# Hexagon Purus Capital Markets Day Presentation

10 May 2022


Morten Holum, CEO
Dilip Warrier, CFO
Michael Kleschinski, EVP
Todd Sloan, EVP


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# Today's presenters

**Morten Holum**
**President and CEO**

- CEO of Hexagon Purus since the carve-out from Hexagon Composites in 2020
- Former CEO of Saferoad Group
- Previously held senior management positions at Norske Skog, Hydro and American Airlines

**Dilip Warrier**
**CFO**

- Joined Hexagon Purus as CFO in August 2020
- Former VP Finance at Agility Fuel Solutions, and equity research at Stifel Nicolaus
- MBA from NYU

**Michael Kleschinski**
**EVP Light Duty, Distribution & Cylinders**

- Joined Hexagon Composites as EVP in 2016 before moving to Hexagon Purus in 2020 as part of the carve-out
- Previously a key management member within the production engineering team at Hexagon Composites

**Todd Sloan**
**EVP Systems**

- Joined Hexagon Purus as EVP in 2020
- Founder of Agility Fuel Solutions
- Industry innovator with 20+ years of clean mobility experience

# Agenda

1. **Corporate update**
   **Morten Holum, President & CEO**
2. Hydrogen cylinders and systems
   Michael Kleschinski, EVP Light Duty, Distribution & Cylinders
3. Heavy duty truck applications
   Todd Sloan, EVP Systems
4. Financials and outlook
   Dilip Warrier, CFO

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# Introduction



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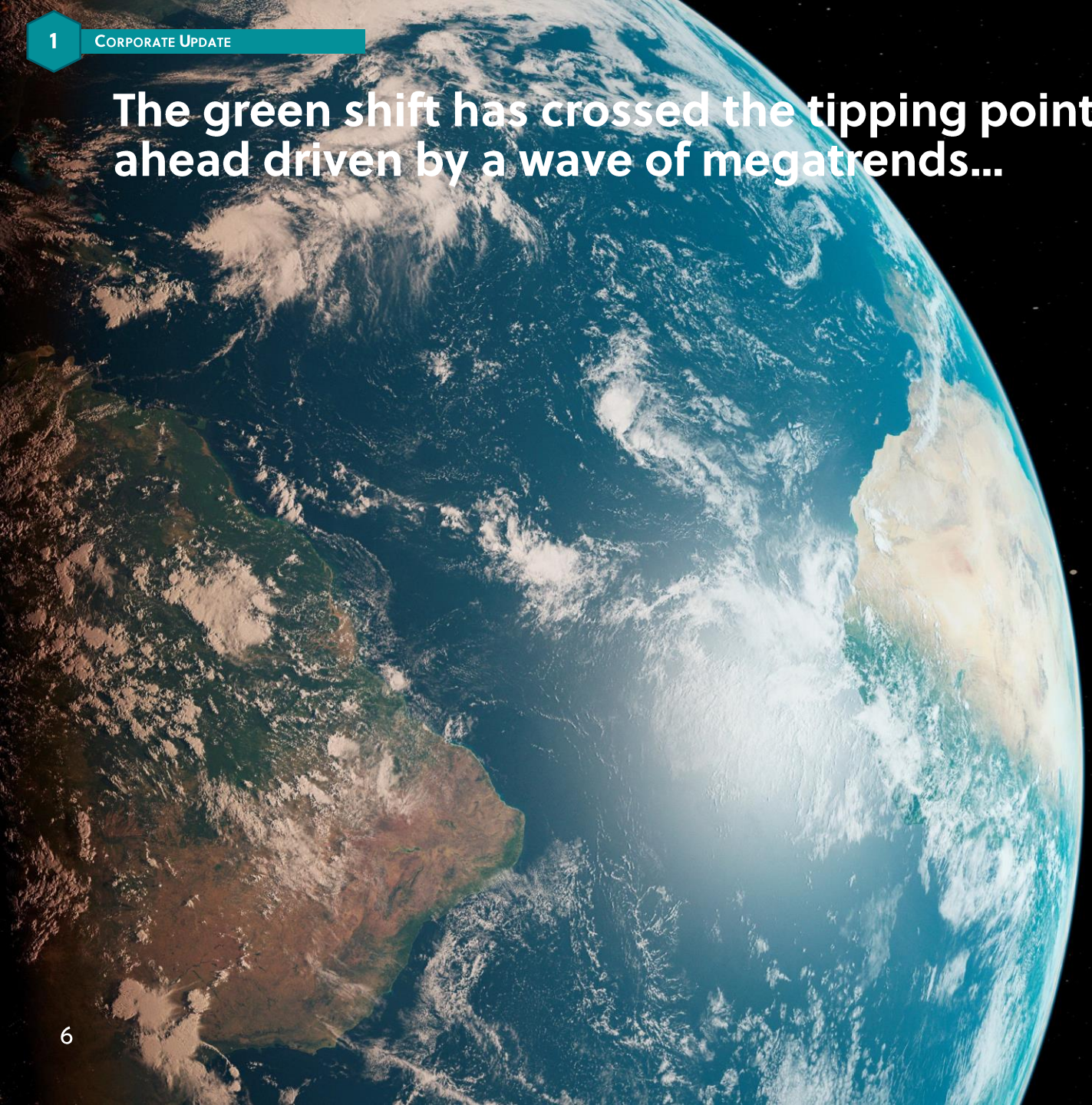
# The green shift has crossed the tipping point with several decades of growth ahead driven by a wave of megatrends...



- Improve the quality of life and reduce pollution in cities and local communities
- Decarbonize industry and mobility applications to limit global warming
- Access to independent energy supply to limit dependence on unreliable suppliers in times of crisis



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# ...and hydrogen will play a key role in enabling energy transition to reach zero emission and energy independence

Enables zero-emission technologies reducing local pollution

Feedstock in industrial processes reducing dependence on carbon-based energy sources

Enables diversification of energy gases through local production reducing dependence on unreliable suppliers of carbon-based energy



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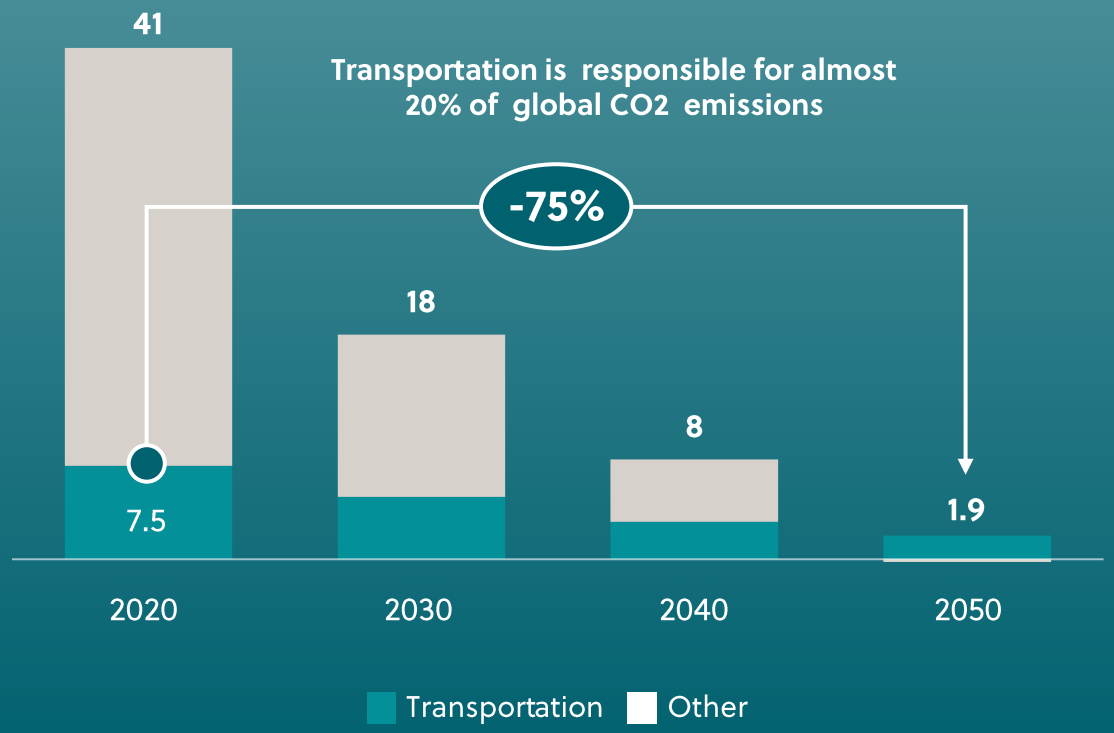
# 75% reduction in global GHG emissions from transport sector by 2050 is required to reach the 1.5 degrees ambition

Primary focus of Purus' activities

## WORLDWIDE GREENHOUSE GAS (GHG) EMISSIONS BY SECTOR, GT CO2-EQ (1.5°C SCENARIO)




## KEY TAKEAWAYS FOR TRANSPORT

GHG emissions need to be reduced throughout **life-cycle** – requiring industry activity along 3 dimensions

**Zero-emission vehicles** (FCEV & BEV) or zero-emission fuels (biofuels or synthetic fuels) to reduce tank-to-wheel emissions

**Zero-emission supply chains & production** to reduce lifecycle emissions

**Renewable power** (for electricity, $H_2$ and fuels) to reduce well-to-tank emissions

# Hexagon Purus' complementary technology solutions drive decarbonisation across all mobility end markets


## MOBILITY APPLICATIONS

ENERGY STORAGE AND FULL VEHICLE INTEGRATION

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A KEY PIECE IN THE ZERO EMISSION MOBILITY AND DECARBONIZATION PUZZLE

## INFRASTRUCTURE

HYDROGEN DISTRIBUTION MODULES, STATIONARY STORAGE AND MOBILE REFUELLING STATIONS



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# Hydrogen and batteries are complementary zero-emission technologies across segments

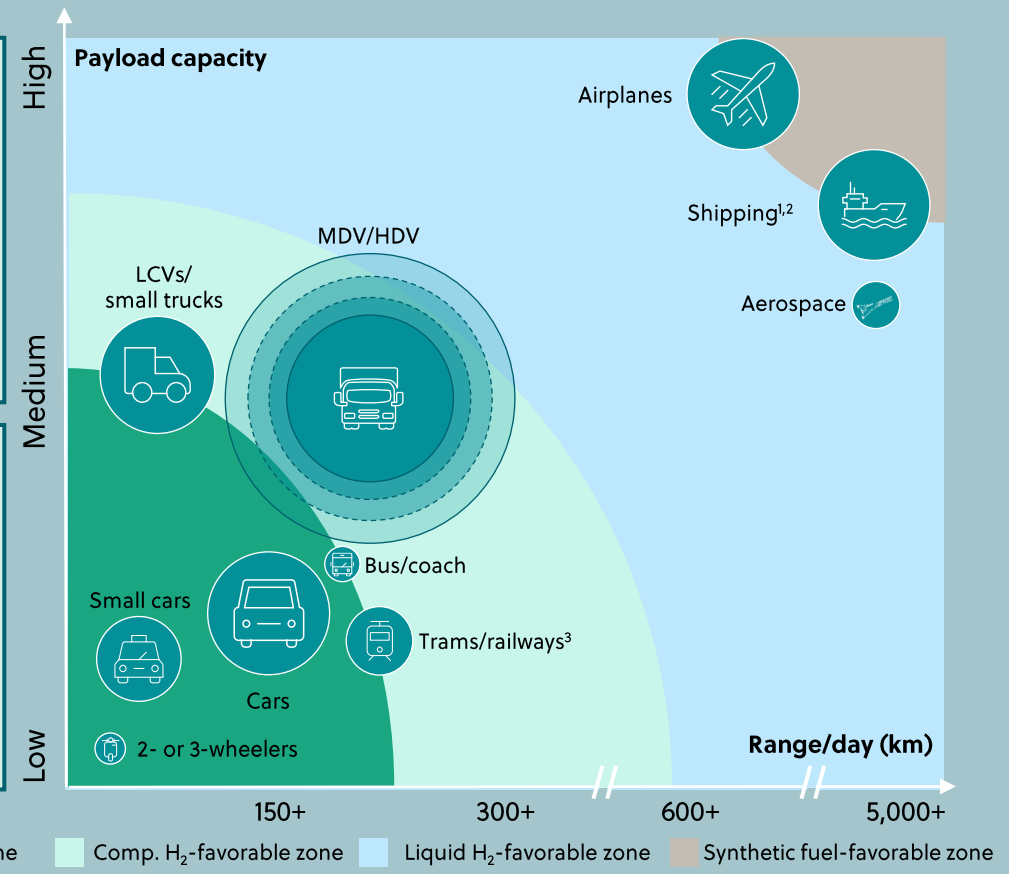
## Complementary technologies across segments

### FUEL CELL (FCEV)

**Faster refueling**, improved **long-range capabilities** and in regions with **energy constraints**

### BATTERY (BEV)

Critical enabler for **fast transport decarbonisation** within short distance and light-duty transportation




## COMPLEMENTARY TECHNOLOGIES

- Efficiently utilizing green energy to improve resource usage
- Faster decarbonization building momentum towards zero-emission transportation
- Highly complementary infrastructure

Source: IEA ETP, IHS, A Portfolio of Powertrains for Europe (2010), Thiel (2014), Hydrogen Council.
1) Refers to hydrogen-based fuels (i.e. ammonia, methanol, synfuel) for large ships, e.g. container ships, tankers; 2) Mid size maritime vessels such as ferries are not included, but hydrogen vehicles in this segment are expected to use liquid or compressed hydrogen; 3) Excluding rail on electrified tracks



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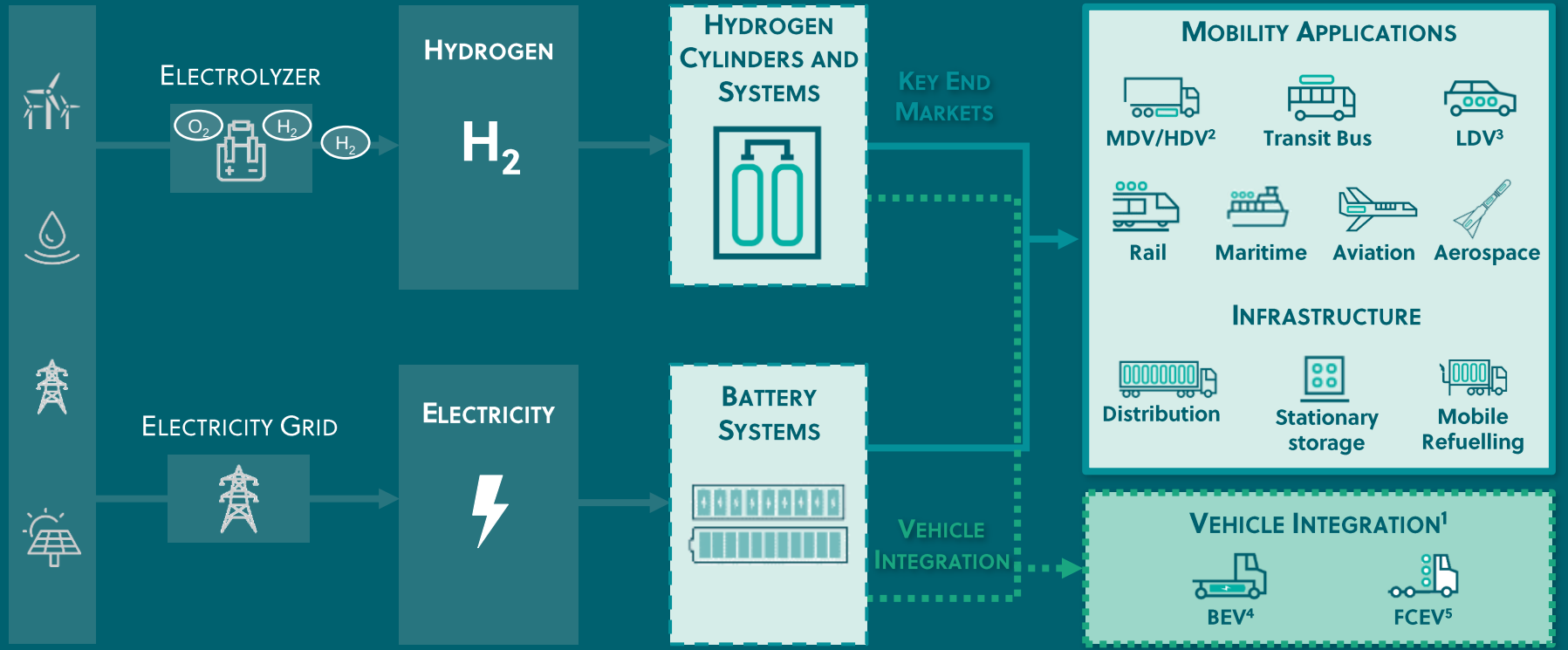
# Hexagon Purus plays an important part in the renewable energy and zero emission value chain

HEXAGON PURUS **Clear position in the value chain**

| ENERGY PRODUCTION: HYDROGEN / ELECTRICITY | ENERGY SOURCE | ENERGY STORAGE | END-USE APPLICATIONS |
|---|---|---|---|




## KEY COMPETITIVE ADVANTAGES

- Technology leadership and know-how with six decades of cumulative learning and heritage from Hexagon
- Early mover advantage underpinned by landmark contracts secured through strong OEM relationships
- Full portfolio of complementary zero emission technologies ($H_2$ gas, $H_2$ liquid and battery electric)
- Global manufacturing footprint enabling rapid scale-up with growing demand

