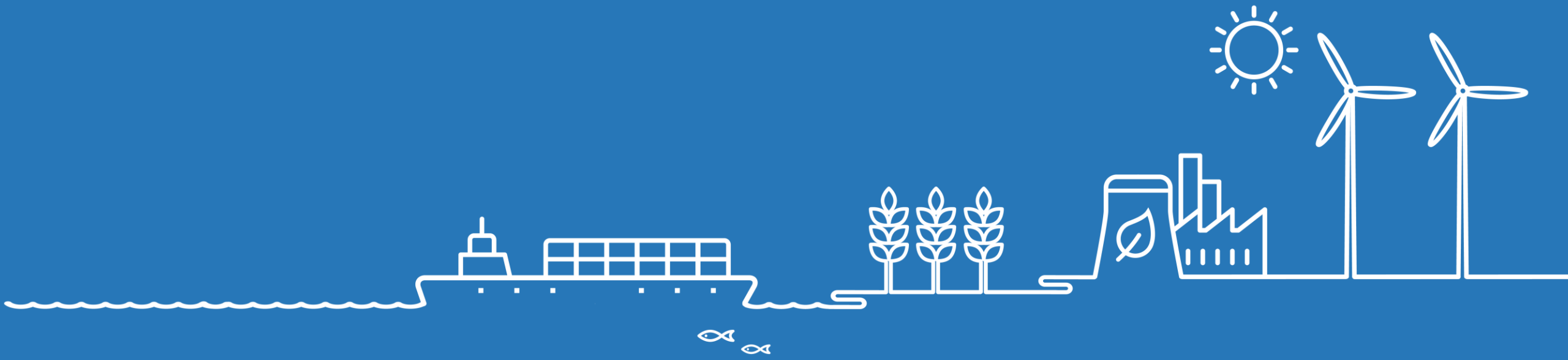
Yara Clean Ammonia



Capital Markets Day

30 June 2022

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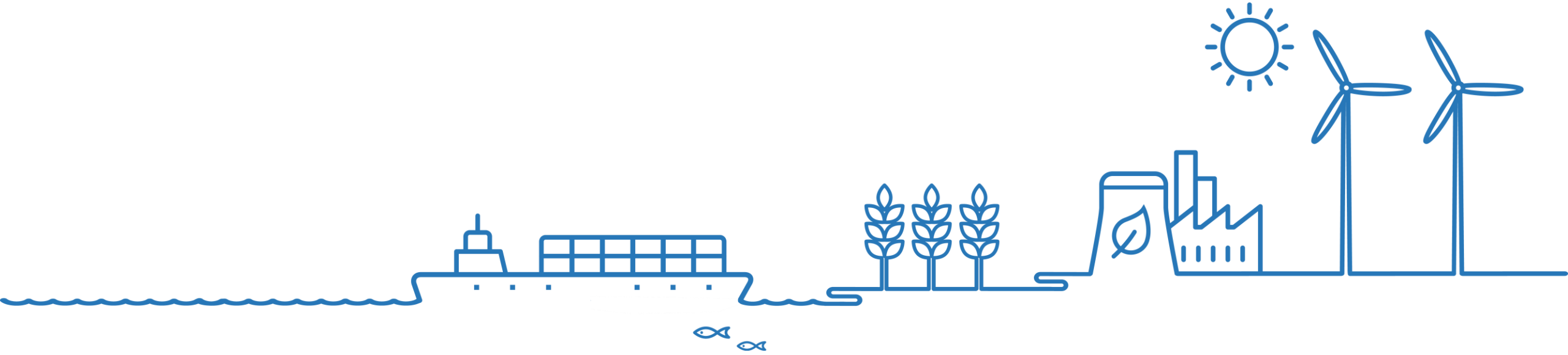
Introduction to Yara Clean Ammonia (YCA)



YCA is a leading[1] global ammonia platform well-positioned to capture the market for clean ammonia

YCA in brief

A key **enabler of decarbonization of hard-to-abate industries**, connecting upstream projects with new customer applications

The #1 **integrated midstream platform in the ammonia value chain**[1], with asset-backed supply and a global footprint

Standalone entity **backed by majority owner and preferred partner Yara**, which has almost 100 years of ammonia experience

Company highlights

USD 3.0bn

Q1 2022 LTM Revenues

USD 159m

Q1 2022 LTM EBITDA[2]

>20%

Market share of merchant/traded ammonia in 2021[1]

4.1mT

Ammonia transported and sold Q1 2022 LTM

#12

Owned and leased purpose-built ammonia vessels

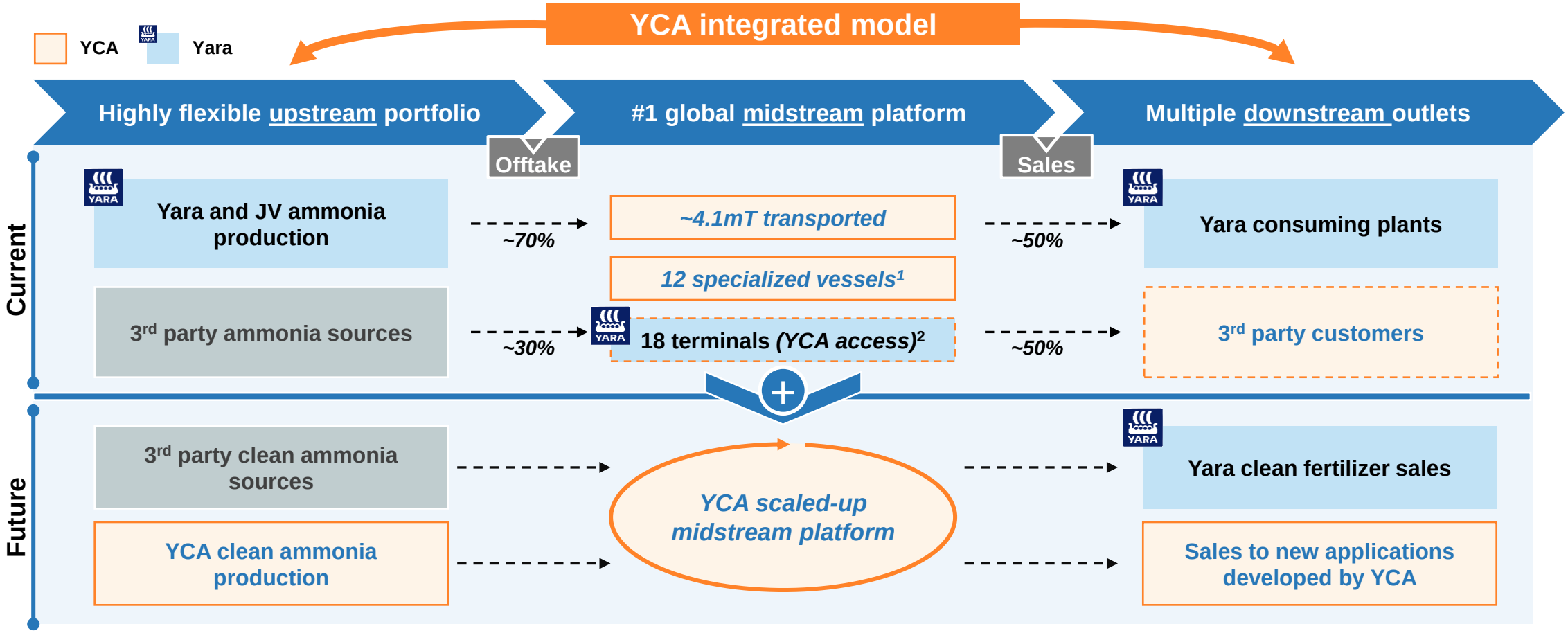
#18

Terminal access in key locations[3]

Source: Company information

1) Based on volumes of traded ammonia in 2021 - Argus market study (2022)
2) EBITDA is defined as operating income plus depreciation and amortization and interest income and other financial income
3) YCA has exclusive access, and manages and optimizes use of Yara's ammonia tank infrastructure at terminals through sourcing and supply agreements with Yara

YCA is the clear #1 in ammonia, built on a global integrated business model backed by Yara

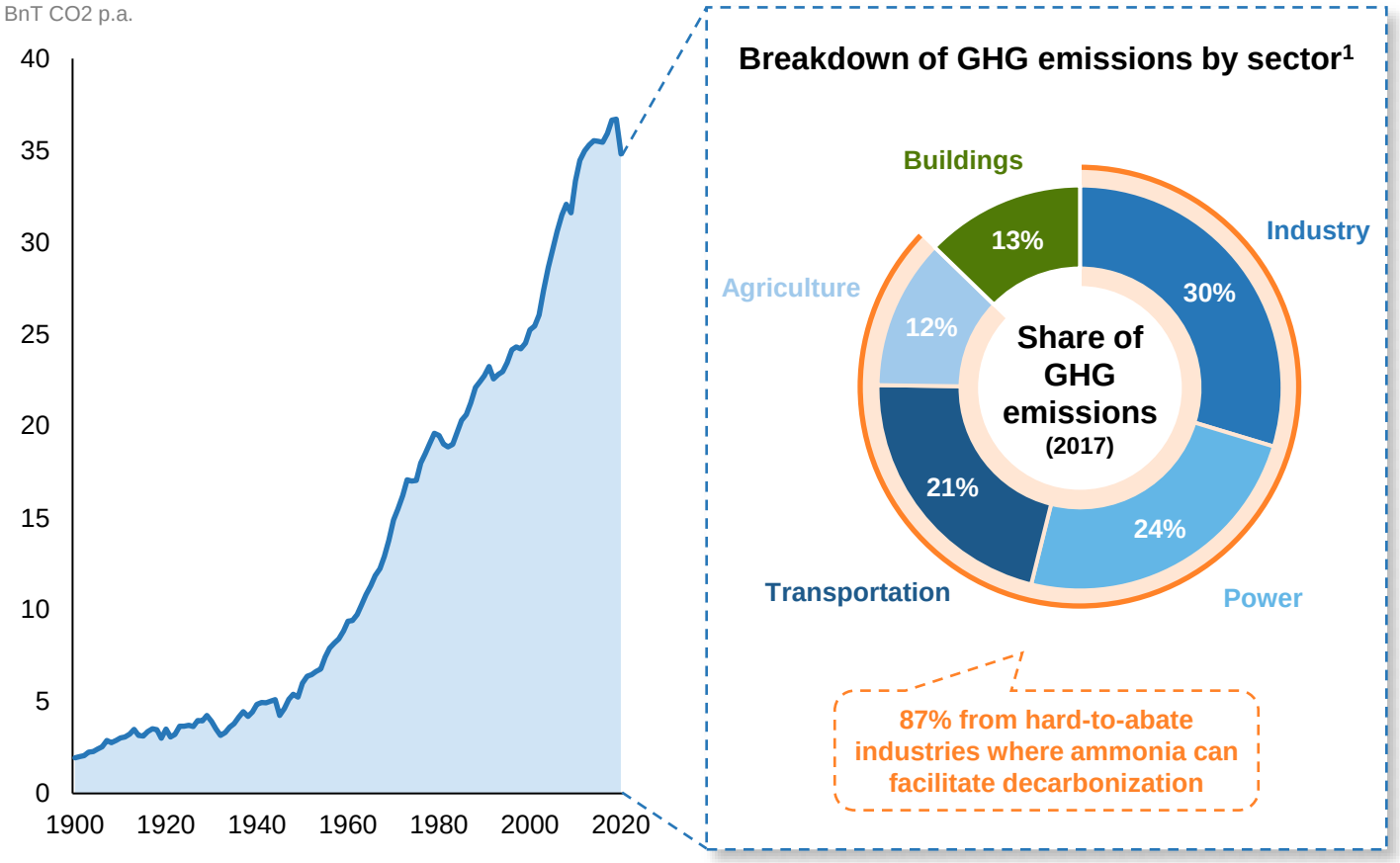


Asset-backed and active across the value chain from sourcing to sales, YCA has >20% market share[3] in traded ammonia

Source: Company information
1) Including leased and YCA-owned vessels
2) YCA has exclusive access, and manages and optimizes use of Yara's ammonia tank infrastructure at terminals through sourcing and supply agreements with Yara
3) Based on volumes of traded ammonia in 2021 - Argus market study (2022)

Clean ammonia offers an attractive solution to decarbonize hard-to-abate sectors…

Rapid growth in GHG emissions from hard-to-abate industries



Ammonia is an attractive solution

- **Clean ammonia available through existing blue and green production methods**
- **Highly versatile with multiple direct applications**
- **Ideal energy carrier with favorable performance across clean fuel KPIs[2]**
- **Well-established global infrastructure and storage network**

Source: "Net-Zero Europe", McKinsey & Company, 2020; "Global Carbon Budget 2021", Global Carbon Project, 2021; Arkwright market study 2021

1) Based on direct EU emissions in CO2 equivalents
2) KPIs include density, cost, scalability and distribution

… through being a superior clean solution across four sizable segments

Shipping fuel

50% higher **energy density** than liquid hydrogen[1]

Easier to scale than hydrogen, e-methanol and synfuel

Can be **stored at higher temperature** than hydrogen, lowering cost

Competitive all-in cost through existing infrastructure and know-how

Power generation

Alternative for countries with **unfavorable renewables conditions**

Economically favorable over carbon capture

Enables continued use of more **flexible producing assets**

Supports **continued use of relatively new plants**

Agriculture/Industrial

Fertilizers account for a very **large share of the emissions of food and agricultural products**

Green fertilizer can provide up to **30% CO2 reduction** on a loaf of bread at a marginal cost increase of ~1%[2]

Grey ⟹ **Green**

Green fertilizer requires **no infrastructure/value chain changes**

Long-term potential: Hydrogen carrier

Mature in transport, infrastructure and know-how

Lower long-distance transportation cost vs. hydrogen

Better **characteristics for storage** vs. hydrogen

More **energy dense** vs. hydrogen

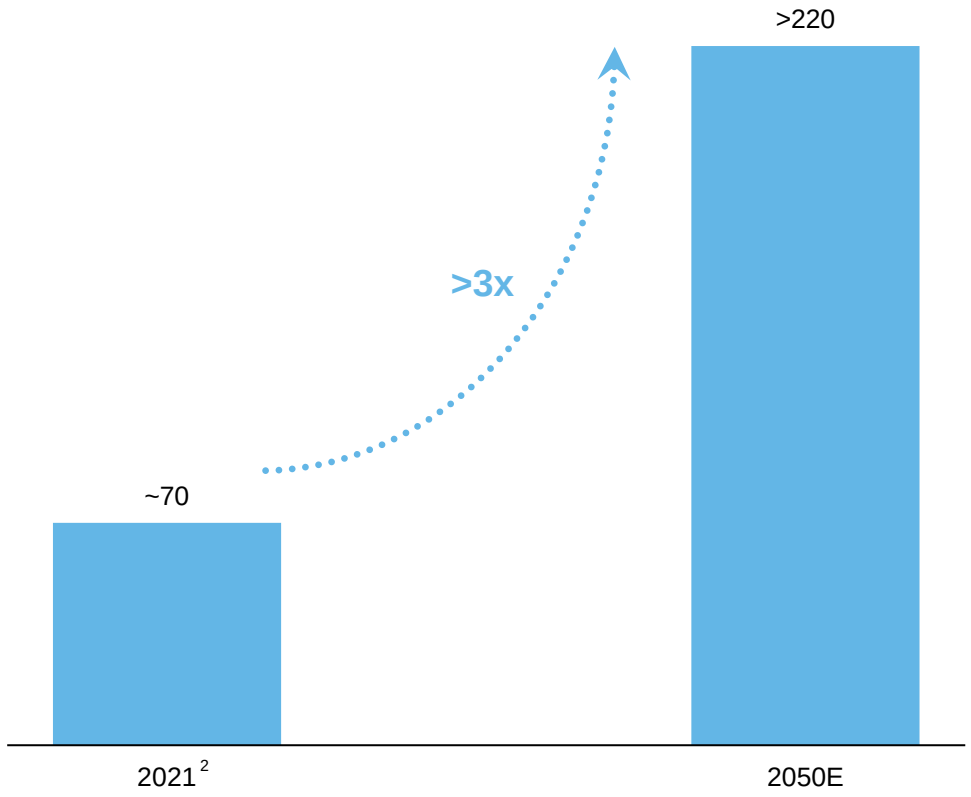
Source: Company information; Arkwright market study 2021

1) Source: "Reversible ammonia-based and liquid organic hydrogen carriers for high-density hydrogen storage: Recent progress", International Journal of Hydrogen, 2019
2) At 1% extra cost on a loaf of bread, clean ammonia can deliver a 15-30% reduction in carbon footprint

Ammonia market expected to grow by >3x supported by the crucial need to decarbonize industries

Total ammonia market expected to grow rapidly to 2050E

USDbn (real terms[1])



Key market drivers

Shipping fuel
Adoption expected to increase rapidly from 2030E driven by anticipated **regulations and customers' environmental focus**

Power generation
Market players expect **40-50% co-firing on operational coal-fired plants** in selected countries by 2050E, driven by Japan, Korea and Taiwan

Agriculture/Industrial
High-value brands with ability to achieve up to **20% premium on sustainable-labelled food products,** highlighting strong adoption incentive. Ammonia market for fertilizer is anticipated to continue to grow

Hydrogen carrier (after 2035E)
Market based **on Europe as major import hub** for cheap renewable-based hydrogen and **Japan as key import market in Asia**

Source: Arkwright market study 2021
1) USD 398bn in nominal terms in 2050E, assuming an inflation rate of 2% starting 2021
2) Based on a normalized ammonia price of ~USD 375/tonne

Integrated operations across the midstream ammonia value chain

YCA's midstream definition

YCA's midstream position is defined differently from the use of the same term in some other contexts/sectors

In the context of YCA, it refers to a **broad set of capabilities (i.e. key competitive edges) beyond just vessels**

Accordingly, YCA's definition encapsulates the **integrated nature of the existing platform**

Direct involvement with upstream (sourcing) and **downstream** (sales)

Asset-backing, terminals, optimization, and commercial setup support a **differentiated midstream model**

Source: Company information

Clear market leader today, providing a unique starting point to develop the clean ammonia value chain

Yara Clean Ammonia

Global #1 with **>20%** market share of merchant/traded ammonia in 2021[2]

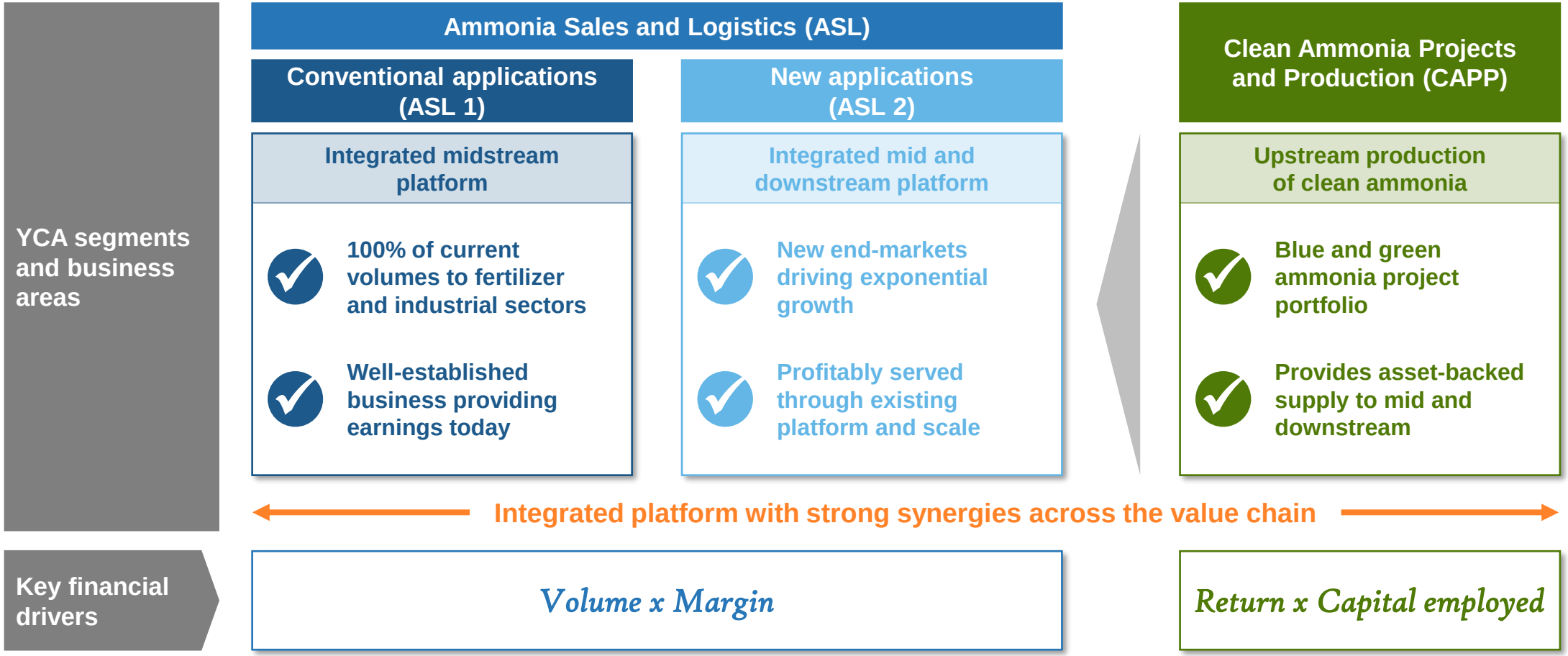
Key success factors for YCA

- Reliable, **asset-backed supply and attractive offtaker**
- **Deep industry know-how**, market insight and track record of safe handling
- **Specialized fleet of 12 ships**
- **Global network of 18 terminals** located in key locations[1]
- **Deep-sea connection** to key bunkering hubs
- **Scalable platform** and business model

Source: Company information

1) YCA has exclusive access, and manages and optimizes use of Yara's ammonia tank infrastructure at terminals through sourcing and supply agreements with Yara
2) Based on volumes of traded ammonia in 2021 - Argus market study (2022)

YCA combines a leading business with exceptional growth prospects and a value creating project portfolio



Source: Company information

Well-established foundation for a continued and mutually beneficial partnership between YCA and Yara

Clear scope of separation of YCA's assets and business

Included in YCA

- Sourcing and sales contracts
- Access to Yara terminals
- Ammonia vessels
- Blue and green ammonia projects and offtake

Retained by Yara

- Ownership of existing/ grey production assets
- Ownership of terminals

- A leading global ammonia production base, exclusively marketed by YCA[1]
- Large captive ammonia demand, exclusively served by YCA[1]
- World's largest network of ammonia storage infrastructure[2], access for YCA[3]
- Attractive ammonia assets/sites as basis for future clean ammonia projects
- Almost 100 years of ammonia safety, project execution and operation experience
- Corporate and project services with global footprint available to YCA through SLAs with Yara

Committed and long-term backing from Yara as majority owner and preferred partner

Source: Company information
1) As sole offtaker and supplier to Yara
2) Source: Argus market study (2022)
3) YCA has exclusive access, and manages and optimizes use of Yara's ammonia tank infrastructure at terminals through sourcing and supply agreements with Yara

YCA is positioned to become a key enabler of the energy transition

By successfully delivering on its business plan, YCA expects to achieve

3mT
CO2 equivalents

Reduction of existing emissions from ammonia production (Scope 1-2)

By 2030E (vs. 2019 baseline)

Equivalent to the emissions of ~650 thousand passenger cars per year[2]

Green fertilizer can provide up to 30% CO2 reduction of a bread at a marginal cost increase of ~1%[1]

4mT
CO2 equivalents

Avoided emissions

of future conversion and new build projects net of loss in energy efficiency from use of ammonia mainly in shipping fuel[3]

By 2035E

Equivalent to the emissions from ~4 million passenger flights between Paris and NYC[4]

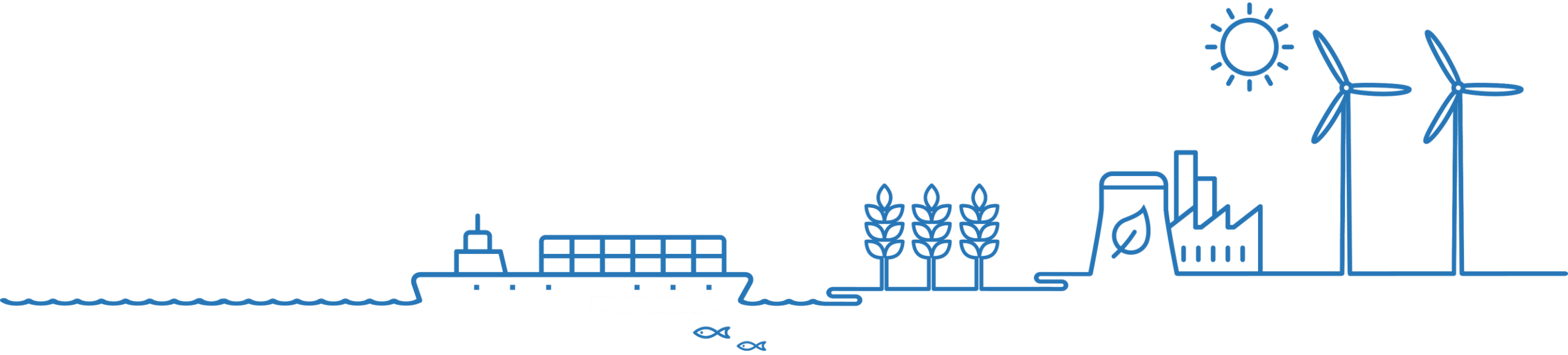
70%

Reduction in GHG intensity vs. baseline for customers in shipping and power[3]

By 2035E

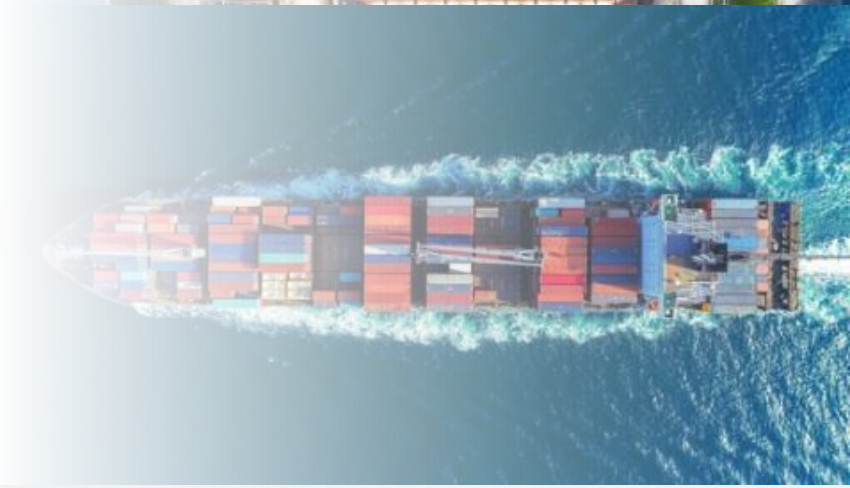
Source: Company analysis for Yara Scope 1-2 impact (not third-party verified); Arkwright market study 2021; YCA GHG impact assessment for net avoided emissions impact
1) At 1% extra cost on a loaf of bread, clean ammonia can deliver a 15-30% reduction in carbon footprint; 2) Based on average CO2 emission from passenger vehicles of 4.6 tonnes (United States Environmental Protection Agency study in 2021); 3) Estimated CO2 emission reduction from converting from a future baseline fuel mix to clean ammonia-based combustion, net of inherent energy efficiency losses of using ammonia combustion technology in shipping and ammonia co-firing in coal power plants. Analysis compare GHG intensity of YCA's clean ammonia portfolio to a future improved GHG intensity baseline per segment, e.g. assuming a higher share of LNG and methanol in the future fuel mix for shipping, and higher share of renewables in the future power generation mix; not a like for like substitution of marine gasoil or coal with clean ammonia. Assumes partial credit for third-party produced volumes distributed by YCA in line with best-practice methods. Higher efficiency fuel-cell technology in shipping is not included. 4) 1 tonnes CO2 represents the average emission of one passenger on a return-flight from Paris to New York ("What exactly is a tonne of CO2?", European Environment Agency)

