - Role: project development and management
- **Ventech**
 - Global leader in design and construction of modular refineries
 - Role: engineering, fabrication, EPC



First JV project

Adjacent to WM East Oak landfill in Oklahoma City, USA



- WM piloting GTL since 2010
- Engineering completing; final permit submitted
- **Final decision to proceed imminent**
- Development activities for additional facilities underway



GreenSky London

Renewable jet fuel in London

- Velocys selected by Solena Fuels as FT supplier for commercial **2,500 bpd** waste-biomass-to-liquids plant
- GreenSky London plant in partnership with **British Airways**
- **Competitive selection** process after technology evaluation advised by **Fluor**
- **BA** to provide off-take for jet fuel
- Pre-Front End Engineering completed
- **Site selection** announced April 2014
 - Site of former Coryton oil refinery in Thurrock, Essex, UK



Picture courtesy of British Airways

Red Rock Biofuels

US DoD sponsored BTL

- Velocys selected for **1,100 bpd** biomass-to-liquids (BTL) plant
 - Located in Oregon, USA
 - Using forestry waste feedstock
- Supported by US Department of Defense and US Department of Energy
 - Received \$4.1m phase 1 grant for engineering
 - 1 of 4 projects eligible to apply for **\$70m construction grant**
 - DOE participation enables 2 projects to be funded in 2014, and more in later years
- FEED study complete and submitted with phase 2 proposal
 - DOD targeting late July for phase 2 grant decision



