

# Bank of America Global Industrial Conference 2024

March 20, 2024

# Forward Looking Statements

**CERTAIN STATEMENTS MADE IN THIS INVESTOR PRESENTATION ARE FORWARD-LOOKING STATEMENTS WITHIN THE MEANING OF THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995. FORWARD-LOOKING STATEMENTS INCLUDE STATEMENTS CONCERNING CHART'S BUSINESS PLANS, INCLUDING STATEMENTS REGARDING OBJECTIVES, FUTURE ORDERS, REVENUES, MARGINS, EARNINGS, PERFORMANCE OR OUTLOOK, BUSINESS OR INDUSTRY TRENDS AND OTHER INFORMATION THAT IS NOT HISTORICAL IN NATURE. FORWARD-LOOKING STATEMENTS MAY BE IDENTIFIED BY TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "COULD," "EXPECTS," "ANTICIPATES," "BELIEVES," "PROJECTS," "FORECASTS," "INDICATORS", "OUTLOOK," "GUIDANCE," "CONTINUE," "TARGET," OR THE NEGATIVE OF SUCH TERMS OR COMPARABLE TERMINOLOGY.**

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# Agenda

Chart at a Glance

Actions to Increase Throughput

The Global Hydrogen Opportunity

Driving Growth in Aftermarket, Service & Repair

# Chart at a Glance

**1** We are uniquely positioned as a leading independent provider of technology, solutions, equipment, and services to customers across multiple end markets, with all mission critical equipment manufactured in-house

**2** Chart can deliver multiple solutions across our Nexus of Clean™ offering. This allows us to be molecule agnostic and deliver value greater than the sum-of-our-parts

**3** Chart is driving profitable growth and free cash flow generation driven by a resilient portfolio inclusive of 30%+ aftermarket, service and repair

**4** High quality backlog provides visibility for 2024 and beyond. Further, customers that are investing to capture secular trends and are not as interest rate sensitive

# Global Network, Local Presence

**11,637**

Experts

**165+**

Years of Innovation

**169**

Countries where Assets are Installed

**50+**

Service Centers

**64**

Manufacturing Sites



# Chart's Competitive Advantage



## Solutions vs. Equipment

Engineered solution across stationary and rotating equipment for different applications



## Domain Expertise / Our People

In Hydrogen, Howden has 100+ years and Chart has 57 years of expertise



## New Products / R&D

In addition to R&D dollars, Chart is funding technology through SG&A and Capex



## Flexible Manufacturing

Multiple locations can produce equipment, ensuring supply chain continuity



## Chart Business System

A unified operating system exists across each vertical and manufacturing location



## Proximity to Customer

Geographic proximity for Aftermarket, Service & Repair



## Certifications

Significant involvement with trade and global government organizations



## Molecule Agnostic

Chart does not compete with its customers in their core business of molecule production

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# Operational Excellence



1

Chart's flexible manufacturing strategy has contributed to the global expansion of our customer base and margin expansion



2

Chart will continue to invest in high ROI productivity and automation projects. This will help drive operating margin leverage through the next decade



3

Chart Business Excellence (CBE) and Six Sigma are driving improvement through our manufacturing and back-office operations which contributes to our margin expansion



# Chart Business Excellence

## Metric Execution

Aligns the organization to achieve goals through improvement initiatives and KPIs.

## Project Execution

Uses a standard stage gate framework to drive consistency on the RFQ and invoice processes to ensure customer deliverables are met

## Sales, Inventory & Operations Planning

Drives efficient capacity planning using data to drive execution, customer on time delivery, and to minimize inventory

## Margin Improvement Projects

Margin improvement process uses data to ensure that operations generate the expected financial results



**CBE focus is to build strong, stable and sustainable core processes as a foundation of the Chart Operating Model. Then use the appropriate problem-solving methods and tools to drive improvement.**