Highlights



Key highlights

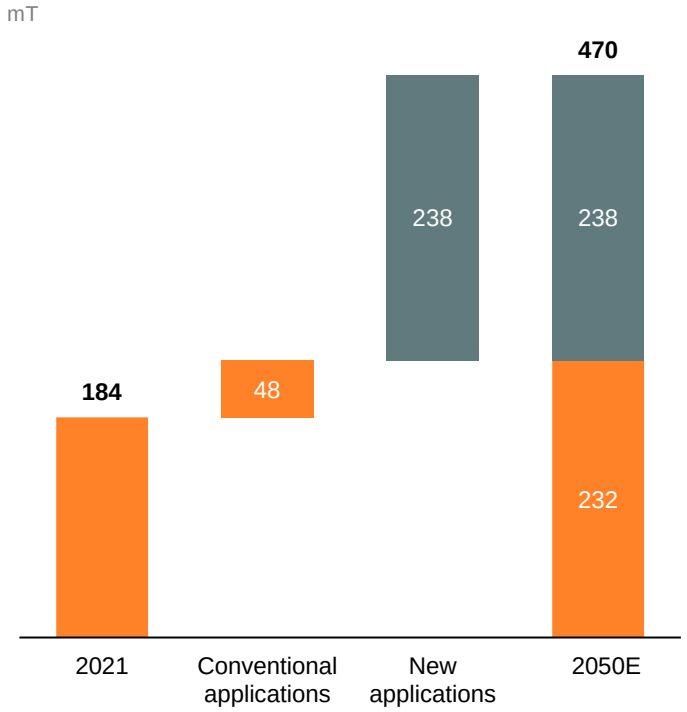
1. Clean ammonia represents a **massive opportunity on top of a structurally robust market for conventional ammonia**
2. **Supportive ammonia market dynamics** expected to significantly **increase cross-regional trading activity**
3. **The #1 global ammonia midstream platform**[1] with significant barriers to challenge YCA
4. Access to **robust upstream projects** to further develop YCA's integrated value chain position
5. **Profitable and scalable business model** with attractive economics and growth prospects from clean ammonia
6. **Experienced and performance-oriented organization** with strong backing from Yara



Source: Company information
1) Based on volumes of traded ammonia in 2021 - Argus market study (2022)

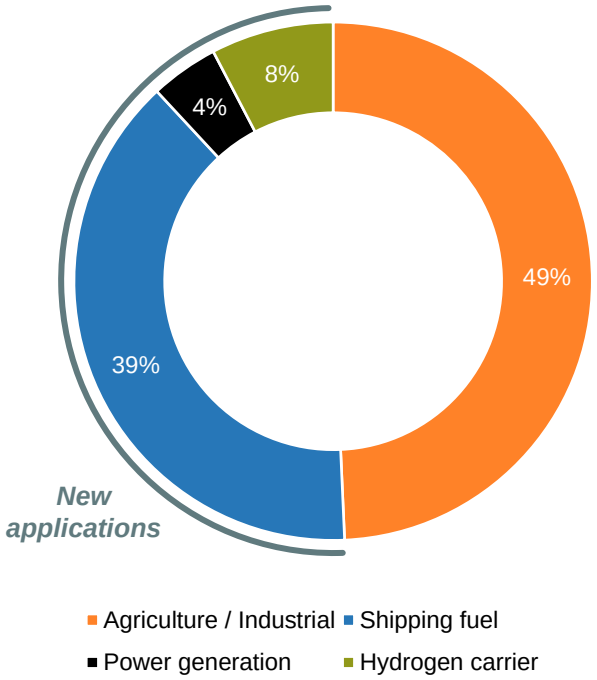
Significant expected ammonia demand driven by a mix of conventional and new applications

Ammonia market growth to 2050E



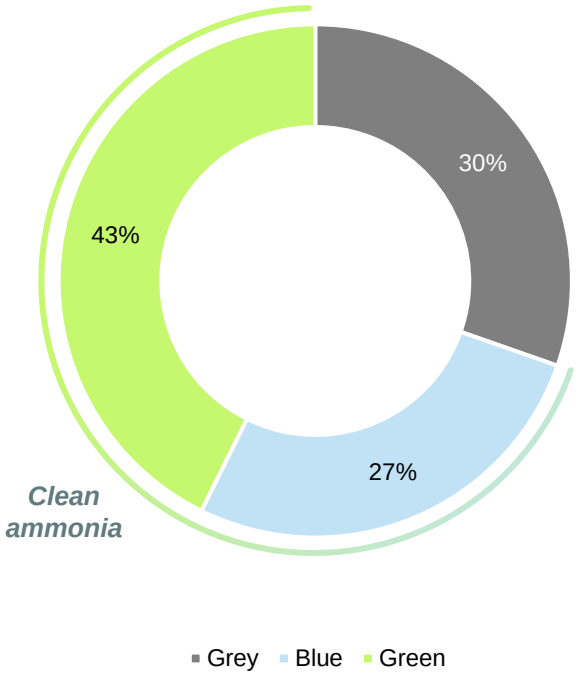
The demand for ammonia is expected to grow significantly to 2050

2050E ammonia demand by application



~50% of 2050E demand expected to come from new applications

2050E ammonia supply by type

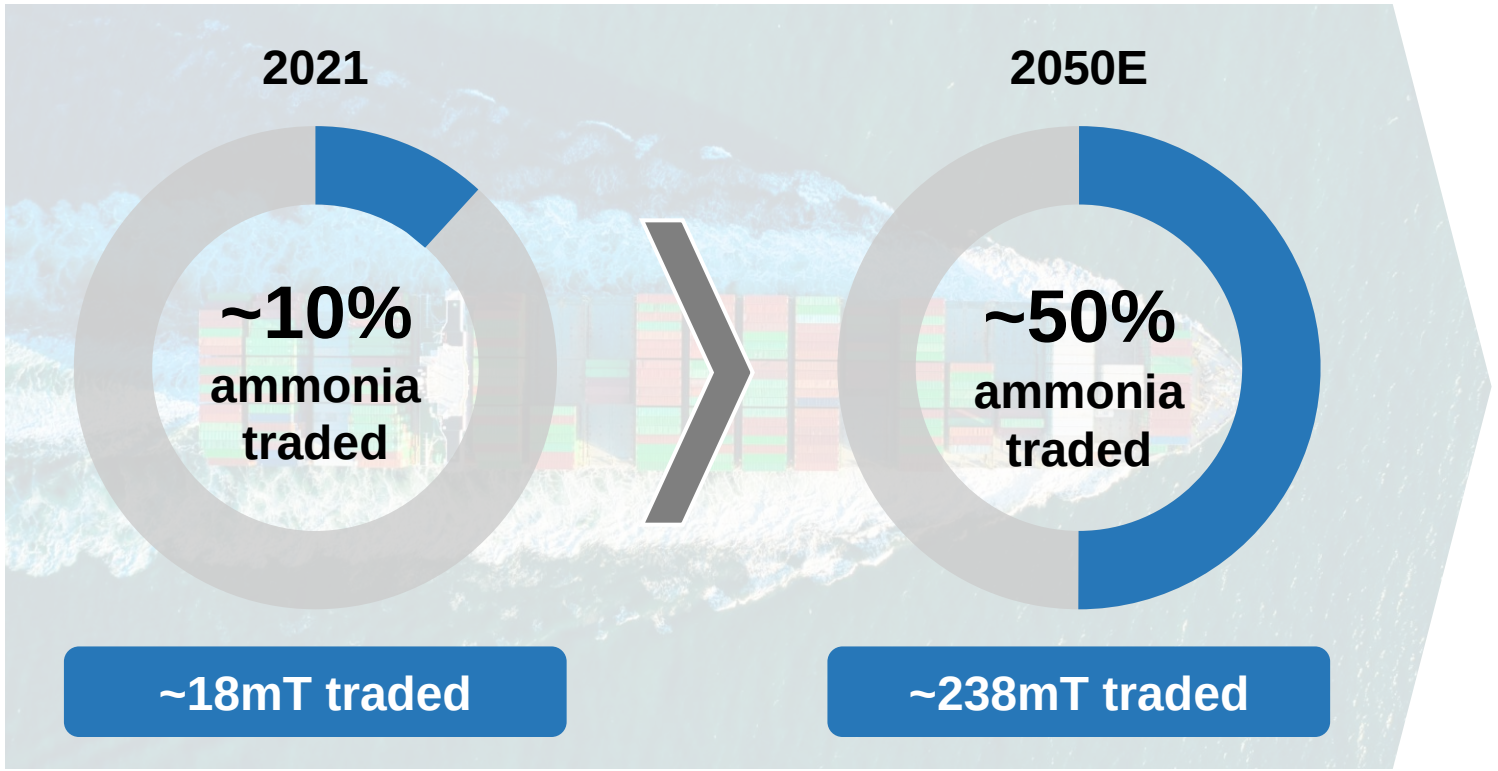


Majority of supply expected to come from blue and green sources

Source: Arkwright market study 2021; Extracts from IFASTAT, International Fertilizer Association

Decoupling historical pattern of captive consumption will increase the importance of YCA's midstream position

Global traded ammonia volumes are expected to grow exponentially



- **Geographically separated** supply and demand centers
- Driven by **production cost differences** caused by several factors, mainly related to cost and availability of energy
- Majority of the **demand growth expected to come near shipping hubs** – largely in high-cost production regions

Substantially all clean ammonia volumes in new applications are expected to be traded

Source: Arkwright market study 2021; Argus market study (2022)

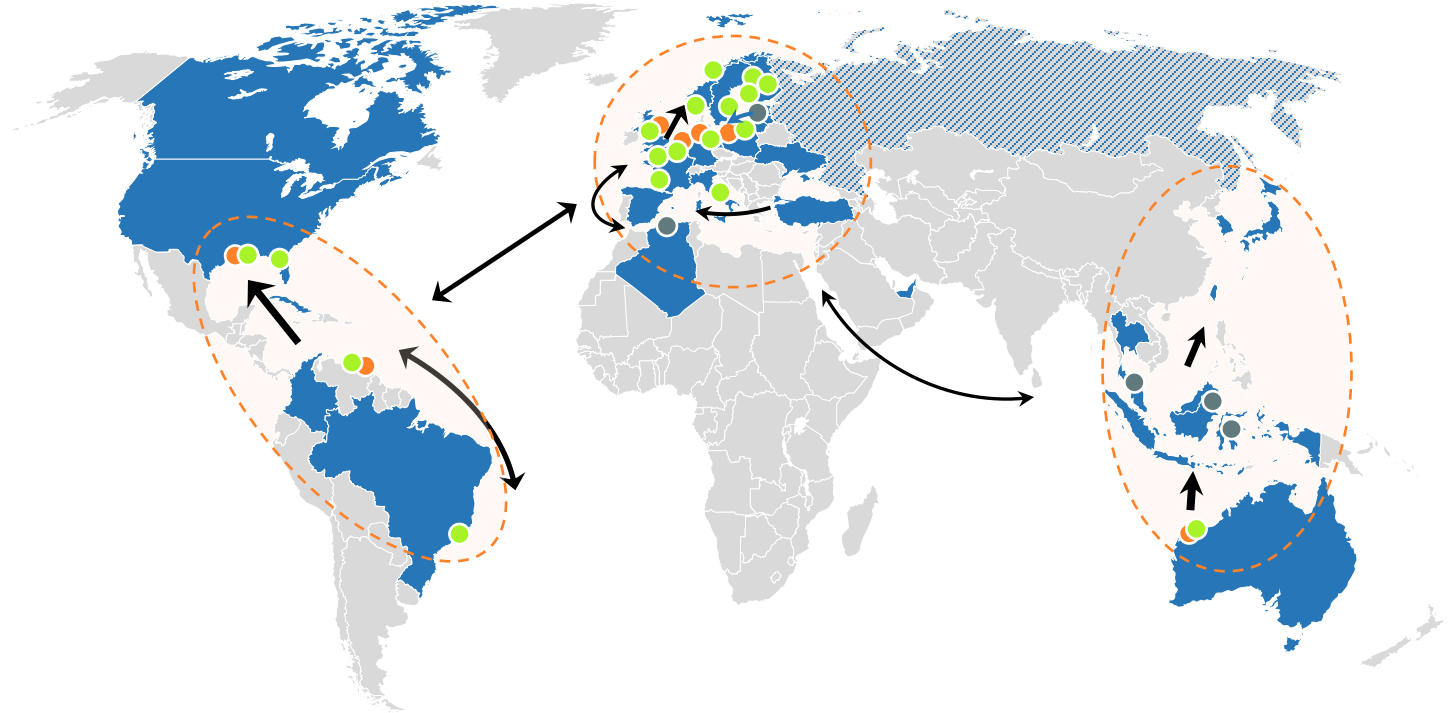
Blue ammonia will be the key immediate focus before relative competitiveness of green ammonia improves

	Blue ammonia	Green ammonia
Brief description	**"Low-carbon" cost leader throughout the long-term;** competitive access to natural resources and infrastructure key to win	Green ammonia projects could **breach the blue cost curve** but will require **significant cost progress**
Scalability	 **Requires meaningful investments to meet demand potential**	 **Further scaling benefits in hydrogen needed along with increased access to ample renewable energy**
Technology and cost gap	 **Carbon capture technology commercially ready – one of the most economically viable low-carbon fuels**	 **Electrolyzer technology still being developed and significant investments needed to achieve competitiveness**
Economic incentives	 **Regulatory incentives already in place in certain regions**	 **Further regulatory push required and subsidies for green/higher prices on alternatives required**
	Transitional option for rapid abatement of emissions	**Long-term fully renewable option**

Source: Company information; Arkwright market study 2021

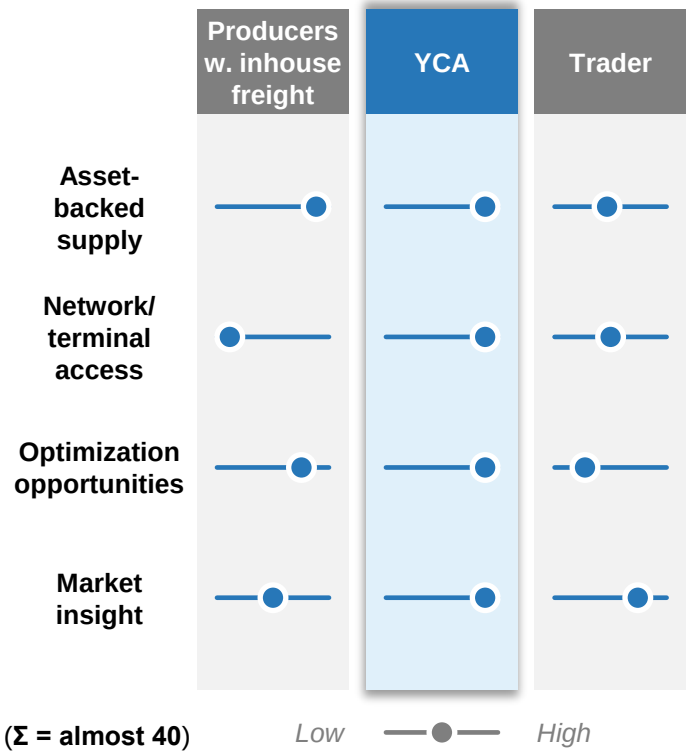
YCA has an established global network with access to asset-backed supply

Overview of YCA's global footprint



Trade flows · YCA terminal access[1] · Yara export production sites · Third-party terminals · Countries present (**Σ = almost 40**)

YCA has a differentiated model



#1 global player with >20% market share[2] and leading positions in key regions

Source: Company information

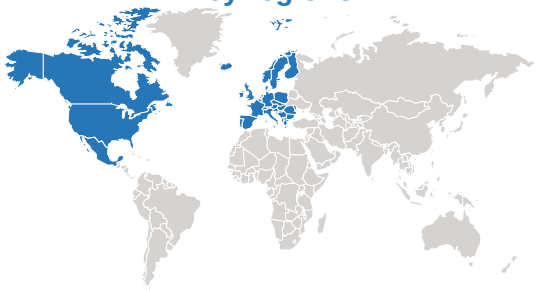
1) YCA has exclusive access, and manages and optimizes use of Yara's ammonia tank infrastructure at terminals through sourcing and supply agreements with Yara
2) Based on volumes of traded ammonia in 2021 - Argus market study (2022)

Growth supported by solid upstream projects, building on YCA's leading[1] midstream position

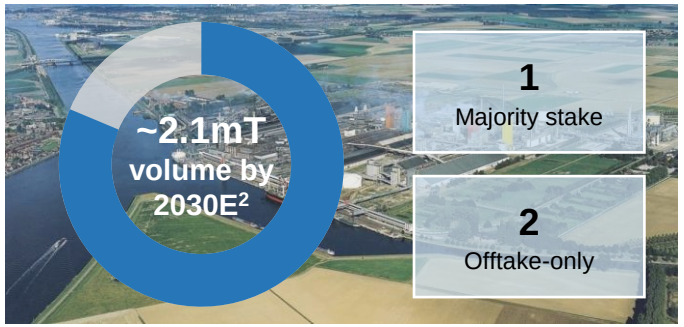
Blue ammonia

Robust pipeline with solid project economics and profitability without need for further subsidies

Key regions



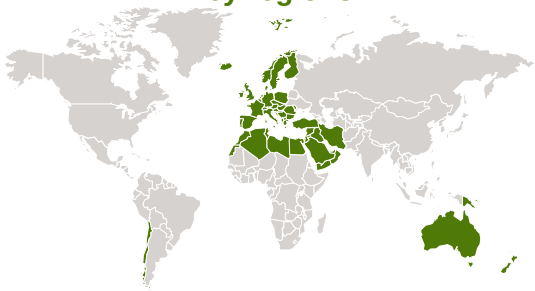
Selected project candidates



Green ammonia

Early mover strategy where government support will be required – anticipated lower costs in the future will increase competitiveness

Key regions



Selected project candidates

Well-positioned with a maturing project hopper and additional long-term opportunities

Key success factors

Access to existing production assets that can be converted to blue or green at **lower costs** compared to greenfield investments

Knowledge and experience built through Yara's almost **100 years** of ammonia track record and over **8mT ammonia production capacity**[3]

Market leading position makes YCA the **preferred offtaker and partner for Yara and other third-parties**, in turn enabling new projects

Source: Company information
1) Based on volumes of traded ammonia in 2021 - Argus market study (2022)
2) Estimated volume by the company for the selected candidate projects, excluding third-party project offtake
3) Ammonia production capacity as of 2021

Attractive financial profile, providing earnings and cash flows from existing midstream operations

Key metrics (USDm)	2019	2020	2021	Q1 '22 LTM
Revenue	1,248	1,015	2,292	3,009
EBITDA	107	116	124	159
Operating income	78	82	85	117
Sales volume (kT)	4,513	3,932	4,099	4,069
EBITDA/sold tonne[1]	24	31	33	42
Capex	1	0	9	8
Ammonia price (fob Black Sea, USD/tonne)[2]	235	204	544	N/A

Robust unit margins and stable volume development

Capital-light model with high conversion of EBITDA into cash flows[3]

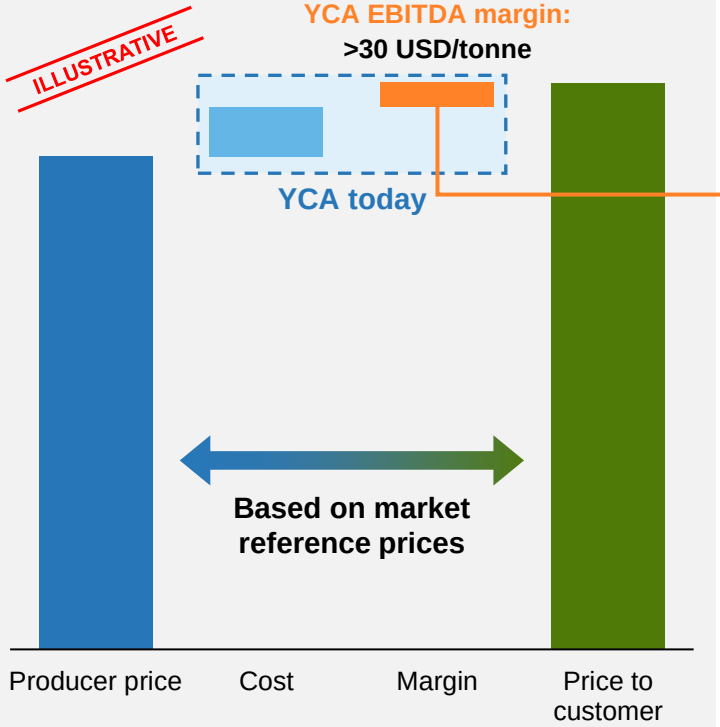
No net interest bearing debt and working capital significantly above normalized levels

Source: Company information

1) EBITDA/tonne calculated from the EBITDA contribution from the ASL segment divided by total sold volumes
2) Publication price from Argus direct
3) Based on free cash flow pre change in NWC

YCA benefits from a predictable and scalable economic model with strong value creation potential

Margin × Volume



Key margin drivers

- Scale and scalability
- Offtake and supply access
- Market position
- Efficient logistics infrastructure

Key sources of income

- Commercial services
- Ship-owning operations
- Global ammonia optimization

Key volume characteristics[1]

- Historically stable around 4mT[2]
- Offtake agreements provide visibility
- Predictable demand patterns[3]
- Limited short-term volatility[3]

Scalable platform with robust margins – YCA is well-positioned to drive volumes while maintaining attractive economics

Source: Company information
1) Characteristics based on historical track record
2) Based on sales volume from 2012 to 2021
3) Under normal conditions

Experienced management team with almost 200 years of combined industry experience

Magnus Krogh Ankarstrand

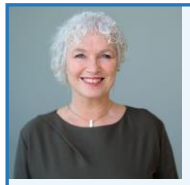
CEO

- 15 years of international mgmt. and team leadership experience
- 9 years at Yara
- Former Head of North America and Head of Strategy at Yara

Hallgeir Storvik

CFO

- 37 years industry and finance experience with Yara and Hydro
- Former CFO and Head of Strategy at Yara



Lise Winther

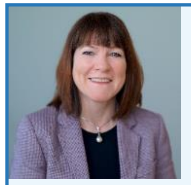
Projects & Technology

- 34 years experience with management of large capital projects and technology
- 13 years at Yara and Hydro
- Former Head of Cleaner Production at Shell and System Technology at Hydro

Murali Srinivasan

Commercial

- 23 years industry and trade experience with Yara and Hydro
- Former CFO for Yara Industrial and Crop Nutrition segments



Vibeke Rasmussen

Product Mgmt. & Certification

- 26 years of water and environmental technology leadership experience
- 9 years at Yara and Hydro
- Former Director Product Quality and Head of ET & NPK R&D at Yara

Joacim Rød Christiansen

Corporate Development & M&A

- 15 years energy industry experience
- 10 years at Yara
- Former Head of M&A and SVP Sustainable Food Ecosystem at Yara, ex. McKinsey consultant

Irene Odhiambo

Human Resources

- 15 years HR generalist experience
- 6 years at Yara
- Previously HR Business Partner at Yara Global Plants and Country HR Manager Yara East Africa

Bart van Hoof

Business Development

- 14 years of international large capital projects and contracting experience
- 12 years at Yara
- Former Head of Contracting at Yara Project Organization

Hilde Steinfeld

Communication

- 17 years experience from communication and public affairs
- Ex. consultant and former VP Public Affairs at Burson Cohn & Wolfe
- Previously diplomat and civil servant

Almost 200 years of industry experience and over 100 years at Yara

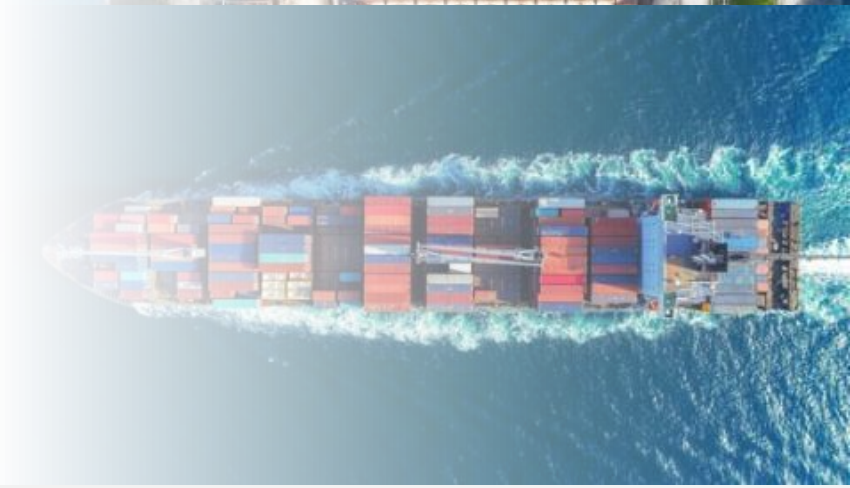
Proven ability to deliver strong financial results

Diverse team combining key capabilities to build global businesses

Source: Company information

Key highlights

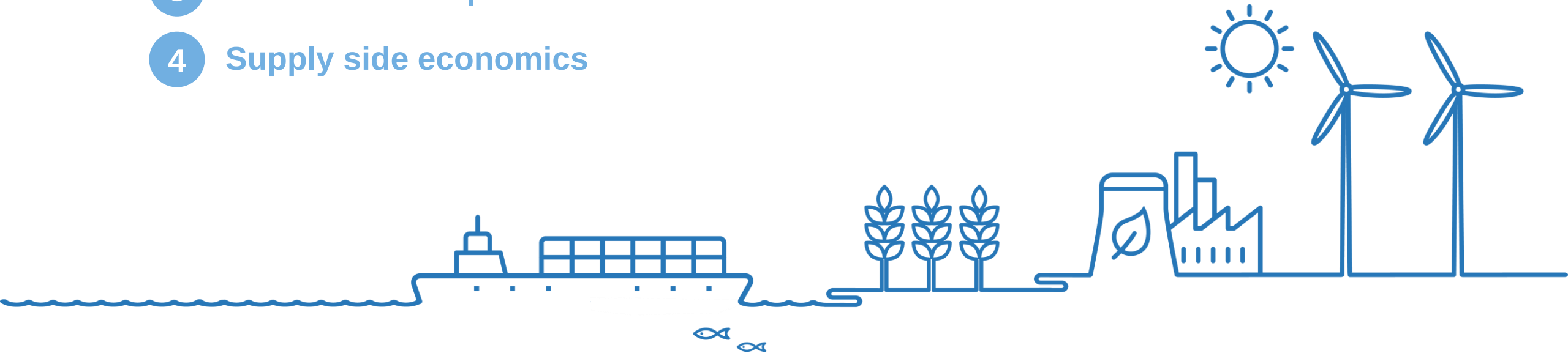
1. Clean ammonia represents a **massive opportunity on top of a structurally robust market for conventional ammonia**
2. **Supportive ammonia market dynamics** expected to significantly **increase cross-regional trading activity**
3. **The #1 global ammonia midstream platform**[1] with significant barriers to challenge YCA
4. Access to **robust upstream projects** to further develop YCA's integrated value chain position
5. **Profitable and scalable business model** with attractive economics and growth prospects from clean ammonia
6. **Experienced and performance-oriented organization** with strong backing from Yara



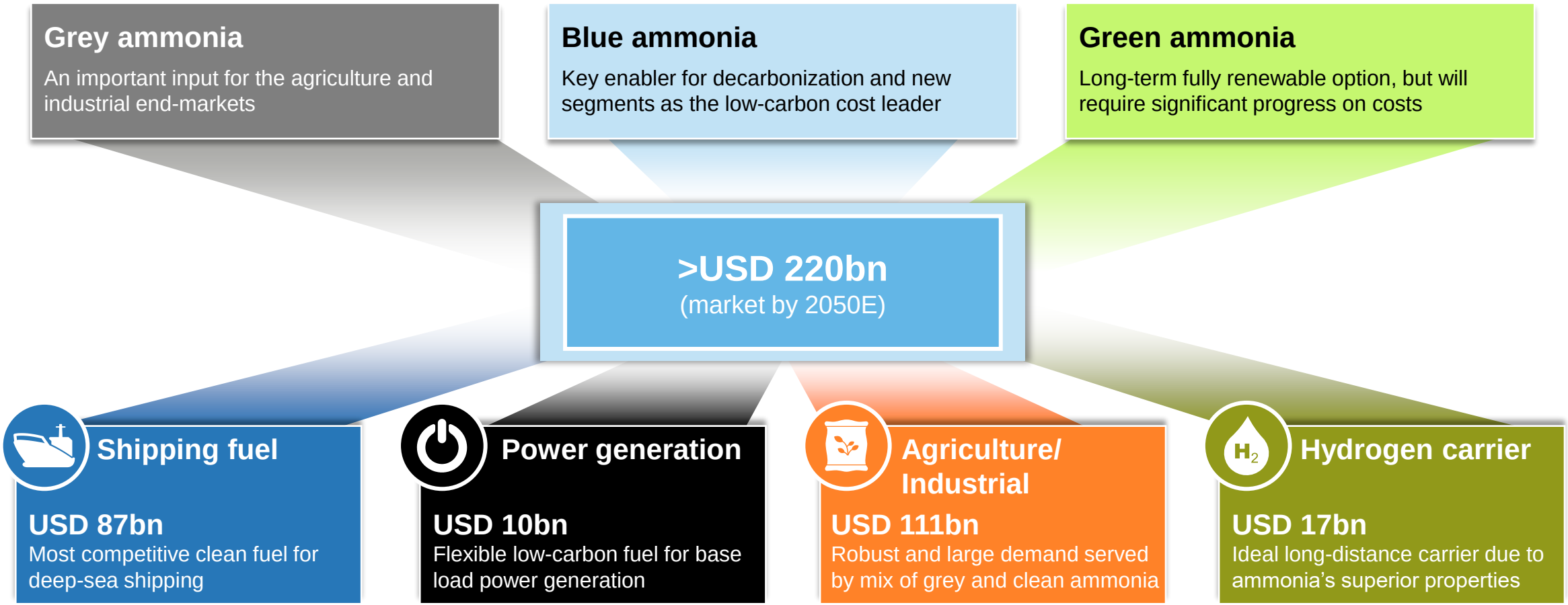
Source: Company information
1) Based on volumes of traded ammonia in 2021 - Argus market study (2022)

Market outlook

1. **Market opportunity**
2. Conventional market
3. Demand development
4. Supply side economics



Snapshot of the clean ammonia market opportunity



Source: Arkwright market study 2021
Note: Market value in real 2021 terms, assuming an inflation rate of 2% starting 2021

Several building blocks needed to fit together for the clean ammonia opportunity to reach its full potential

Regulatory environment

A **global adoption of "fair" CO2 prices or subsidies** supporting low-carbon fuels; **"true" carbon pricing or forceful regulation** required to sufficiently incentivize the transition

Market

Users in key end-markets will shift towards ammonia – or be "pulled" by their final customers

Technology

The **technologies required** to support the green "hydrogen economy" will be **efficiently developed and scaled to make green cost competitive**

Infrastructure

The **required infrastructure and operational support will be developed** in line with market growth

Source: Arkwright market study 2021

A combination of regulatory “pull” and “push” factors expected to support the development of clean ammonia

Regulatory “pull”

EU Green Deal and Hydrogen Roadmap

EU Green Deal targeting climate neutrality by 2050, including **hydrogen as a key pillar**

Public investments focused on promoting the hydrogen economy e.g., through infrastructure, technology etc. – with clear direction pointed out for private investment

Country-level support

Governmental organizations can provide **support to country-specific projects (i.e. capex subsidies)**

However, **support is likely to be demand-focused**, e.g., contracts for difference for offtake, regulatory requirements for blending with shipping fuel etc.