Pinto Energy

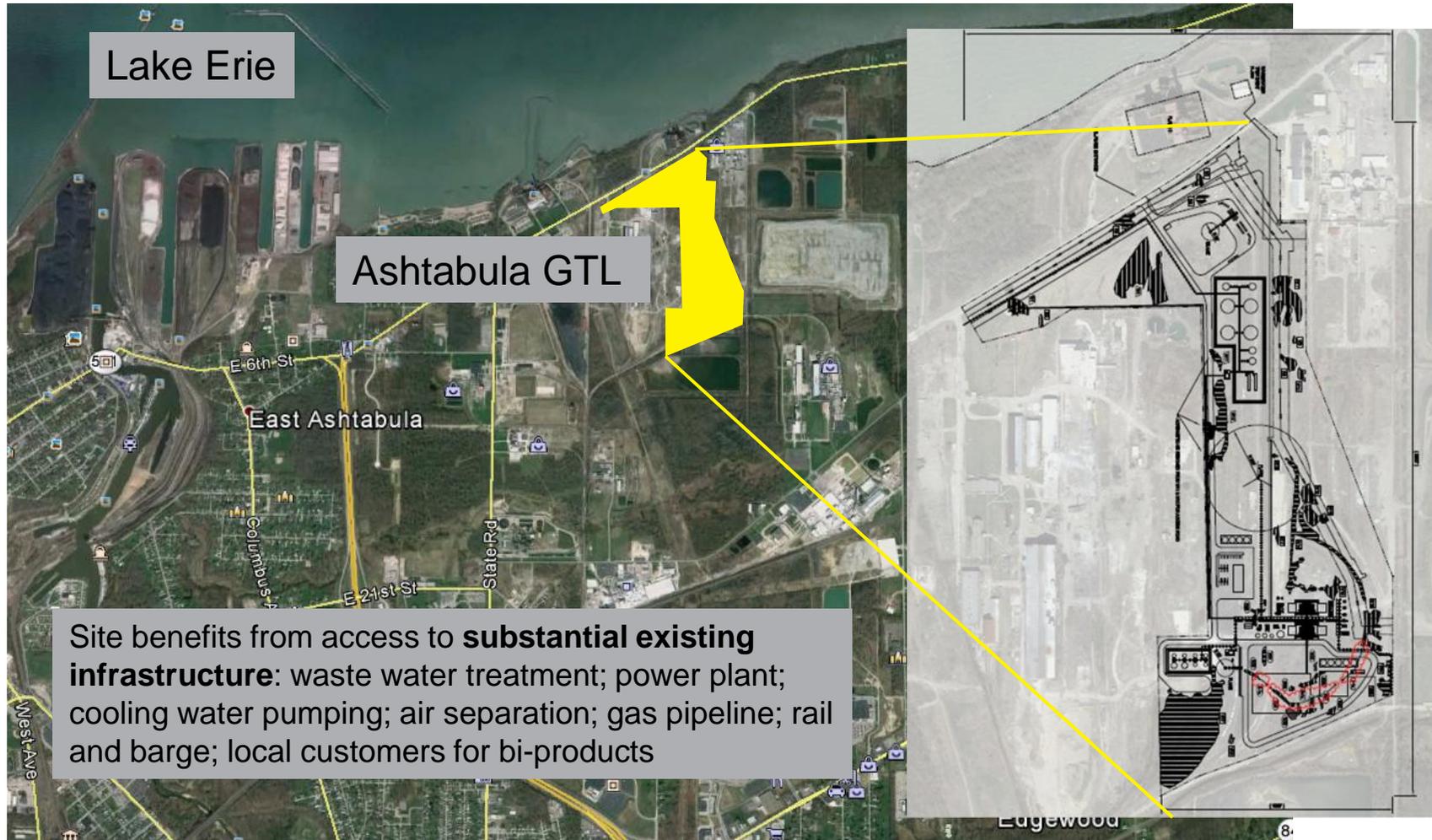
One of many

- Velocys selected by Pinto Energy
 - Houston-based developer of GTL facilities in North America
 - **Portfolio of sites** for development of smaller scale GTL
- 2,800 bpd GTL plant in Ashtabula, **Ohio**, USA
 - **Substantial existing infrastructure** enhances economics
 - First phase of a **multi-train** facility
- Ventech began engineering in April 2013
- Air permit recently **granted**
 - Construction storm water permit and wetlands permit expected soon