1) MDV and HDV only; 2) MDV = Medium-Duty Vehicle, HDV = Heavy-Duty Vehicle; 3) LDV = Light-Duty Vehicle; 4) Battery-Powered Electric Vehicle; 5) FCEV = Fuel Cell Electric Vehicle



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# Hexagon Purus is a leading provider of hydrogen and battery electric technology for zero-emission mobility

## COMPONENTS

### High-pressure, lightweight Type 4 hydrogen cylinders

**Leading cylinder technology supported by a fine-tuned and scalable production setup**

**Suitable for a vast variety of zero emission mobility applications**

## SYSTEMS

### Storage systems

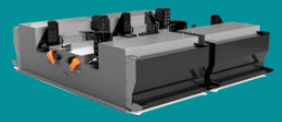
**Storage systems for a range of mobility applications**

### Distribution systems

**Leading distribution trailers for transportation and refuelling**

### Battery systems

**High-performance, modular and lightweight battery systems for MDV/HDV**

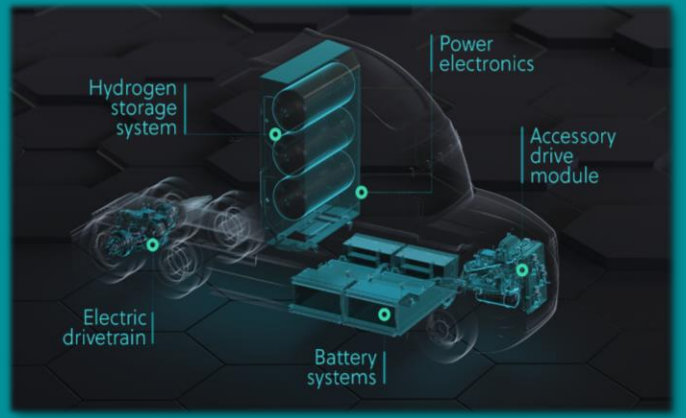


## VEHICLE INTEGRATION

### Complete vehicle integration

Complete electric drivetrain integration for BEVs and FCEVs[1]

**BEV and FCEV[1] drivetrain integration**




Hydrogen | Battery / EV systems

1) BEV = Battery Electric Vehicle, FCEV = Fuel Cell Electric Vehicle



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# Longstanding experience from the NASA space mission in the 60s, to becoming a technology leader driving hydrogen and battery innovation

**Hexagon Purus is built on...**

**6 DECADES** ...of composite pressure vessel experience...

**2 DECADES** ...of hydrogen experience and...

**2 DECADES** ...of system integration know-how

**1969** Lincoln Composites started with filament-wound rocket motor cases for NASA

**2005** Acquired Lincoln Composites, a supplier of high-pressure cylinders

**2015** JV with Agility Fuel Systems, creating a vertically integrated Tier 1 clean solutions provider

**2016** Acquired Xperion to strengthen European footprint and hydrogen capabilities

**Successfully building the clear market leader in Type 4 high-pressure cylinders**

**2000** Norwegian Applied Technology ASA was merged with Devold AMT AS, forming today's Hexagon Composites

**2002** Developed first hydrogen fuel cylinder capable of handling 700 bar of operating pressure

**2006** Awarded development contract for supply of hydrogen cylinders to Mercedes Benz' B-series FCEV pilot

**2016** First battery pack development

**2020** HEXAGON PURUS carved out and separately listed on Euronext Growth

**2021** Acquired Wystrach, a leading European provider of hydrogen systems

**2022** Invested in liquid $H_2$ tank producer Cryoshelter, to further accelerate FCEV transition

**Carve-out of Hexagon zero-emission business**

**2021** JV agreement with CIMC Enric in China – expected to be the world's largest hydrogen market

**2021** 1,000,000+ miles on-road with Hexagon Purus' battery systems

**Strong Hexagon heritage to leverage after carve-out**



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# Investment in cryogenic storage technology leader Cryoshelter


BUILDING EARLY-STAGE CRYOGENIC TANK TECHNOLOGY FOR LIQUID HYDROGEN ON SUPERIOR AND DIFFERENTIATED LNG TECHNOLOGY

## LIQUID HYDROGEN CRYOGENIC TANK


## REVOLUTIONARY CRYOGENIC STORAGE TECHNOLOGY

- THE TRANSACTION BRINGS EARLY-STAGE EXPERTISE IN LIQUID HYDROGEN TANK TECHNOLOGY FOR ZERO EMISSION MOBILITY APPLICATIONS
- POTENTIAL FUTURE COMPLEMENTARY OFFERING TO HEXAGON PURUS' LEADING COMPRESSED HYDROGEN AND BATTERY ELECTRIC TECHNOLOGY
- COMMERCIAL VOLUMES NOT EXPECTED IN THE NEAR TO MEDIUM TERM

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- ✓ 20-50% HIGHER FUEL STORAGE
- ✓ 2-4X IMPROVED HOLD TIME
- ✓ OEM MODULAR DESIGN
- ✓ SYSTEM OPTIMIZATION
- ✓ ELECTRONIC CONTROL
- ✓ FLEXIBLE MANIFOLD POSITION

*"Hexagon Purus is the company with the most practical experience with the application of the technology"*

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# Hydrogen distribution systems

Everfuel

Hydrogen systems




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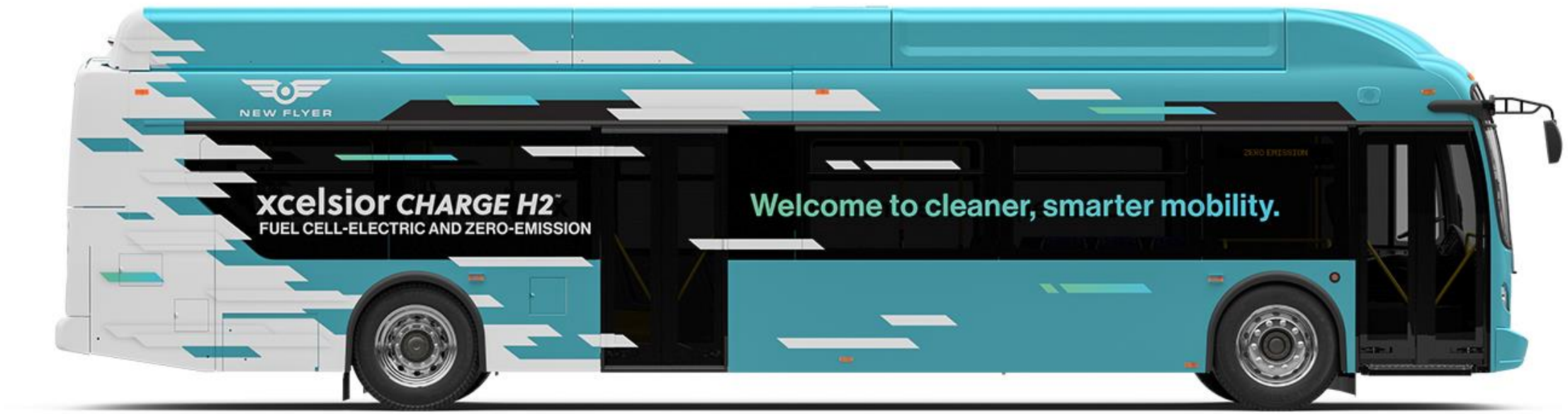
# Hydrogen transit buses

NEW FLYER

Hydrogen cylinders



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# Hydrogen transit buses

SOLARIS

Hydrogen systems


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# Heavy-duty applications

TOYOTA

Hydrogen and battery systems




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# Heavy-duty truck applications

# Hydrogen storage systems for rail applications

ALSTOM

Hydrogen systems

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# Hydrogen storage systems for maritime applications

VARD™

Hydrogen systems




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# Aerospace applications

Hydrogen cylinders



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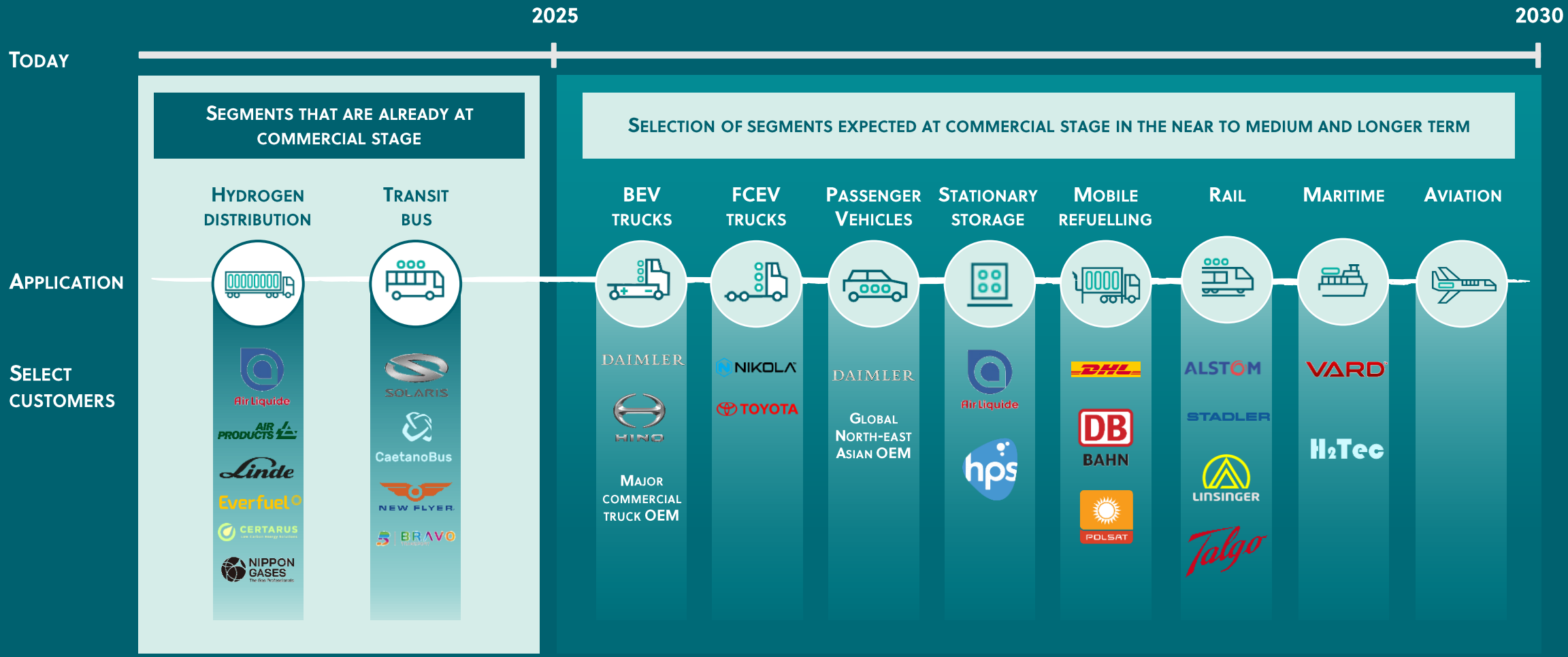
# Hexagon Purus is ideally positioned to benefit from market leading positions in several application areas






Source: Hexagon Purus, third-party consultant

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# Hexagon Purus is a technology leader in hydrogen and battery systems

| CATEGORY | HYDROGEN | BATTERY SYSTEMS |
|---|---|---|
| Product |  |  |
| Speed to market |  |  |
| Operations |  |  |
| Aftermarket service |  |  |

 Improving

 Well-positioned

 Leading

## KEY TAKEAWAYS

- $H_2$ Type 4 cylinder champion with broad experience, deep know-how and production at competitive price point
- Strong performance of battery systems far above industry requirements due to unique understanding of vehicle integration
- Expansion of current manufacturing footprint, gearing up for mass-production at scale
- Roadmap to develop aftermarket and repair service offering as market and installed base grows



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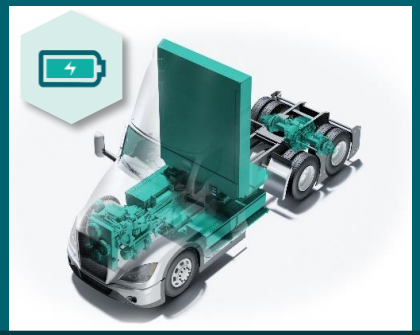
# Early mover with unique market position validated by major customer wins and recurring business

## SELECTION OF MILESTONE COMMERCIAL AGREEMENTS TO BE EXECUTED IN THE COMING YEARS

NIKOLA™

MULTI-YEAR CONTRACT WITH NIKOLA FOR SUPPLY OF HYDROGEN CYLINDERS FOR NIKOLA'S TRE HEAVY-DUTY FCEV TRUCKS

EST. VALUE: EUR >200M



BATTERY SYSTEMS FOR MAJOR COMMERCIAL TRUCK OEM

NOMINATED FOR SERIAL SUPPLY OF BATTERY SYSTEMS TO MAJOR COMMERCIAL TRUCK OEM FROM 2024-2027 (2029)[1]

EST. VALUE: USD 0.8-1.2BN

HINO

LONG-TERM BINDING LOI FOR SERIAL SUPPLY OF BATTERY SYSTEMS FOR MULTIPLE HINO TRUCK PLATFORMS FROM 2024

EST. VALUE: USD 1BN


SERIAL SUPPLY OF HYDROGEN SYSTEMS FOR FCEV BUSES

EXCLUSIVE SUPPLY AGREEMENT FOR HYDROGEN SYSTEMS WITH LEADING EUROPEAN BUS OEM FROM 2021-2024

EST. VALUE: EUR 30M


Air Liquide

MULTI-YEAR GLOBAL SUPPLY AND NATIONAL EXCLUSIVITY AGREEMENT FOR HYDROGEN DISTRIBUTION MODULES

Hydrogen cylinders | Hydrogen systems | Battery systems

1) Option to extend until 2029



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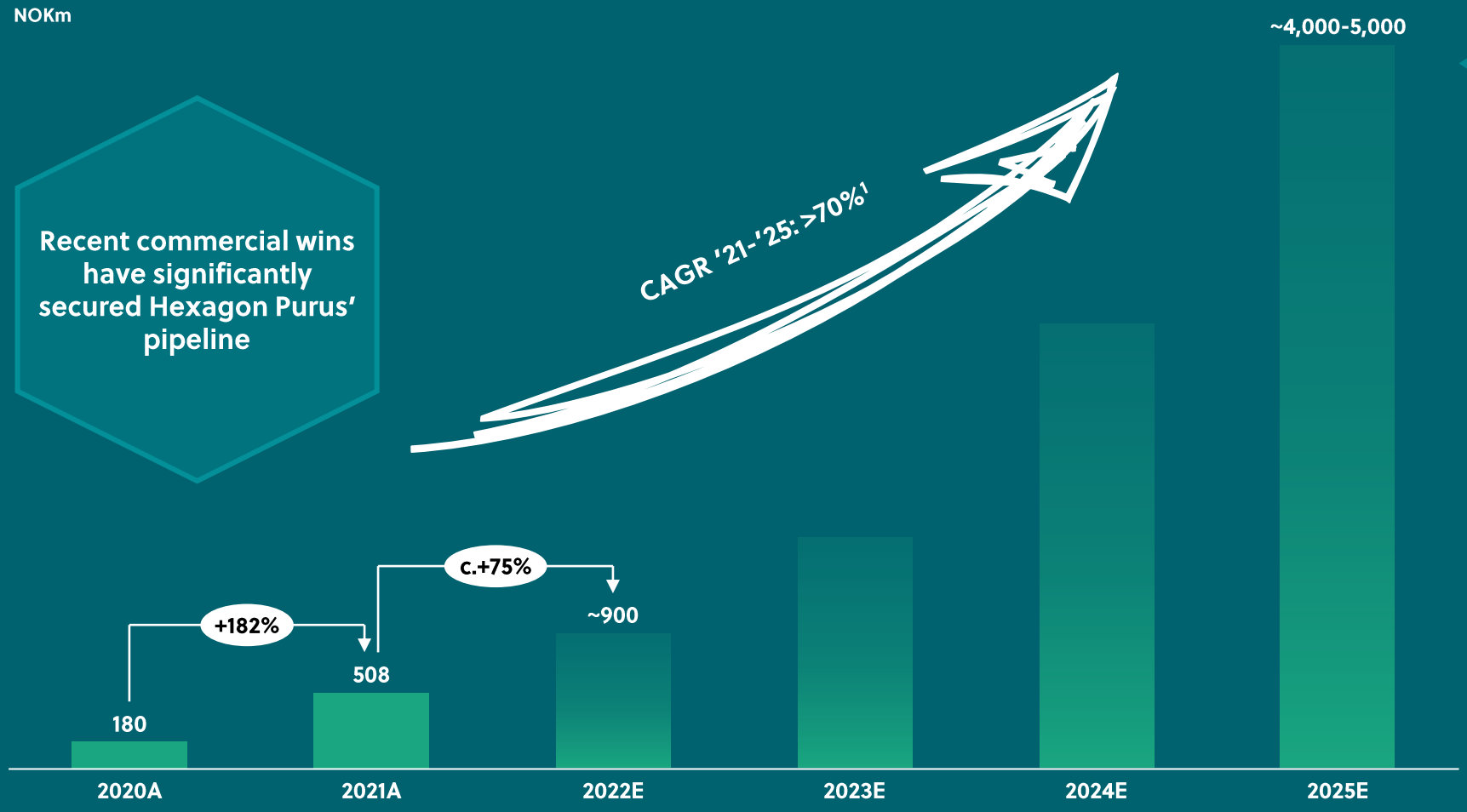
# Competitive position in a growing market has led to significant top line growth, expected to continue into 2025 and beyond