Regulatory “push”

EU Emissions Trading System (ETS)

‘Cap and trade’ system that drives cost of emissions

Set to be coupled with **carbon border tax system**, in which entering goods are **taxed according to EU system**

In this field, the **EU sets the direction for global regulation**

Country-specific CO2 taxation

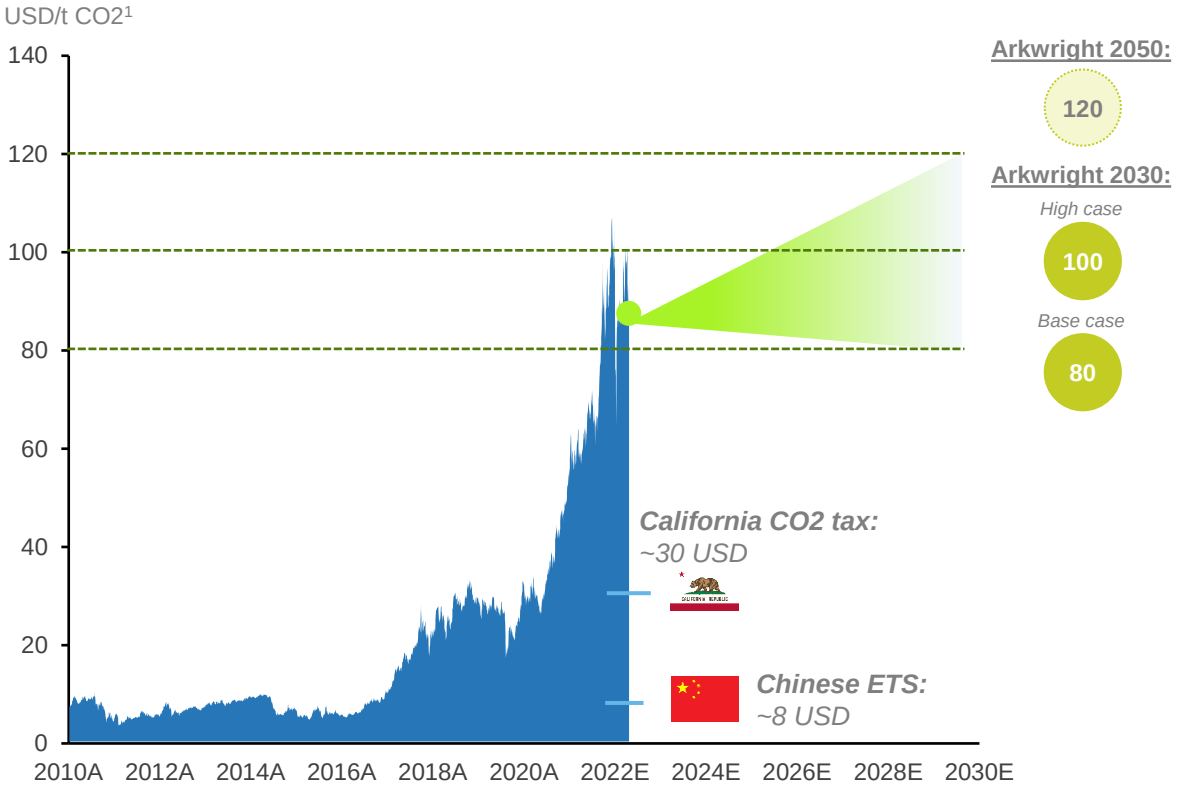
Individual countries broadly follow up international regulation with **country-specific efforts (e.g., national, sectorial etc.)**

This is likely to **improve the region-specific competitive position of low-carbon ammonia**

Source: Arkwright market study 2021

EU ETS prices increased sharply in the last year, supporting transition towards clean ammonia application

Current and anticipated EU ETS carbon price



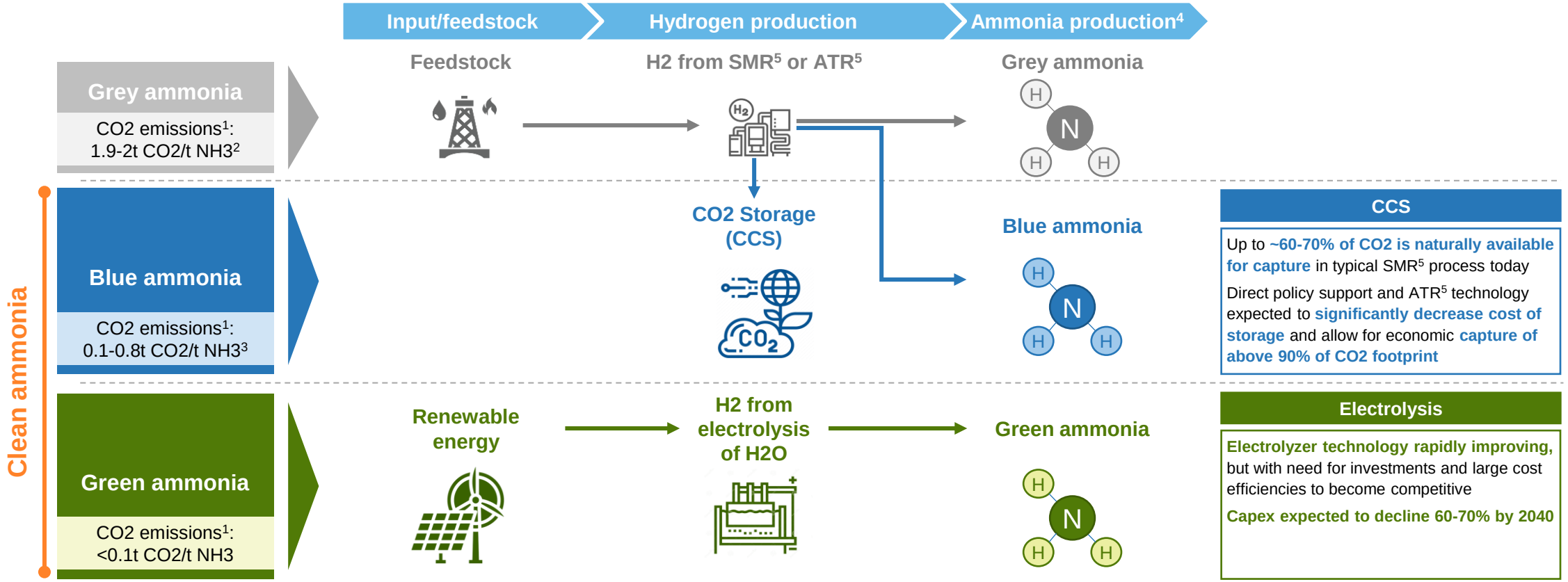
Main drivers and regulatory dynamics

- EU ETS saw a **significant price surge in 2021/2022 driven by a combination of policy initiatives as well as market fundamentals**
- On the policy side, measures taken by the EU have **increased the credibility of the scheme**, including:
  - **"Fit for 55"**, accelerating allowance reductions (at a rate of 4.4% vs. 2.2% previously)
  - **Institutional buy-in** from use of EU ETS as a policy instrument
  - **The Market Stability Reserve (MSR)** seen to "work as intended" (by removing credits in times of oversupply)
  - **Carbon Border Adjustment Mechanism (CBAM)**
- On the fundamentals side, **rising natural gas prices, demand from industrials and higher trading activity have supported prices:**
  - Increased demand from the **power generation** sector due to higher natural gas prices, resulting in increased coal firing
  - Recovery of **industrial activity** from COVID-19 lows
  - Broader **participation by financial players**

Prices will likely trend higher as allowances are reduced, new sectors are included and the CBAM is introduced

Source: Arkwright market study 2021
1) Fixed conversion from Euros using the 2022 average exchange rate of 1.1012 (as of May 30, 2022)

Different "colors" indicate different production processes for hydrogen and related carbon intensity

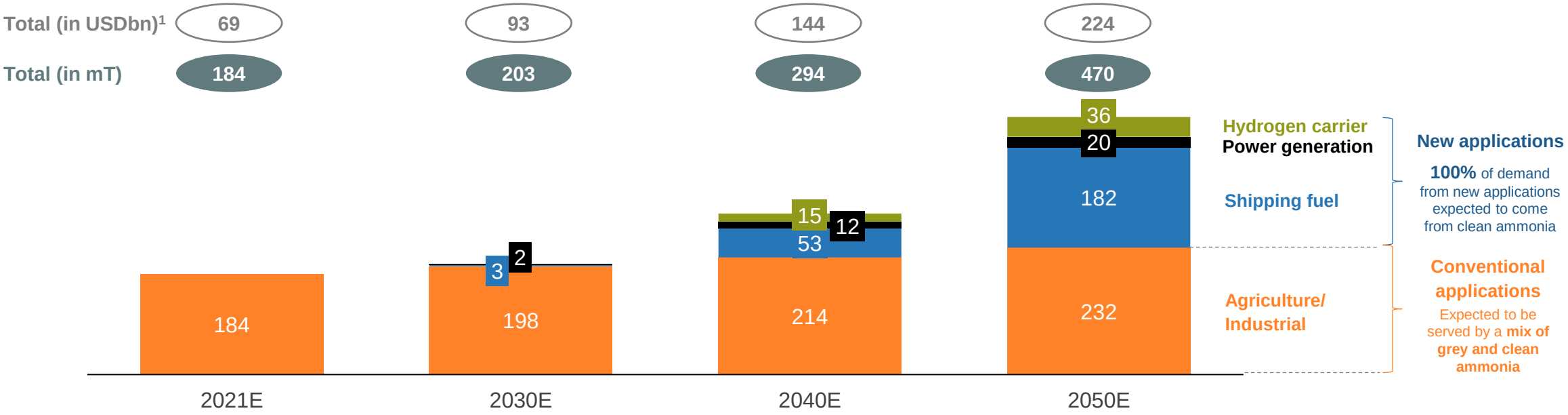


The Haber-Bosch process is used to synthesize ammonia from hydrogen[1], producing an identical ammonia molecule regardless of "color"

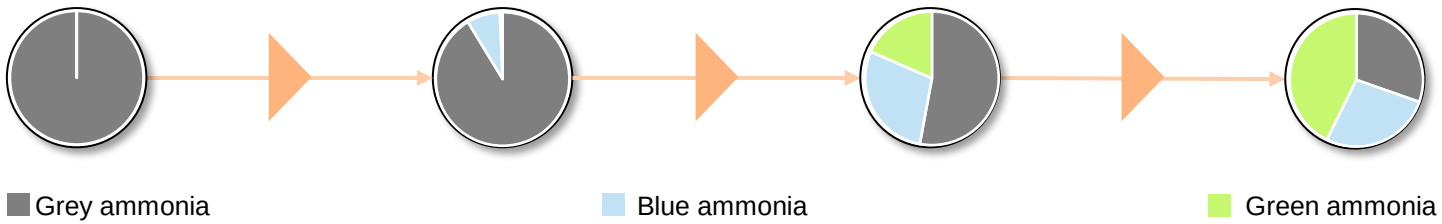
Source: Company information; Arkwright market study 2021
1) Indirect emissions (Scope 3) from natural gas and embedded assets are not included in the values
2) Fertilizers Europe Carbon footprint calculator
3) IRENA Innovation outlook: renewable ammonia
4) Combining hydrogen with nitrogen from the air
5) SMR = Steam Methane Reforming, ATR = Autothermal Reforming

Significant growth opportunity in ammonia driven by the development of the clean ammonia market

~50% of 2050 demand is projected to come from new applications, with shipping fuel as the main contributor



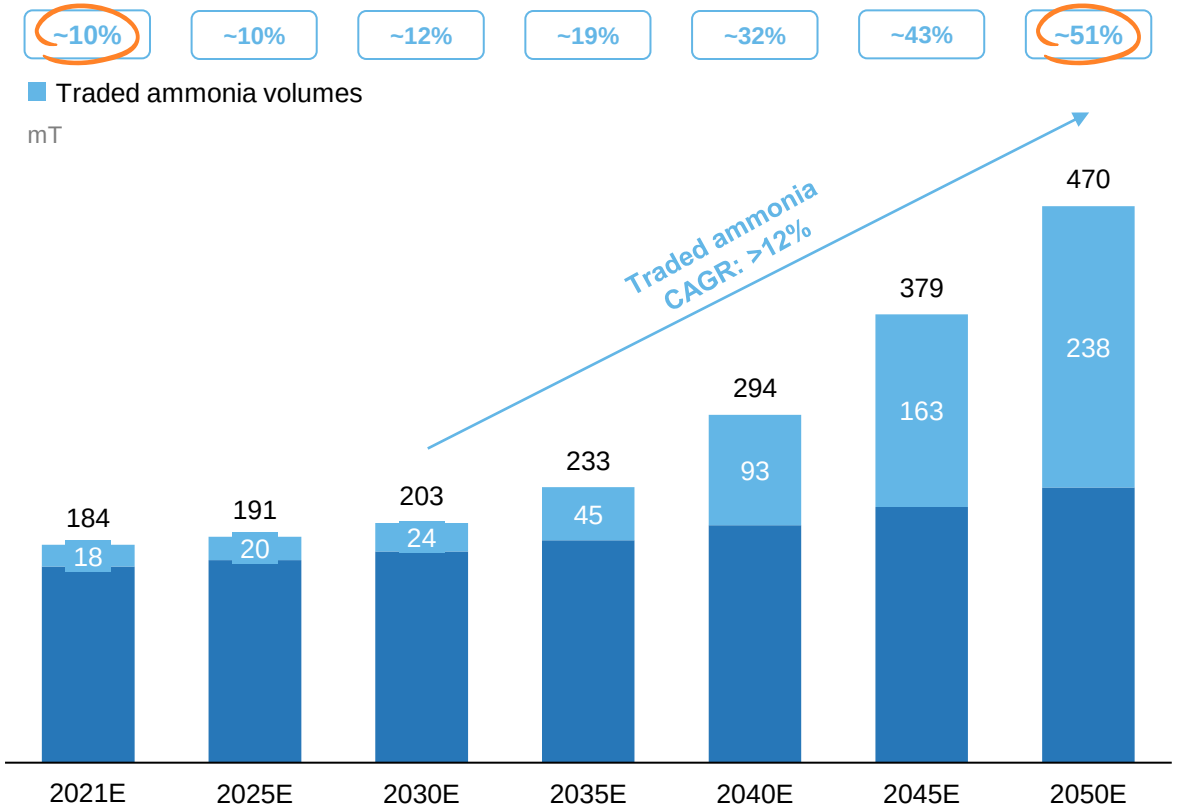
Ammonia supply expected to shift towards blue and green



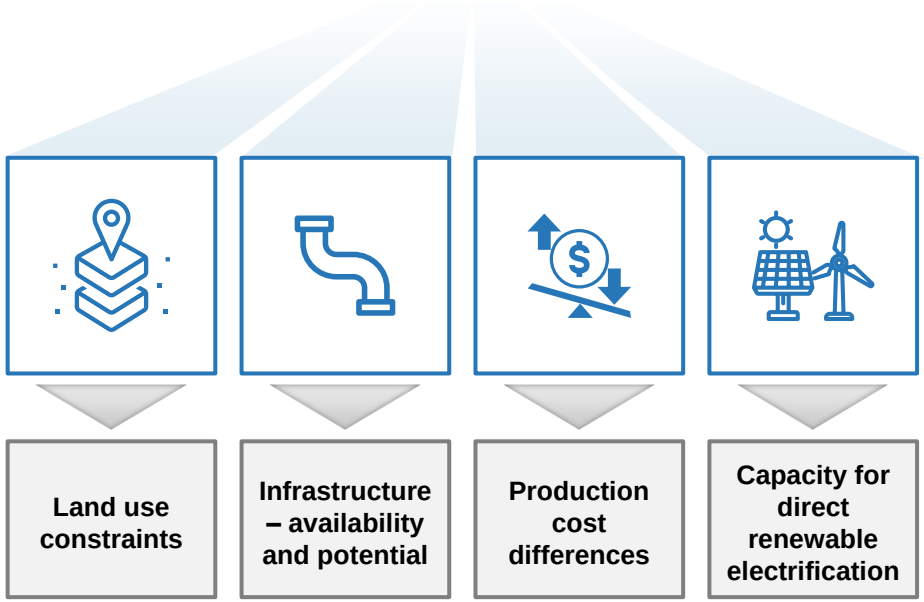
Source: Arkwright market study 2021
1) Market value in real 2021 terms, assuming an inflation rate of 2% starting 2021

Future ammonia market expected to rely heavily on cross-regional transportation

Traded ammonia volumes are expected to grow substantially…



…driven by regional differences



Imbalance between locations of low-cost supply and demand as key consumption hubs will be more geographically spread (i.e. shipping) and have less favorable conditions for direct production

Substantially all clean ammonia volumes in new applications are expected to be traded

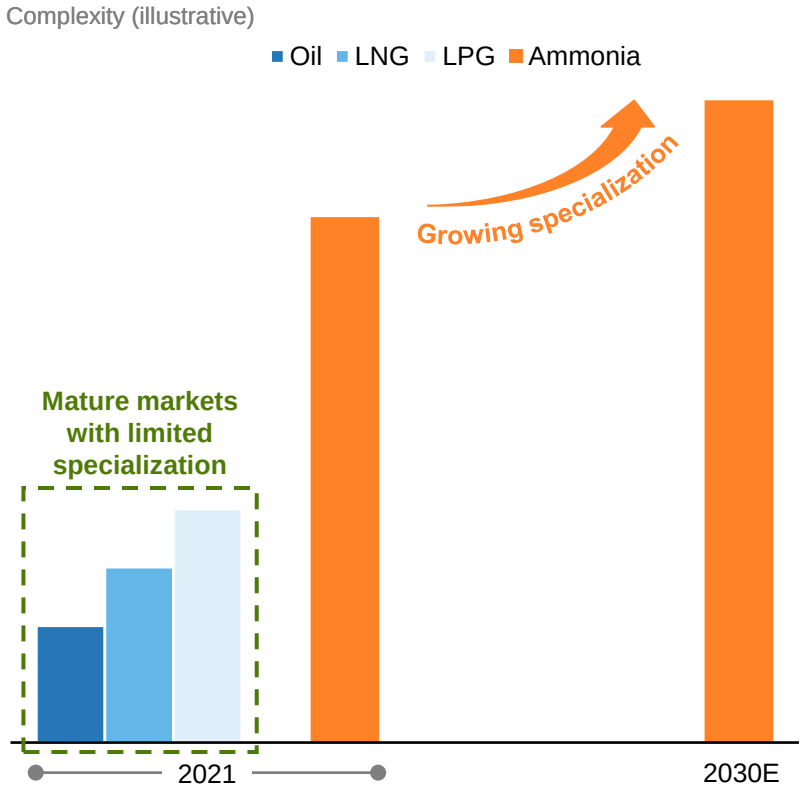
Source: Arkwright market study 2021

The ammonia market is highly specialized/complex, providing a strong fit with YCA's competitive edge

Merchant ammonia market requires a high degree of specialization…

- **Illiquid market**, without real possibility to do paper trade, hedging, etc.
- **Limited storage capacity**
- Most volumes are **contracted out** between players
- Long-term professional players with **high safety requirements and standards**
- **Price semi-transparency** (market price once a week that is up to 5 publications)
- **Reliability issues** both on producer and consumer side

… which is expected to remain high in the coming years



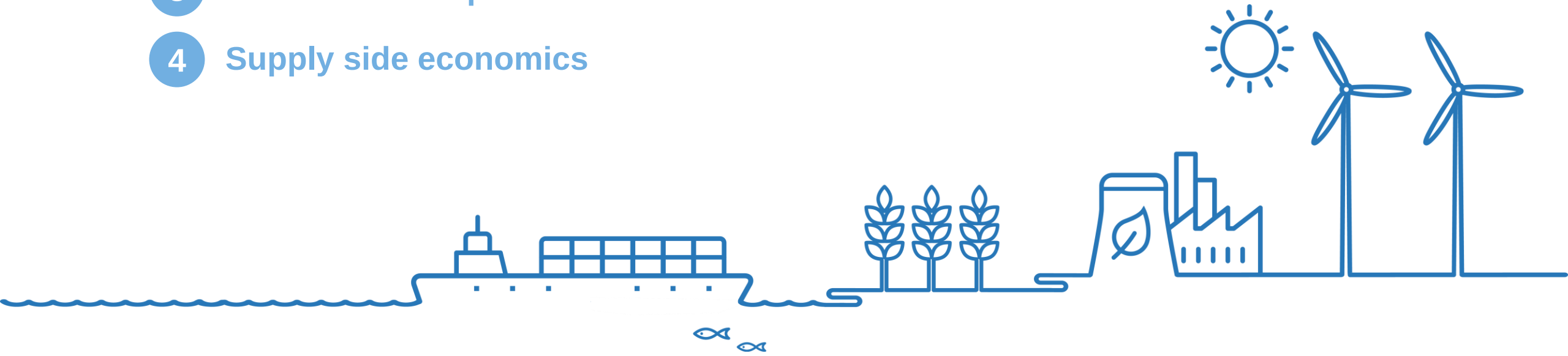
YCA uniquely positioned across key success criteria

- **Reliable and asset-backed supply**
- **Global scale and flexibility**
- **~100 years of ammonia experience**
- **Track record of safe operations**
- **Market insight**
- **Existing long-term customer relationships**

Source: Company information

Market outlook

1. Market opportunity
2. **Conventional market**
3. Demand development
4. Supply side economics



The gross ammonia market primarily serves captive production of urea and other fertilizer products

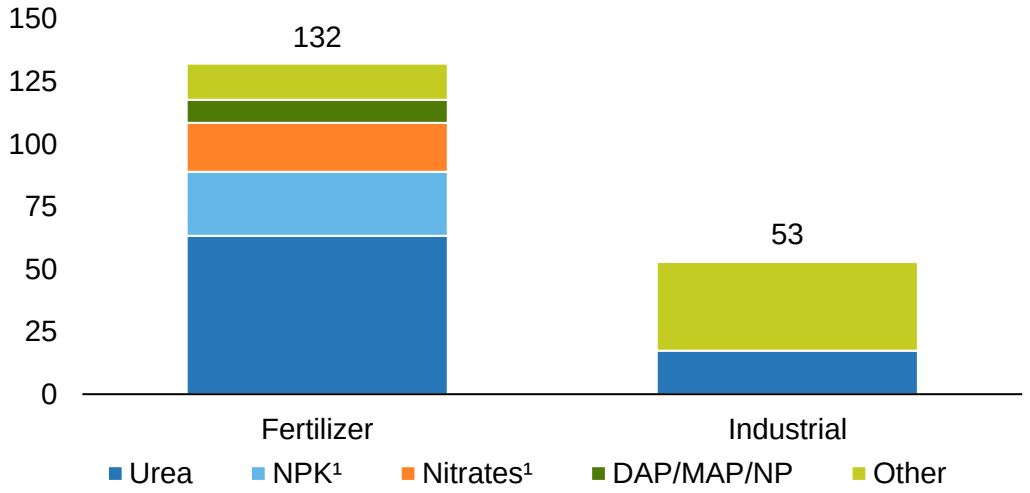
Market structure dominated by captive consumption

2021A (mT)

- **~75% of ammonia is consumed in captive downstream production** (i.e. consumed on-site)
- **International trade in ammonia represents ~10%** of the overall market
- The **largest domestic merchant markets** (where volumes stay within a country's borders) are **China and US**
- **Merchant volumes include optimization within internal production systems** (such as Yara volumes flowing through YCA)

Fertilizer markets consumes the majority of ammonia

2021A (mT)



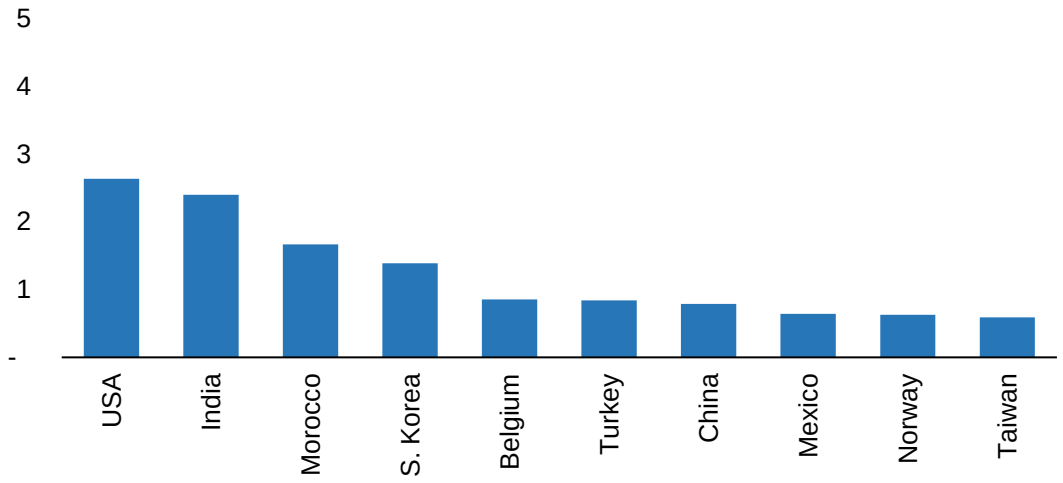
- Ammonia is the **key intermediate for all nitrogen fertilizer products**, with fertilizer representing **>70% of gross ammonia consumptions**
- **Urea is the main nitrogen product,** consuming **~45% of gross ammonia**
- **Industrial demand** primarily relates to the use of ammonia as **feedstock in the chemicals industry**, consuming **<30% of gross ammonia**
- Large nitrogen-consuming countries are large producers of ammonia (USA, China, Russia and India), but **not necessarily key merchant exporters**

Source: Argus market study (2022)
1) NPK includes fertilizer products used as inputs to NPKs. Nitrates includes urea in UAN

Main trade patterns in the merchant market driven by geographical spread of net exporters and importers