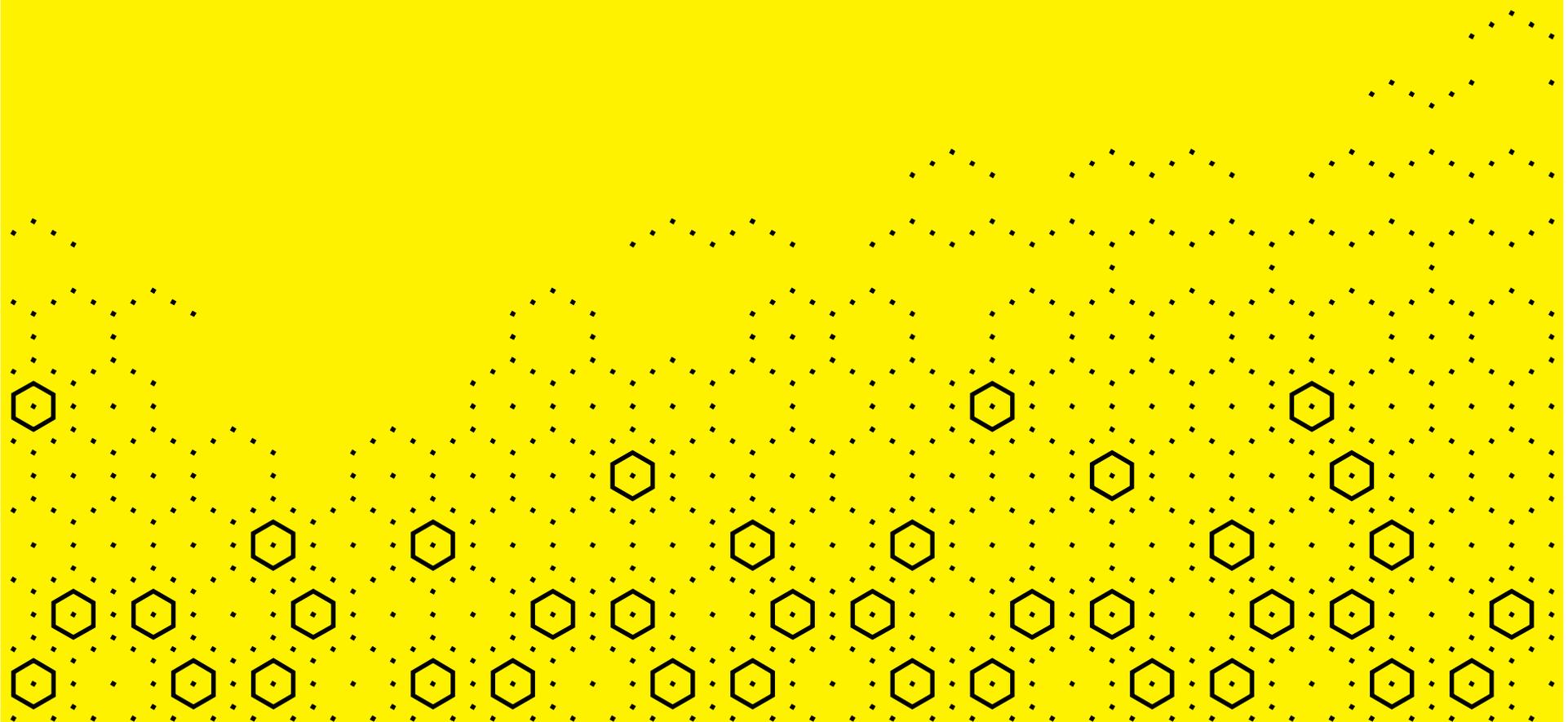


Pinto Energy: Ashtabula project

Location and layout



Commercial readiness



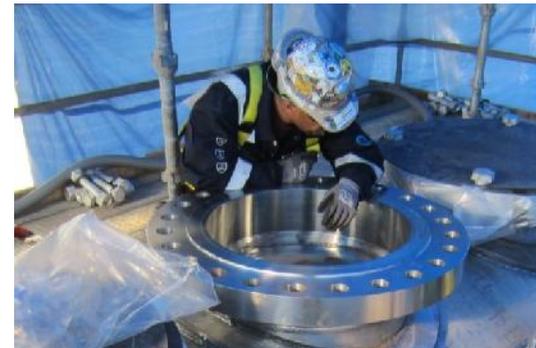
Supply chain

Ready for commercial deployment

- Commercial FT **reactor manufactured**
 - Optimized final design for manufacture at volume
 - Demonstrated and finalized service, manufacture & quality protocols
- Catalyst service partner Mourik **trained and certified**
 - Catalyst loaded
 - Process declared as *“fit for commercial application”*
- Reactor approved as **fit for deployment** by independent third party



Commercial reactor



Catalyst loading

Supply chain partnership with Shiloh

- N. America's supplier of engineered metal products to automotive industry
- Partnership to
 - Continuously improve FT reactor manufacturing
 - Enhance overall GTL plant costs
- Shiloh contributing
 - Several \$M in manufacturing resources
 - Dedicated team of engineers
 - Strategic investment in Velocys



Manufacturing

Ready for mass deployment

- Multi-million dollar state-of-the-art production facility
 - Cost effective mass production
 - Consistent high quality
 - Initial capacity supports **10,000 bpd/yr** of orders
 - Plans in place to support a **4x capacity increase**
- Reactor approved as **fit for deployment**
- Catalyst service partner **trained and certified**



Reactor manufacture



Catalyst loading



Pilot plant and training facility

Supporting sales and delivery

- Integrated GTL pilot plant at the Velocys Ohio, USA site
- Designed to provide
 - Performance data to support differing client designs
 - Product for client studies
 - Permanent training facility for plant operators
- Platform for
 - Developing our own field support staff
 - Demonstrating future product generations