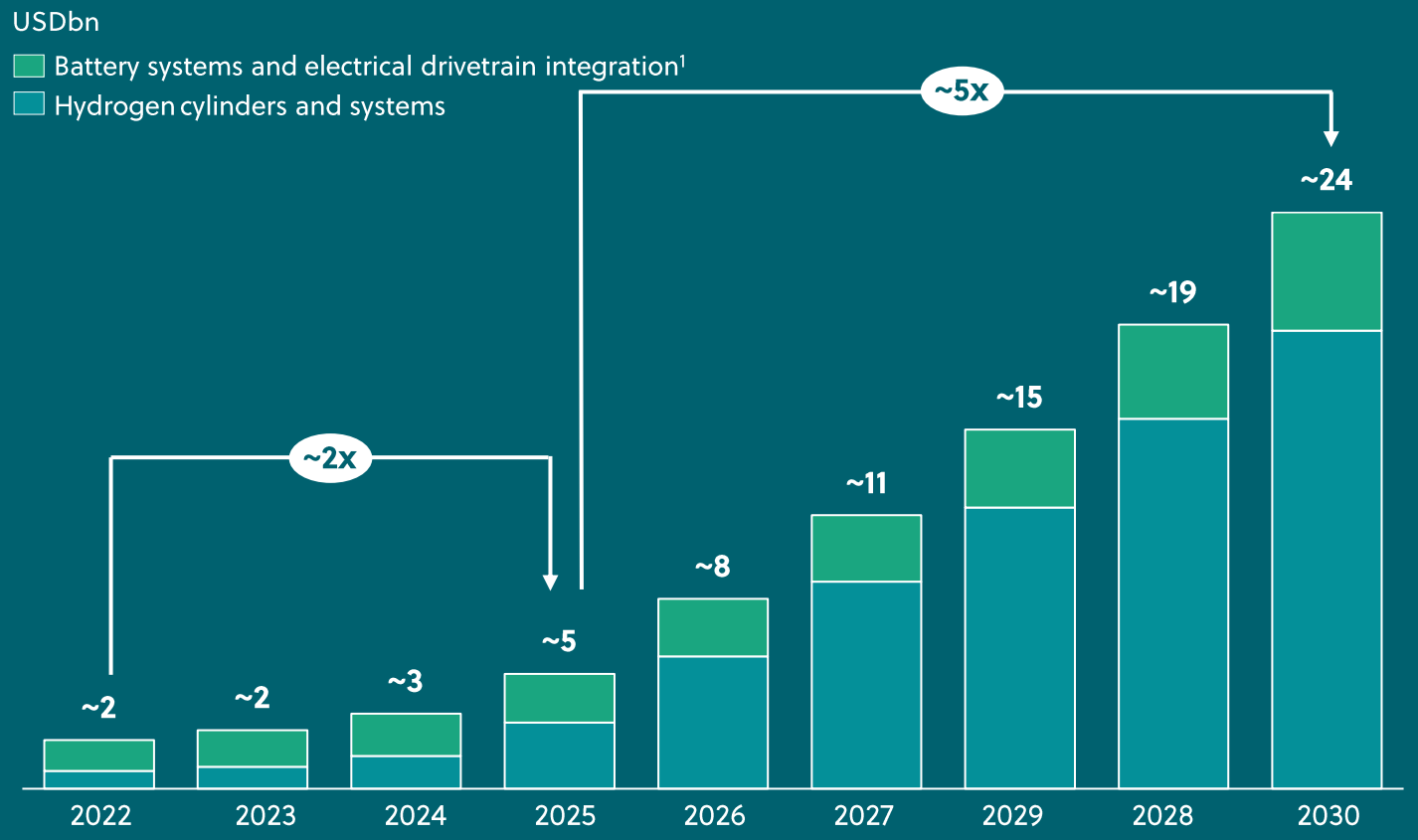



**~75-80% OF TARGETED 2025 REVENUE IS EXPECTED TO BE DRIVEN BY ANNOUNCED LONG-TERM AGREEMENTS**

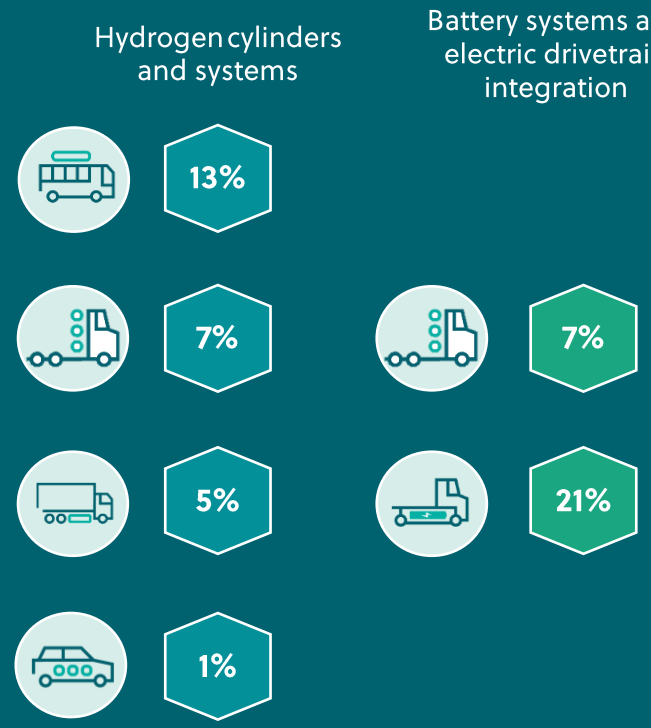

1) Based on 2025E range mid-point value of 4,500m NOK

# Addressable market is expected to grow by more than 10x by 2030 reaching USD ~24bn

## HEXAGON PURUS' TOTAL ADDRESSABLE MARKET

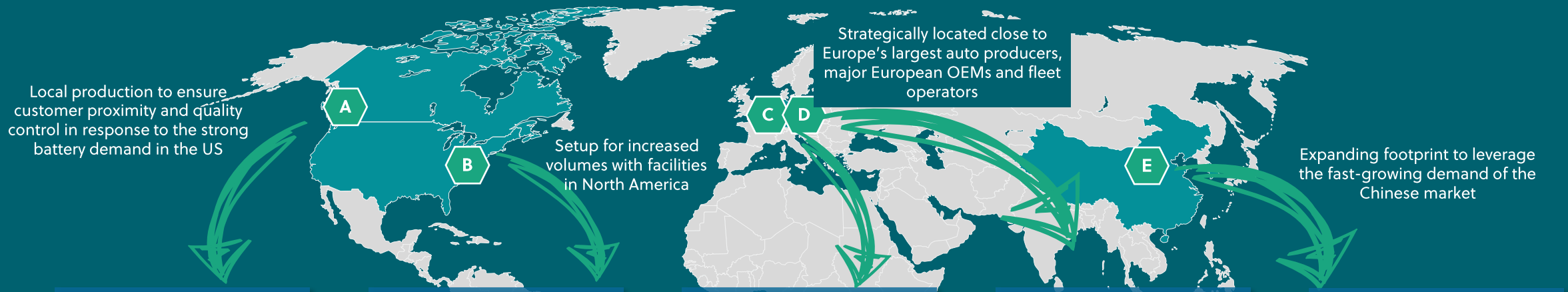



## VEHICLE ADOPTION RATES IN 2030




Source: Hexagon Purus, third-party consultant
1) The TAM for Battery systems and electric drivetrain integration is for North America only

# Entering next phase of industrial scale-up




## A KELOWNA

AUTOMATED MANUFACTURING FACILITY FOR BATTERY AND HYDROGEN STORAGE SYSTEMS

## B WESTMINSTER

ENGINEERING & CYLINDER MANUFACTURING FACILITY

## C KASSEL

HYDROGEN CYLINDER ENGINEERING AND PRODUCTION HUB

## D WEEZE

HYDROGEN SYSTEM ENGINEERING AND ASSEMBLY HUB

## E SHIJIAZHUANG

JV HYDROGEN CYLINDER MANUFACTURING AND SYSTEMS ASSEMBLY FACILITY



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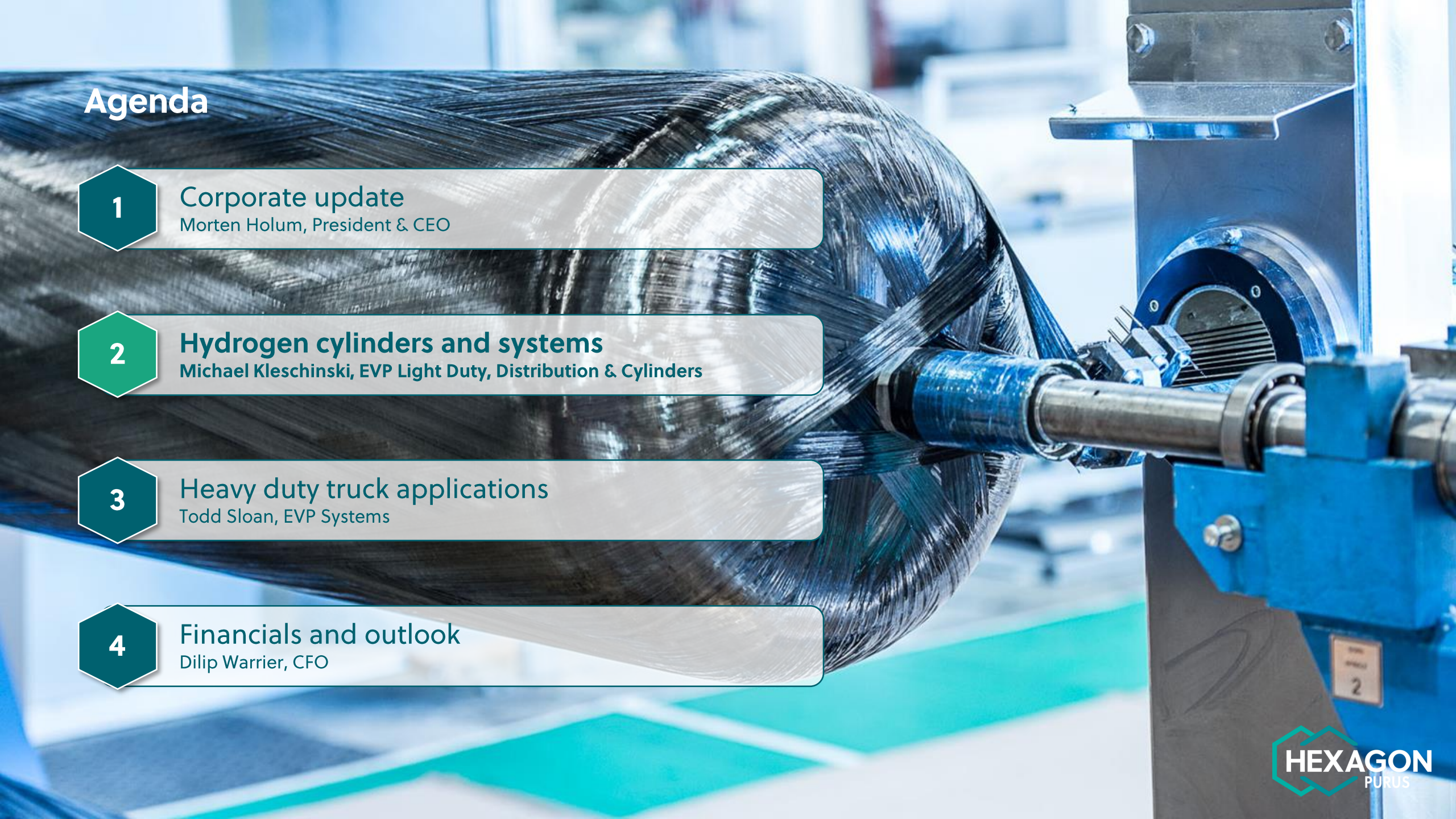
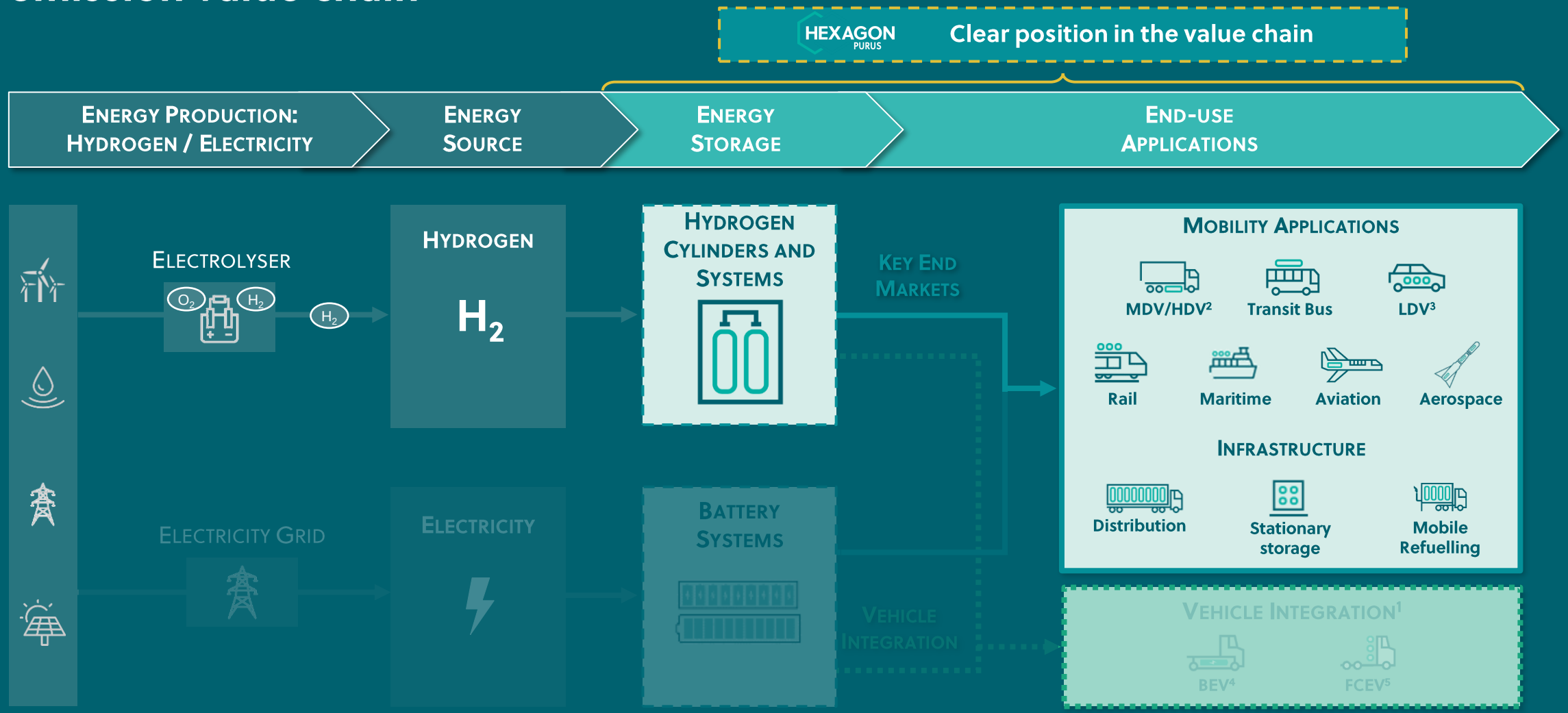
# Agenda

1. Corporate update
   Morten Holum, President & CEO
2. **Hydrogen cylinders and systems**
   **Michael Kleschinski, EVP Light Duty, Distribution & Cylinders**
3. Heavy duty truck applications
   Todd Sloan, EVP Systems
4. Financials and outlook
   Dilip Warrier, CFO



# Hexagon Purus plays an important part in the renewable energy and zero emission value chain




1) MDV and HDV only; 2) MDV = Medium-Duty Vehicle, HDV = Heavy-Duty Vehicle; 3) LDV = Light-Duty Vehicle; 4) Battery-Powered Electric Vehicle; 5) FCEV = Fuel Cell Electric Vehicle

# Hexagon Purus plays an important part in the renewable energy and zero emission value chain

## CYLINDERS

## INFRASTRUCTURE

## MOBILITY ENERGY STORAGE SYSTEMS

## A RANGE OF END-USE APPLICATIONS

- Stationary Storage
- Distribution
- Mobile Refuelling
- MDV/HDV
- Transit Bus
- LDV
- Rail
- Maritime
- Aviation
- Aerospace