Top 10 importers represent almost 70% of traded volumes

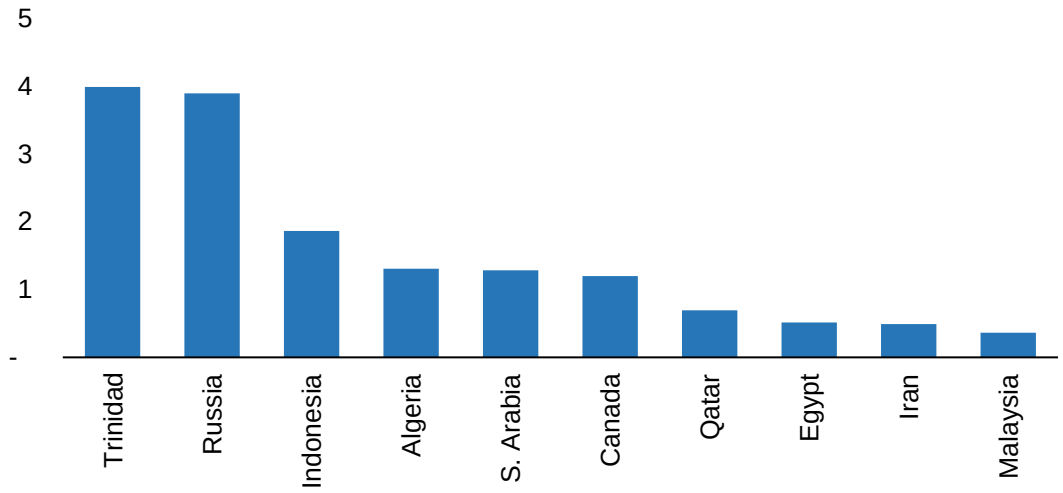
Top 10 importers, 2021A (mT)



- There are **4 main categories of buyers** in the merchant market:
  1. **Industrial customers**, primarily in the chemicals industry
  2. **Producers of phosphate fertilizers** as the regions with phosphate reserves often lack nitrogen capacity
  3. **Some nitrate production capacity** is based on purchased ammonia
  4. **Direct application on the field** (only common in US)

Top 10 exporters represent almost 85% of traded volumes

Top 10 exporters, 2021A (mT)

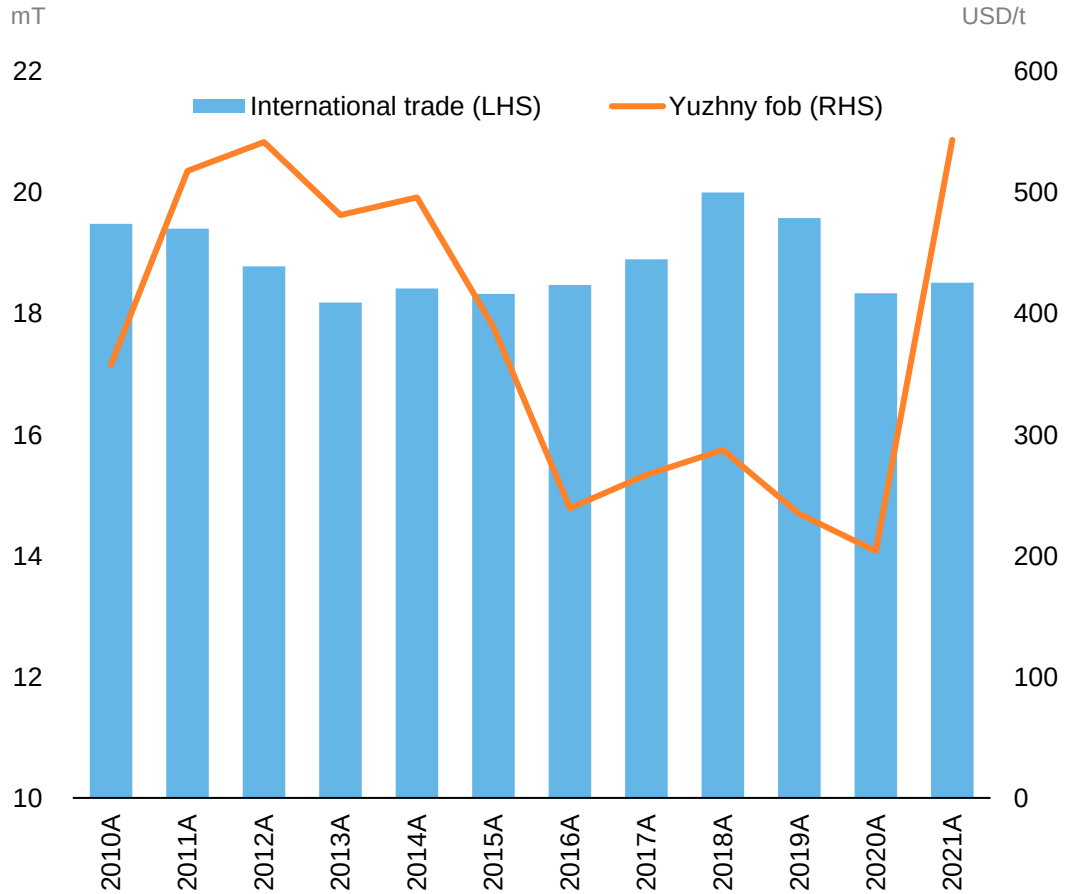


- Ammonia exporters have access to **competitive feedstock/energy**, coupled with a **deficit of domestic demand** (for ammonia and fertilizers)
- Most of the merchant market is **seaborn (deep-sea)**, with **limited volumes via rail**
- **Majority of export capacity** comes from **dedicated merchant ammonia plants** (as opposed to **surplus ammonia from integrated plants**)
- The majority of **Russian export volumes removed during 2022**

Source: Argus market study (2022)

Historical volume and price drivers in the merchant ammonia market

Long-term volume and price development



Key drivers

Stalled volume development over the last decade

- **Gross ammonia** production grew at a **CAGR of ~1.5%** between **2010-21**
- **International ammonia trade expanded during the 2000s**
- Growth during the 2000s from **downstream demand** linked to processed **phosphates** and **industrial end-uses**, plus **uneconomic ammonia plant closures**
- **Stagnant trade volumes over the previous decade** given **expansion in integrated processed phosphates operations** and **construction of integrated ammonia plants** (as opposed to merchant capacity) – increasing the proportion of captive ammonia consumption

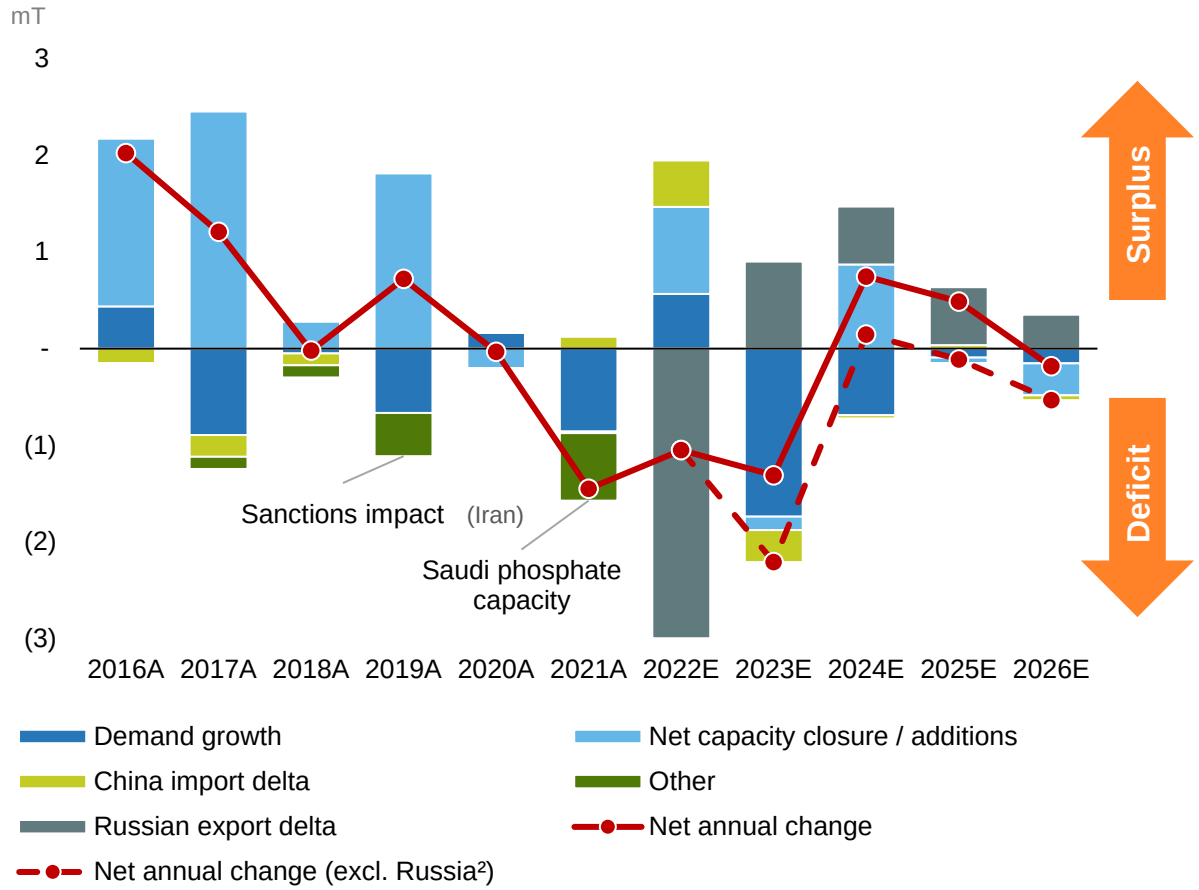
Pricing dynamics vary depending on the state of the market

- **Price floor (in a supply-driven market):** Price set by the cost base of the marginal/swing producer. The cost is predominantly driven by the cost of energy (natural gas or coal)
- **Price ceiling (in a demand-driven environment):** Price typically constrained by the value of urea (on same nitrogen content basis) and the corresponding upgrading margin (from ammonia to urea)

Source: Argus market study (2022)

Supply and demand outlook indicates structural support for a robust market over the next few years

Historical and projected supply/demand balance[1]



Tight market that will take time to normalize

Limited number of merchant ammonia plants in the pipeline

- **Ma'aden's** new **1.1mT** ammonia plant started operations in **Q1 2022**. From the second half of this decade, it is expected to feed a domestic phosphate plant, reversing the capacity addition
- Shipments from the **0.35mT Salalah Methanol in Oman** is expected to start during production during 2022
- **Gulf Coast Ammonia's 1.3mT** merchant plant is expected to commence operations in **2024**

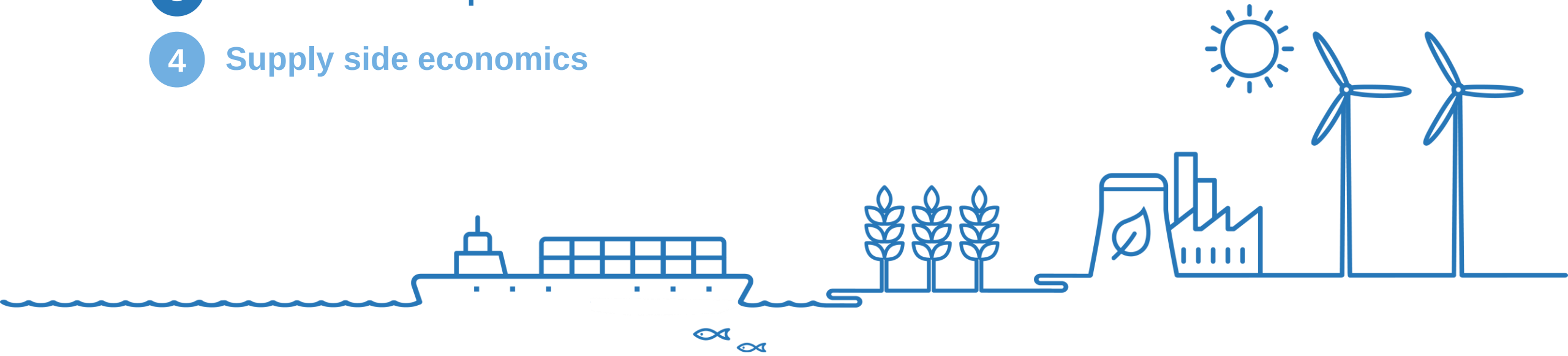
Russian supply loss removes large merchant volumes

- In 2021, Russia exported **~3.9mT** of ammonia, representing **>20% of global merchant volumes**
- **No Russian export terminals**; instead, ammonia is shipped from the **Black Sea** and Baltics (via **pipeline** and **rail**)
- In 2022, **~3mT of Russian ammonia has been removed** from the market, causing a large **supply deficit in the "west"**
- With a **surplus in the "east"**, **Middle Eastern** producers are **best-placed to replace Russian exports**

Source: Argus market study (2022)
1) Potential switch to integrated urea production not included in the supply and demand chart
2) Excluding return of Russian export capacity after 2022

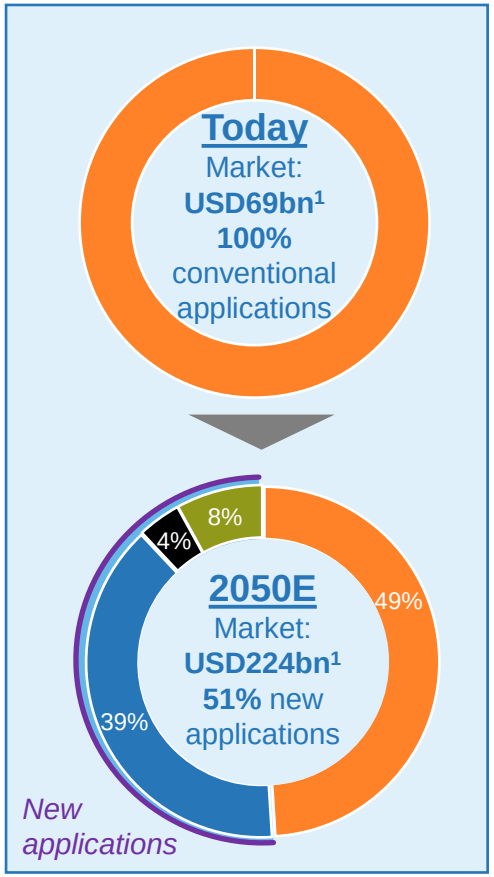
Market outlook

1. Market opportunity
2. Conventional market
3. **Demand development**
4. Supply side economics



Demand from new applications is expected to come exclusively from clean ammonia

Demand focused on key applications



Shipping fuel

- Ammonia is the most promising scalable clean fuel solution
- Regulation to drive ship owners towards fleet conversion and orderbook commitments
- Current decarbonization toolbox is insufficient to achieve GHG reduction targets

Power generation

- Ammonia in power generation can help decarbonize countries which have unfavorable conditions for renewables and therefore need a reliable, flexible back up power source
- Japan has stated clear targets for ammonia co-firing and is expected to be leading the market

Agriculture/Industrial

- Grey ammonia is expected to continue to play an important role in the agricultural and industrial market
- Industry standards, cost incentives and end consumer demand to act as a pull for clean ammonia in fertilizers

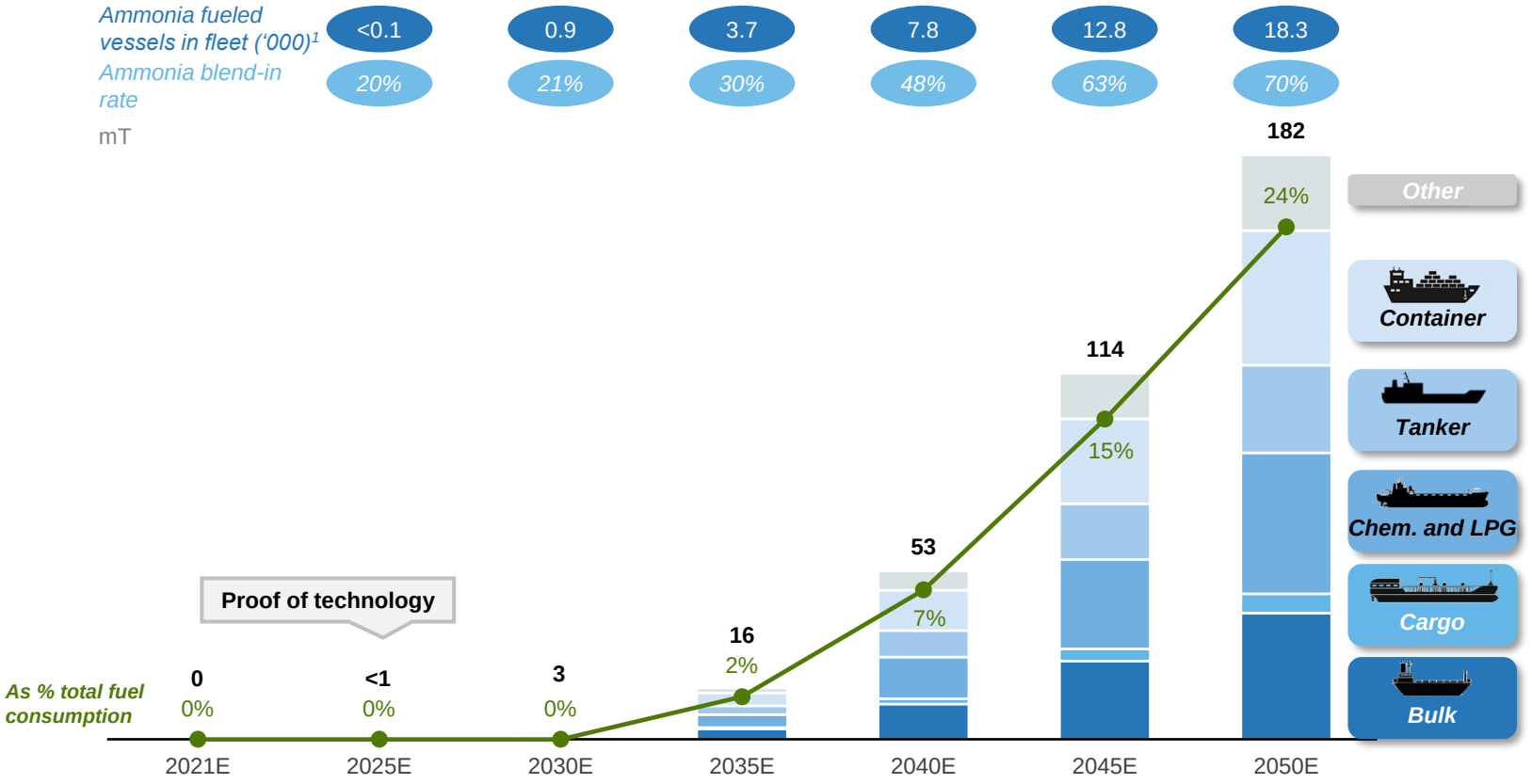
Hydrogen carrier

- Emerging hydrogen roadmaps at national level outlining ambitious targets
- Ammonia will be key for large-scale hydrogen import (i.e. linking demand centers and low-cost supply)
- Driven by ammonia's superior transport attributes, existing infrastructure and lower handling complexity

Source: Arkwright market study 2021
1) Market value in real 2021 terms, assuming an inflation rate of 2% starting 2021

Rapid growth in the use of ammonia as a shipping fuel is expected to create a USD 87bn market by 2050

Ammonia demand outlook in the shipping fuel segment

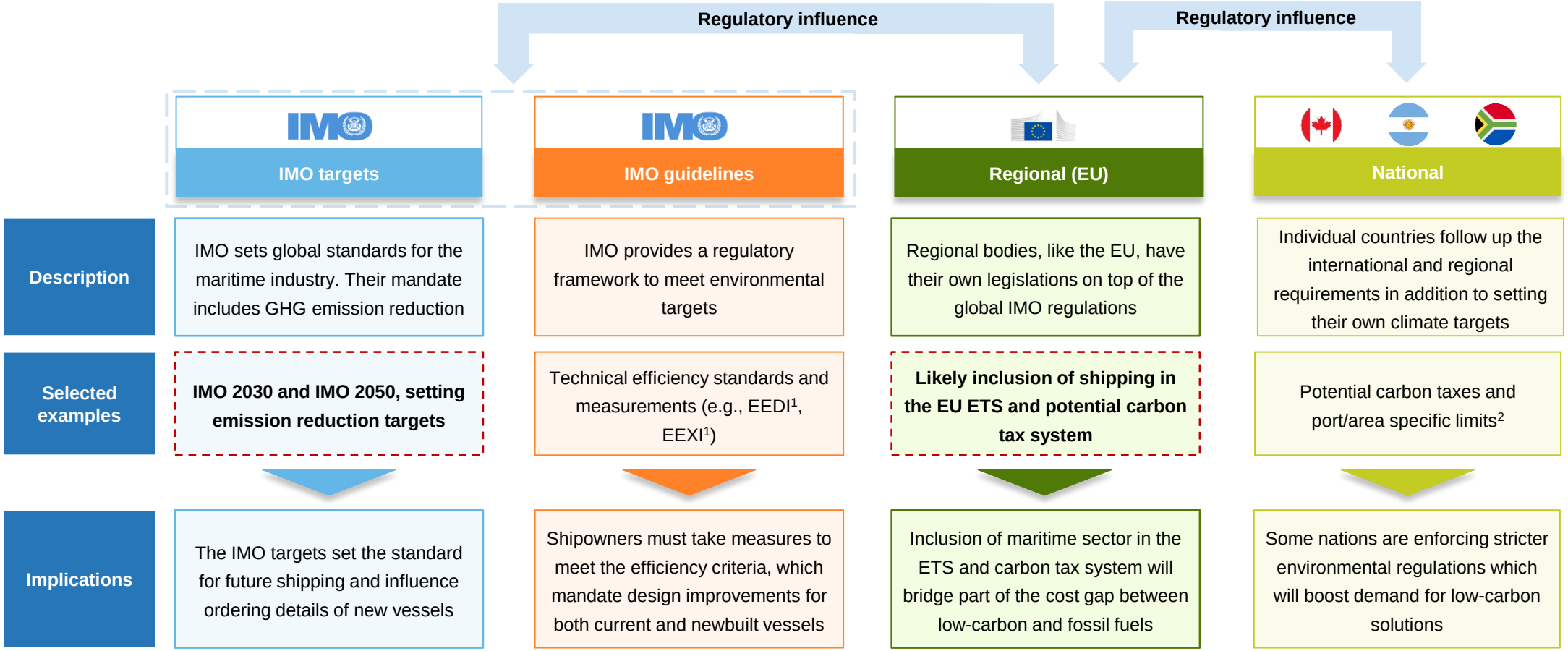


Key drivers

- Current toolbox **insufficient to reach IMO's emission reduction targets – a clean fuel alternative is required**
- Likely inclusion of shipping in the **EU ETS increases price of fossil fuels**
- Ammonia scores best across clean fuel KPIs and will be particularly **important for deep-sea shipping**
- Engine **commercial readiness** and **fuel availability** expected **second half of this decade**
- **Retrofit adoption of c. 10%** gradually from 2028 driven by selected segments
- **Market take-off of newbuilds towards 2040 and 2050** with 50-60% adoption

Source: Arkwright market study 2021
1) All vessels capable of running on ammonia; blend-in rates differ per segment

IMO targets and guidelines together with regional and national regulations drive demand for low-carbon fuels

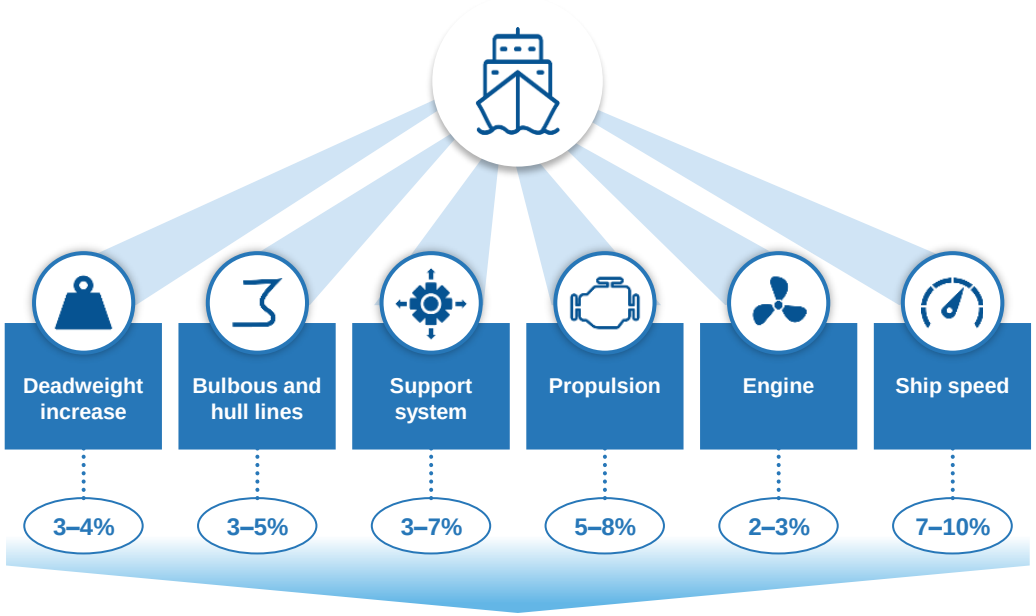


Source: Arkwright market study 2021

1) EEXI: Energy Efficiency Existing Ship Index measures existing ships energy efficiency; EEDI: Energy Efficiency Design Index applies to newbuilt vessels and estimates the grams of CO2 per transport work
2) E.g., Norway plans to more than triple its national tax on CO2 emissions

The IMO has set targets to reduce GHG emissions by 40% and 50% by 2030 and 2050, respectively

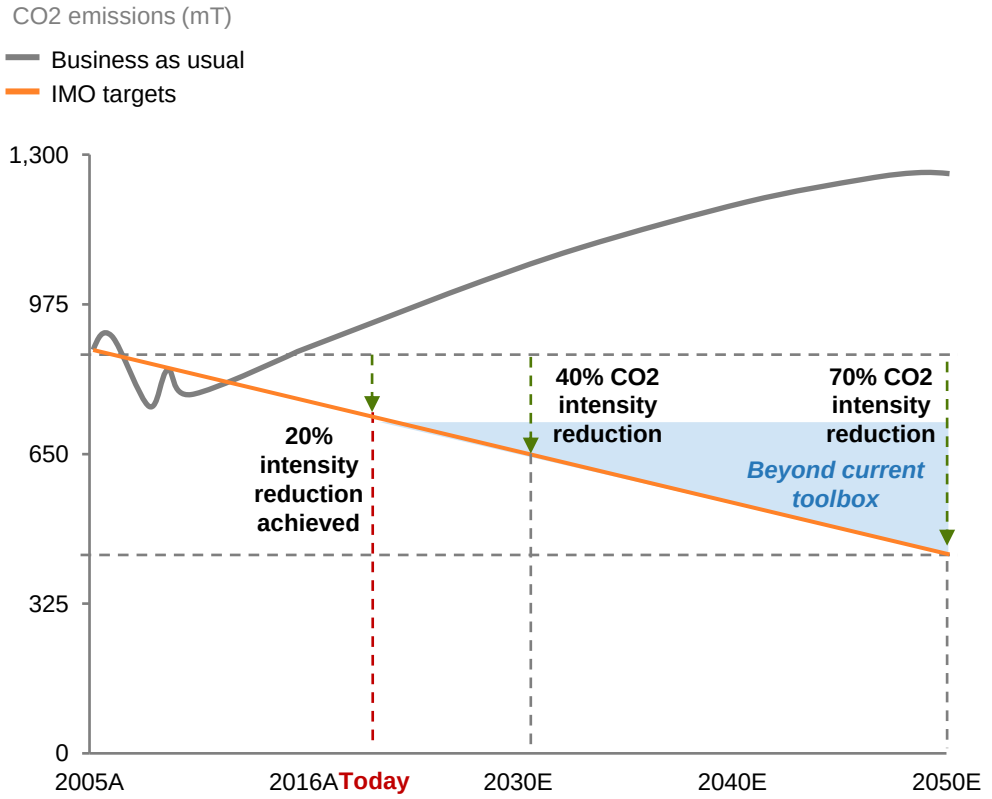
Current decarbonization toolbox



20–25%

Fuel reduction estimate
(estimated savings potential)

IMO CO2 emission reduction targets



The industry's current toolbox can reduce emissions by 20-25% – clean fuel alternatives will be required to meet IMO's targets

Source: Arkwright market study 2021
Note: Reduction measured against 2008 baseline

Maritime transport likely to be included in the EU ETS from 2024, introducing a carbon quota for the sector

Key milestones

July 2021: The legislation was **first introduced by the European Commission** (as part of the **"Fit For 55"** package)

May 2022: ENVI[1] voted to **accelerate implementation** and **broaden the scope**

8 June 2022: Amended proposal **rejected by the EP**, deadline for ENVI[1] to find a **compromise solution: 23 June 2022**

22 June 2022: EP voted in favor of a draft law to **include shipping** (and road transport) **in the EU ETS**

The parliament will now defend this position in the **upcoming negotiations with member states**, as **agreement between Parliament and Council[2] is necessary for the law to enter into force**

Draft law (22 June 2022)

Implementation and emissions covered	**From 2024:** 100% of emissions from intra-European routes and 50% of emissions from extra-European routes[3] (from 2024 until the end of 2026) **From 2027:** 100% of emissions from all trips to be covered[4]
Scope of ships covered by ETS	**>400** gross tonnage and **offshore service vessels**
Type of emissions covered by ETS	**Carbon dioxide, methane** and **nitrous oxide**
Cost exposure	**"Polluter pays"** principle allows shipowners to **pass on carbon cost to the commercial operator**