# Actions to Increase Throughput in 2024

## Capital for Automation and Productivity

- New SPV automated long seamer investments (multiple sites)
- New machines for screw compressor capacity
- New plating machines for screw compressor lead times
- New CNC and CNC milling capabilities in South Africa

## Additional Capacity

- Teddy 2 comes online at end of Q1 2024
- Teddy 1 to produce bulk tanks and rail cars
- GOFA, Germany trailer expansion online
- Expansion of service footprint with new services facilities in Middle East (via JV), and increased field resources globally

**Chart Business Excellence (CBE) and Lean Six Sigma programs across the global organization are driving meaningful efficiency and capacity gains**

**Additional customer qualifications of products and manufacturing plants**

## Localization

- Global compressor production enhanced through insourcing and assembly localization programs in the U.S., China, and India
- Cooling fan localized into Americas

# Agenda

Chart at a Glance

Actions to Increase Throughput

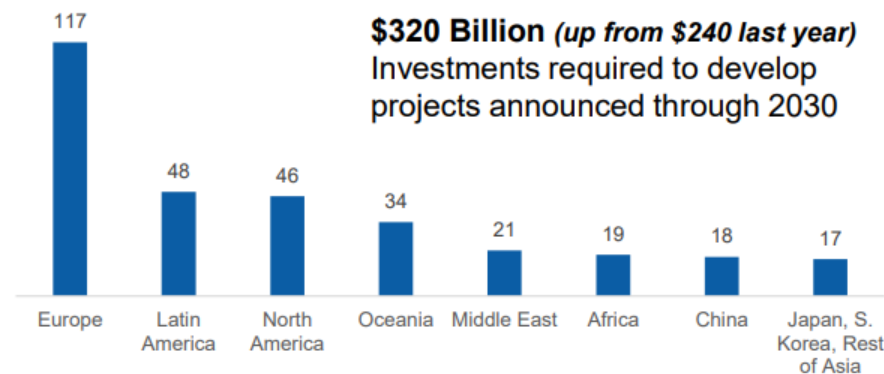
The Global Hydrogen Opportunity

Driving Growth in Aftermarket, Service & Repair

# Hydrogen Momentum Across Applications and Geographies

- **Notable hydrogen-related orders around the world**
  - Awarded H2 and He liquefiers (synergy wins)
  - Compression award for renewable hydrogen and Chart pressure vessel equipment; opportunity for installation and monitoring (synergy wins)
  - H2 liquefier, liquid H2 transports and ISO containers for US renewable green hydrogen production facility
  - Orders from various geographies, including China, USA, Canada, Korea including our first order for LH2 tank in South Korea market
- **2023 hydrogen-related certifications and engineering accomplishments**
  - Received full Korean code (KGS) approval for the LH2 trailers
  - Howden successful stage gate review for high pressure 70MPa oil free reciprocating compressor development.
  - Received Design Appraisal Document for the ASME version of our LH2 ISO container.
- **2023 significant hydrogen achievements with our customers**
  - Hyzon Motor Company and Performance Food Group (PFG) completed deliveries to 8 PFG customers using our liquid hydrogen onboard tank (traveled 540+ miles, 16 hours continuous run-time, temperatures 100F+)
  - We completed and shipped three trailers from our Theodore, Alabama (USA) factory to a South Korean customer (October 4, 2023) that will be first to deliver liquid H2 to customers in country

## Global Hydrogen Investment



Source: Global Hydrogen Council

## Global Chart Hydrogen Orders 2020-current



Note: Countries can have multiple projects

# Hydrogen Applications We Serve

## Hydrogen Liquefaction



Important for developing hydrogen fueled aviation, maritime transport and long distance road distribution

Chart offers state of art technology for hydrogen liquefaction supporting our customer across the globe



## Hydrogen Storage



Hydrogen storage is a key enabler for the advancement of hydrogen and related fuel cell technologies

Chart has extensive experience in offering cost-effective compression solutions as well as liquid hydrogen storage tanks across the different applications