Engineering partner example

Ventech Engineers

- Placed reactor **order** for **1,400 bpd** capacity
 - 8 commercial scale reactors (\$8 million)
 - Kick-started supply chain
 - Production underway
- Several GTL plants in engineering
 - Considering investing in some of these
- Progressing **own GTL project** in Texas, USA
- Participating in JV with Velocys, Waste Management and NRG Energy



Resource build-up

Houston operation

- Houston has become the Company's commercial and engineering center
 - Hub of global oil & gas industry
 - Improved access to talent
 - **Accelerate commercial roll out** and reinforce **market leading** position
- CEO now based in Houston
- Actively recruiting
 - Process engineers
 - Business development and marketing

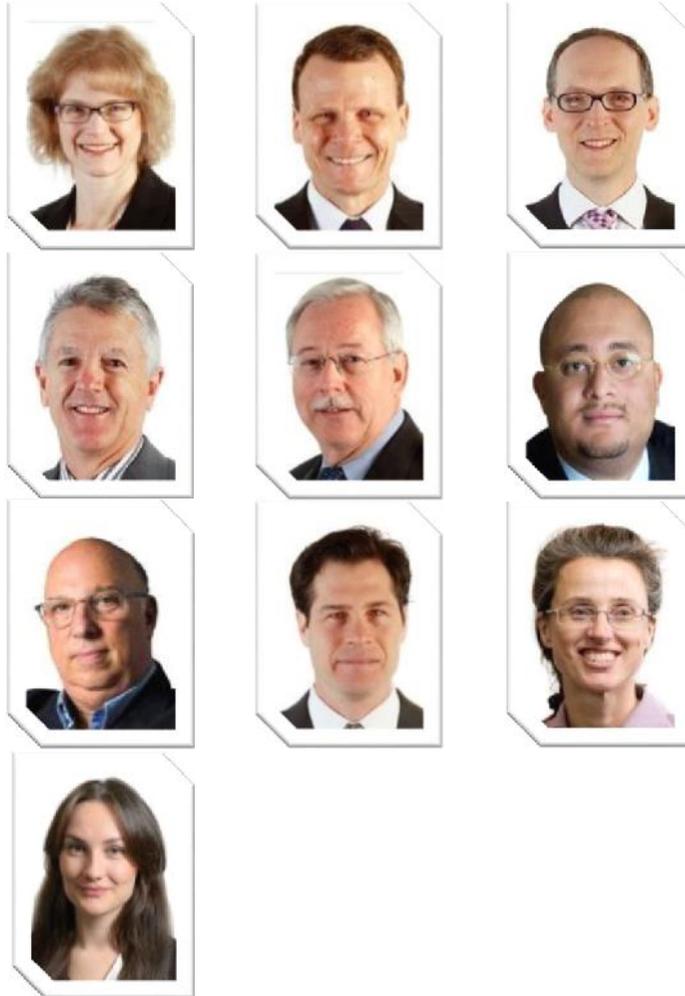


2603 Augusta Drive

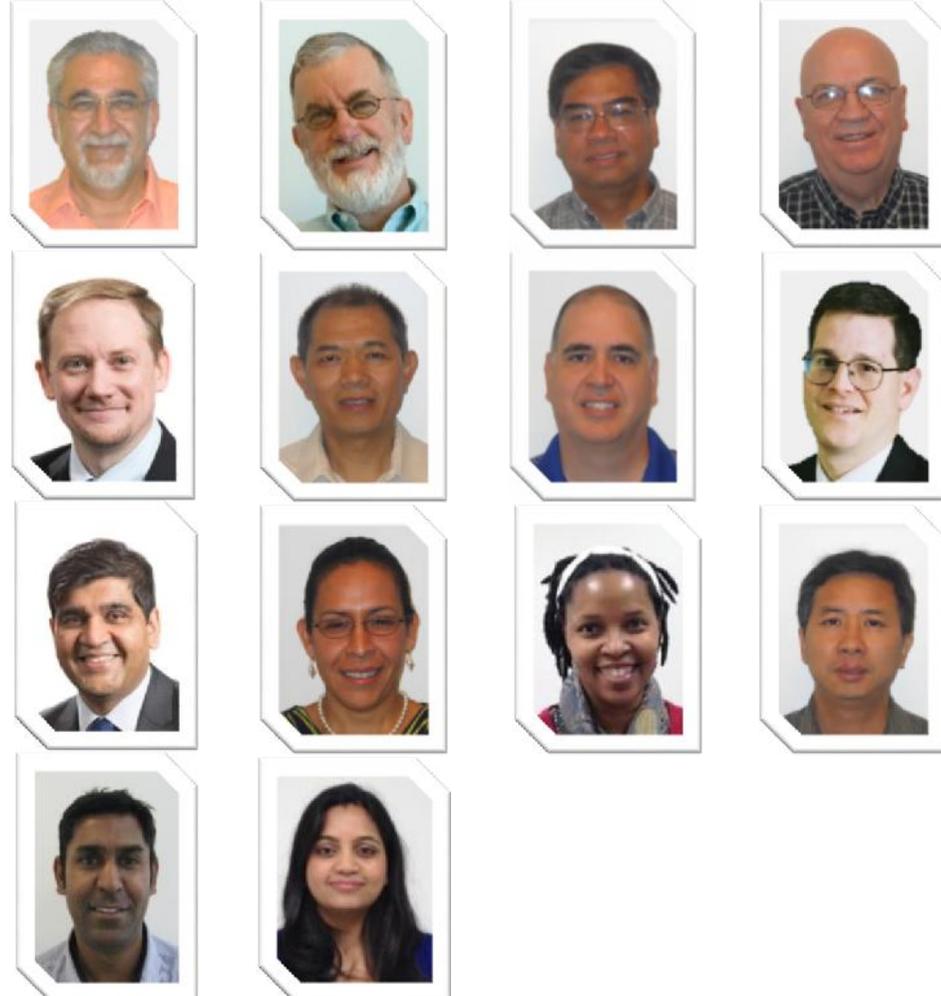
Resource build-up

Strong commercial and process engineering teams

Commercial team



Process engineering team



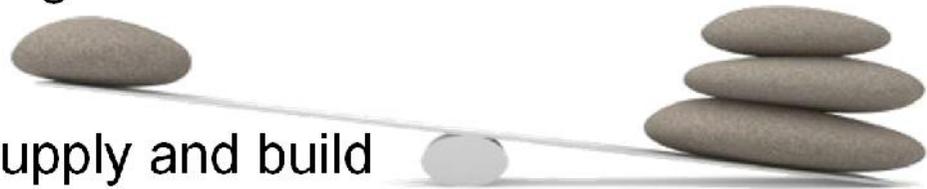
A man with short grey hair and glasses, wearing a light blue button-down shirt, is smiling and looking towards the camera. He is holding a large, round, dark metal tray with a white, textured substance on it. The tray is tilted, and the substance appears to be a mixture of white powder and a dark liquid. In the background, there are several other similar trays on a dark surface, and a window with white vertical blinds is visible. The lighting is bright, creating strong shadows on the wall behind him.