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# HEXAGON PURUS' HIGH-PRESSURE TYPE 4 CYLINDERS


**1 Carbon fiber composite**

Contains the high internal pressure

**2 Polymer liner**

Creates the barrier for the compressed hydrogen gas

**3 Valve interface**

Provides interface to the hydrogen system

NON-CORROSIVE

FATIGUE STRENGTH

LIGHTWEIGHT

LEAK-FREE

LOWEST TCO



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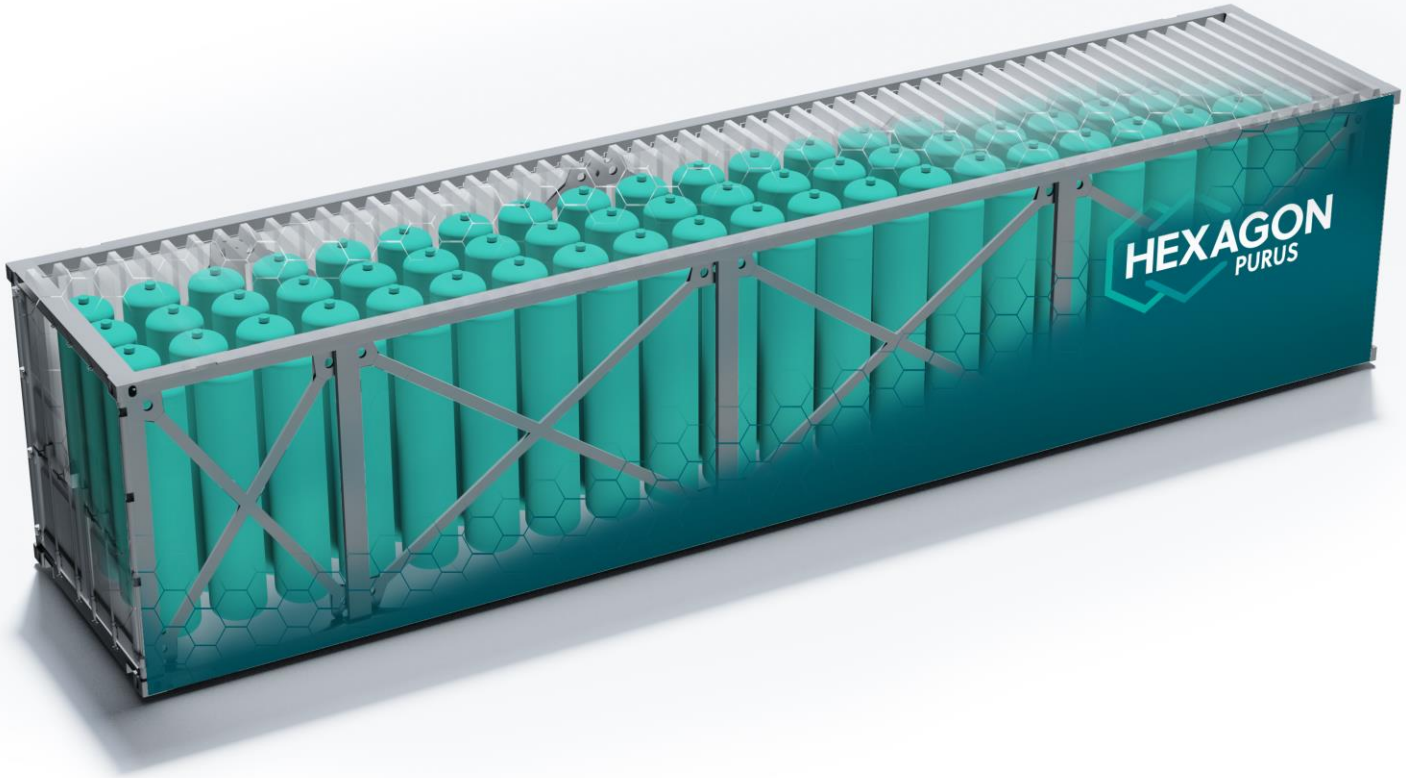
# HEXAGON PURUS' DISTRIBUTION MODULE




## Steel frame

Structure of the distribution system containing and protecting the cylinders for on-road and intermodal operations

## Type 4 cylinders

Container for the compressed hydrogen up to **500 bar pressure** designed and approved for transport applications

## Gas control

Piping and valves inside the container enabling loading and unloading of the compressed hydrogen



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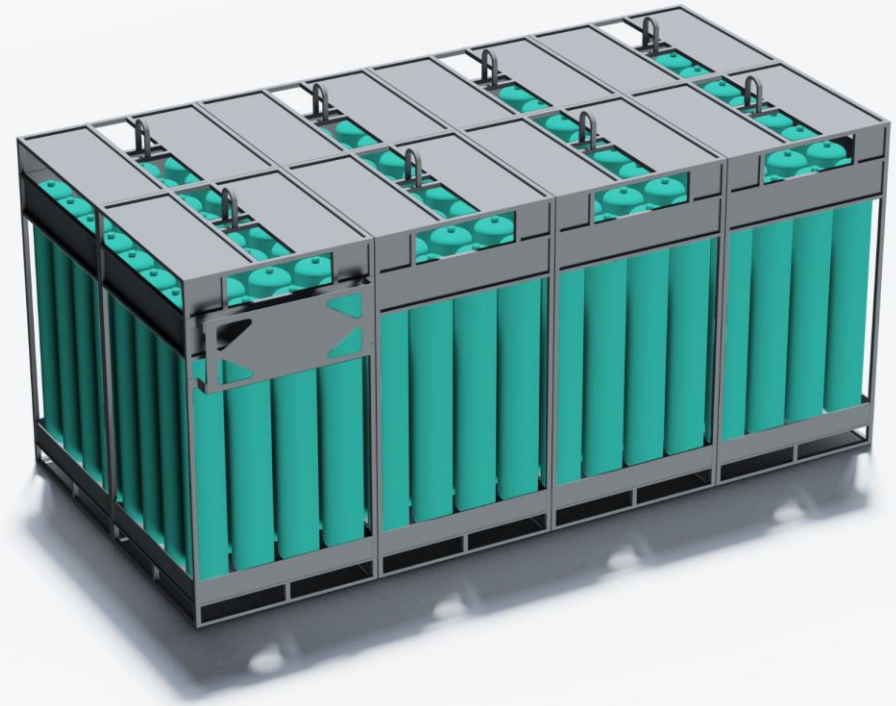
# HEXAGON PURUS' STATIONARY STORAGE



## Steel frame

Structure of the storage system containing and protecting the cylinders in stationary operations

## Type 4 cylinders

Container for the compressed hydrogen up to **1,000 bar pressure** designed and approved for stationary applications

## Gas control

Piping and valves inside the container enabling loading and unloading of the compressed hydrogen

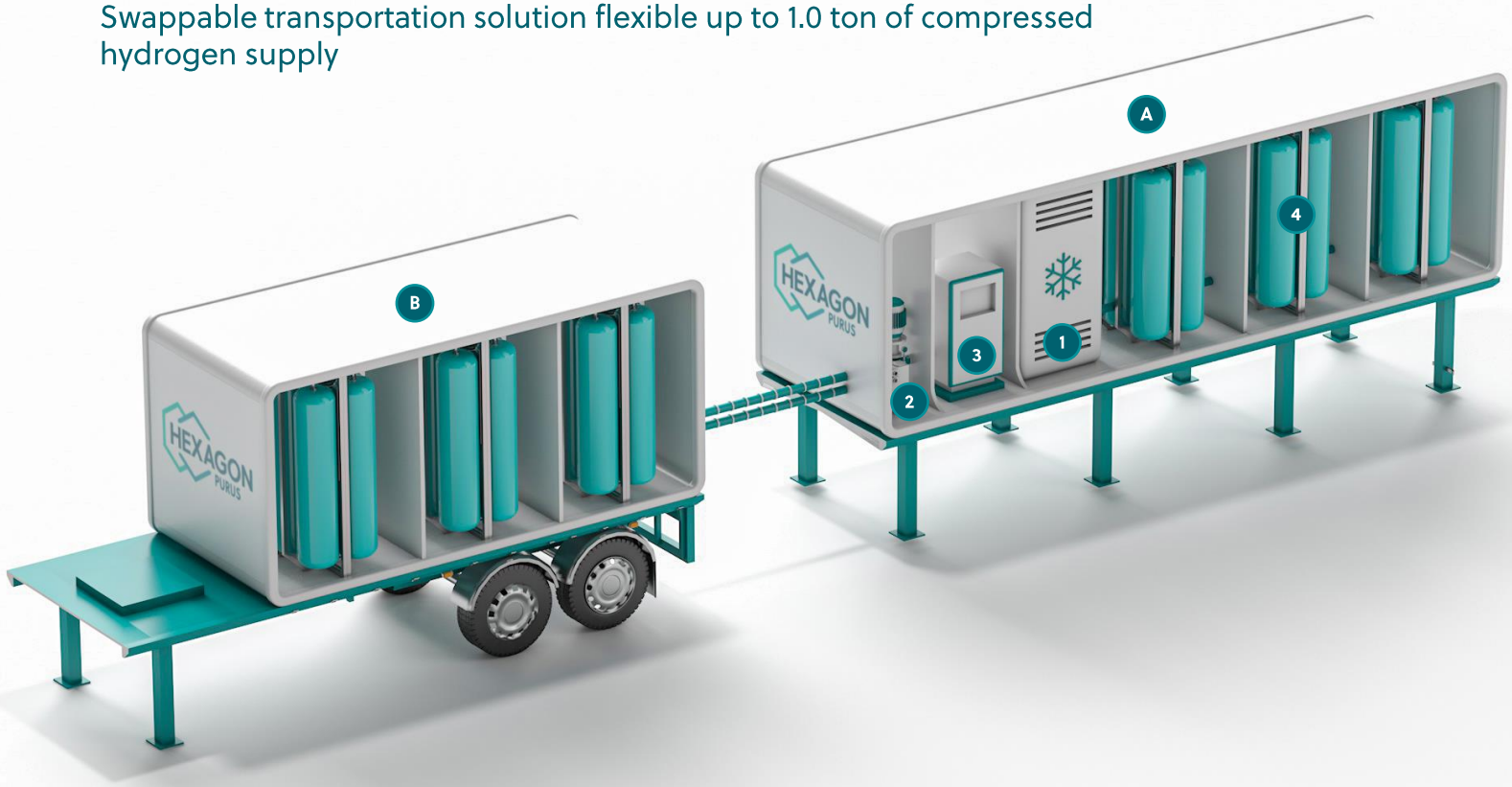
# HEXAGON PURUS' MOBILE REFUELING SYSTEMS

**A** **Mobile refueler**

Mobile solution for on-site refueling up to **350 bar pressure**

**B** **Tank container**

Swappable transportation solution flexible up to 1.0 ton of compressed hydrogen supply




**1** **Cooling**

Pre-cooling of compressed hydrogen to increase fueling efficiency of vehicles

**2** **Compressor**

Ensuring replenishment of the compressed hydrogen storage buffer

**3** **Dispenser**

Gas management system to fuel the vehicles by cascading from the buffer storage

**4** **Buffer storage**

High pressure 500 bar hydrogen storage for direct fueling into the vehicle



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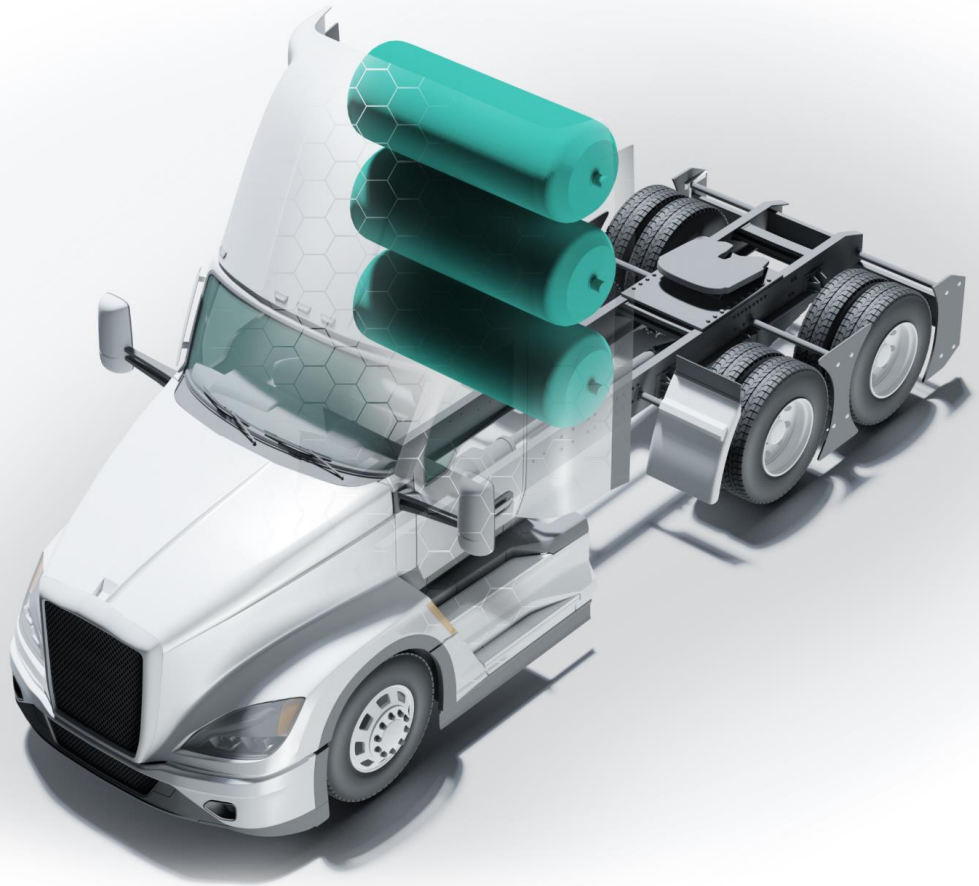
# HEXAGON PURUS' HEAVY-DUTY APPLICATIONS



## Type 4 cylinders

- 350-700 bar pressure cylinders
- Up to 9.8 kg hydrogen per single cylinder (larger capacities in development)
- Compliant with EC79 / HGV2, UNECE-R134 in development

## Type 4 hydrogen systems

- Customizable to OEM platforms
- Pre-assembled systems with weight optimized design
- Behind-the-cab and rail-mount possible



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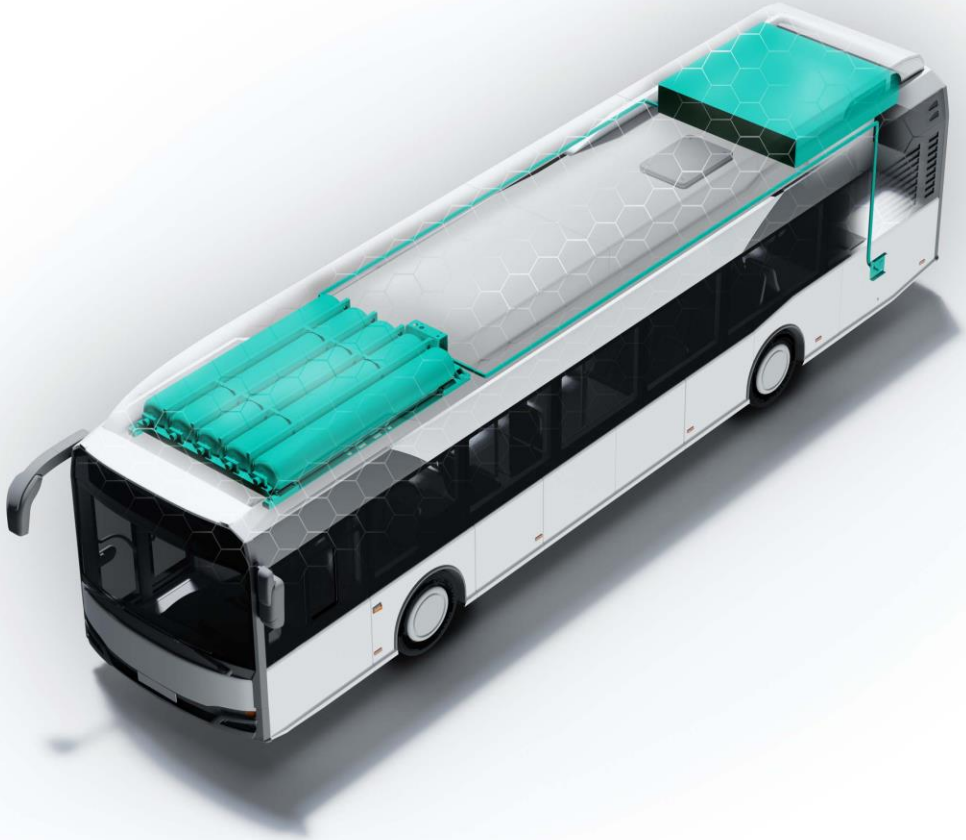
# HEXAGON PURUS' TRANSIT BUS APPLICATIONS



## Type 4 cylinders

- 350 bar pressure cylinders
- Up to 7.5 kg hydrogen per single cylinder
- Compliant with EC79, UNECE-R134 in development

## Type 4 hydrogen systems

- Standardized solutions that are adaptable for bus OEMs
- Longitudinally rooftop mounted cylinders
- Including fuel management systems
- 37+ kg of hydrogen per system