## Green Fuels (eFuels)



eFuels are generated when hydrogen that can be produced using renewable energy is combined with carbon dioxide

Chart delivered a hydrogen compression solution to the world's first efuels plant to harness energy from the wind, in South America



## Green Steel



Transitioning the steel industry towards carbon neutrality is essential for energy transition

Chart provided a hydrogen storage compression solution for the world's first fossil-free steel plant in Europe



## Green Ammonia



Produced via the Haber process but with a hydrogen feedstock derived from the electrolysis rather than steam methane reformation

Chart's compression solutions are used for compressing the hydrogen as well as SynGas



# Hydrogen Applications We Serve

## Blue hydrogen



Conversion of a hydrocarbon feedstock into a hydrogen product with CO2 capture for storage and usage

Chart supports customers across the compression processes, with a range of compressor types suitable for requirements



## Refueling Stations



Decarbonizing transport is key to the energy transition and hydrogen offers an important decarbonization pathway

Chart refuelling solutions have been deployed in a large number of hydrogen refueling stations across the globe for both liquid and gaseous applications. Chart can offer engineered to order or off the shelf solutions



## Power - to - X



Conversion of renewable electricity into storable hydrogen fuel. Hydrogen production from electrolysis supplied by renewable power produces a green hydrogen fuel

Chart provides hydrogen liquefaction solutions as well as compression solutions to ensure the availability of large volumes of hydrogen for downstream applications



## Hydrogen Pipelines



Gaseous hydrogen can be transported to pipeline networks in the same way as natural gas

Chart can provide compressor solutions to inject hydrogen into the grid from low pressure production sources, as well as large flowrate booster compression throughout the pipeline network



## Hydrogen Bottle Filling



Large quantities of compressed hydrogen can be delivered to different remote sites to serve a variety of applications via tube trailers or manifolded cylinder packs (MCPs)

Howden compressors have been safely serving gas high pressure bottling solutions for decades