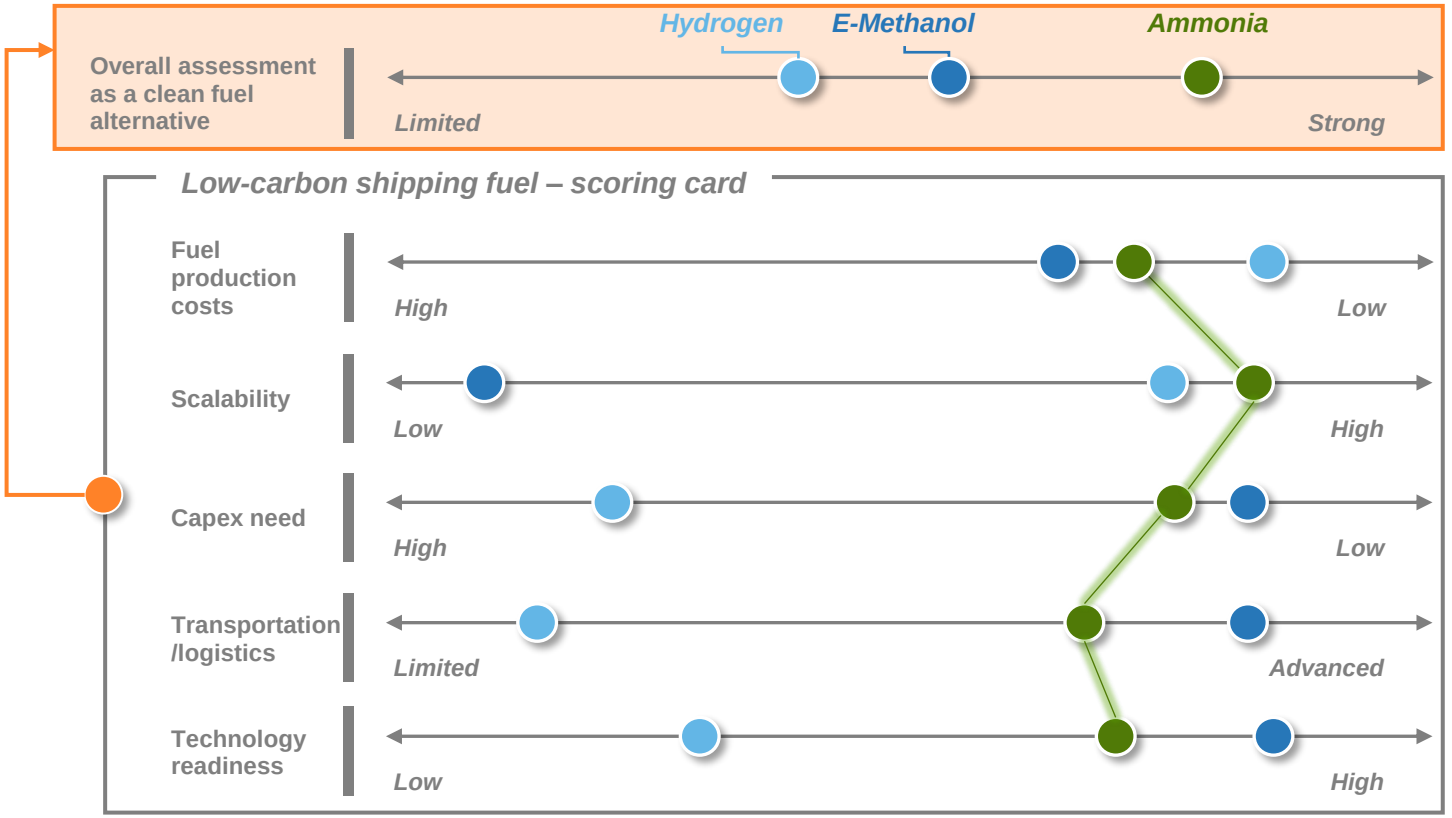
Inclusion of shipping in the EU ETS will bridge part of the cost gap between low-carbon and fossil fuels

Source: European Parliament; Arkwright Market study 2021; S&P Global news; other news sources

1) European Parliament's Committee on Environment, Public Health and Food Safety (ENVI)
2) 55% of member states representing at least 65% of the total EU population must agree
3) From and to the EU
4) With possible derogations for non-EU countries where coverage could be reduced to 50% subject to certain conditions

Ammonia is the most promising solution for clean fuel in deep-sea shipping

Comparison of shipping fuel alternatives



E-Methanol

- **E-Methanol is not a zero-carbon fuel**, as it emits CO2 when combusted
- Methanol will **only be emission-free if the carbon going into e-methanol is captured from a source where it would otherwise be emitted or captured after combustion**; this is very expensive and difficult to scale
- In light of its **low scalability**, there is **limited incentive for large-scale adoption**

Hydrogen

- Lower **energy density** disadvantageous for longer-distance shipping
- **Limited existing infrastructure** vs. ammonia
- **Hydrogen fuel cells are not expected to be available at commercial scale before 2028/2029**, while ammonia engines should be available from 2024/2025

"Ammonia (green and blue) is the most promising carbon-free deep-sea fuel in the long run" – DNV

Source: Arkwright market study 2021

Fuel cost parity between ammonia and MGO requires CO2 pricing of USD ~250 per tonne[1]

Shipping fuel cost comparison requires several aspects:

Shipping fuel **cost comparison should consider total cost** of propulsion, which includes the following key items:

- Price of fuel
- Energy density in fuel
- Engine combustion efficiency

In addition, **the price of carbon** will likely play an increasingly important role going forward:

- Price of CO2 emissions
- Carbon intensity embedded in fuel (well to wake)

- *Other elements to consider over a ships lifetime, albeit not reflected here, could be:*
  - *Alternative value of cargo space needed for fixed fuel installations*
  - *Capex*
  - *Etc.*

Cost comparison between Ammonia and MGO

Ammonia requires only **carbon pricing of USD ~250/tonne** in order to reach **cost parity with MGO**, assuming respective fuel price levels of 750 USD/t for MGO and 500 USD/tonne for ammonia:

- MGO price assuming oil price of 80 USD/barrel and historical correlation
- Ammonia price based on natural gas cost of 4.5 USD/MMBtu and with 90% carbon capture
- Considering fuel cost, energy density, combustion efficiency and carbon cost

Cost of MGO vs. blue ammonia at selected carbon price levels[1]

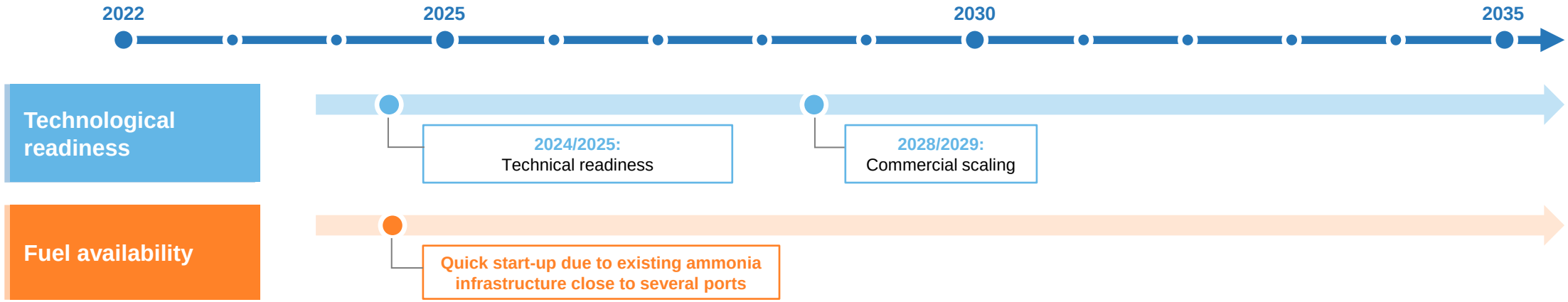
CO2 tax (USD/t)	0	50	100	150	200	250	300
MGO (USD/GJ)	32	38	45	52	58	65	71
Blue ammonia (USD/GJ)	57	58	60	61	62	64	65
MGO vs. Blue ammonia	-78%	-52%	-33%	-18%	-7%	+1%	+9%

Source: Company information; Arkwright market study 2021

1) Assuming brent price of 80 USD/bbl and natural gas price of 4.5 USD/MMBTU

Ammonia fueled engines expected to be ready from 2024–2025 with commercialization in 2028–2029

Timeline for expected availability of ammonia as a shipping fuel



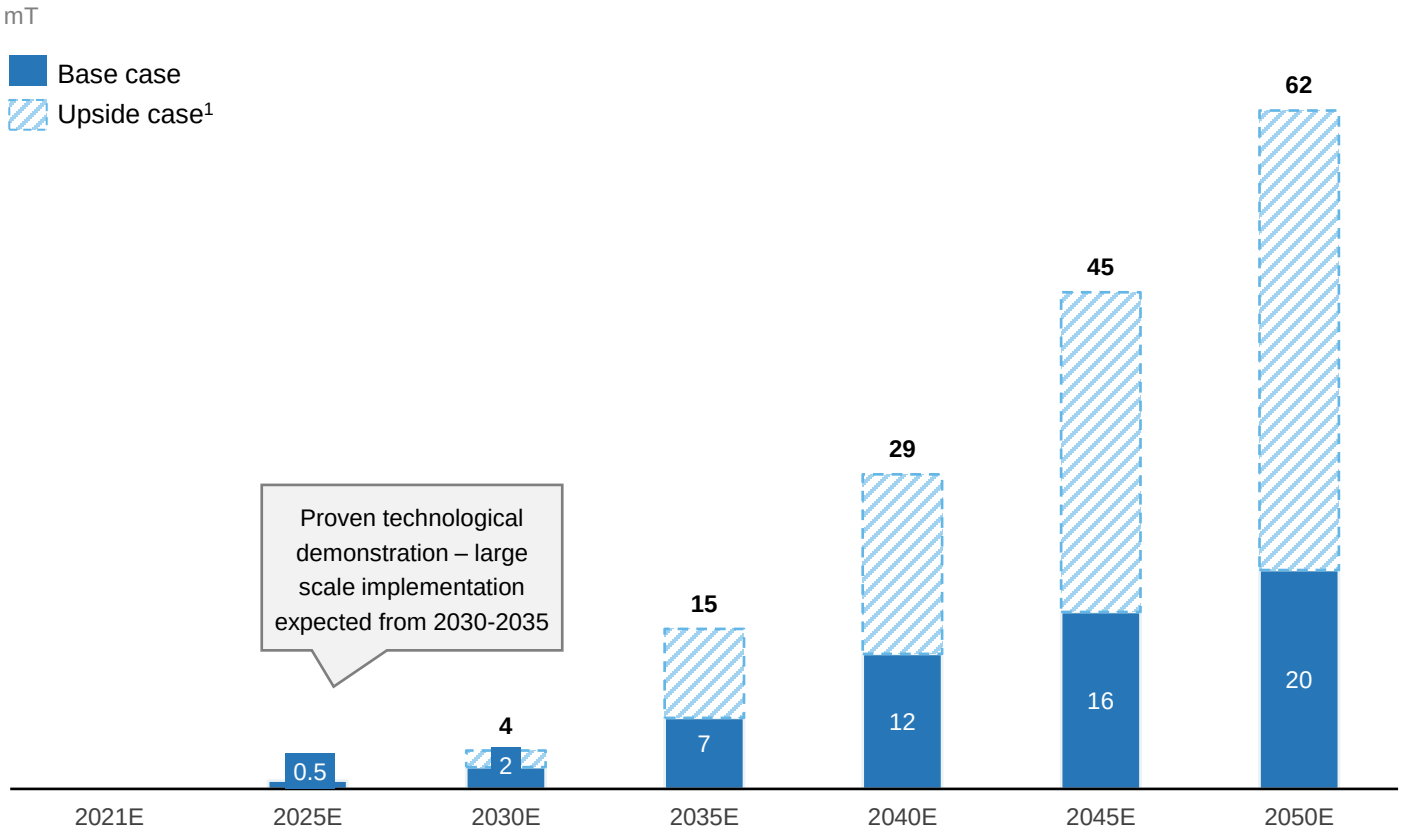
Selected ship-owners involved in ammonia-as-a-fuel projects

Color Line · HYUNDAI MIPO DOCKYARD · CSSC · mise · HÖEGH AUTOLINERS · AVIN INTERNATIONAL · GRIEG · SOARI · NYK LINE NIPPON YUSEN KAISHA · VIRIDIS

Source: Arkwright market study 2021

Ammonia co-firing in power generation can support the emergence of a USD 10bn market in Asia by 2050

Ammonia demand outlook in the power generation segment



Key drivers

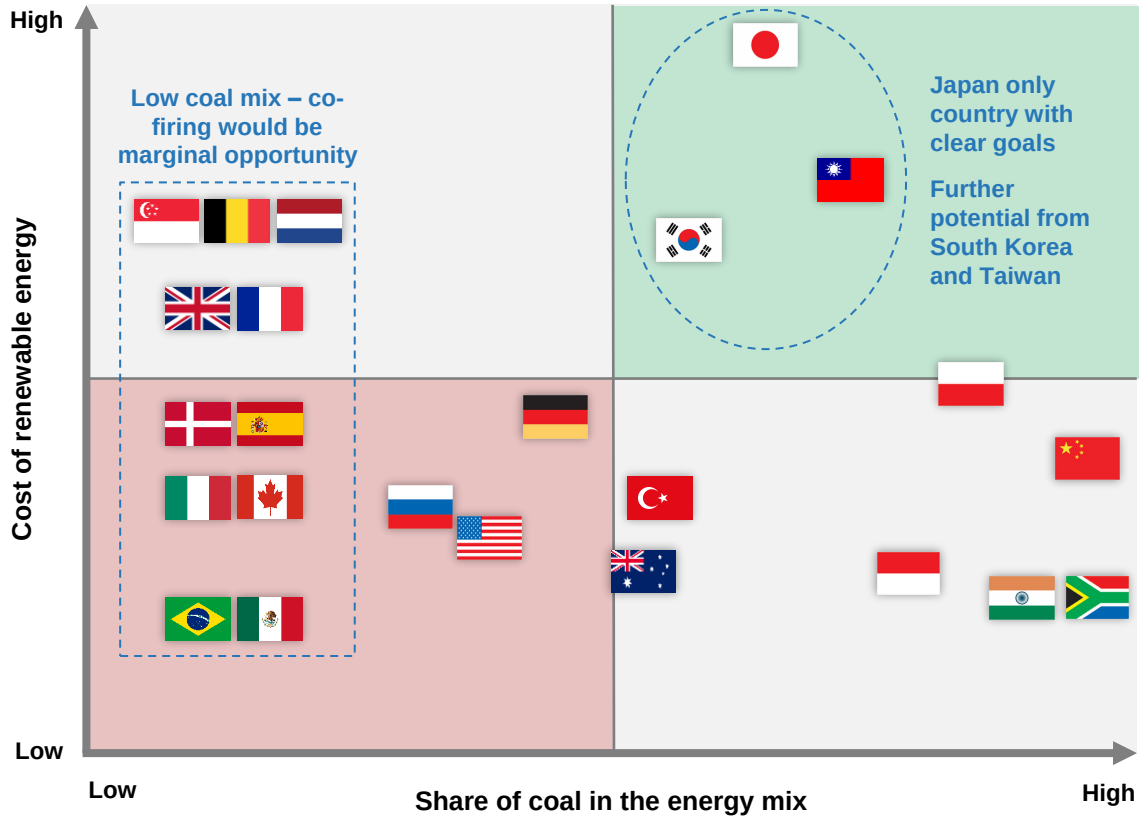
- Provides cleaner power generation in countries with unfavorable renewable conditions through **decarbonization of existing coal-based base load capacity**
- **Ammonia co-firing has large potential to reduce emissions** for large-scale coal-fired power plants
- Especially relevant for countries with **high exposure to coal** and **high cost and low load factor of renewables** – e.g., **Japan**
- **Significant upside potential** from additional ammonia used, as well as from further countries adopting ammonia co-firing and replacing oil-fired electricity generation
- **Technological development needed**: development for inclusion of very high ammonia shares[2] and to ensure low NO_x emissions[3]

Source: Arkwright market study 2021

1) Assumes Japan realizes 100% ammonia-fired power plants by 2050; 50% of Taiwan and South-Korea potential realized; 20% of small- and medium-scale oil-fired backup electricity generation replaced by ammonia-fired gas turbines
2) Due to low flammability and radiation intensity
3) Ammonia co-firing might have higher NO_x-formation than pure coal firing without NO_x abatement technology

Countries with high cost of renewables and high share of coal are most relevant for ammonia co-firing

Indicative evaluation of co-firing opportunities



Benefits of ammonia co-firing

- Provides an **alternative for countries with unfavorable conditions for renewable production** – both in terms of price and capacity potential
- Reduces emissions yet allows continued **use of relatively new fleets of coal- and gas-fired power plants with long remaining lifetime**
- Enables **continued use of more flexible production assets** that can complement the intermittency of renewables production
- **Economically favorable over CCS** – and beneficial by having a **more flexible opex profile** vs. large investments

Source: Arkwright market study 2021

Japan, Taiwan and South Korea are key potential demand centers for ammonia in power generation

Main potential countries

Japan

- Japan has **clear targets for ammonia co-firing**
- By **co-firing with 20% ammonia** on all coal-fired power plants in Japan, **CO2 emission** from the electricity sector can be **reduced by 10%**
- **Green Innovation Fund and tax incentives estimated to induce ~ USD 150bn[1] private investment** over next 10 years
- Plan to establish **scheme for short-term subsidy** with funds of c. USD 9bn[1] in next three years with incentive-based payouts

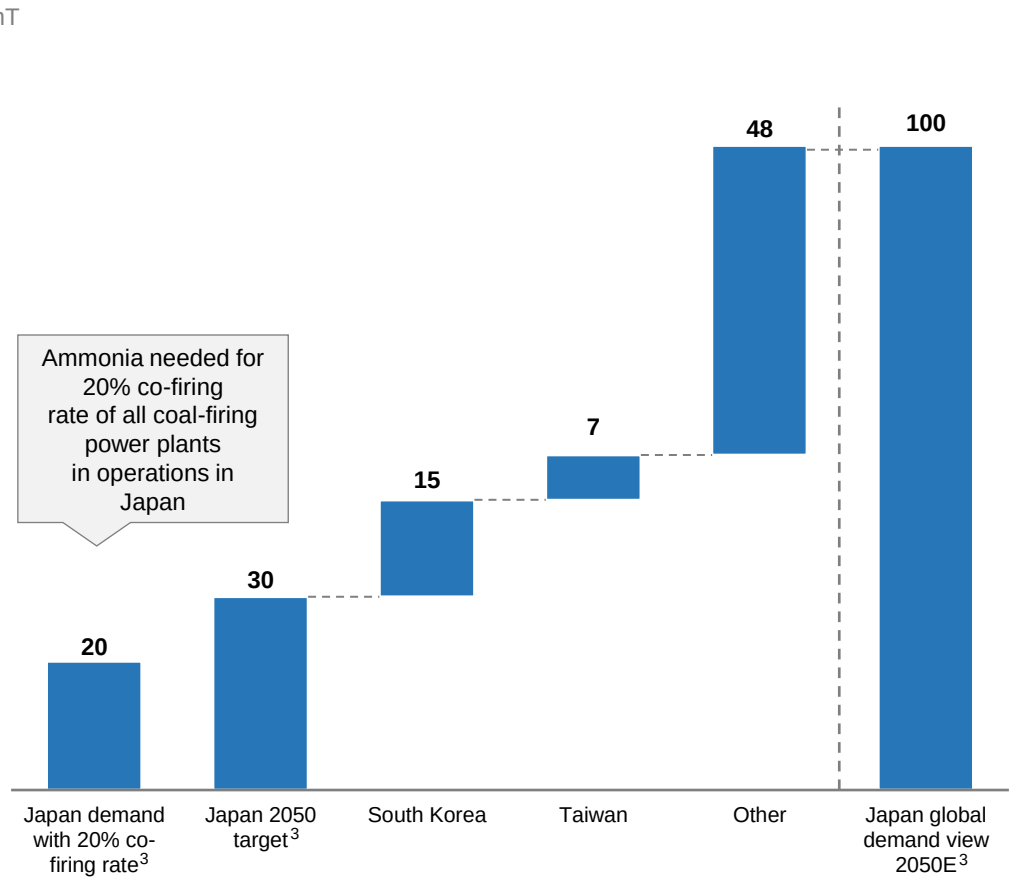
South Korea

- Ranked as the **world's 7th biggest coal consumer** with **strong public ambitions for reaching carbon neutrality**
- **Mature ammonia infrastructure, world's 4th largest importer[2]**
- **Major institutions formed Green Ammonia Alliance** in 2021

Taiwan

- Ranked as the **world's 14th biggest coal consumer,** with limited renewable options
- Amid **neighboring countries with mid-century net-zero targets**, Taiwan is expected to take appropriate measures

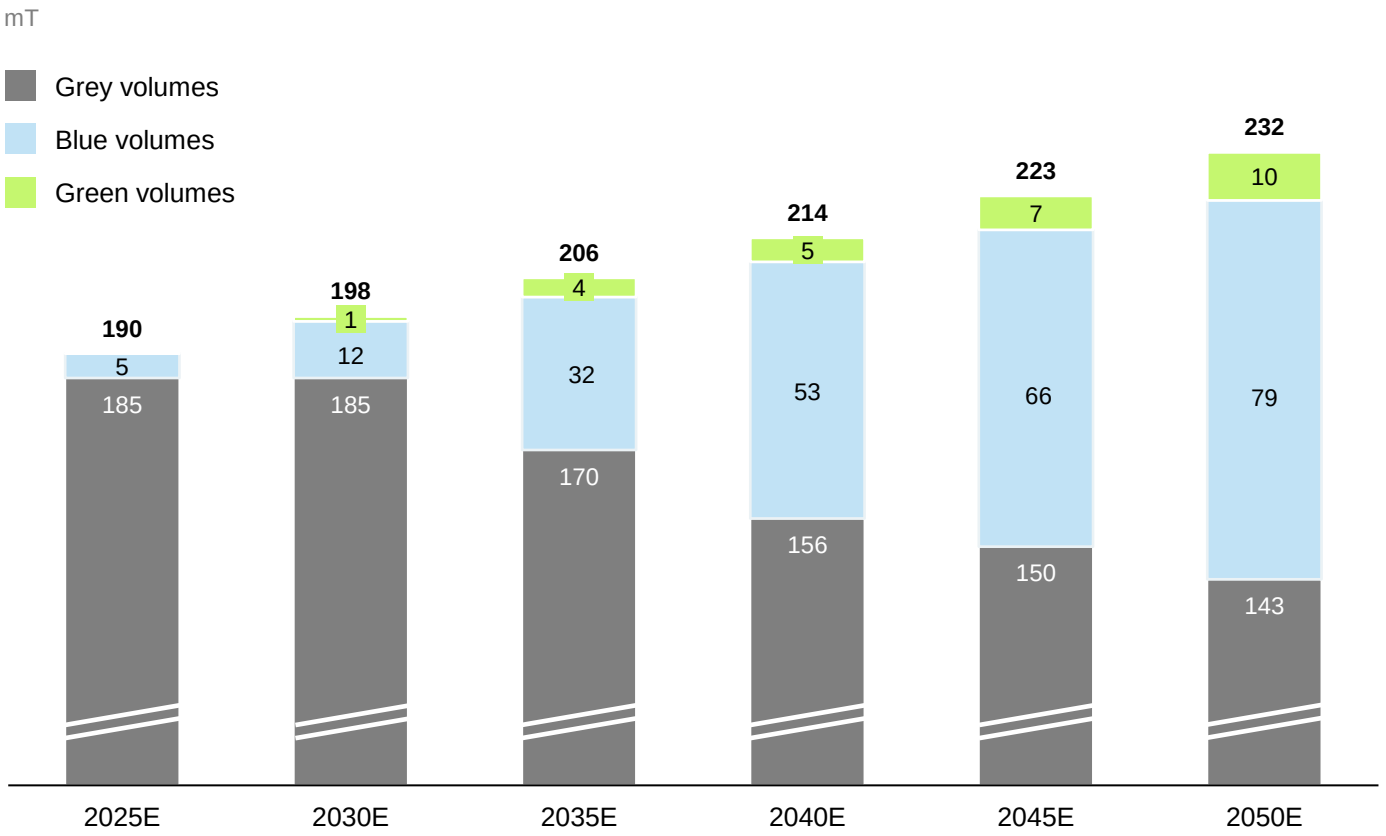
Demand development



Source: Arkwright market study 2021
1) Assumes 1 yen = 0.0090 USD
2) Argus market study (2022)
3) Japanese government estimates

Demand from conventional applications is expected to support a traded and captive market of USD 111bn by 2050

Ammonia demand outlook in the agriculture/industrial segment



Key drivers

- **Conventional applications** (i.e. fertilizer and industrial segments) are expected to **remain key sources of ammonia demand**
- **Demand for green fertilizer supported by:**
  - Food companies gradually **committing to reducing emissions**
  - **Minimal infrastructure** or **value chain changes** required for green fertilizer
  - CO2 savings in the food industry with only **small impact on cost**[1]
  - **More than 50% of customers demonstrating the willingness to pay** within the food industry, compared to other sectors
- **Decreasing contribution from grey** production, yet it will **remain an important source of ammonia going forward**
- **Blue ammonia** includes a mix of **new capacity** and **grey conversions**

Source: Arkwright market study 2021

1) Green ammonia would constitute only 0.5-1.0% price increase on finished goods

Green ammonia has a strong business case of providing up to 30% CO2 reduction at a ~1% marginal cost increase

Food companies are recognizing the need to reduce their emissions

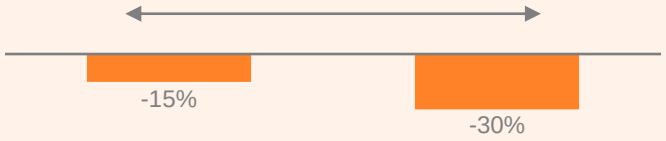
Example food companies with ambitious emission reduction plans

Nestlé, PEPSICO, DANONE (ONE PLANET. ONE HEALTH), HEINEKEN, Unilever

- **Global brands are pushed to take responsibility** for their emissions throughout the value chain
- Many brands pledging **net-zero targets by 2040-2050**
- The brands can use their **value chain power to drive the adoption of green fertilizer** at farms to reduce emissions

Fertilizer accounts for a very large share of CO2 emissions, but a small share of the cost

At 1% extra cost on a loaf of bread, clean ammonia can deliver a 15-30% reduction in carbon footprint



- **Fertilizer** used at farms often **accounts for a large share of total emissions** for an end-product
- However, the **cost for fertilizer is often marginal** compared to other cost components
- The result is a very strong **value proposition for brands** to **reduce their emissions significantly with a marginal cost increase**

Impact on end-consumers is marginal and likely within willingness to pay for a "green" product

2x cost

+€0.05

2x increase in fertilizer cost only results in paying €0.05 extra for a cup of coffee