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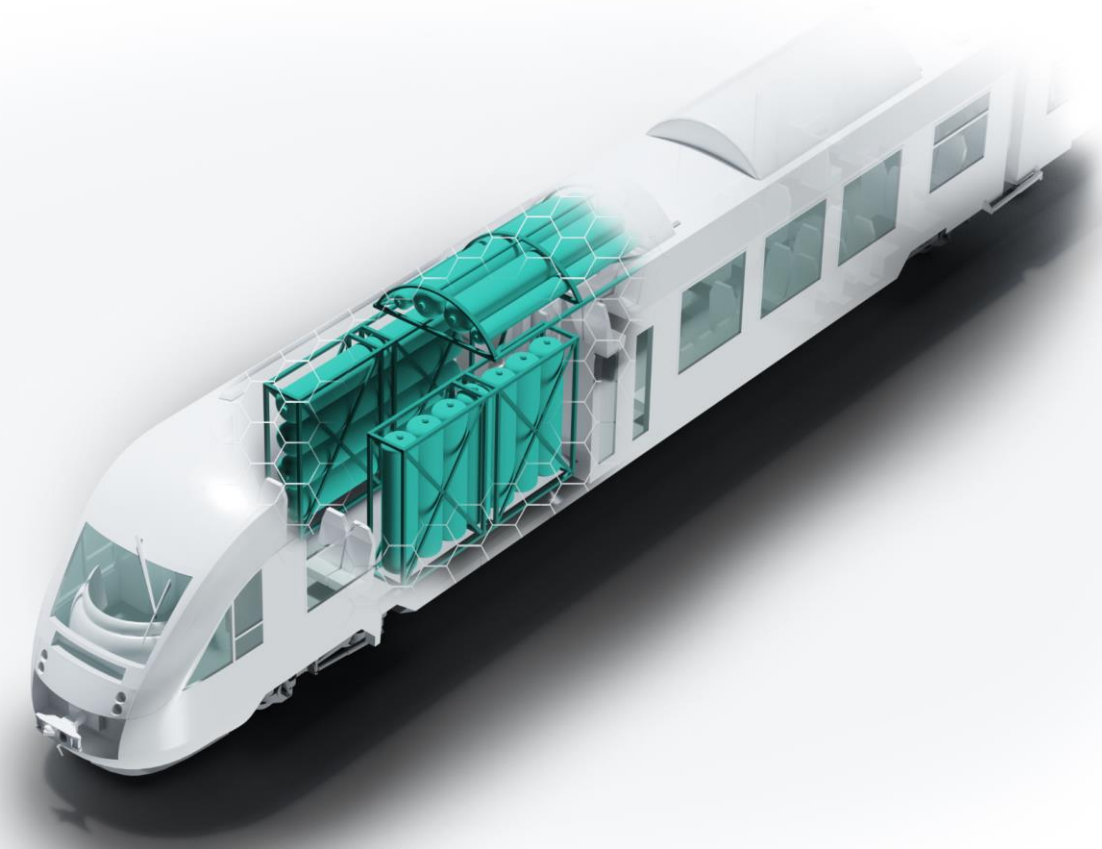
# HEXAGON PURUS' RAIL APPLICATIONS



## Type 4 cylinders

- 350 bar pressure cylinders
- Compliant with major railway standards

## Type 4 hydrogen systems

- Rooftop or rail cart installation
- More than 200 kg $H_2$ on board storage
- Including fuel management systems
- Increased system robustness to meet rail standards
- Designed to meet 30-year operational requirements



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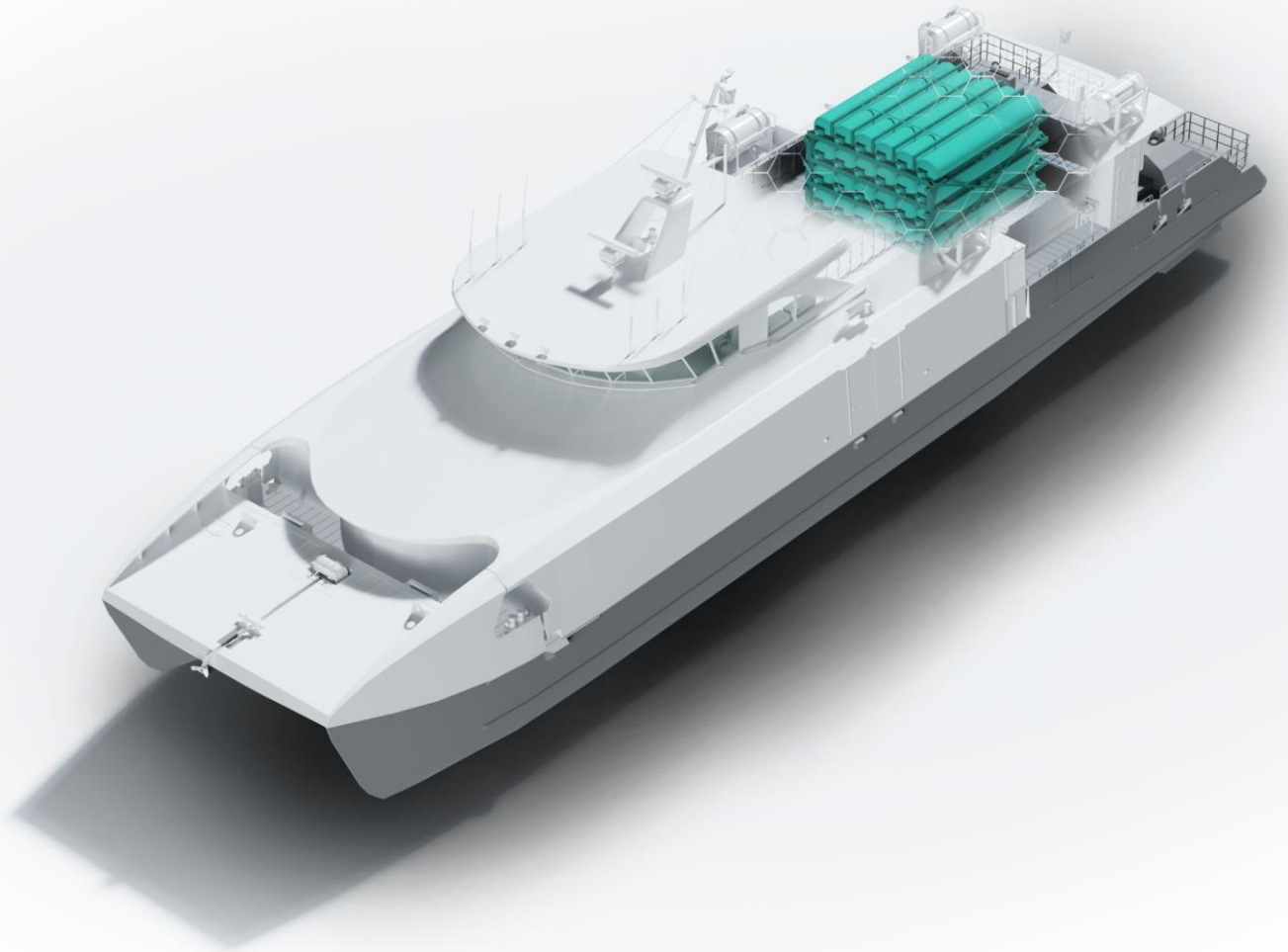
# HEXAGON PURUS' MARITIME APPLICATIONS



## Type 4 cylinders

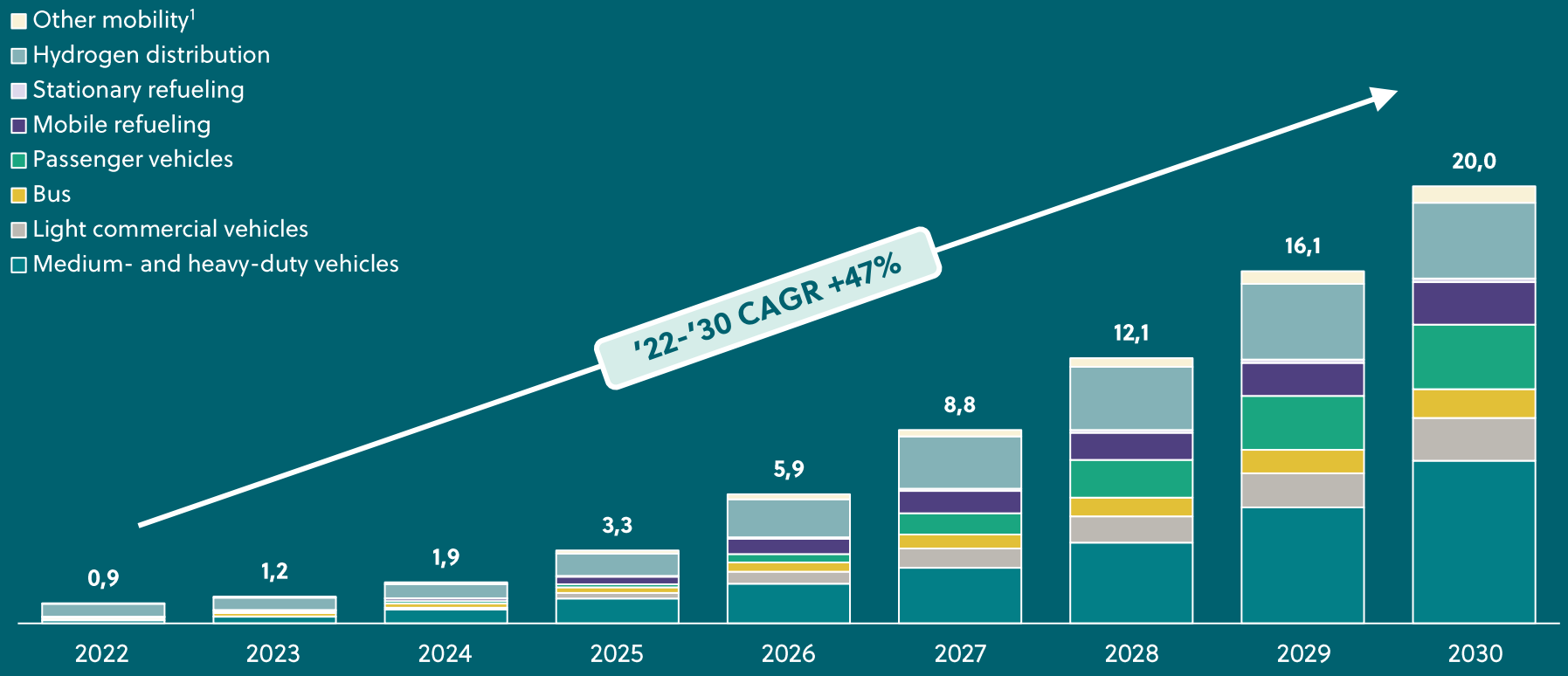
- 250-380 bar pressure cylinders
- Up to 32 kg hydrogen per single cylinder
- Compliant with US Coast Guard, with additional standards under development

## Type 4 hydrogen systems

- Fixed installation over and below deck
- Swappable containerized systems
- Option to include fuel management systems

# Addressable hydrogen market is expected to reach ~USD 20bn in 2030, corresponding to a ~20x increase relative to 2022

## HEXAGON PURUS' TOTAL ADDRESSABLE HYDROGEN MARKET




## HYDROGEN VEHICLE ADOPTION RATES IN 2030


Source: Hexagon Purus, third-party consultant
1) Other mobility (marine, rail, drones, aviation, farming, construction, mining)

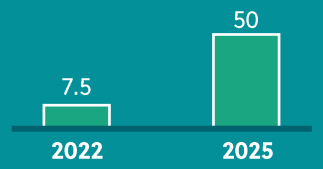
# In process to scale capacity to deliver on hydrogen growth plan

## WESTMINSTER

**ENGINEERING & CYLINDER MANUFACTURING FACILITY**

Production/assembly site, engineering centre and sales office

Revenue capacity

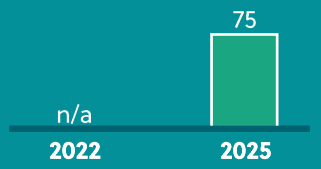



## KASSEL

**HYDROGEN CYLINDER ENGINEERING AND PRODUCTION HUB**

Production/assembly site, engineering centre and sales office

Revenue capacity

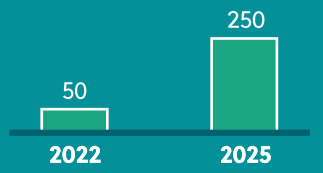



## WEEZE

**HYDROGEN SYSTEM ENGINEERING AND ASSEMBLY HUB**

Production/assembly site, engineering centre and sales office

Revenue capacity

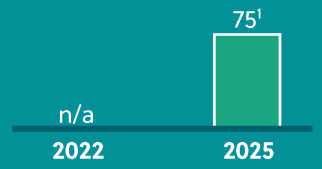



## SHIJIAZHUANG

**JV HYDROGEN CYLINDER MANUFACTURING AND SYSTEMS ASSEMBLY FACILITY**

Production/assembly site, engineering centre and sales office

Revenue capacity



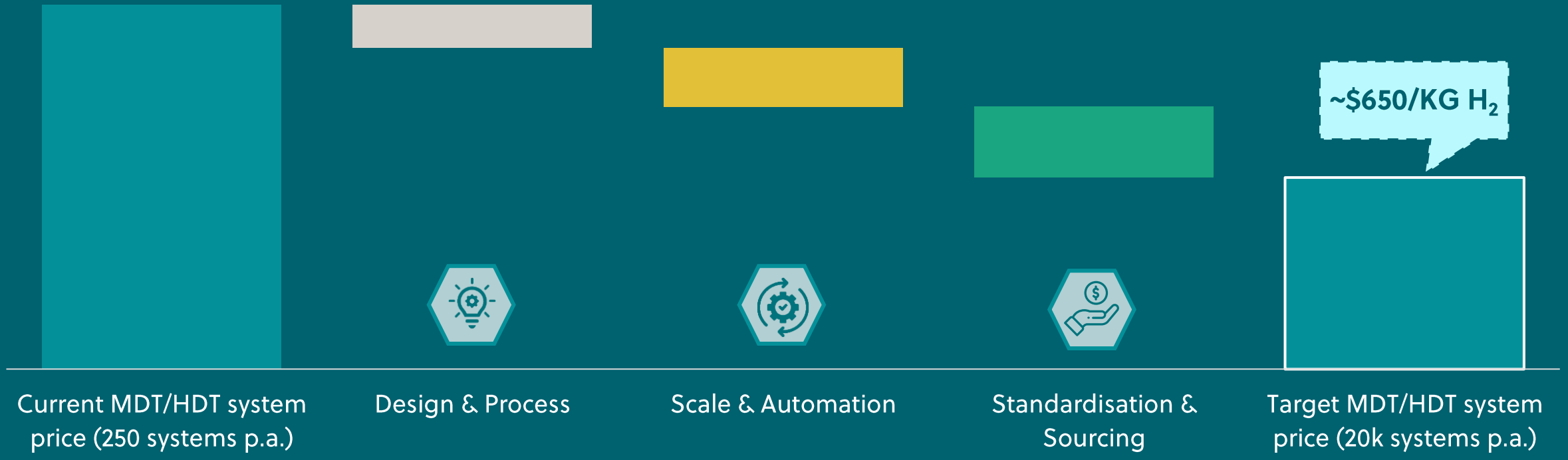



Note: Based on current expansion plans for 2025 target
1) System level revenue capacity

Revenue capacity p.a. (EURm)

# Hydrogen Type 4 cylinder system cost expected to decrease over time

COST IMPROVEMENT LEVERS FOR MDV/HDV TYPE 4 CYLINDER SYSTEMS (700 BAR)



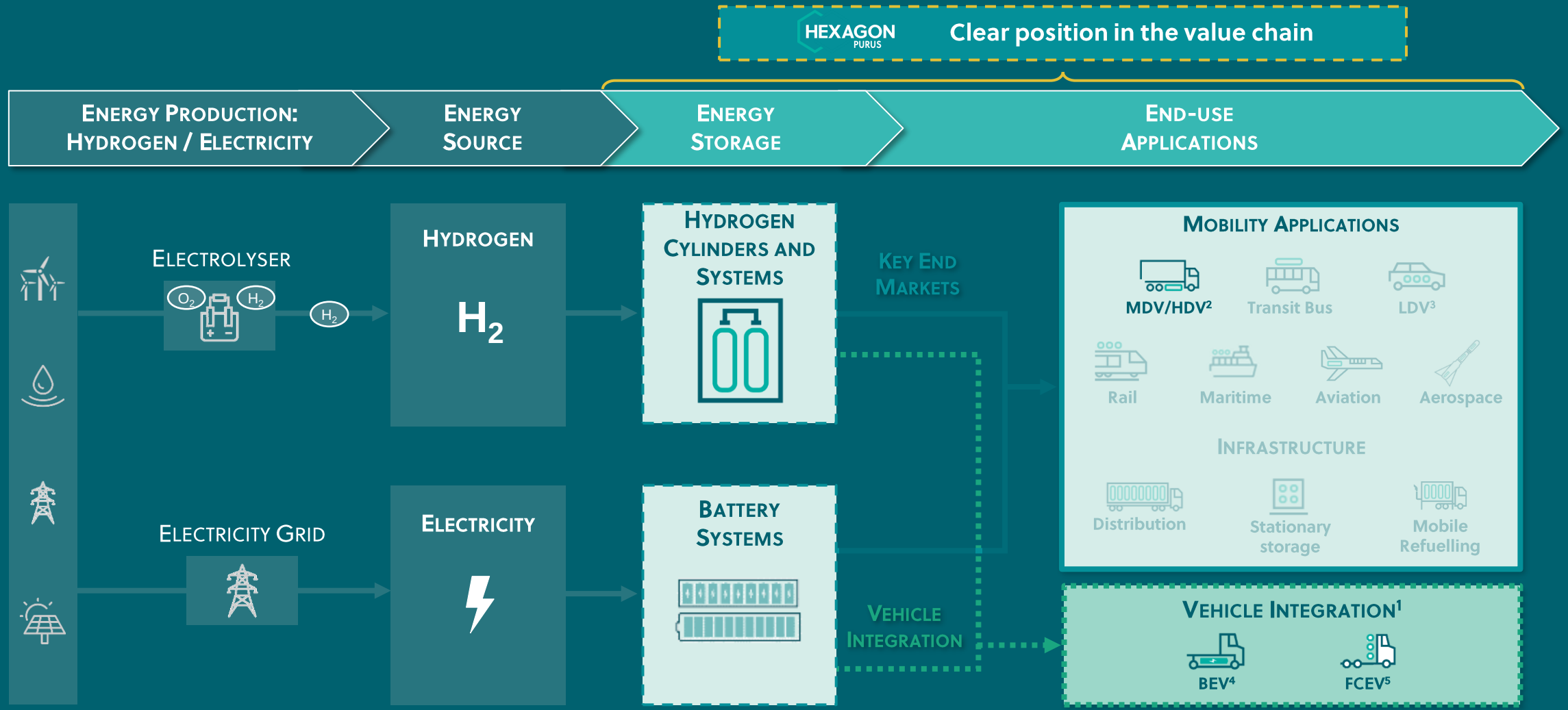



HEXAGON PURUS

# Agenda

1. **Corporate update**
   Morten Holum, President & CEO
2. **Hydrogen cylinders and systems**
   Michael Kleschinski, EVP Light Duty, Distribution & Cylinders
3. **Heavy duty truck applications**
   **Todd Sloan, EVP Systems**
4. **Financials and outlook**
   Dilip Warrier, CFO