# Agenda

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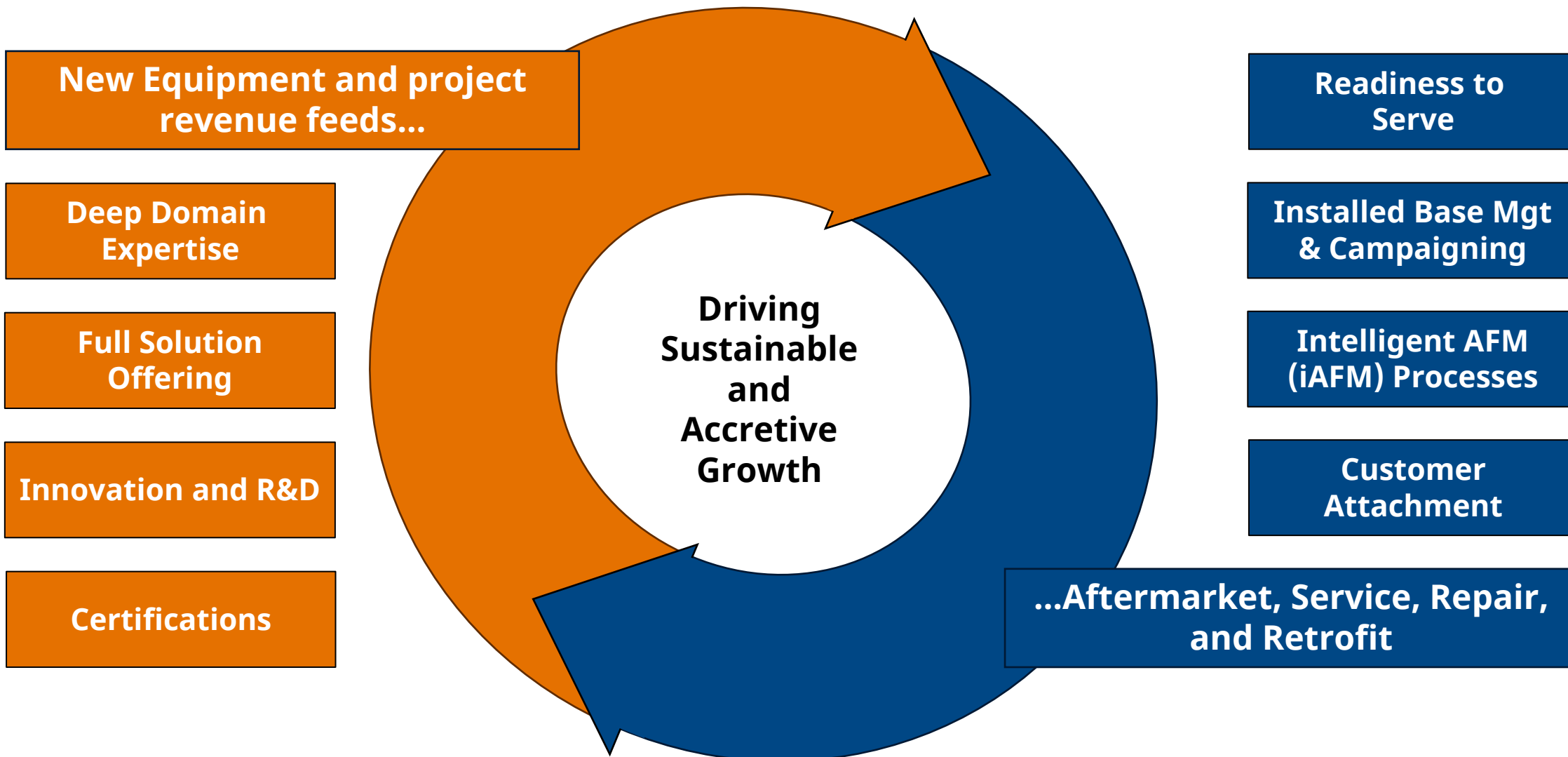
Actions to Increase Throughput

The Global Hydrogen Opportunity

Driving Growth in Aftermarket, Service & Repair

# Sustainable Aftermarket Model

Aftermarket and service revenue opportunity is a multiple of OE revenue



# Aftermarket, Service and Repair is a Key Area of Synergy Opportunity

## Readiness to Serve



Optimize sales & service capabilities local to customers – provide a 'One-Chart' approach

- Combined service centre network in every region
- Multi-skilled field service resources
- Aftermarket academy

## Installed Base Mgt & Campaigning



Improve processes to capture more business from the global installed base through targeted campaigns

- Installed Base data capture & management
- Proactive Sales Campaigning
- Tools to access installed base for each salesperson

## Intelligent AFM (iAFM) Processes



Enhance our systems and processes to improve response times, upsell our services and maximize our prices

- Spare Parts Pricing
- Smart Records
- Customer Service Desk
- Inside Sales & Channel Partner Management

## Customer Attachment



Expand our connected customer assets to provide enhanced reliability and long term service agreements

- Lifecycle contracts with connected assets (Uptime, LTSA, Frameworks)
- Uptime enabled products

# Appendix



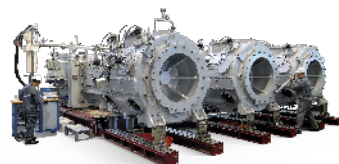
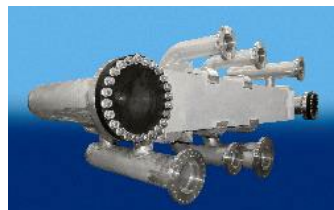
# Serving Multiple Energy Applications