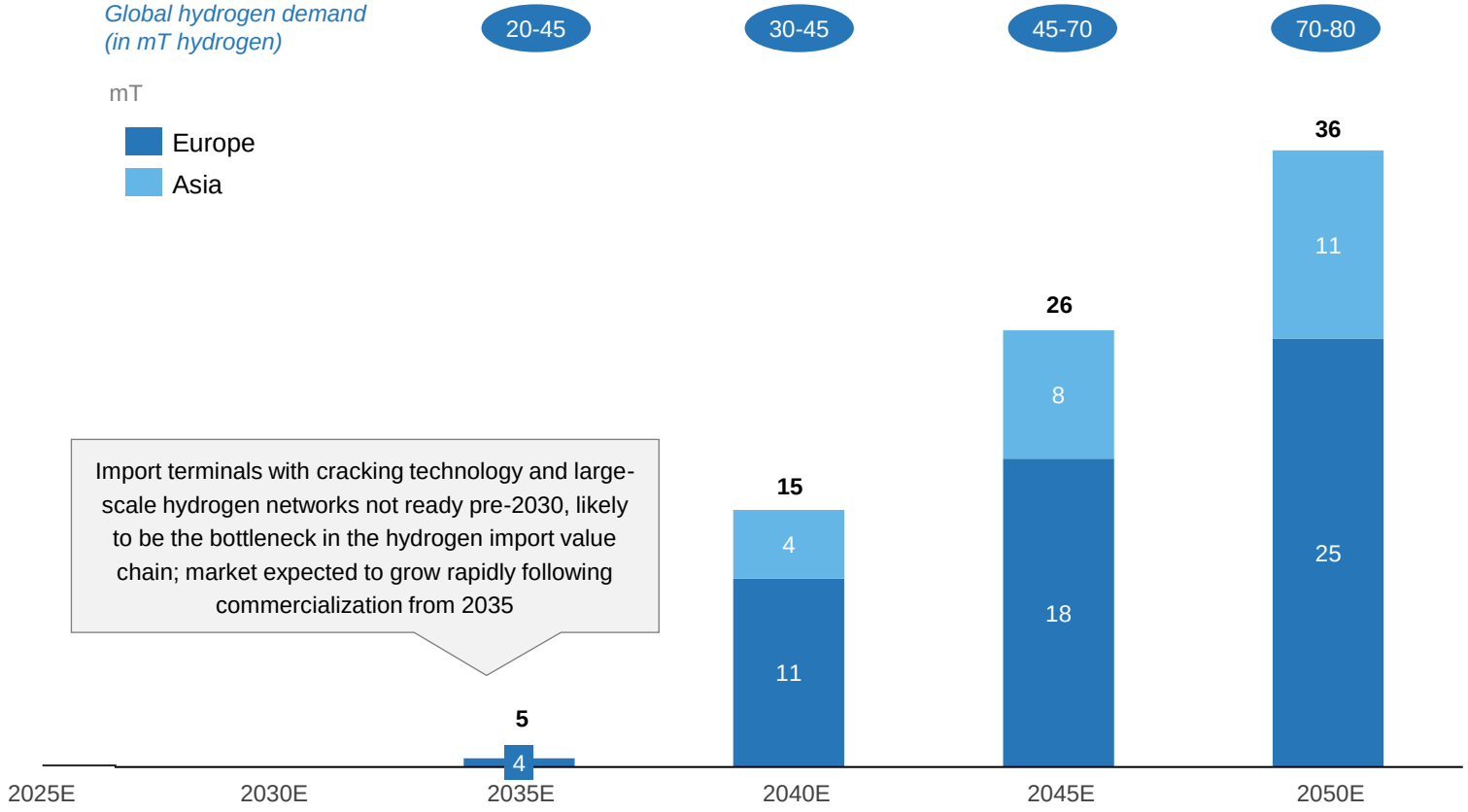
- Demonstrated ability of high-value brands to take out up to **20% premium on sustainable products**
- Green ammonia at 2-3x the price of conventional ammonia only constitute a **minor green premium for end-customers**
- More than **50% of consumers are willing to pay a green premium** for food products

Source: Arkwright market study 2021

The use of ammonia as a hydrogen carrier is expected to emerge as a USD 17bn market by 2050

Ammonia demand outlook in the hydrogen carrier segment

Global hydrogen demand (in mT hydrogen)



Key drivers

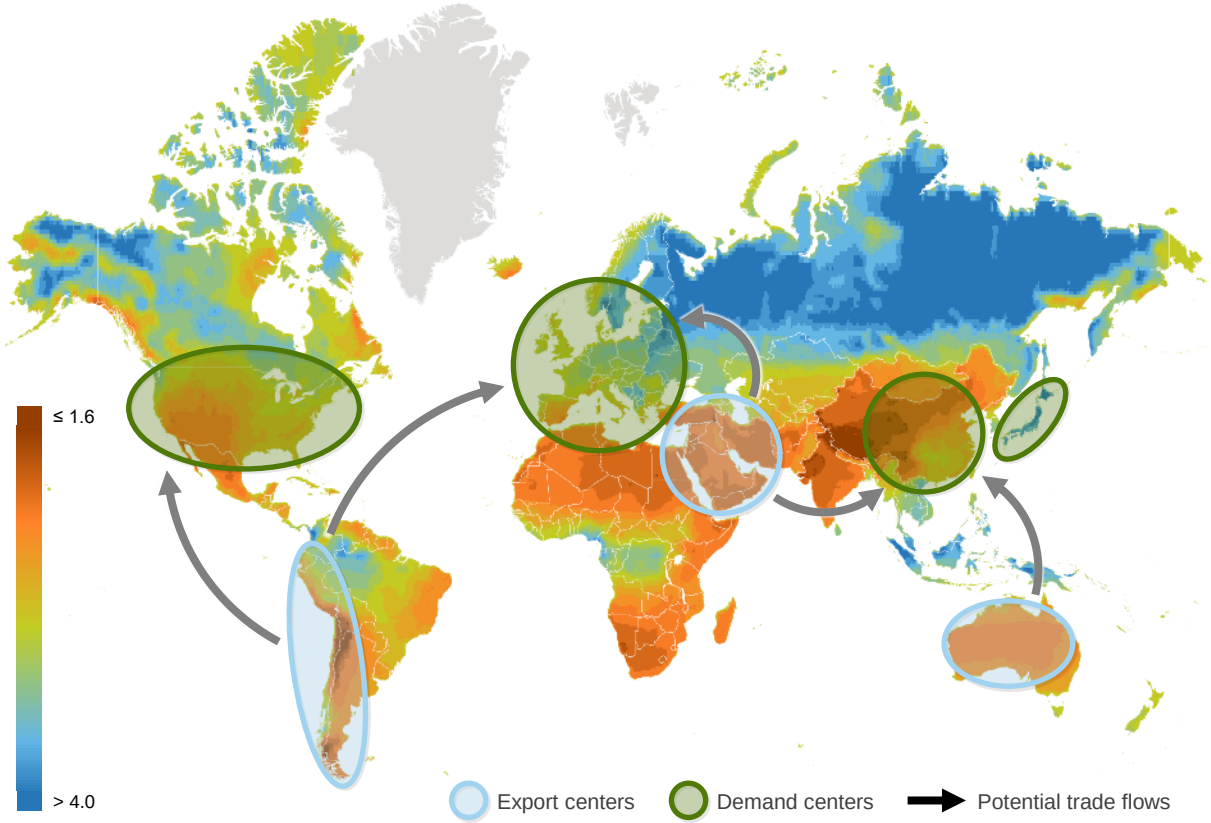
- **Hydrogen roadmaps are being drawn up globally** through public investments focused on promoting the hydrogen economy
- **Supply and demand centers will differ** due to land use constraints, infrastructure availability and potential, production cost differences and capacity for direct electrification
- **Europe and Asia** are expected to become **key demand centers with significant import need**
- **Ammonia is the most promising long-distance hydrogen carrier** due to favorable attributes such as ease of transport leading to lower cost

Source: Arkwright market study 2021

Ammonia will provide an important link for deep-sea transportation of hydrogen

Geographically separated supply and demand centers

Hydrogen production cost from solar PV and onshore wind systems in the short-term (USD/kgH2)



Alternatives for hydrogen transport

- **Pipelines**
- **Ammonia as a carrier**
- **Liquefied hydrogen**

Ideal for distances >1,000km

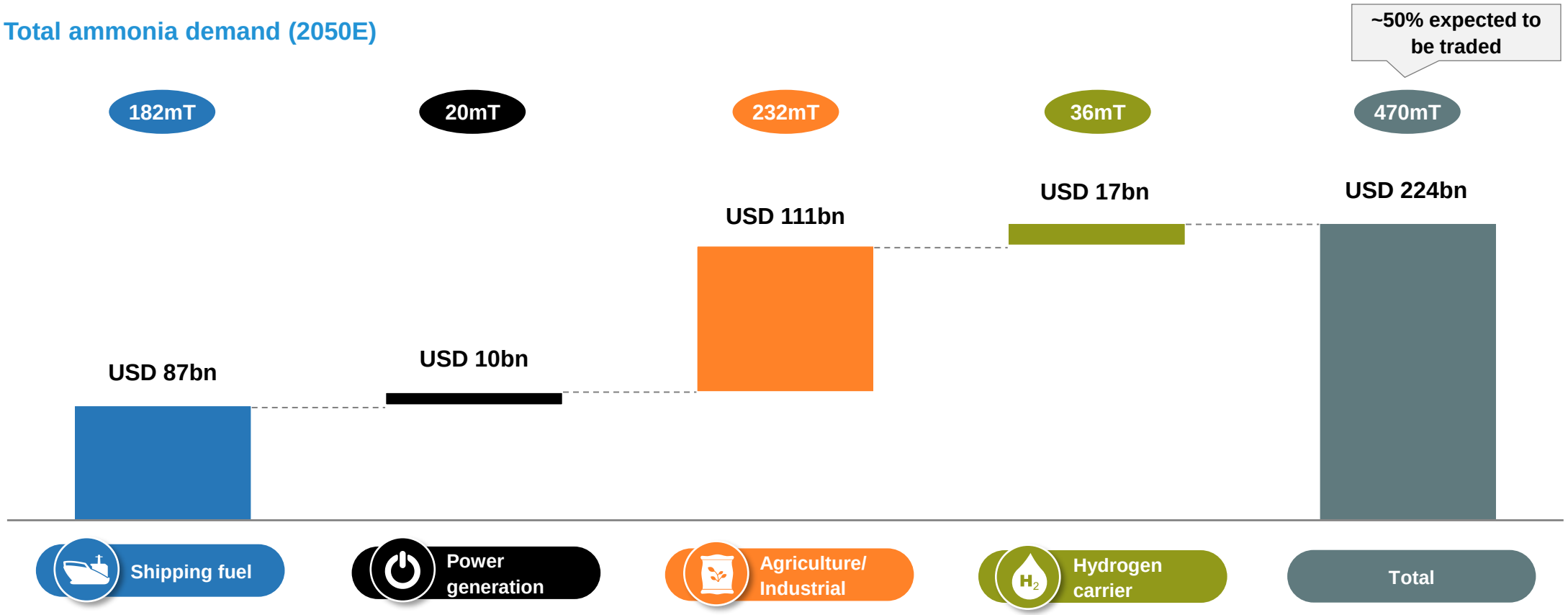
Advantages of ammonia

- **Mature** in transport, infrastructure and know-how
- More **energy dense** vs. hydrogen
- Better **characteristics for storage** vs. hydrogen
- **Lower all-in long-distance transportation cost** vs. hydrogen

Source: Arkwright market study 2021

Ammonia market expected to be USD 224bn in 2050 driven by strong mega trends across four different end-use applications

Total ammonia demand (2050E)

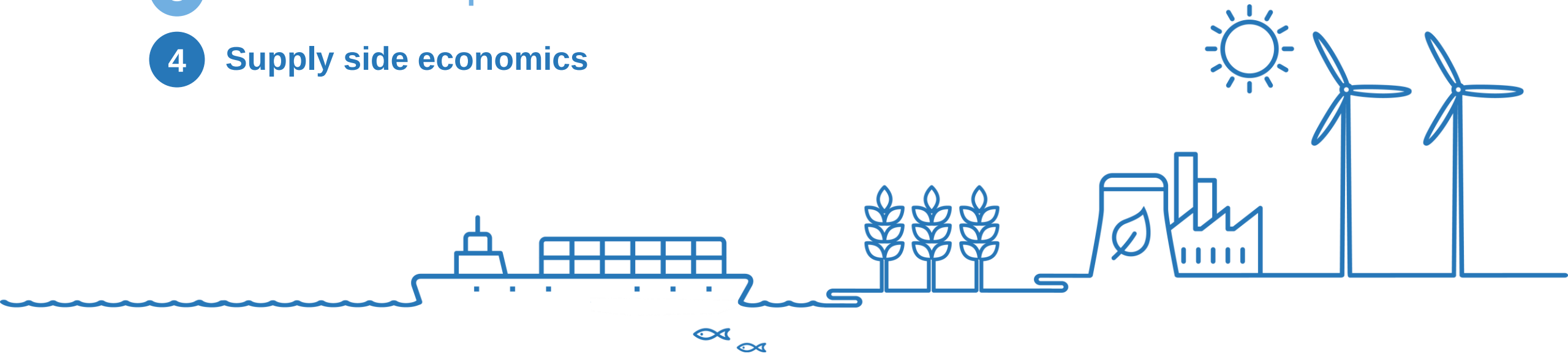


Growth underpinned by four distinct segments where each one on their own represents a significant opportunity for YCA

Source: Arkwright market study 2021
Note: Market value in real 2021 terms, assuming an inflation rate of 2% starting 2021

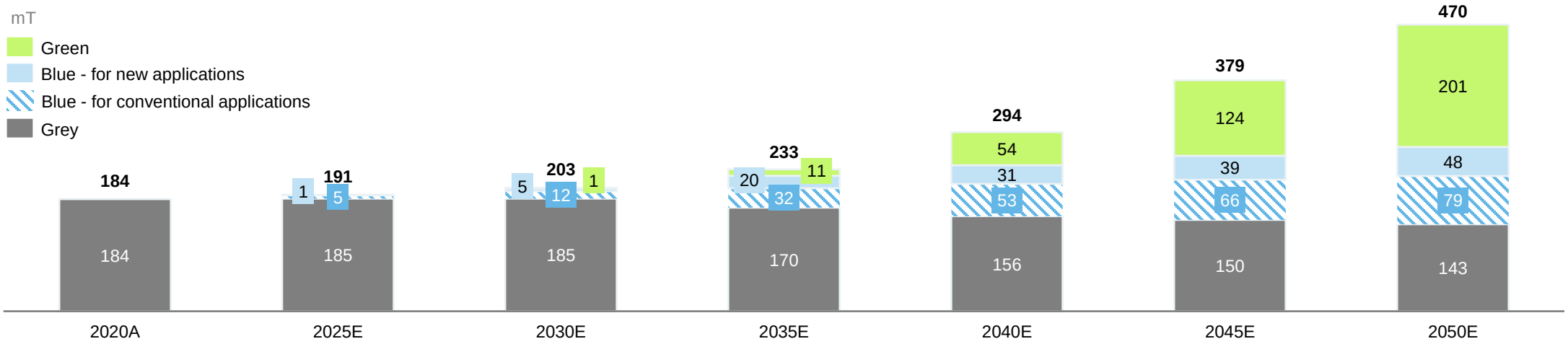
Market outlook

1. Market opportunity
2. Conventional market
3. Demand development
4. **Supply side economics**



Blue ammonia will reach scale first, but green expected to eventually surpass blue volumes

Ammonia volumes



Key factors impacting relative competitiveness of grey, blue and green ammonia

- Regional development of natural gas prices
- Timing and implementation of carbon taxation schemes
- Relative price differential vs. alternatives

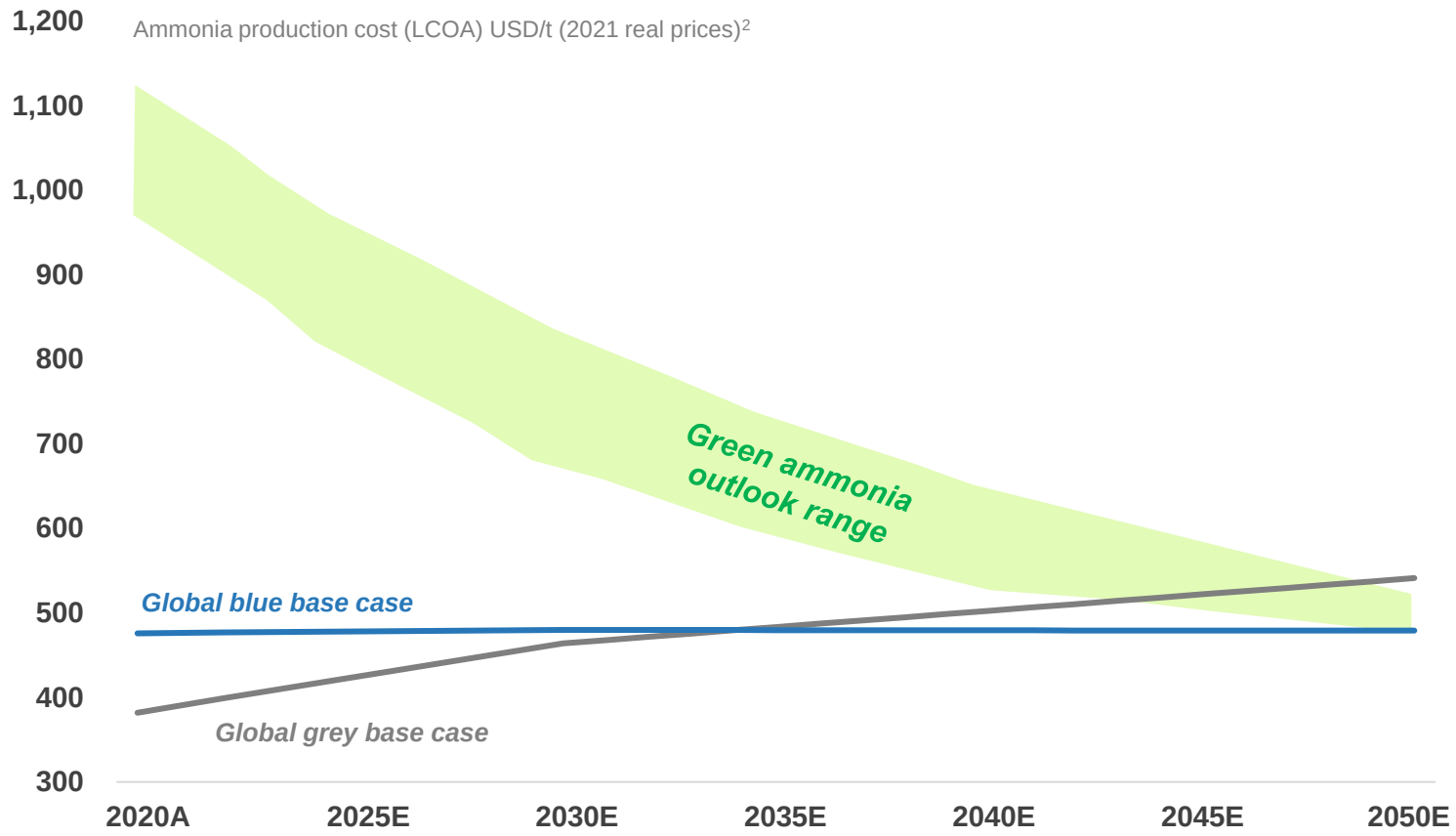
- Regional development of natural gas prices
- Timing and implementation of carbon taxation schemes
- Speed of cost reduction and regional differences in CCS availability

- Access to renewables capacity
- Rate of improvement in cost of renewables
- Electrolyzer cost
- Construction and civil costs in “stranded” areas
- “Greenium” that customers are willing to pay

Source: Arkwright market study 2021

Blue ammonia to be cost competitive with grey by 2035 and green ammonia becoming cost competitive over time

Ammonia production cost



Key assumptions and trends

- Blue ammonia with high capture rates (90%+) **expected to be cost competitive with grey ammonia with CO2-taxation between 2030-2035**[1]
- **Green ammonia expected to require significant premium and subsidies in order to be competitive short-term** due to high capex, present electrolyzer efficiency rates and competition for renewable electricity in grid-connected locations
- **Green ammonia will prevail in the long-term** as total plant capex comes down and efficiencies and load factors increase as the industry develops, but will take time until it becomes cost competitive without subsidies
- **Blue ammonia is expected to be key to scale up** ammonia application in new segments such as shipping fuel and power generation until green ammonia is mature

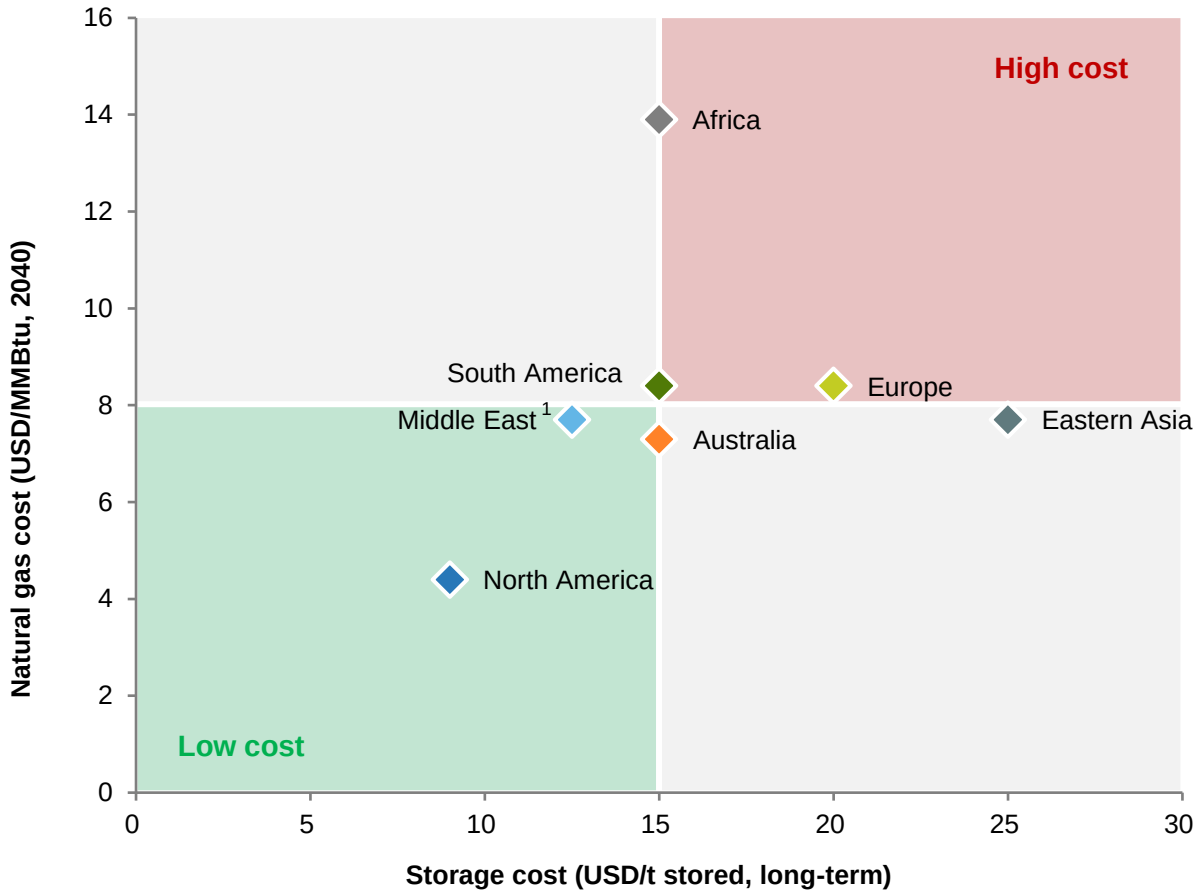
Source: Arkwright market study 2021
1) Assuming "global" CO2 prices increasing towards 50 USD/t by 2030
2) Assuming an inflation rate of 2% starting 2021

Differences in regional competitiveness of blue ammonia driven by gas, CO2 storage costs and incentive mechanisms

Relative regional competitiveness

North America	Sweet spot for blue hydrogen – lowest gas prices and only place with existing CO2 value chain and well-established incentive mechanism for CCS through 45Q tax incentive
Middle East	Cheap gas and suitable reservoirs for large-scale CO2 storage – "runner-up" to the US
Australia	Domestic gas supply and promising CO2 storage locations – relatively competitive region for blue production
South America	Gas supply varies by location – some areas (e.g., Argentina) with promising low-cost storage areas
Europe	Gas imports from US and Russia. In early days of CO2 storage and costs are currently high
Eastern Asia	Relies on gas import, limited/no real storage options in region as of yet
Africa	Varying gas supply/prices but specific locations with good potential – no current storage initiatives

Scoring on key cost drivers



Source: Arkwright market study 2021

1) Assumes LNG export price into Asia as "true price" for a Middle Eastern exporter, due to this being the alternative value of the gas – actual Middle Eastern production cost lower

In the US, the 45Q tax credit is already in place, supporting economics of blue ammonia production

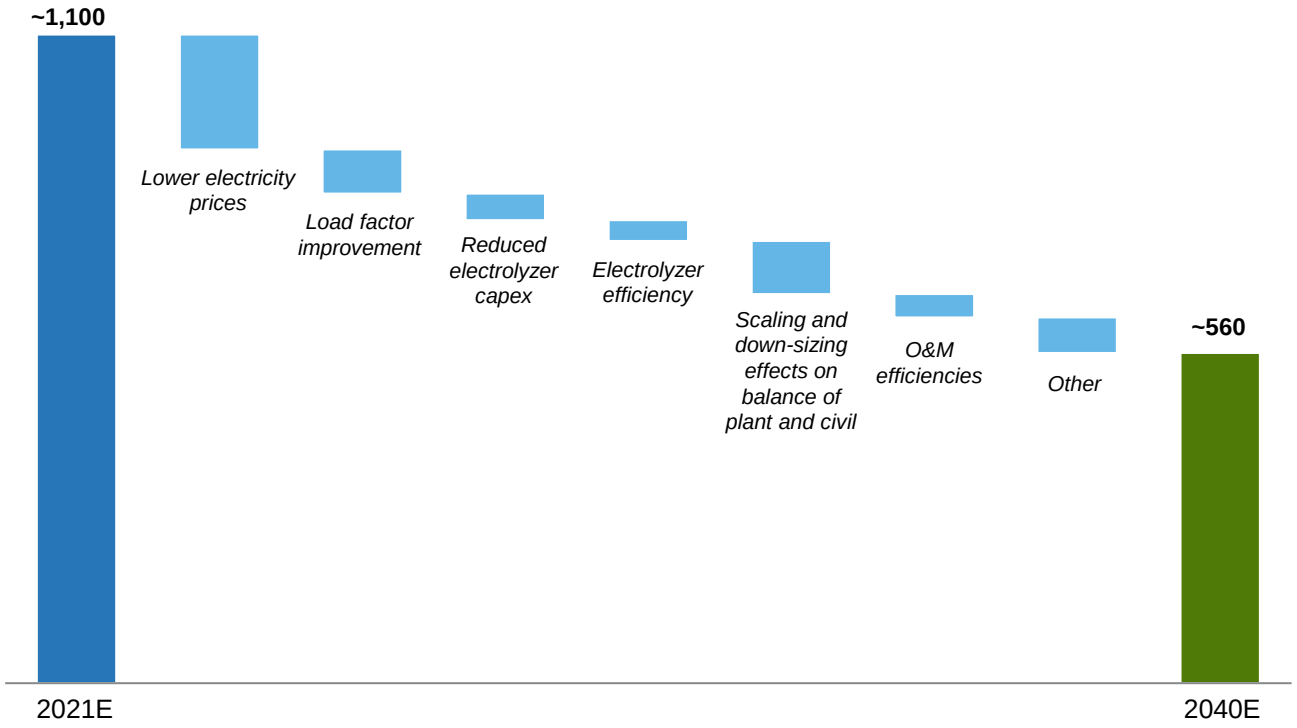
		Equipment placed in service before Feb-2018	Equipment placed in service on Feb-2018 or later
		USD/t of CO2 captured and sequestered	
Credit amount (per tonne of CO2)	**Geologically sequestered CO2**	USD 23.82 in 2020[1]	**USD 31.77 in 2020 → increasing to USD 50 by 2026[2]**
	Geologically sequestered CO2 with EOR	USD 11.91 in 2020[1]	USD 20.22 in 2020 → increasing to USD 35 by 2026[2]
	Other qualified use of CO2	None	USD 20.22 in 2020 → increasing to USD 35 by 2026[2]
Claim period		Until 75mT CO2 are captured and sequestered	12-year period once facility is placed in service
Qualifying facilities		Capture carbon after 10-Mar-2018	Begin construction before 1-Jan-2026
Annual capture requirement		Capture at least 500,000 tonnes	**Power plants**: Capture at least 500,000 tonnes **Facilities that emit no more than 500,000 tonnes per year**: Capture at least 25,000 tonnes **DAC[3] and other facilities not described above**: Capture at least 100,000 tonnes

Source: Congressional Research Service ("The Tax Credit for Carbon Sequestration (Section 45Q)", 2021)
1) Inflation-adjusted annually (as computed and published by the US Secretary of Commerce)
2) Then inflation-adjusted (as computed and published by the US Secretary of Commerce)
3) DAC = direct air capture

Cost of green ammonia expected to fall ~50% by 2040 from improvements across the value chain

Green ammonia production cost by 2040

Ammonia production cost (LCOA) USD/t



Key drivers

Electricity costs	▪ Power prices expected to fall ▪ Cost decline in line with overall LCOE for the most promising regions
Load factor	▪ Increased load factor for dedicated renewables plants allows downsizing of hydrogen capacity – in turn, providing significant capex savings
Electrolyzer capex	▪ ~70% expected to come from value chain efficiencies, remainder from tech improvements
Electrolyzer efficiency	▪ Higher electrolyzer efficiency reduces power need and allows downsizing of the incoming power supply infrastructure
Plant scaling effects	▪ ~40% cost reduction on balance of plant expected as stack sizes double ▪ Project management, engineering and owner cost expected to fall as industry matures