# Hexagon Purus plays an important part in the renewable energy and zero emission value chain






1) MDV and HDV only; 2) MDV = Medium-Duty Vehicle, HDV = Heavy-Duty Vehicle; 3) LDV = Light-Duty Vehicle; 4) Battery-Powered Electric Vehicle; 5) FCEV = Fuel Cell Electric Vehicle

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# ~60 years' energy integration experience and in-house development

## 60+ years' expertise
in safe energy storage and integration expertise

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Agility fuel solutions

## ~100k upfitted
CNG/BEV/FCEV trucks on the road show front runner mindset for powertrain transition

amazon

ups

## 8/10 major US CV OEMs served
as vehicle integrator for CNG/BEV/FCEV

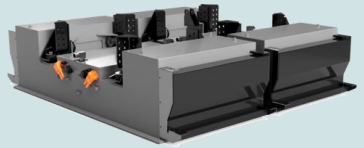
TOYOTA Peterbilt NAVISTAR VOLVO

MACK DAIMLER KENWORTH HINO

## More than 1 billion miles
on-road record with CNG systems, and 1.3M+ miles with BEV

## Innovation fleet
Part of the Daimler Innovation Fleet developing zero emission MDV and HDV vehicles

## Leading CV battery pack
enabled by safe and robust battery pack system design





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# Experience and competence enabled efficient transition in becoming battery pack and powertrain integration specialist

**2016** Agility Fuel Solutions are created[1]

**2016** First battery system development commencing

**2021** 1M miles driven with Purus' battery systems

**2022** 1.3M miles driven with Purus' battery systems

**16 years of cleantech experience**

**Successful journey to become a battery pack and powertrain integration specialist over the last few years**

## 2000-2010

**2000**
enviroMECH is founded, offering vehicle, stationary and mobile hydrogen and natural gas fuel storage solutions

## 2010-2016

**2010**
Agility Fuel Systems created through merger between FAB and EnviroMECH

**2014**
Hexagon Composites and Agility Fuel Systems enter into JV

## From 2016

**2017**
Start of $H_2$ program with Toyota Motors North America (TMNA)

**2018**
Awarded the Daimler Trucks North America BEV Innovation Fleet

**2020**
Start of battery program with TMNA

**2021**
Class 7/8 BEV pre-production with HINO

**2022**
Opening of Kelowna for Gen 3 batteries and $H_2$ storage systems

**2022**
Significant commercial traction with leading CV truck OEMs; USD 1.8-2.2bn of potential revenue

**The largest E-truck fleet in the US**

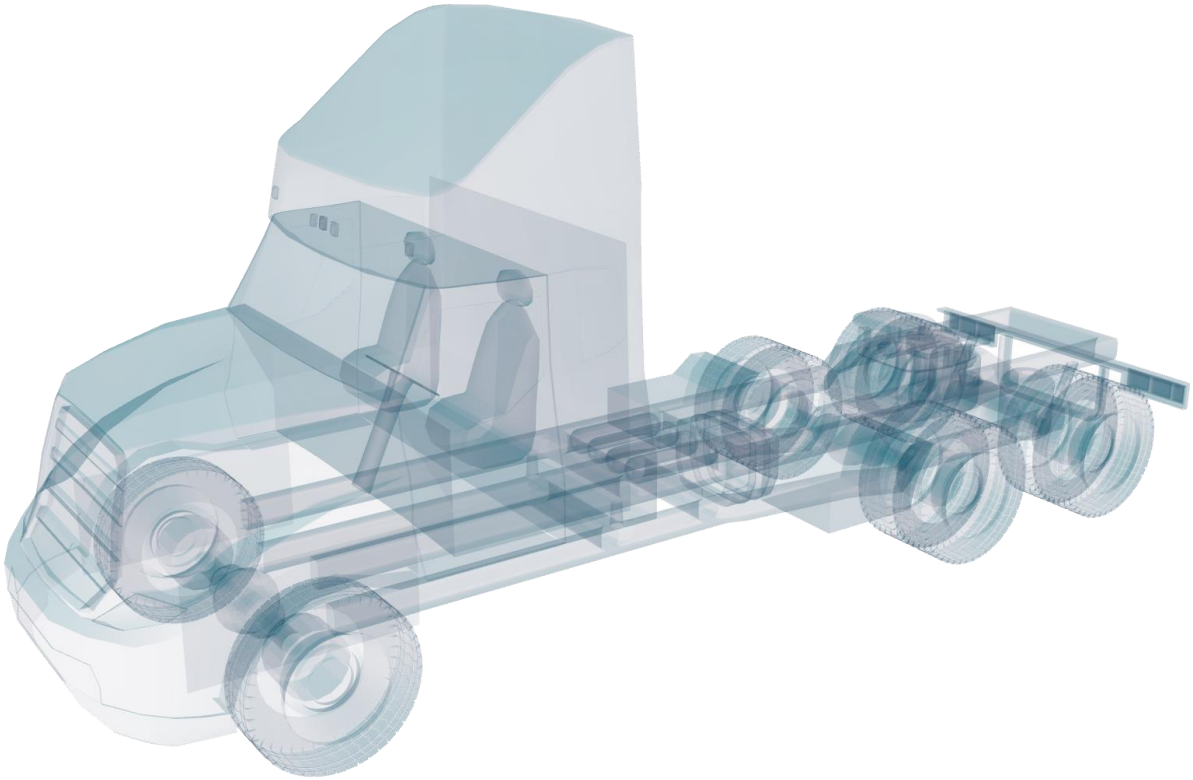
**Working with additional OEMs and tier 1s**

**Powertrain agnostic BEV vs FCEV battery business opportunity**

1) Agility Fuel Solutions was a result of the merger between Agility Fuel Systems and Hexagon Composites' CNG Automotive Products Division

# PURUS DELIVERS BATTERY SYSTEMS AND FULL ELECTRIC VEHICLE INTEGRATION

## STEP 1 - EMPTY CHASSIS FROM OEMS

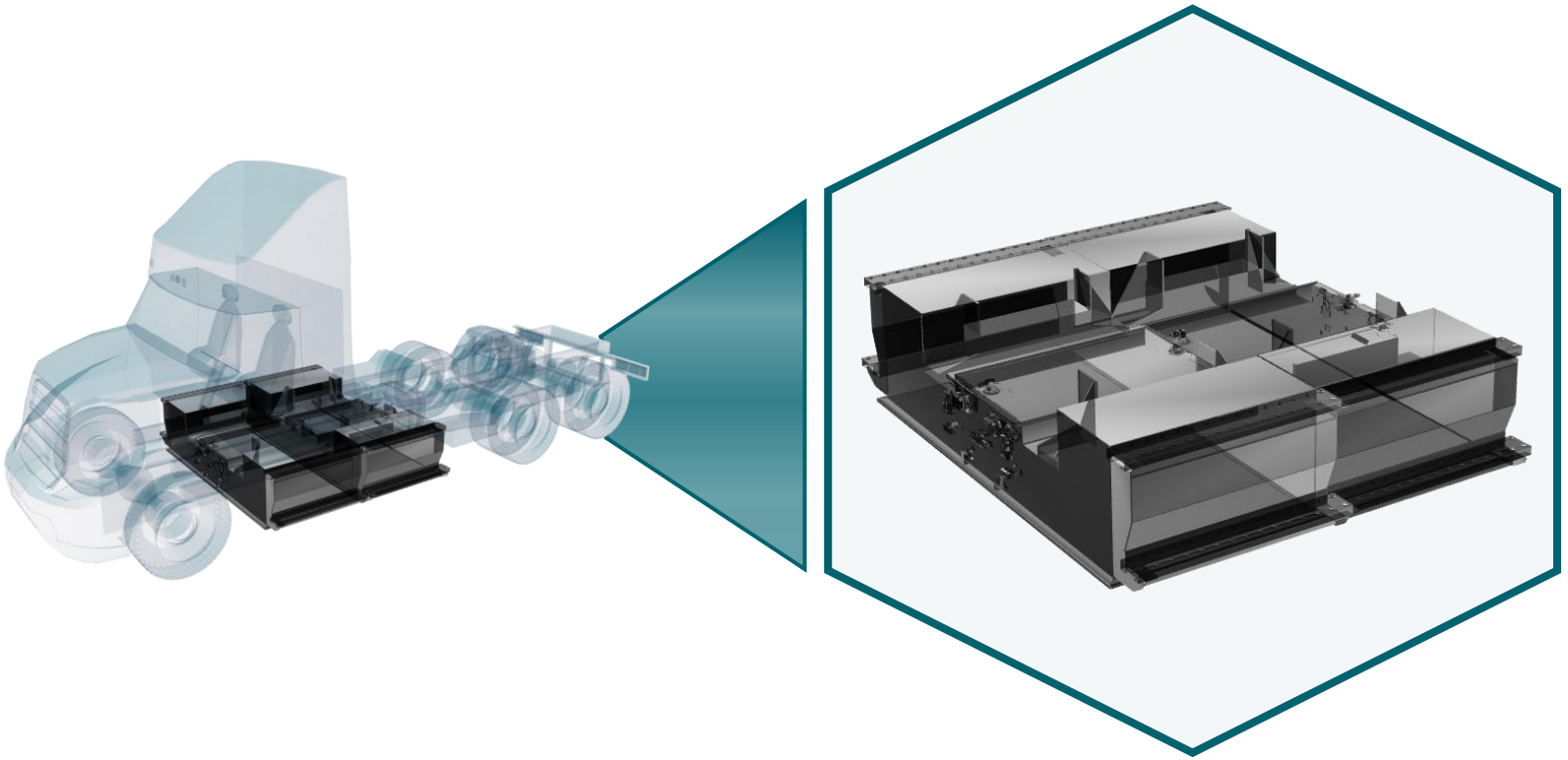


**Powered by Hexagon Purus**

- Chassis arrives without powertrain
- Integration done @OEM or @HPUR
- Chassis is prepared for electrification
- Contracts either for battery/hydrogen systems only *or* complete vehicle integration

# PURUS DELIVERS BATTERY SYSTEMS AND FULL ELECTRIC VEHICLE INTEGRATION

## STEP 2 – INSTALLATION OF BATTERY PACK



### BEV/FCEV Propack™

- Up to 330kWh per pack
- Often 2 packs for Class 8 applications = 660kWh, smaller ~200kWh for Class 8 FCEV's
- Modular down to 70 kWh
- Installs in factory setting target 2-minute takt time
- Best in class performance metrics
  - Continuous current
  - Gravimetric energy density
  - Thermal conductivity
  - kWh/wheelbase



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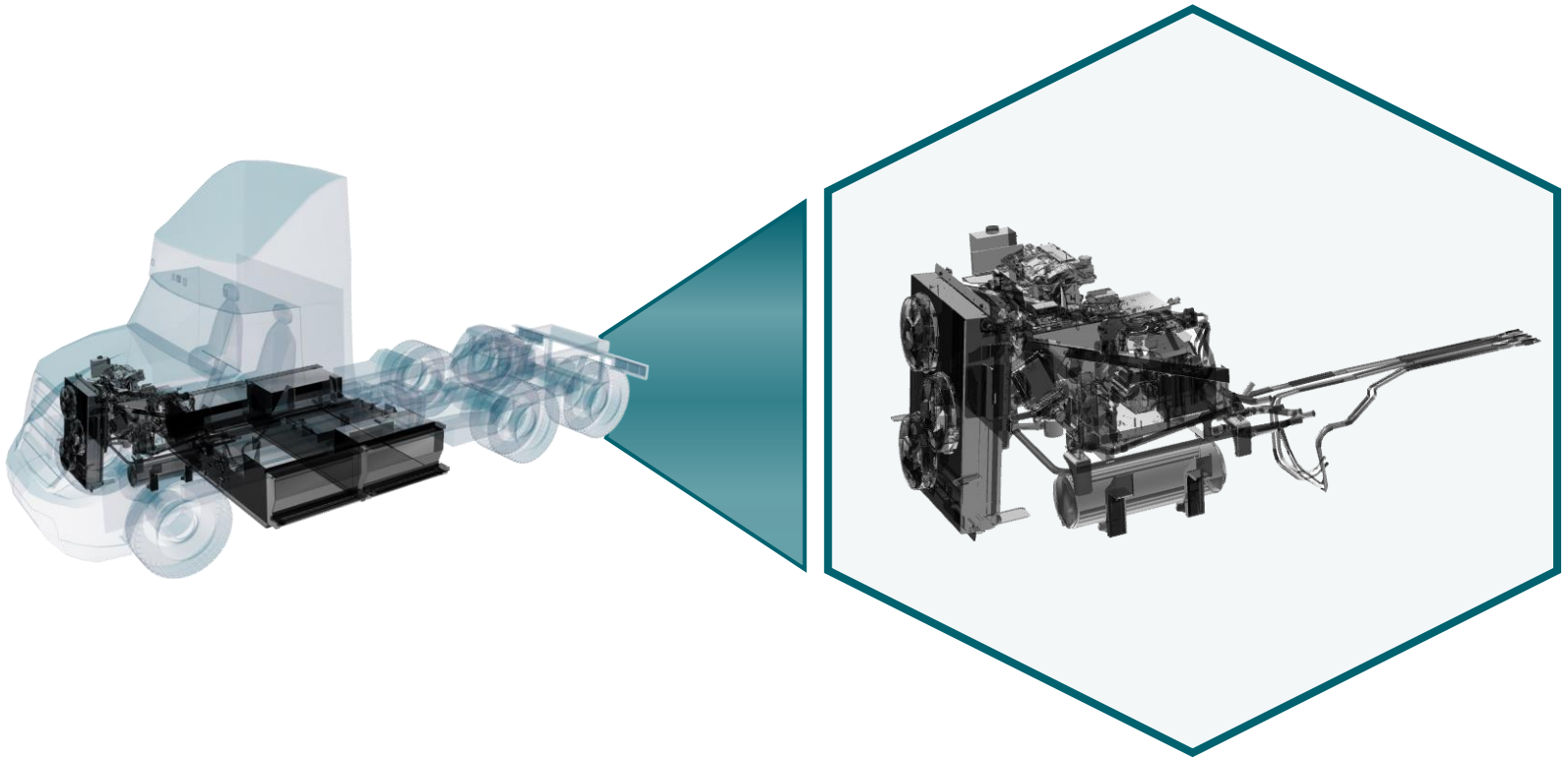
# PURUS DELIVERS BATTERY SYSTEMS AND FULL ELECTRIC VEHICLE INTEGRATION

## STEP 3 – INSTALLATION OF AUXILIARY MODULE

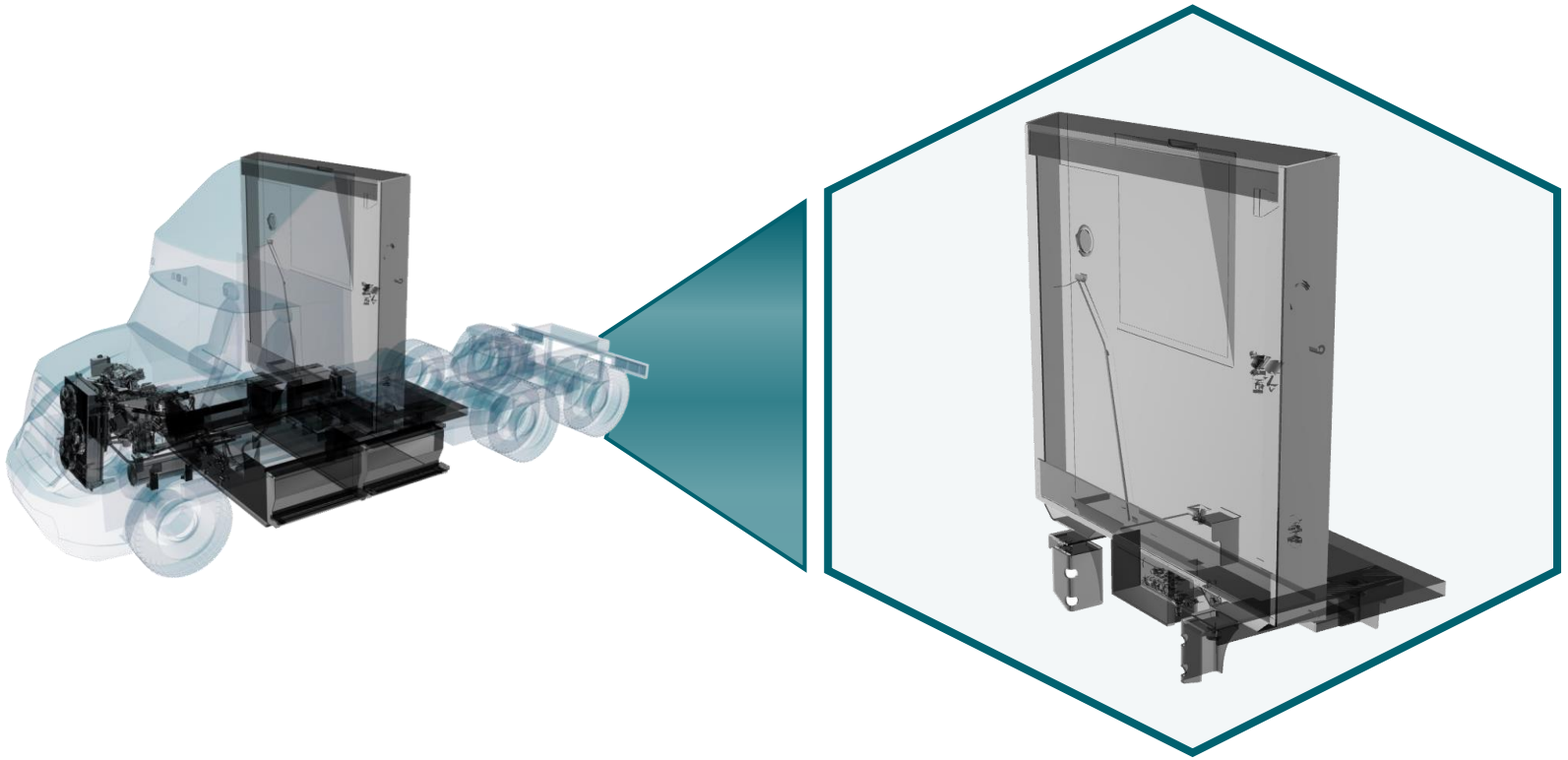


### Accessory drive module

- Modular system installs in minutes
- Strong IP
- HVAC, Pumps, Compressors, DCDC = everything that used to be powered by belts and pullies off of a diesel engine
- Quiet and reliable performance
- Easy maintenance access