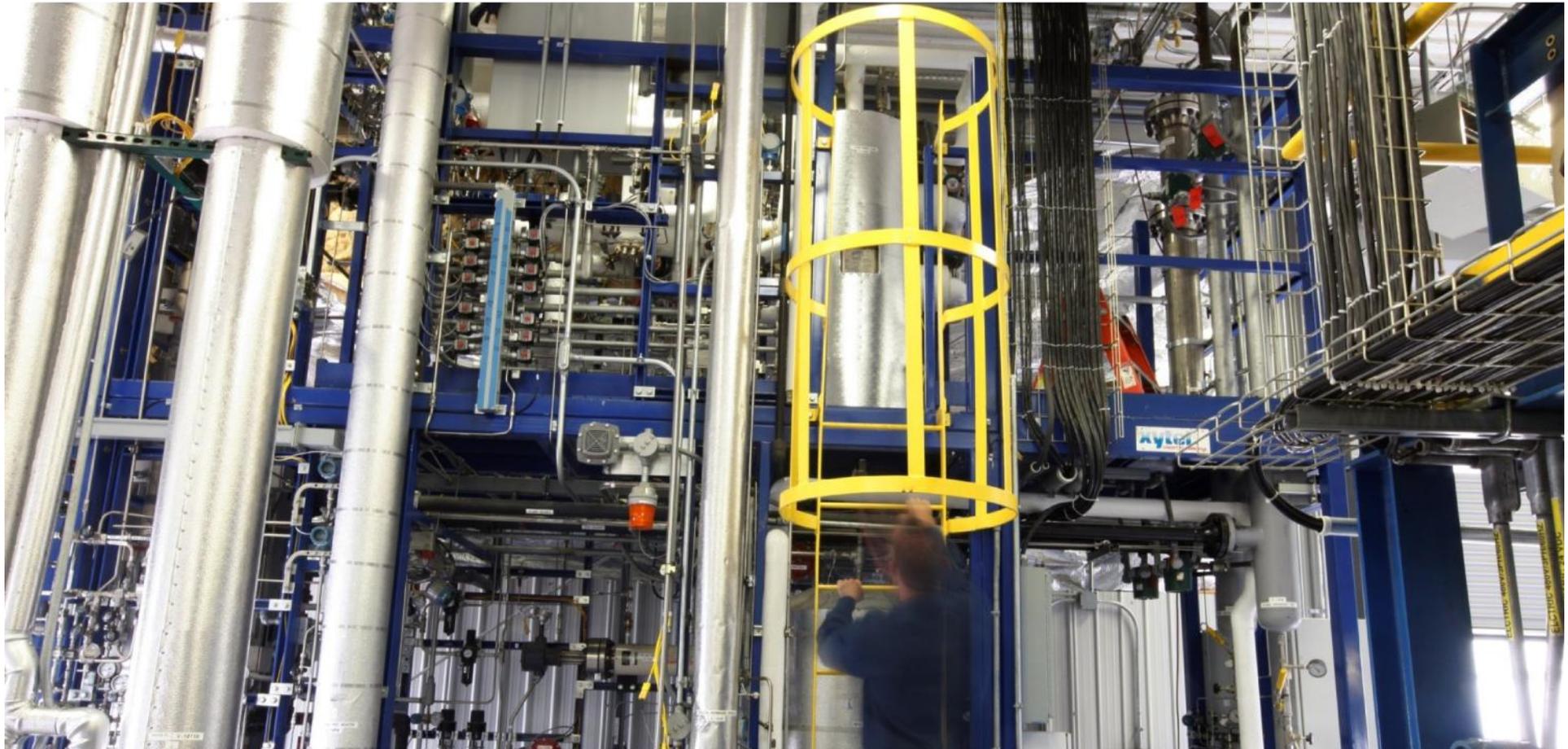
The time is now!

Summary

Velocys smaller scale GTL

- **GTL “for the mainstream”**
 - Attractive for wide variety of gas reserves and locations
- **Practical**
 - Easier to finance, permit, supply and build
- **Manageable risks**
 - Phased investment; quicker construction, less in-field build
- **Profitable**
 - Unlock resources; capture gas/oil spread; leverage existing infrastructure
- **Velocys market leading technology is ready for commercial deployment**





Changing the way fuels are made



Thank you

Jeff McDaniel

Commercial Director

jeff.mcdaniel@velocys.com

Plain City, Ohio office

+1 614 733 3300

Houston office

+1 713 275 5840

www.velocys.com