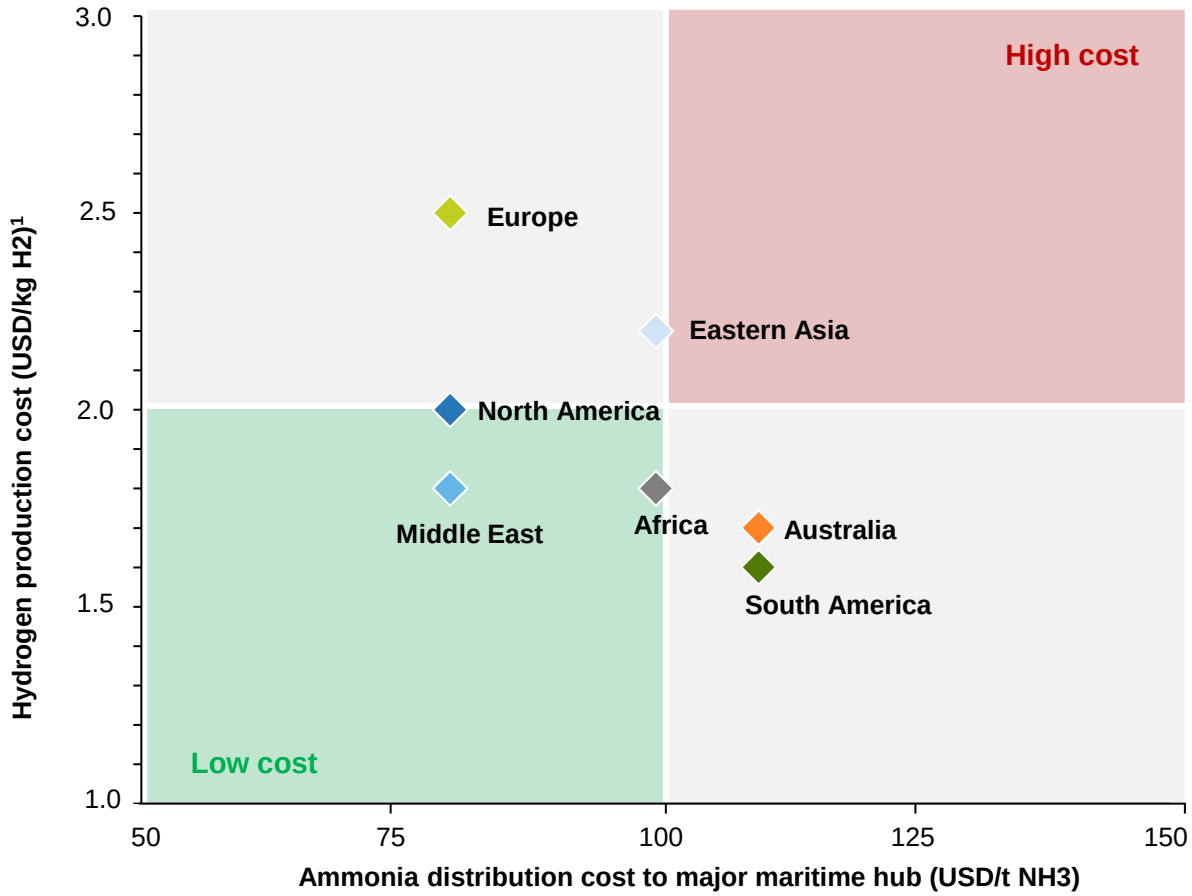
Source: Arkwright market study 2021

Regional competitiveness for green ammonia is shaped by renewables cost and distribution cost into end markets

Relative regional competitiveness

Middle East	Very favorable renewables cost and potential to build facilities with competitive distribution cost
North America	"Average" renewables cost, particularly in regions with optimal logistics for production
Africa	Varying cost of renewables and distribution; sites in North Africa combine low cost with competitive logistics
South America	Highly favorable renewables cost; requires elaborate logistics from production site to port and into markets
Australia	One of the lowest-cost renewables regions, but higher on the distribution cost curve and potentially capex
Eastern Asia	Parts of Asia with competitive renewables cost and other parts with competitive logistics, but few areas with both
Europe	High alternative cost of renewables implies that Europe will not be a key location for new low-cost ammonia production

Scoring on key cost drivers



Source: Arkwright market study 2021
Note: Price levels refer to 2040E
1) Using Arkwright assumptions on hydrogen production cost with analyst views on regional power cost

Summary of the market outlook

Demand: Demand expected to **increase significantly in the future**

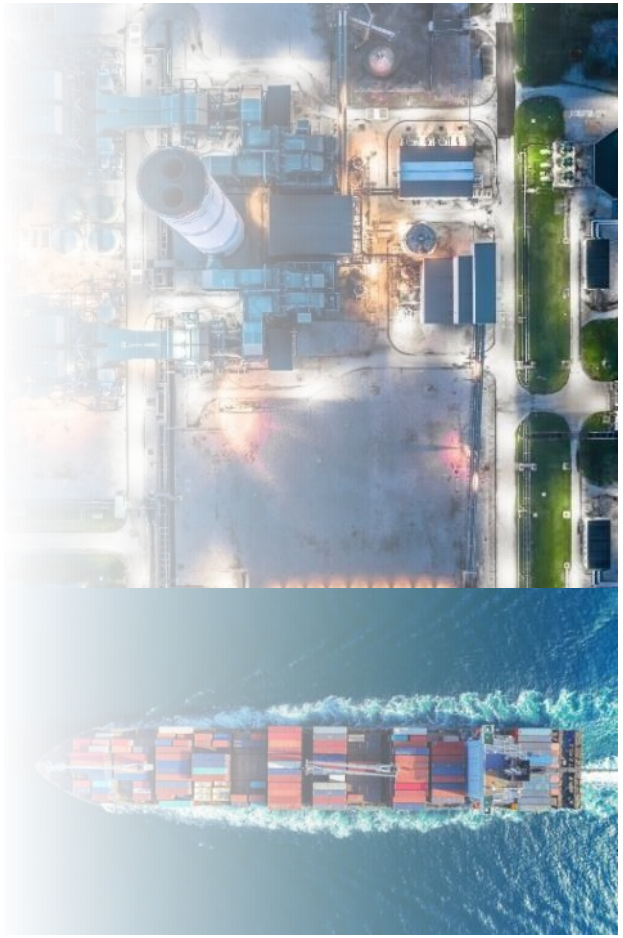
Driven by usage of clean ammonia in key industries: **shipping fuel, power generation, agriculture/industrial and hydrogen carrier**

These end-markets are expected to create **demand of USD 224bn[1], or 470mT, for ammonia in 2050**, of which **~50% is expected to be traded**

Supply: **Grey ammonia to remain key in supplying conventional markets** until blue or green is at cost parity with grey cost

Blue ammonia is scalable and will be cost competitive in the short-term with particularly attractive economics in the US – will be key to enable the decarbonization of shipping fuel and power generation

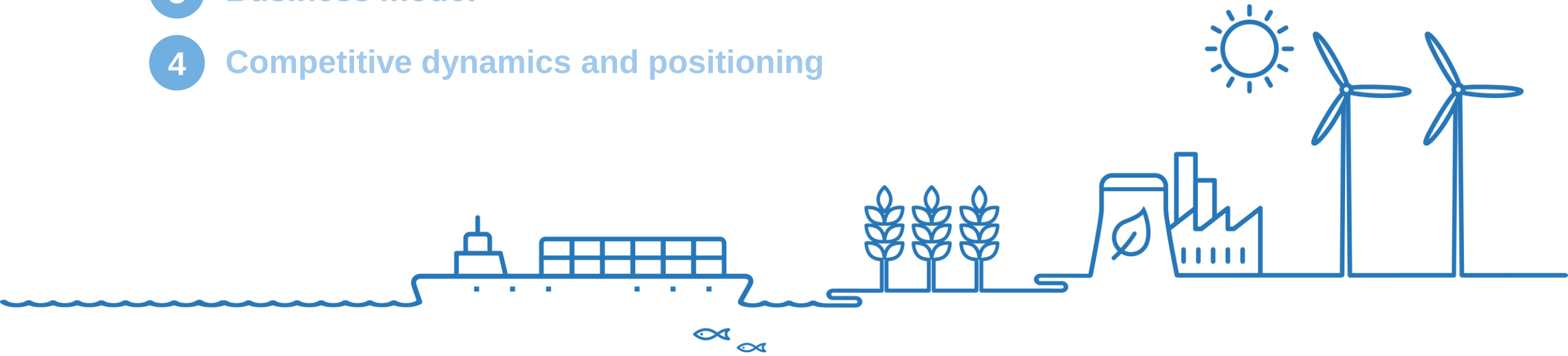
Blue expected to be low-carbon cost leader also in the medium-term, while **green ammonia will become cost competitive as the industry develops**



Source: Arkwright market study 2021
1) Market value in real 2021 terms, assuming an inflation rate of 2% starting 2021

Business overview

1. **Introduction to YCA**
2. Deep-dive on the current YCA platform
3. Business model
4. Competitive dynamics and positioning



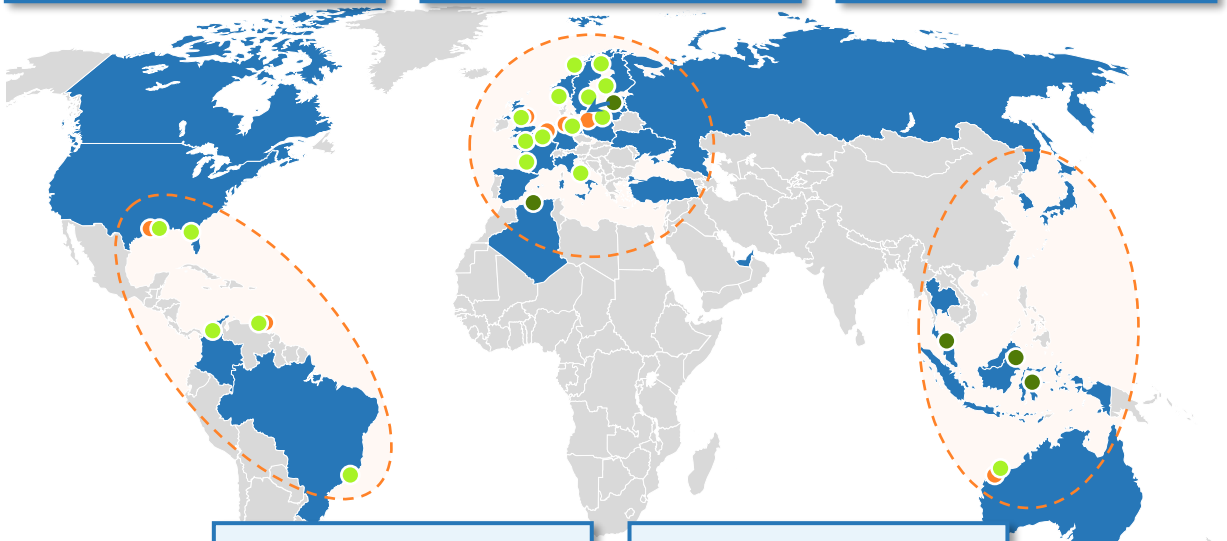
Snapshot of the current YCA platform

Footprint

4.1mT
Sales volume
Q1 2022 LTM

>20%
Market share of merchant/ traded ammonia in 2021[1]

USD 159m
EBITDA
LTM Q1 2022



#12
Owned and leased vessels

#18
Terminals in key locations[2]

YCA terminal access[1] · Third-party terminals · Yara export production sites · Countries present

Key highlights

- **Leading global ammonia footprint** with physical presence in almost **40 countries**, including key trading hubs
- **Infrastructure in place** with access to Yara's terminal and production network
- **Specialized fleet of 12 ships**
- **Integrated, asset-backed platform** covering the entire midstream ammonia value chain
- **Profitable business model** delivering robust margins
- **Experienced and competent organization** with a **long track record** in safe and efficient handling of ammonia

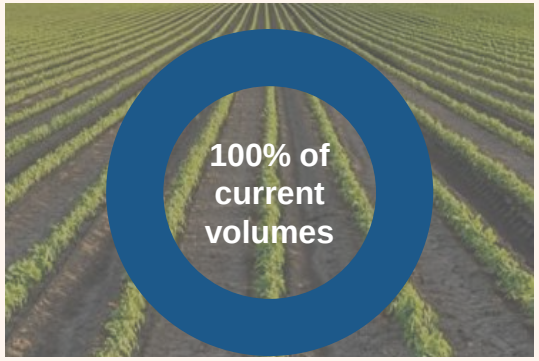
Attractive platform for profitable growth, leveraging YCA's leading scale and position

Source: Company information; Argus market study (2022)
1) Based on traded market volumes from Argus market study
2) YCA has exclusive access, and manages and optimizes use of Yara's ammonia tank infrastructure at terminals through sourcing and supply agreements with Yara

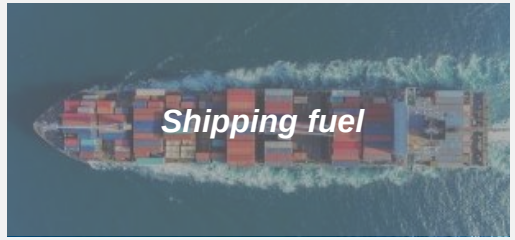
YCA combines a leading business with exceptional growth prospects and a value creating project portfolio

Ammonia Sales and Logistics (ASL)

Conventional applications (ASL 1)



New applications (ASL 2)



Infrastructure and network to deliver ammonia to new applications driven by increasing demand for clean energy sources

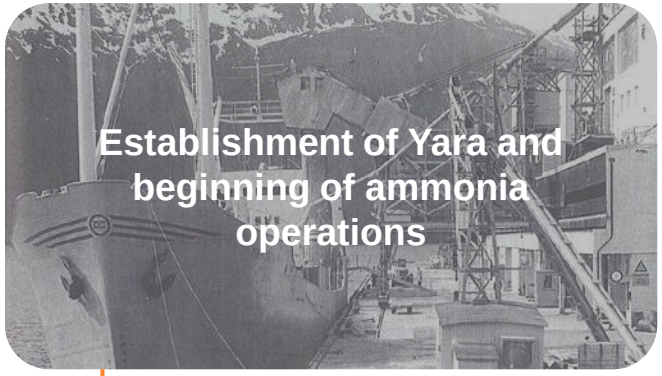
Clean Ammonia Projects and Production (CAPP)

Blue ammonia projects

Green ammonia projects

Source: Company information

YCA, as part of Yara, has a long history as a leading[1] player in the ammonia value chain



1905	Norsk Hydro founded by Sam Eyde and Kristian Birkeland, producing fertilizer based on hydropower and electric arc
1927-1928	Secured license for Haber-Bosch ammonia production process, supporting a quadrupling of capacity
1947	Started ammonia production at Glomfjord, marking the early beginning of ammonia logistics operations
1949	First ammonia transportation for Yara taking place in Norway

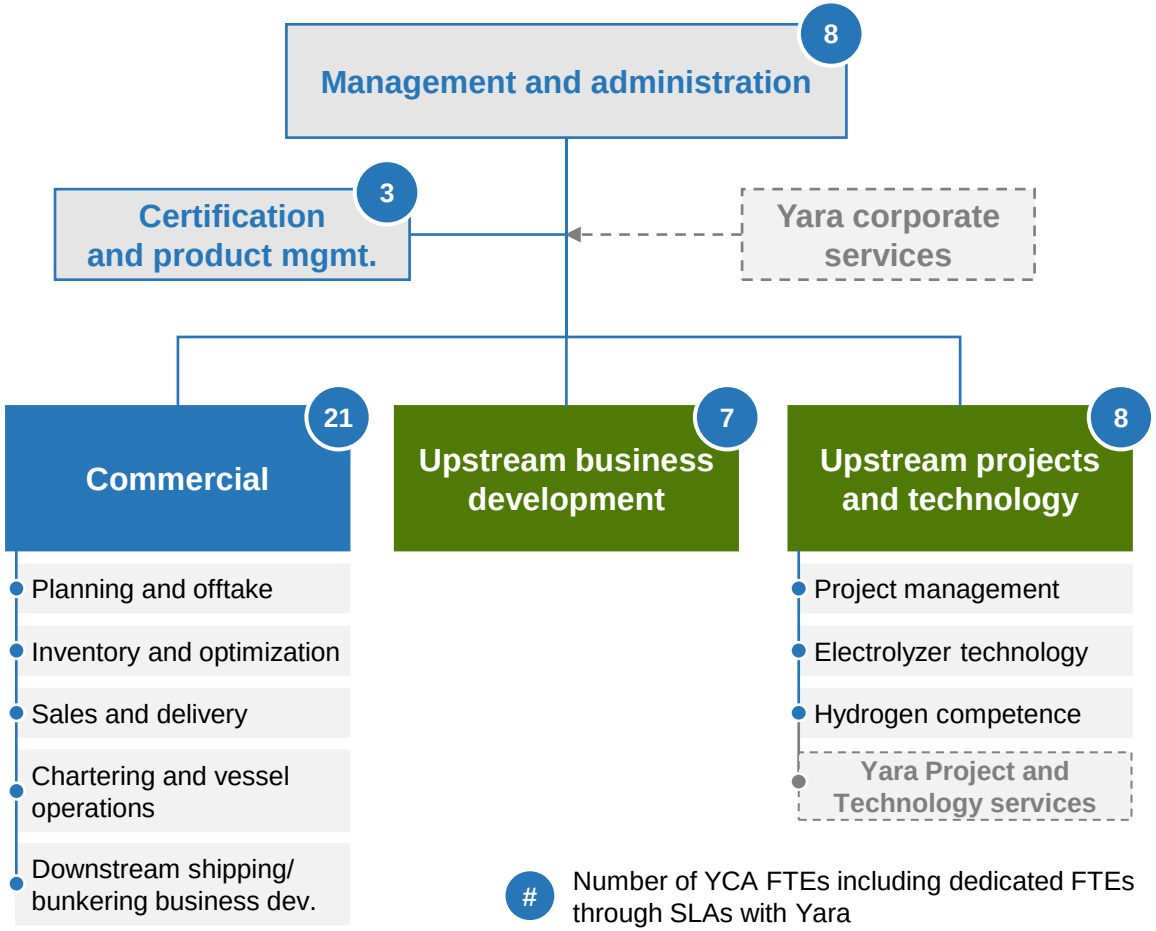
1979-1986	Accelerated growth of the ammonia business through European plant acquisitions
1980s-1990s	Started to offer midstream ammonia services to third-parties
1990➔	Expanded the ammonia business globally
2006	Established Swiss entity and Geneva headquarter for ammonia transportation
2006	Sold ammonia vessel fleet to BW Gas and entered into a partnership agreement
2015	Re-built the ammonia fleet

2017	Strategic decision to focus on and invest in clean ammonia
2021	Started electrification of ammonia production at Herøya
2021	YCA became a separate segment of Yara with an ownership model open to new minority investment
2022	YCA carved out of Yara – evaluating a potential IPO

Source: Company information
1) Based on volumes of traded ammonia in 2021 - Argus market study (2022)

Lean organizational setup rigged for growth and vertical expansion

Organizational setup

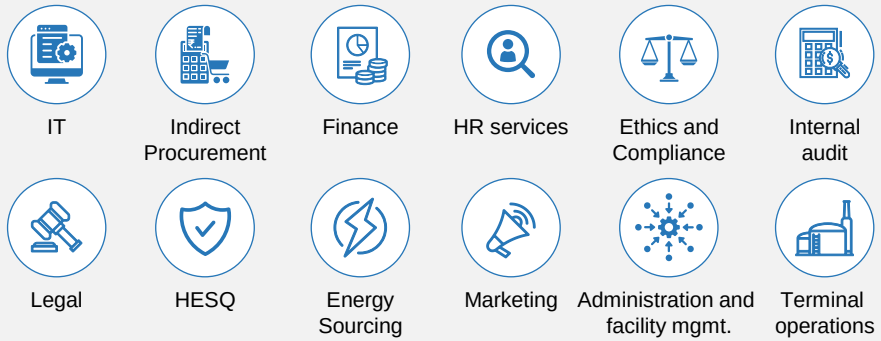


Number of YCA FTEs including dedicated FTEs through SLAs with Yara

Key highlights

- Highly competent organization with significant industry experience and employees with long tenure from Yara
- Employees are located across Europe, US, Singapore and Australia with the majority in Switzerland and Norway
- The commercial department organizes operations throughout the midstream value chain, and develops customer relations and bunkering solutions within the shipping and power segments
- The YCA workforce comprises 34 FTEs in YCA legal entities and 13 dedicated FTEs working for YCA trough SLAs with Yara
- In addition, YCA draws on significant resources from Yara through SLAs

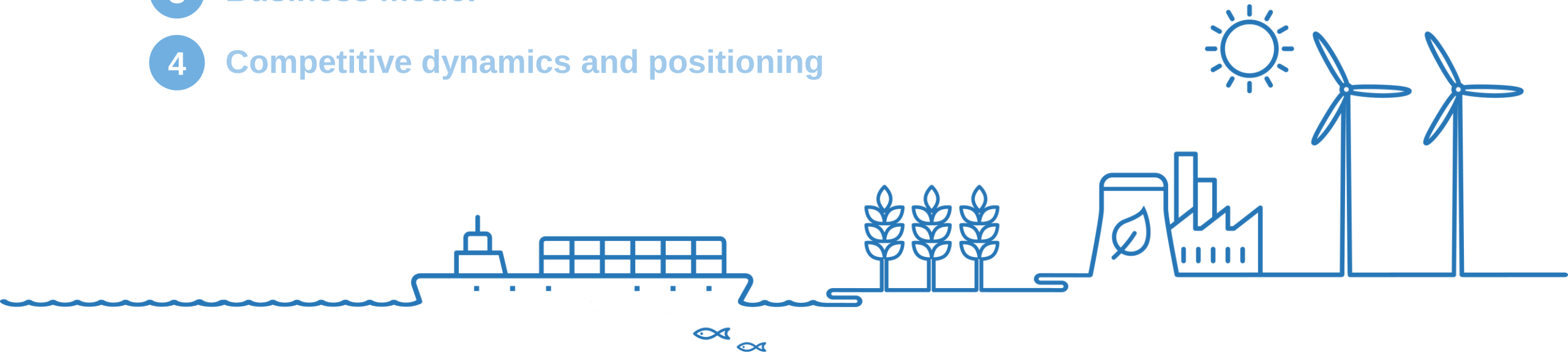
Key Yara corporate services

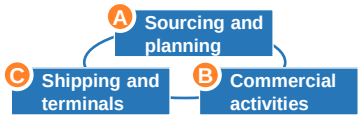


Source: Company information

Business overview

1. Introduction to YCA
2. **Deep-dive on the current YCA platform**
3. Business model
4. Competitive dynamics and positioning





YCA is fully integrated across the ammonia midstream segment

End-to-end operations across the midstream value chain

A Sourcing and planning

- **Asset-backed with multiple sourcing points globally** (Yara and third-parties)
- **Diversification** provides high security of supply
- **In-house planning system**

C Shipping and terminals

- **YCA operates a fleet of 12 vessels** (of which 5 are owned by YCA)
- Access to **18 terminals providing global reach**[1]
- Scale enables **above 90% vessel utilization**

B Commercial activities

- **Sales of ~4mT ammonia to Yara and third-parties globally**[2]
- **Mission-critical supplier** with long-term relationships with key customers
- **Predictable contract dynamics based on reference prices**, lowering risk

Selected scale benefits for YCA

Diversification

Lower risk achieved through multiple sourcing points and consumers

Planning and optimization

Ability to magnify returns by **leveraging YCA's leading infrastructure** and **optimizing trade routes/fleet utilization**

Synergies and network effects

Unmatched insight from being a **leading partner to both suppliers and consumers** – allowing YCA to **optimize positions and harness scale benefits**

Source: Company information

1) YCA has exclusive access, and manages and optimizes use of Yara's ammonia tank infrastructure at terminals through sourcing and supply agreements with Yara
2) Based on sales volume from 2012 to 2021

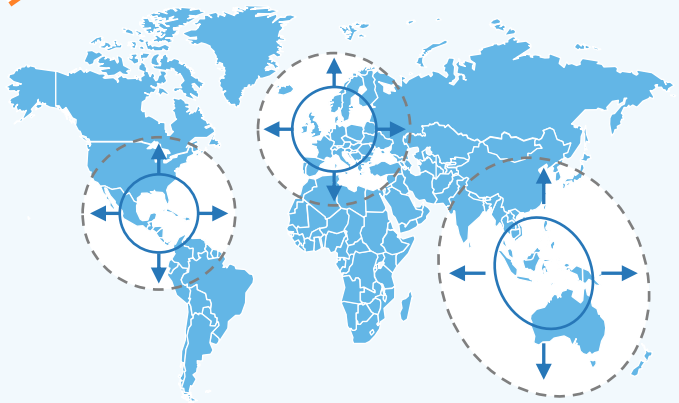
Dynamic planning approach ensures efficient operations and high level of flexibility

Business logic

- Yara's **asset-backed production footprint and consumption footprint create concentric "circles" of business** in Western Europe, Americas and Asia
- Adding contracts in regions with current presence to **leverage scale and optimize logistics**
- Adding customers when **new supply capacities become available**
- **Adjusting long vs. short position** (i.e. contract position) depending on YCA's market expectations

Yearly

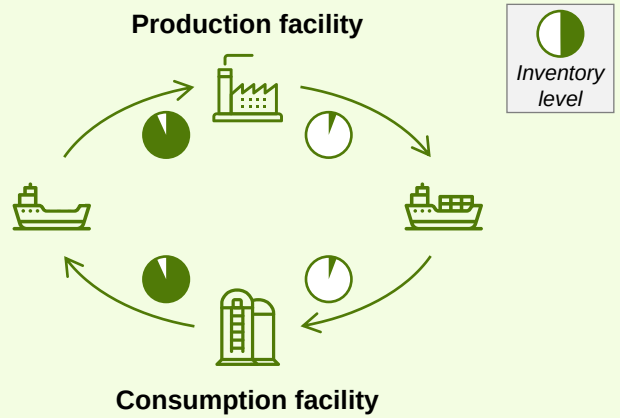
Long-term planning



- Planning of Yara and third-party **longer-term supply and sales** contracts
- **Forecasting of supply and demand** for the next year
- **Tilt long or short** based on market expectations
- Evaluate which **new supply and sales contracts** YCA should target

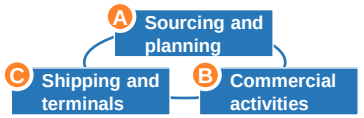
Weekly

Operational planning



- Based on **regular communication, stock level and 6-8 week production and consumption** plan from each plant
- **Optimization to minimize milage and costs** while preserving flexibility
- **Rolling plan in YCA's planning tool**, including schedules for vessels and pick-up from and delivery to terminals

Source: Company information



Attractive value proposition to both suppliers and consumers

Suppliers (upstream)

- YCA can provide selected suppliers with **highly predictable and lower risk offtake commitments**
- YCA's **large, integrated and global** network supports **improved economics for suppliers**

Consumers (downstream)

- YCA is **asset-backed with multiple sourcing points**, providing security of supply to consumers
- The strength of the **sourcing setup** enables YCA to offer **long-term contracts** and **visibility** for consumers

- YCA has a **flexible fleet** with regards to port connectivity and capacity, and a strong **track record of safe handling of ammonia**

YCA is a trusted partner providing critical services to both suppliers and consumers

Source: Company information

YCA acts as preferred offtake partner for Yara and third-party producers

Yara ammonia production

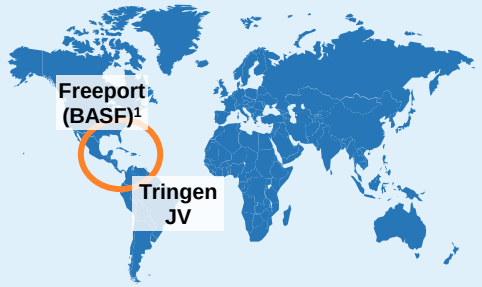
Typical locations

- **Yara-owned export volumes** sourced by YCA
- Volumes driven by **difference in plants' production and on-site consumption** of ammonia
- Largely **predictable volumes** (under normal conditions)
- **Arm's length evergreen agreements**[2]

~2.0mT *2021 volumes*

Yara JV partner production

Typical locations



- Volume **sourced from Yara JVs**
- Operates **similar to own plants** with largely established volume patterns from internal production planning
- **Long-term arm's length agreements**

~0.9mT *2021 volumes*

External ammonia production

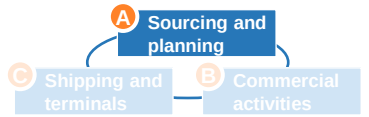
Typical locations

- Typically sourced from **other large fertilizer producers** with excess ammonia
- Historically, these volumes have been **largely sourced under term**, rather than spot contracts
- More **diversified third-party sourcing** in 2022 (i.e. to replace volumes impacted by sanctions)