## Traditional Energy ←

Oil & Gas /  
Petrochemical

Midstream Oil & Gas

Downstream  
Oil & Gas / Refinery



## → Energy Transition / New Energy

LNG, Hydrogen  
applications and  
Helium liquefaction,  
Biogas

Carbon Capture and  
Water

Hydrogen and Helium  
applications, Carbon  
Capture, and Water



## Chart's Leadership Position

- Chart can manufacture in-house all mission critical pieces of equipment for the full solution across a variety of end markets
- Only North America manufacturer of brazed aluminum heat exchangers (BAHX) and only 1 of 5 total global BAHX providers
- Leadership market share position in air cooled heat exchangers (ACHX) fans, and hydrogen compression

# Combined Solutions Across the Nexus of Clean™

Integrated Digital Offerings including Uptime

Clean End Market	Solution	Chart Process Technologies		Equipment		
		Wholly-Owned	Minority Ownership	Stationary	Rotating	
<b>Clean Power</b>	<ul style="list-style-type: none"> <li>Hydrogen</li> <li>Helium</li> <li>LNG</li> <li>Biogas</li> <li>Nuclear Energy recovery</li> <li>Biofuel / synfuels</li> <li>Biomass</li> </ul>	 	 	<ul style="list-style-type: none"> <li>BAHX</li> <li>ACHX</li> <li>Bulk &amp; Microbulk</li> <li>Fans</li> <li>Transports</li> </ul>	<ul style="list-style-type: none"> <li>Valves / Vaporizers</li> <li>Expanders</li> <li>Liquefiers</li> <li>Cold Boxes</li> </ul>	<ul style="list-style-type: none"> <li>Fans</li> <li>Compressors</li> <li>Blowers</li> <li>Heaters</li> <li>Steam Turbines</li> <li>SaaS</li> </ul>
<b>Clean Water</b>	<ul style="list-style-type: none"> <li>Water &amp; Wastewater Treatment</li> <li>Desalination</li> </ul>	 		<ul style="list-style-type: none"> <li>Bulk tanks</li> <li>Dissolution equipment</li> <li>Vaporizers</li> <li>Cryo-lease</li> </ul>		<ul style="list-style-type: none"> <li>Blowers</li> <li>SaaS</li> </ul>
<b>Clean Food, Beverage &amp; Agriculture</b>	<ul style="list-style-type: none"> <li>Carbon capture</li> <li>Beverage &amp; Food</li> </ul>			<ul style="list-style-type: none"> <li>Microbulk tanks</li> <li>Dosers</li> <li>Vaporizers</li> <li>Transports</li> </ul>		<ul style="list-style-type: none"> <li>Compressors</li> <li>SaaS</li> </ul>
<b>Clean Industrials</b>	<ul style="list-style-type: none"> <li>CCUS</li> <li>Metals processing</li> <li>Chemicals / Petrochem</li> <li>Cement</li> <li>Mining</li> <li>Marine Refrigeration</li> <li>Gas By Rail</li> </ul>		 	<ul style="list-style-type: none"> <li>Heat exchangers</li> <li>Storage tanks</li> <li>Vaporizers</li> <li>VIP / VJP</li> </ul>	<ul style="list-style-type: none"> <li>Transports</li> <li>Liquefiers</li> <li>Cold Boxes</li> <li>Expanders</li> </ul>	<ul style="list-style-type: none"> <li>Fans</li> <li>Compressors</li> <li>Blowers</li> <li>Steam Turbines</li> <li>Heaters</li> <li>VentSim Software</li> <li>SaaS</li> </ul>

# Performance Drivers



1

## Sales Growth Driven By:

- Full solution offerings for all molecules and applications
- Energy transition activities and water regulations
- Aftermarket, service & repair
- Record backlog and commercial



2

## Margin Expansion Driven By:

- Increased full solutions mix
- Increased aftermarket, service and repair mix
- Disciplined price / cost
- Productivity actions
- Cost synergies



3

## Deleveraging Driven By:

- Operational free cash flow
- EBITDA growth
- Balance sheet optimization
- Synergy achievement
- Targeted divestures (complete)

*Sustainability*

*Energy Security*

*Energy Access*

*Nexus of Clean™*

*Digitization*