# PURUS DELIVERS BATTERY SYSTEMS AND FULL ELECTRIC VEHICLE INTEGRATION

## STEP 4 – INSTALLATION OF POWER ELECTRONICS



### BEV eProCab™

- Depending on application, power electronics either between frame rails or in vertical system behind the cab
- Easy maintenance access
- Billions of miles of experience prove better durability above rail
- Integrated cameras, lights, grab handles, trailer connections
- ePTO options
- Charge port



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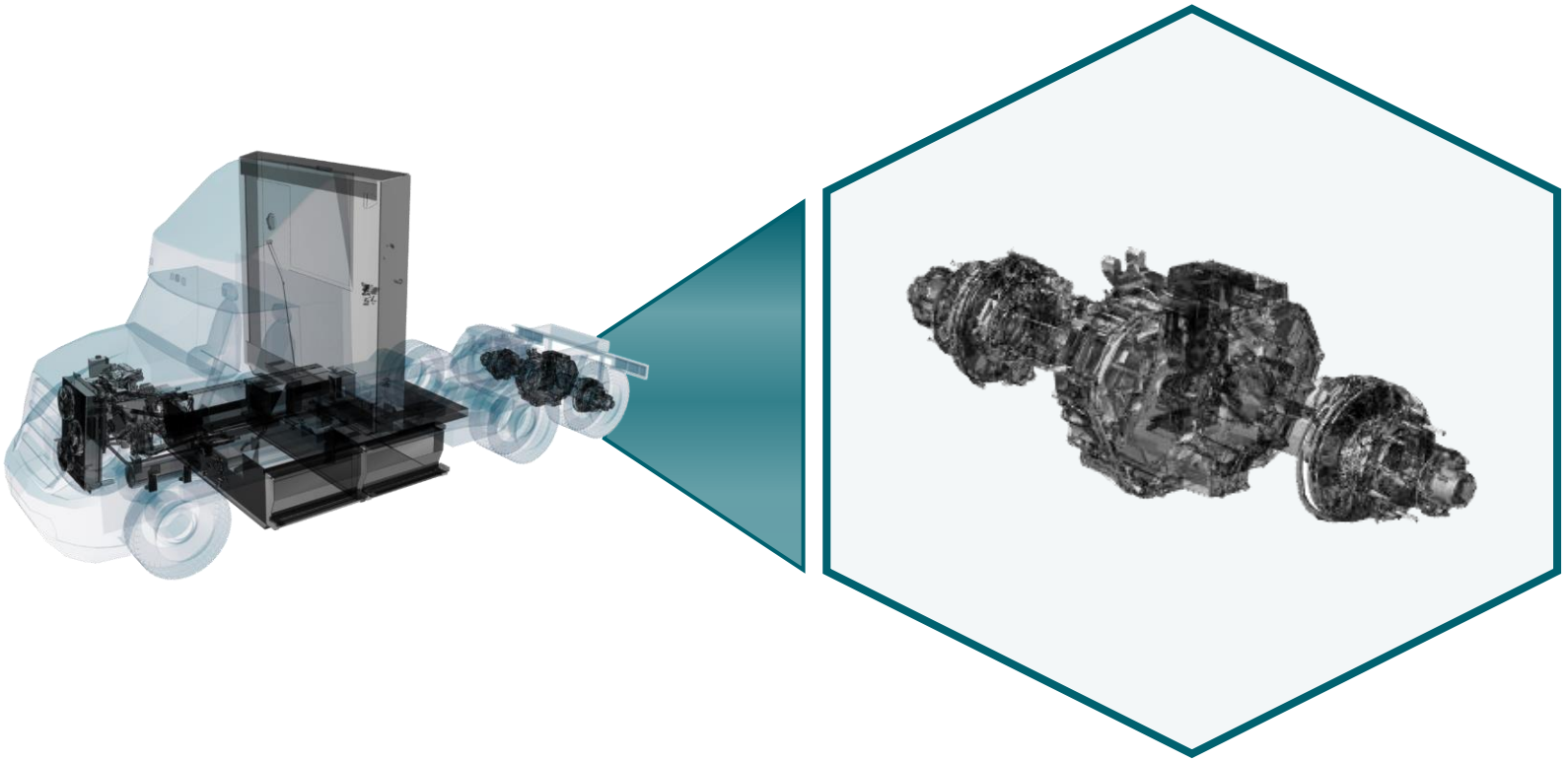
# PURUS DELIVERS BATTERY SYSTEMS AND FULL ELECTRIC VEHICLE INTEGRATION

## STEP 5 – INSTALLATION OF 3RD PARTY COMPONENTS

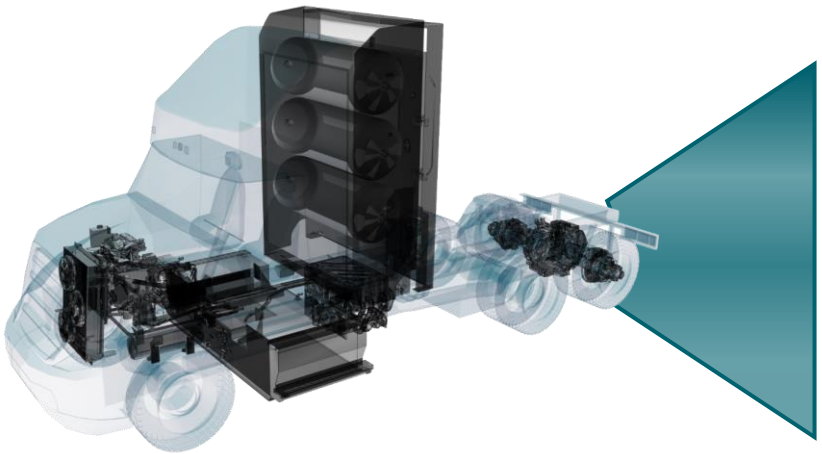


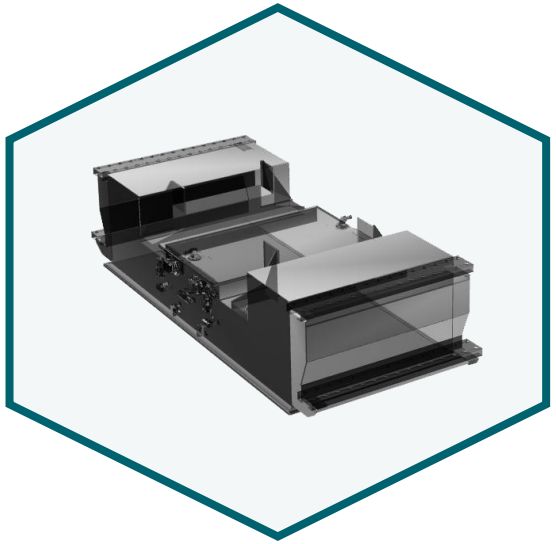
### eAxle or eMotor

- One or more eAxle(s) or eMotor(s) installed onto chassis
- Software development and validation completed by HPUR for numerous eAxle and eMotor applications
- eAxle inverter installed in eProCab™
- Extremely high power and torque
- Highly efficient
- Single speed or multi-speed gearbox options
- Lift axle and various suspension/brake options

# PURUS DELIVERS BATTERY SYSTEMS AND FULL ELECTRIC VEHICLE INTEGRATION

## STEP 6 – FUEL CELL ELECTRIC VEHICLE INTEGRATION





### 1 BEV to FCEV

- Build BEV with
  - 200 kWh ProPack™
  - eAxle(s)
  - Auxiliary module
- Add H-ProCab™ Hydrogen Storage System integrated with power electronics
  - 73 kg of Hydrogen storage is equivalent to 1,200 kWh at the wheels
- Install fuel cell from 3rd party

### 2 Installation of Software

- Install HPUR **thermal management system**
- HPUR **vehicle level software** supervises BEV, $H_2$ system and fuel cell
- Result = FCEV (a.k.a. long-range BEV)



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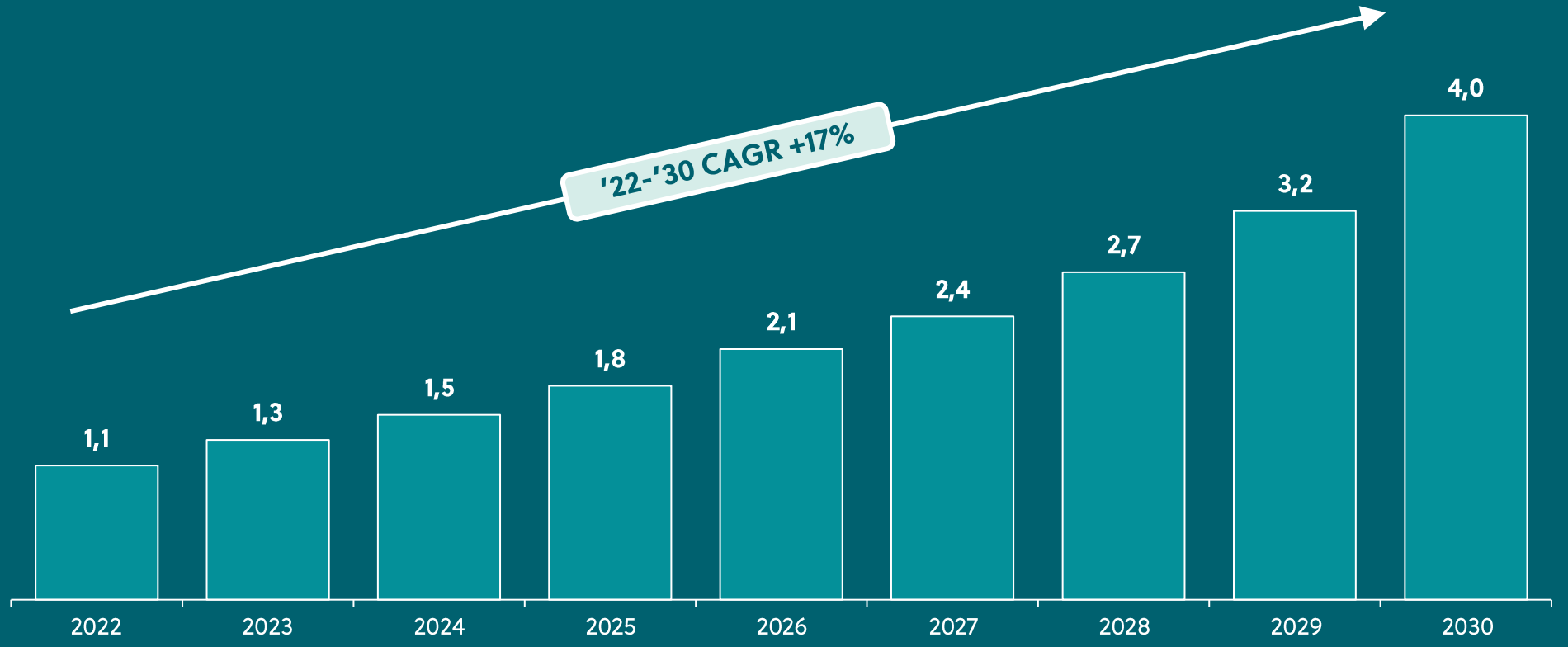
# Addressable battery market expected to reach USD ~4bn by 2030, with BEV accounting for ~90% of 2030 revenue due to larger battery sizes

## HEXAGON PURUS' TOTAL ADDRESSABLE BATTERY MARKET IN NORTH AMERICA

USDbn




### BATTERY ADOPTION RATES IN 2030




Source: Hexagon Purus, third-party consultant
Note: Vehicle integration included in total addressable market (USD ~0.7bn in 2030)

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# Overview of the Kelowna manufacturing facility


Please click **here** to see a video of the facility



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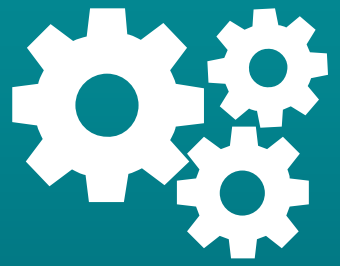
# Strategically positioned manufacturing sites in close proximity to customers

## MULTIPLE LOCAL MICRO-MANUFACTURING SITES

- Production in close proximity to customers
- Manufacturing sites solely specialised in producing various products
- Shorter time-to-market for new products
- Ability to lever local competence

## FEW GLOBAL GIGA-MANUFACTURING SITES



- Increased economies of scale in production
- Collaboration between product teams



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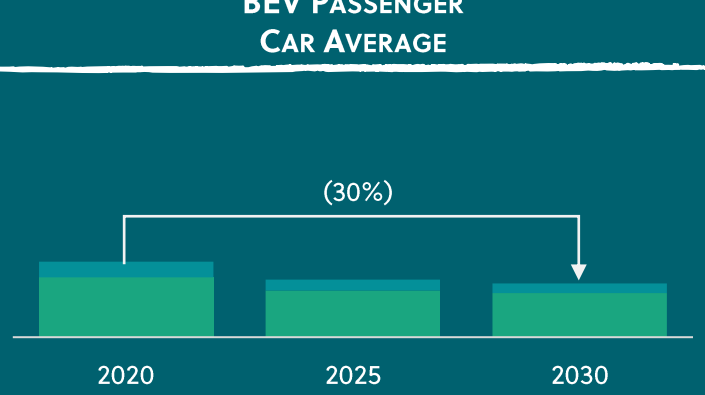
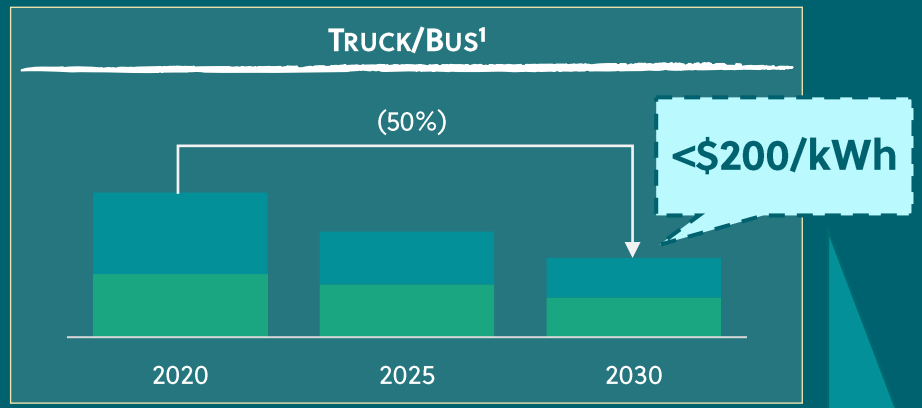
# Commercial vehicle (Truck/Bus) battery pack cost expected to decrease over time

## ENERGY BATTERY PRICE COMPARISON 2020-2030 ACROSS SEGMENTS, USD/KWH

### BEV PASSENGER CAR AVERAGE

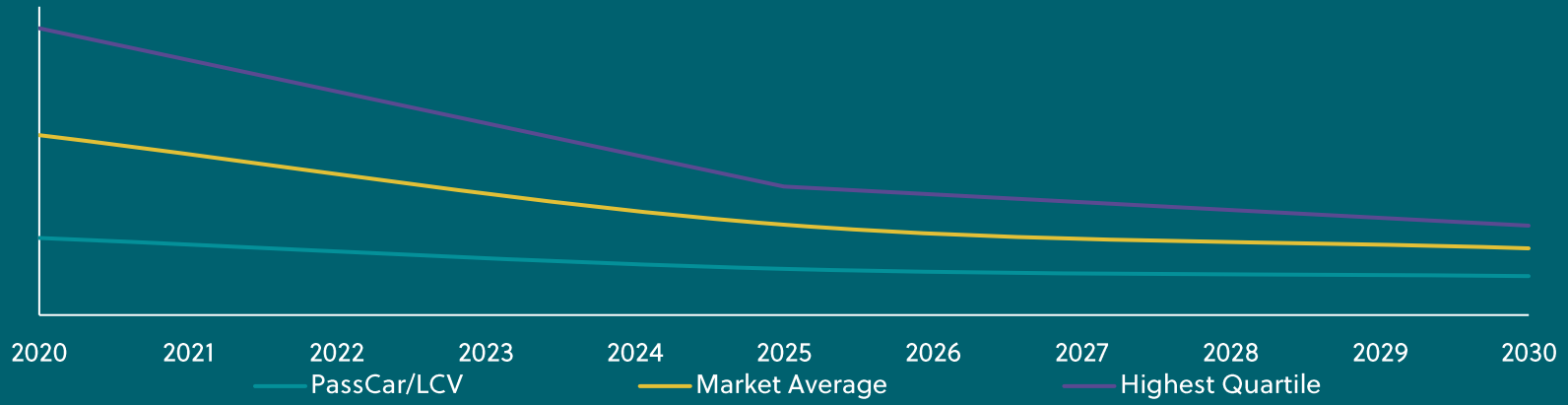



### TRUCK/BUS[1]




Cell Pack HPUR's key end markets

## TRUCK/BUS ENERGY BATTERY PACK PRICE BANDS, USD/KWH




## DRIVERS FOR COST REDUCTION

- Cost of raw materials
- Increased automation
- Scale of production

1) Relevant truck/bus price segment for Sunlight Energy, excluding LCVs and China; 25% mark-up assumed for off-highway



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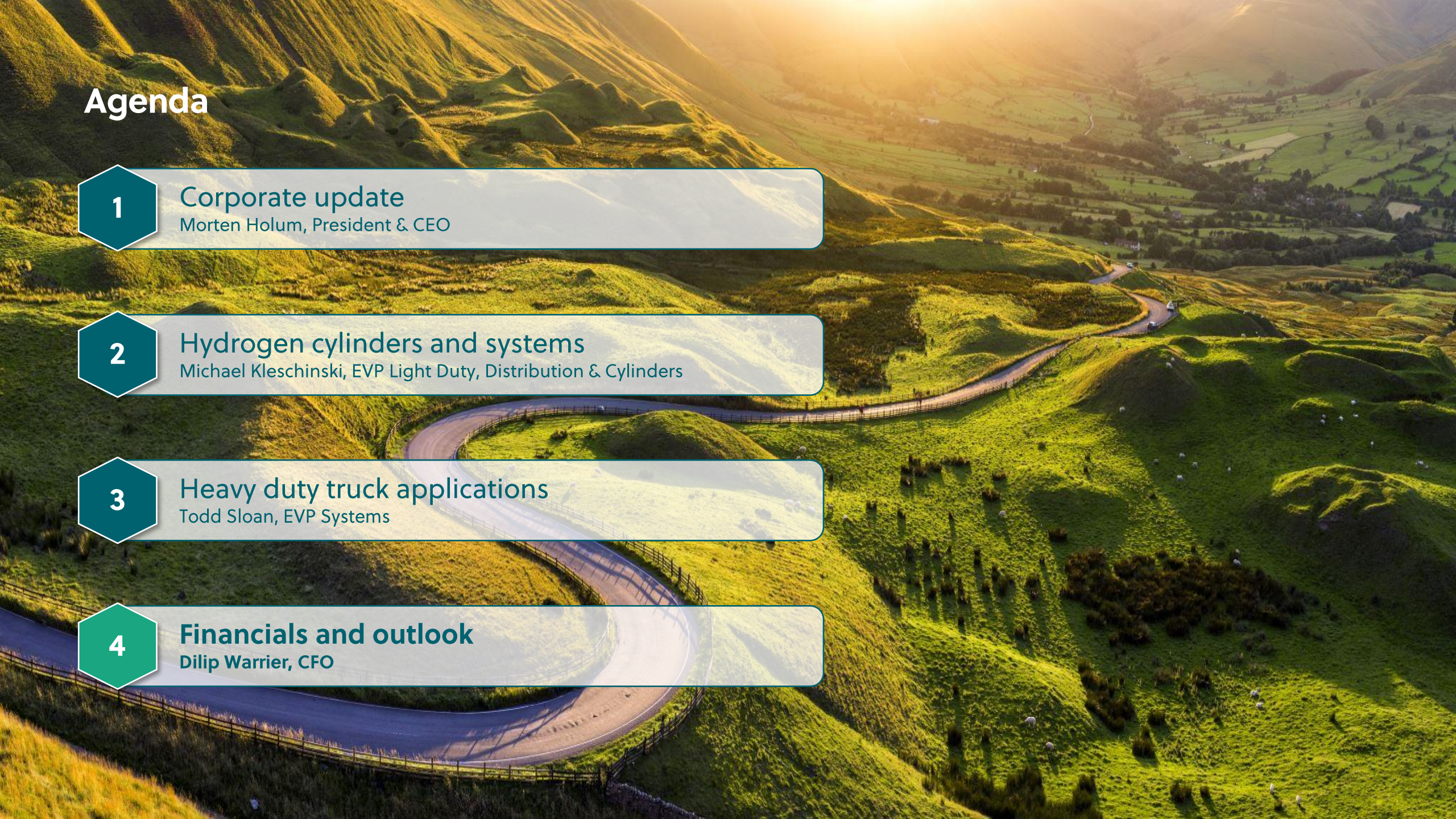

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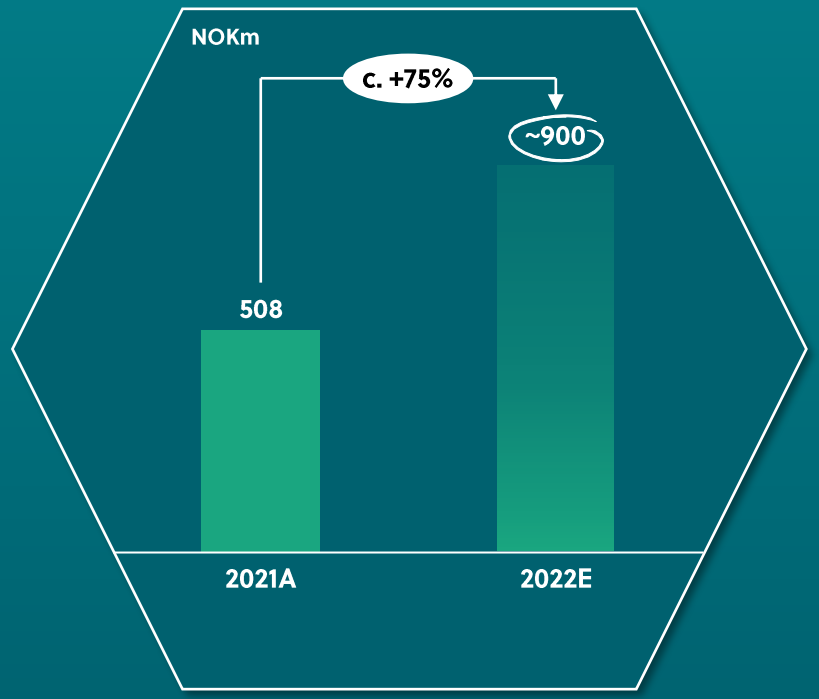
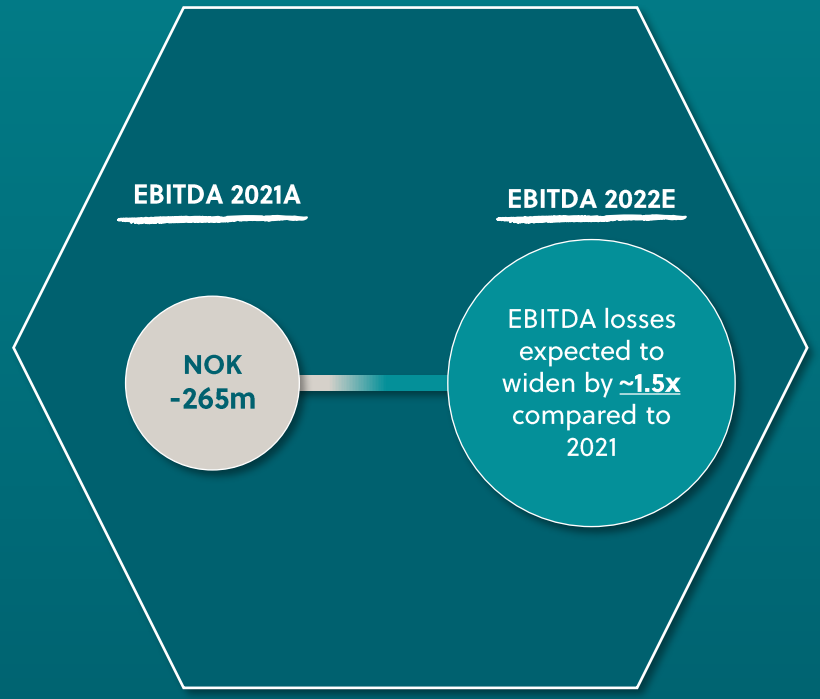
   **Dilip Warrier, CFO**

# Reiterating 2022 revenue and EBITDA guidance

## 2022 REVENUE GUIDANCE




## 2022 EBITDA GUIDANCE



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# Capital deployment priorities

## Grow revenue

Will require substantial working capital

**Revenue target (NOK)**

**4-5 billion in 2025**

## Scale up

Scaling organization to support production, engineering, infrastructure, and backbone functions

**450 FTEs**

(as per Q1 2022)

## Capacity

Expansion initiatives related to production capacity in order to meet customer demand

**Revenue Capacity (NOK)**

**5.0+ billion in 2025**

## Product and process development

Support booked business and continue innovation to lower cost, lighter weight and more efficient energy storage solutions

**Target cost down[1]**

**<USD 200**

*HD Battery Pack USD/kWh*

**~USD 650**

*Cylinder System USD/$H_2$kg*



1) 2030 target ambition

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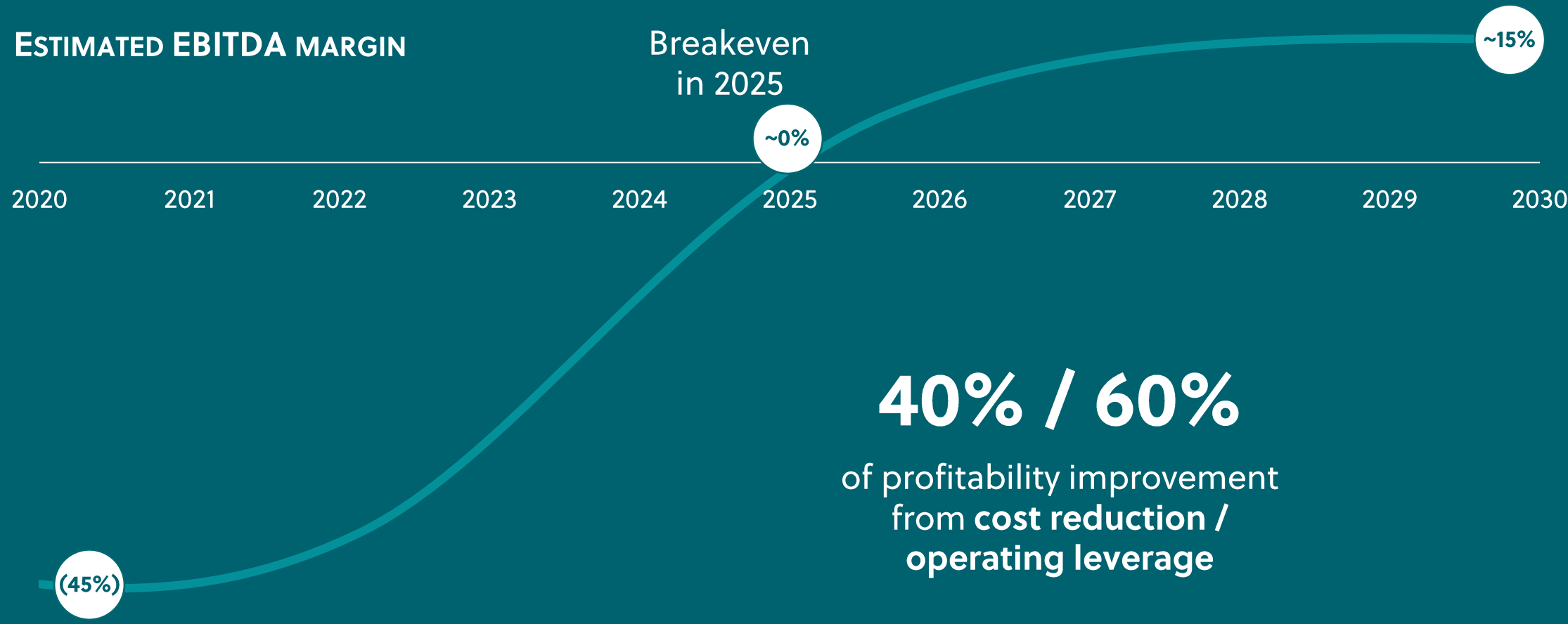
# Profitability improvements will be driven by manufacturing scale-up and operating leverage




**40% / 60%**

of profitability improvement from **cost reduction / operating leverage**



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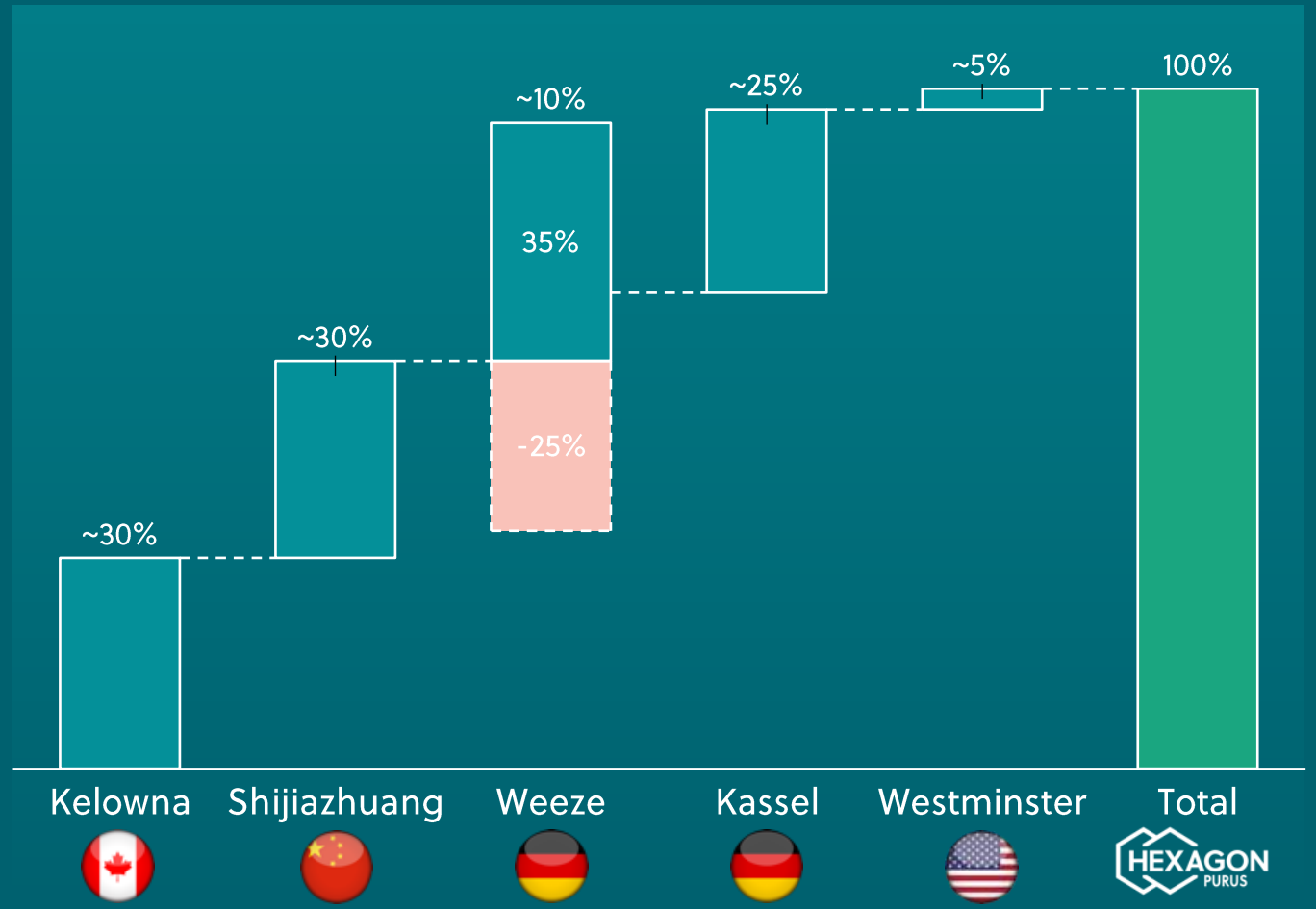
# NOK 750-800m net CAPEX required through 2024 to achieve capacity for 2025 revenue target

## % DISTRIBUTION OF CAPEX THROUGH 2024




## CAPEX DETAILS

- Assumes Weeze facility capacity expansion partially funded by external debt
- Excludes:
  - Expected external debt funding in Weeze (~NOK 200 million)
  - Capitalized R&D (NOK 70m)
  - Expected acquisition consideration for Wystrach and Cryoshelter (NOK 180m)



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# SUMMARY



HEXAGON PURUS

# Key summary highlights

1. Large and rapidly growing addressable market in the zero-emission mobility space
2. Leading provider of hydrogen and battery electric technology for zero-emission mobility, including components, systems and vehicle integration
3. Extensive track-record in delivering solutions to a wide spectrum of fuel cell electric and battery electric applications
4. Global and scalable manufacturing footprint with presence in key regions, and a capable organisation with skill-set to deliver transformational growth
5. Early mover with unique market position validated by major customer wins and recurring business
6. Strong momentum on several fronts, on-track to reach revenue ambition of NOK 4-5bn in 2025

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Q&A