~1.2mT *2021 volumes*

Asset-backed sourcing through Yara/JVs provides important scale and security of supply

Source: Company information
1) Freeport volumes are allocated based on equity ownership (68% Yara, 32% BASF). Accordingly, Yara's equity production has been classified as part of Yara's ammonia production while volumes sold on behalf of BASF (surplus) have been classified as Yara JV partner production
2) Evergreen contract with termination of the agreement being subject to mutual agreement



Majority of volumes sourced under term contracts, with selective use of spot market for short-term balancing

~90% of total volumes (2021)

Term contracts

- Merchant market for ammonia is **largely based on term contracts**
- Benefits from strong relationships, providing **high supply visibility and predictability** (under normal conditions)
- **Regular negotiation of terms** and prices based on market quotations
- **Limited price exposure** as YCA matches supply with demand

~10% of total volumes (2021)

Spot purchases

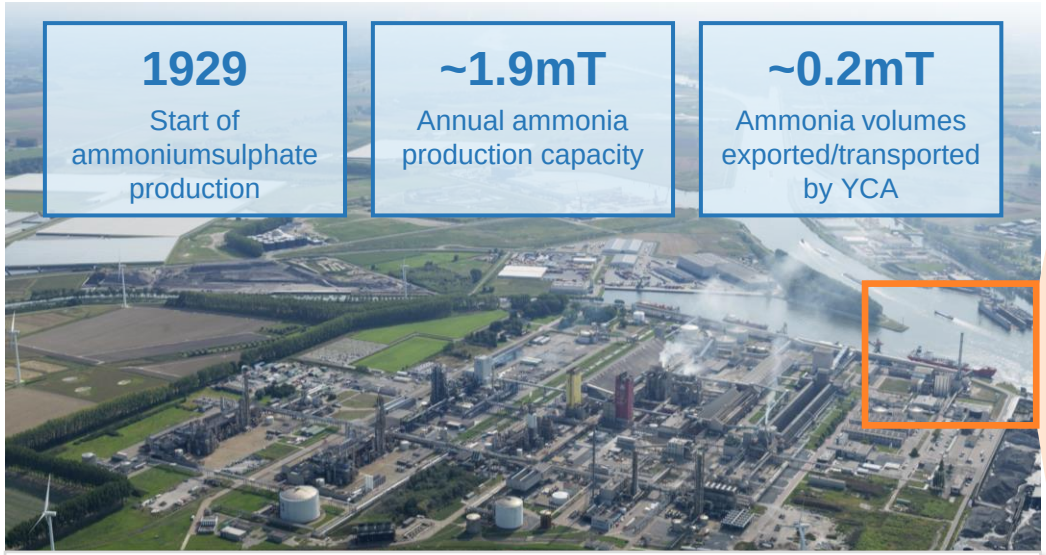
- The spot market is primarily used to **balance short-term fluctuations in volumes**
- Serving spot enquires forms part of YCA's **market presence**
- **Limited exposure to ammonia price fluctuations** as most spot positions are closed relatively quickly
- Spot purchases are **part of YCA's planning and optimization decisions** and **provides flexibility to further optimize trade flows**
- **Can take opportunistic spot cargos to lock-in short-term profit opportunities**, but the extent is limited and based on known sourcing or delivery need
- Recent **sanctions has tilted YCA more towards spot** (in 2022)

Generally, limited price risk as sourcing and sales contracts are based on indexed market references

Source: Company information

Sourcing example (1/2): YCA handles ~200kT ammonia per year from Sluiskil

Sluiskil: Yara plant with 1.9mT Ammonia capacity



- **Sluiskil is Yara's largest ammonia plant**, strategically located in the Netherlands
  - Most of the volumes produced are used as input to other nitrogen/fertilizer products – however, **Sluiskil also exports ~10% of its production**
  - **Exported volumes** are often transported to other Yara plants in Europe with deficit of ammonia, i.e. **balancing Yara's network**
  - Sluiskil's location offers **deep-sea connection**
- **YCA is responsible for efficient transportation and inventory management**

Overview of Sluiskil's vessel loading/terminal setup

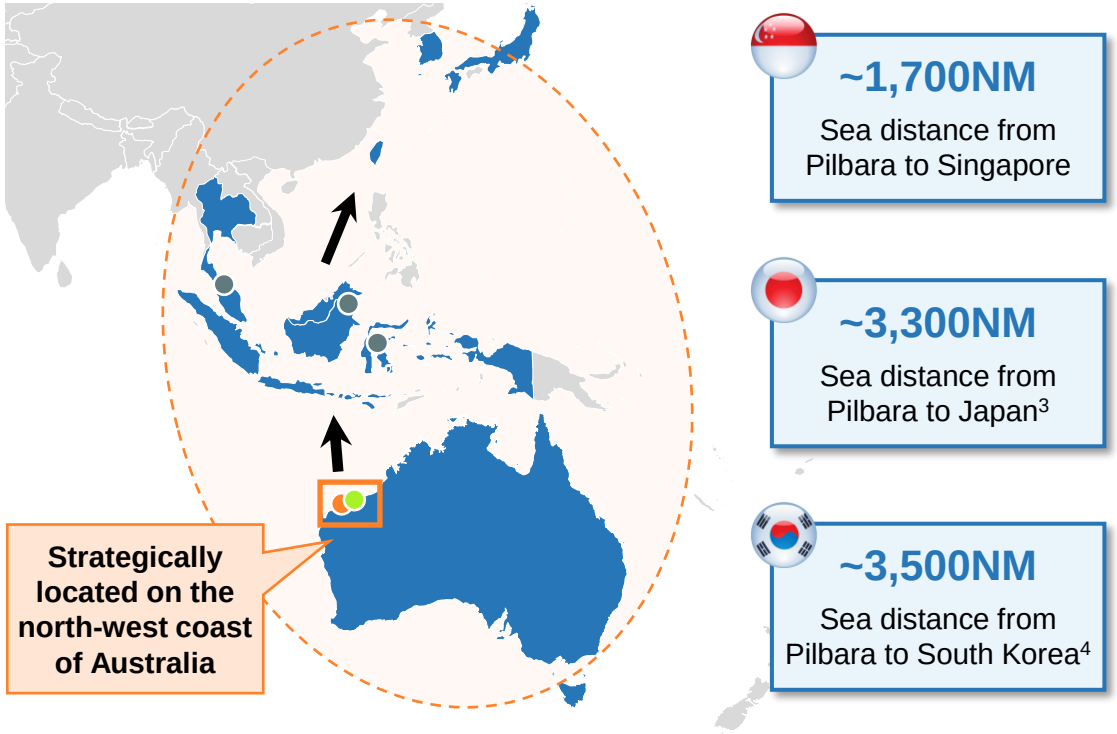
Terminal setup for ammonia loading to vessels

Vessels at the quay for loading

Source: Company information

Sourcing example (2/2): YCA serves the Asian market with ~600kT export from Pilbara[1]

Strategically located, covering the Asian market



~1,700NM
Sea distance from Pilbara to Singapore

~3,300NM
Sea distance from Pilbara to Japan[3]

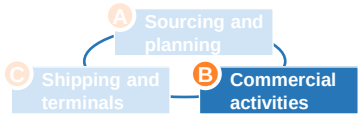
~3,500NM
Sea distance from Pilbara to South Korea[4]

Key highlights

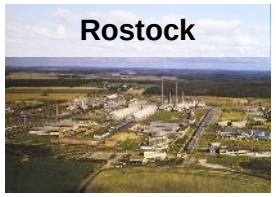
- Broad coverage of the Asian market through Pilbara and limited third-party sourcing
- YCA mainly sells to external consumers in Asia on term contracts
- Annual ammonia export capacity of ~600kT at Pilbara

Yara Pilbara plant

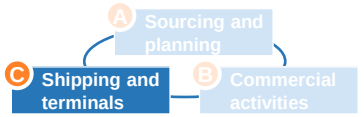
Source: Company information; Sea-distances.org
1) Based on historical volumes
2) YCA has exclusive access, and manages and optimizes use of Yara's ammonia tank infrastructure at terminals through sourcing and supply agreements with Yara
3) Kagoshima port
4) Busan port



YCA is a reliable supplier of ammonia to Yara and third-party consumers

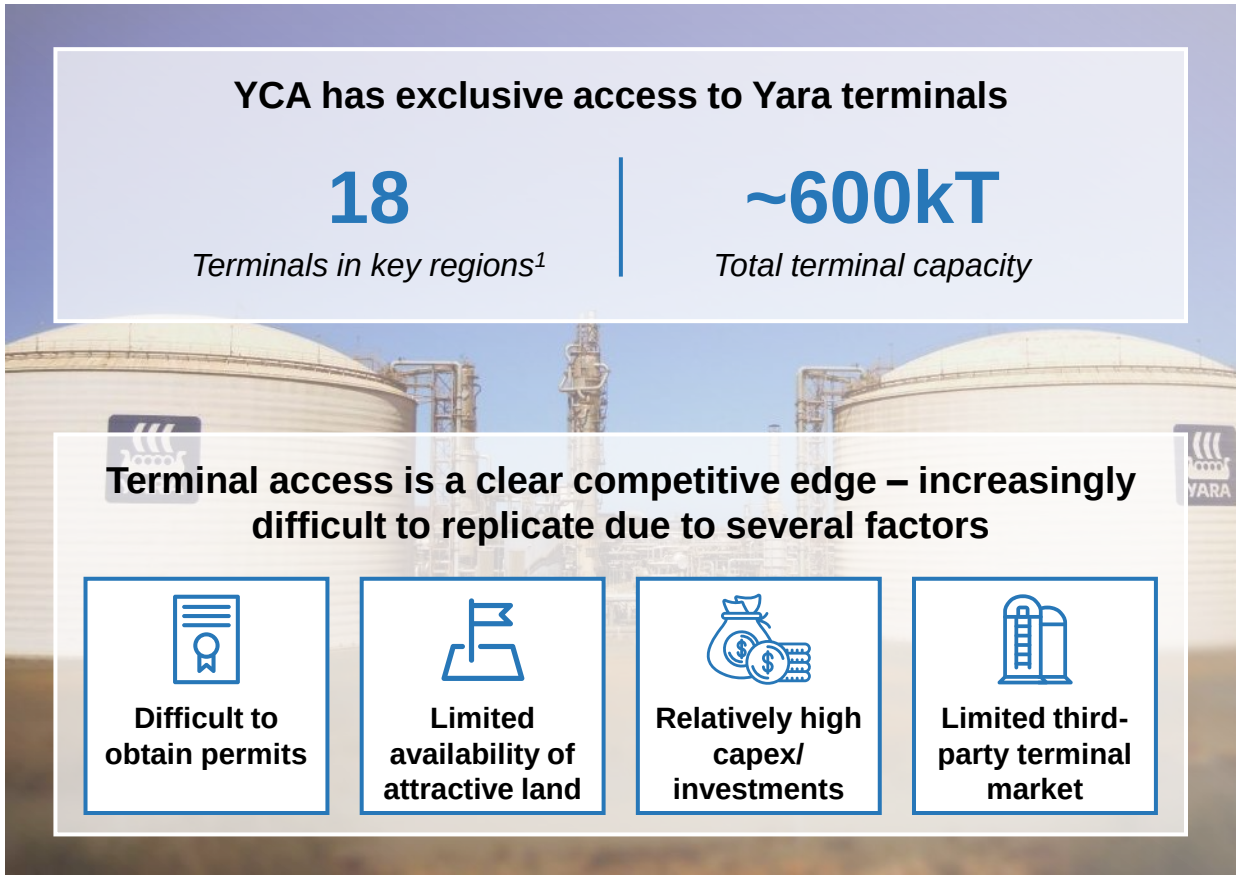
	Sales to Yara	Sales to third-party consumers
Type of consumers	 Porsgrunn  Rostock **~10** Yara plants served by YCA	 Fertilizer companies  Industrial companies
Contract portfolio	▪ **~40% of volumes are shipped directly from other Yara plants**, ~60% covered from third-parties[1] ▪ Relatively **predictable volume development** driven by internal production/consumption balance	▪ **Long-tenured consumer relationships** with sticky and predictable trading patters ▪ **Relatively concentrated consumer base** ▪ **Currently 19 contracts in force**
Typical contract terms	▪ **Pricing model:** YCA sells on arm's length terms with price based on public market references ▪ **Contract duration:** Evergreen contract with Yara[2]	▪ **Pricing model:** YCA negotiates prices based on relevant public market references ▪ **Contract duration:** Typical contract duration varies between 1 and 2 years
	~2.1mT *ammonia delivered in 2021*	**~2.0mT** *ammonia delivered in 2021*

Source: Company information
1) Including Yara JV partner production
2) Evergreen contract with termination of the agreement being subject to mutual agreement



YCA has access to Yara owned terminals in key regions

YCA has access to Yara terminals in key regions



YCA handles inventory management for Yara

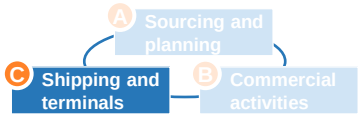
Evergreen agreement[2] with Yara governing all relevant Yara plants and storage facilities

YCA receives weekly updates on inventory levels at the plants and uses this in planning

YCA is responsible for managing the ammonia tanks and holding inventories between predetermined levels, based on the plants' production and consumption schedules

YCA calculates the need for refill and uses this in delivery planning – inventory turnover is ~1 month[3]

Source: Company information
1) YCA has exclusive access, and manages and optimizes use of Yara's ammonia tank infrastructure at terminals through sourcing and supply agreements with Yara
2) Evergreen contract with termination of the agreement being subject to mutual agreement
3) Assuming average inventory of 0.1mT linked to European average sales of 2mT p.a.



YCA has a fleet of 12 owned and leased vessels to support its midstream operations

Overview of YCA's fleet of owned and leased vessels

Owned vessels

Medium gas carriers

2	2016	76k
Owned	Built	Total cbm

Handysize carriers

3	2016	62k
Owned	Built	Total cbm

Chartered vessels[1]

6 (+1)	10 years	146k	1.5 years
6 vessels + 1 barge	Average age[2]	Total cbm[2]	Average remaining duration[2,3]

Key highlights

12 dedicated vessels with >90% utilization, ensuring **efficient operations in a specialized shipping segment** with most capacity tied up on term contracts

Flexible fleet strategy with direct ownership and leasing when financially favorable

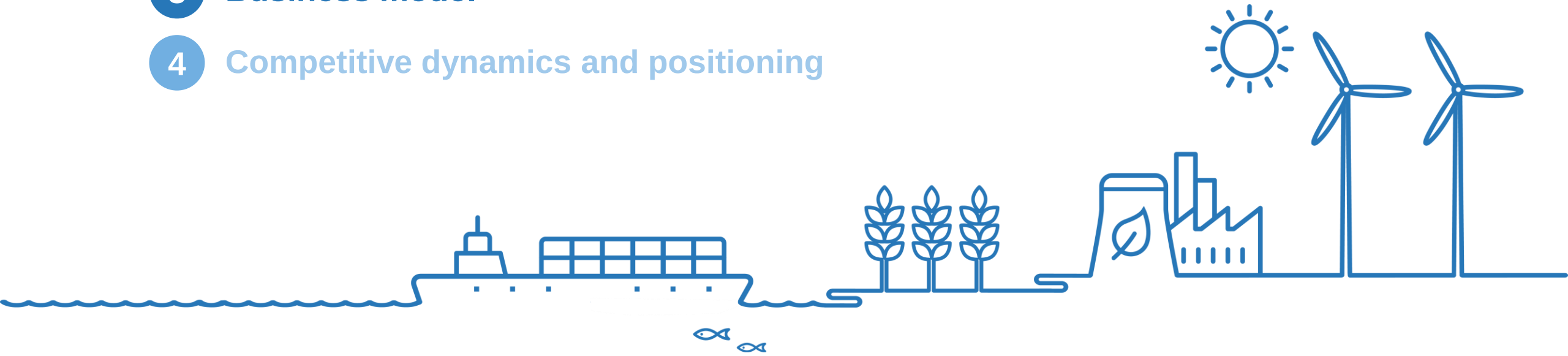
Access to LPG vessels (in the market), which can be converted to ammonia carriers

YCA continuously evaluates its fleet composition and invests in vessels when it creates value

Source: Company information
1) Including Gaz Serenity, which will be replaced. YCA has entered into a charter agreement for a new vessel per 16 June to replace Gaz Serenity. Details will be provided later
2) Excluding 1 barge
3) Excluding Gaz Serenity

Business overview

1. Introduction to YCA
2. Deep-dive on the current YCA platform
3. **Business model**
4. Competitive dynamics and positioning



Attractive and integrated midstream business model driven by volume and margin

Volume × **Margin**

Predictable volumes and trading patterns under normal conditions

Robust margin on midstream volumes

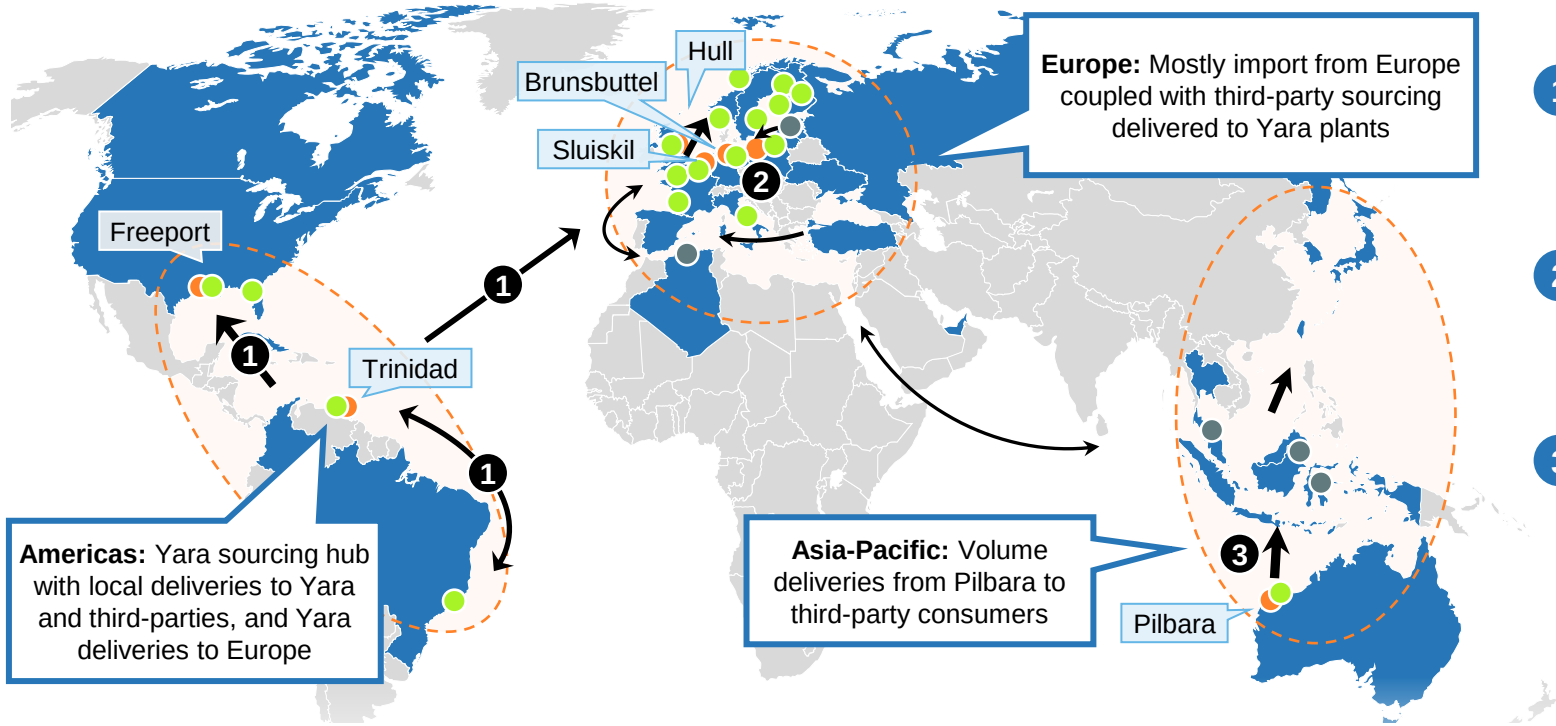
- Commercial services
- Ship-owning operations
- Global ammonia optimization

EBITDA

Source: Company information

Predictable global trade flows, with strong YCA presence in key regions

Overview of the YCA's global network and trade flows



Key trade routes

1. **Trinidad to US gulf coast and Europe and Brazil**
2. **Between a number of sourcing and delivery points in Europe**
3. **Pilbara, Australia to east and southeast Asia**

Thickness of arrows indicate volume per trade route

● YCA terminal access[1] ● Yara export production sites ● Third-party terminals ■ Countries present □ Key export plants

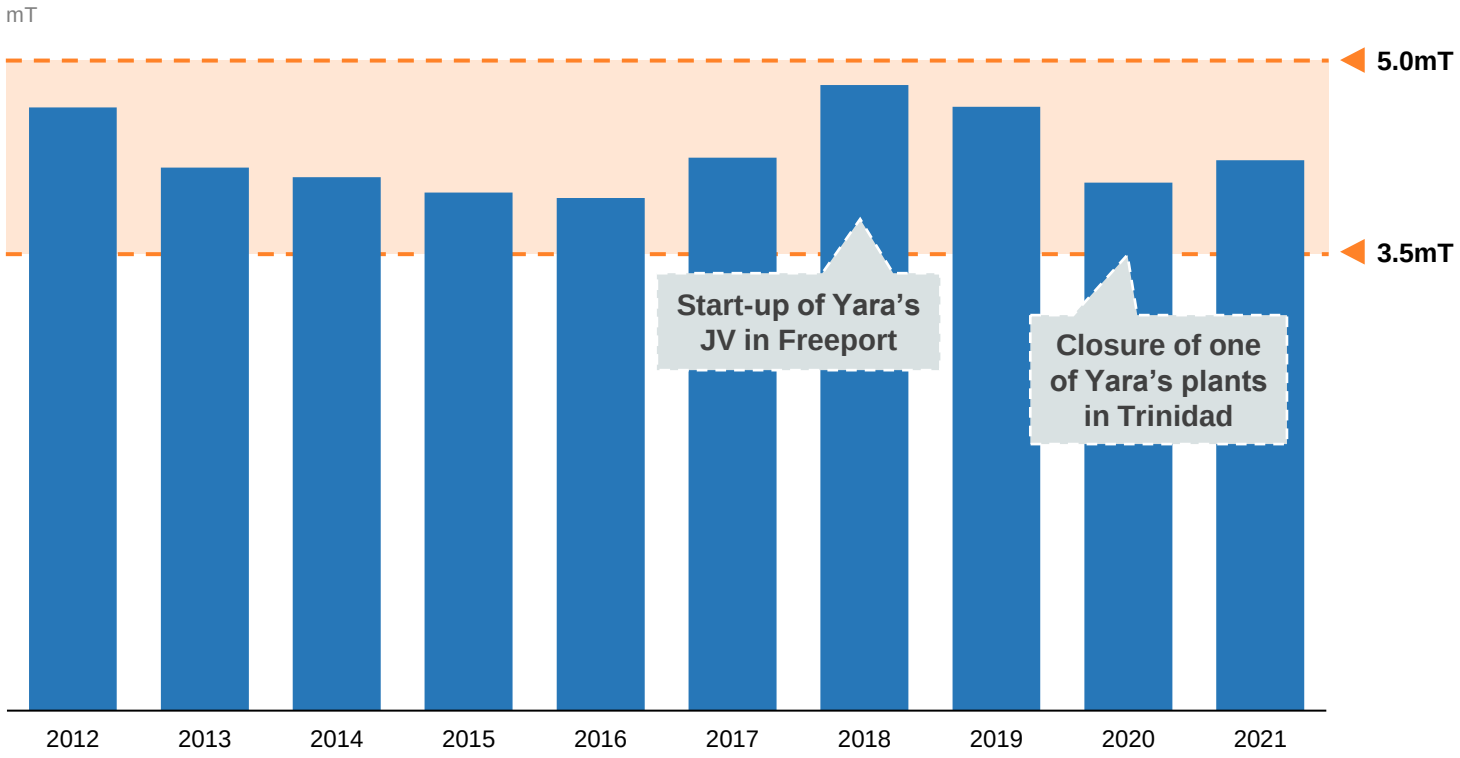
Global midstream operations to balance/optimize Yara's production system and serve third-party producers/consumers

Source: Company information

1) YCA has exclusive access, and manages and optimizes use of Yara's ammonia tank infrastructure at terminals through sourcing and supply agreements with Yara

Relatively stable underlying volume development underpinned by contracts

YCA sales volume development



Typical drivers of volume fluctuations[1]

1. Structural changes in connection with closure of plants
2. Construction of new plants
3. Reliability issues at ammonia plants
4. Consumption level of finished fertilizer plants

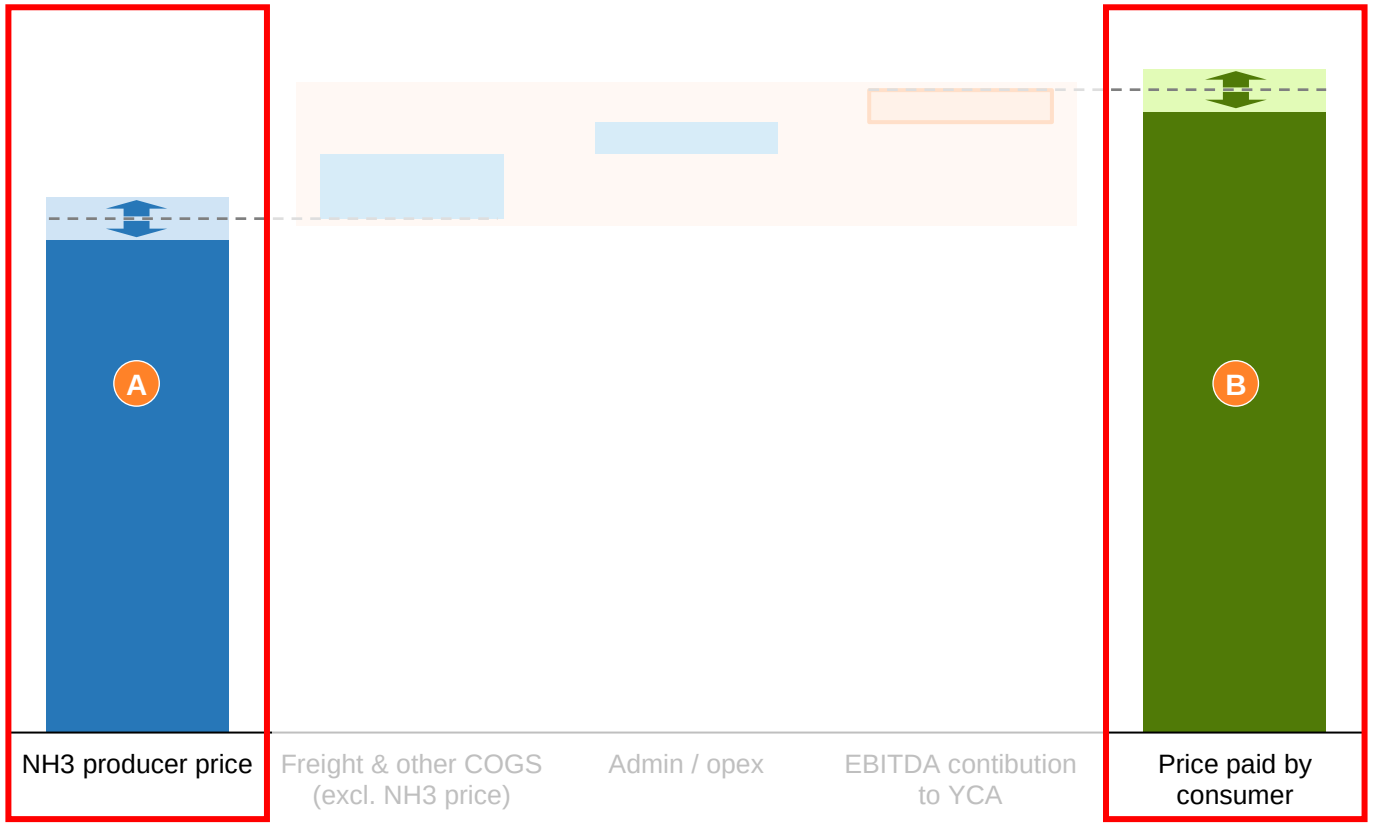
Larger fluctuations typically driven by specific events (and not generally tied to cyclical economic developments)

Source: Company information
1) Drivers based on historical volume fluctuations/patterns

Well-established pricing mechanisms at both ends (i.e. sourcing and sales)

Illustrative margin build-up

ILLUSTRATIVE



A Producer price

YCA generally sources from producers with negotiated prices linked to ammonia market reference prices

B Consumer price

YCA generally sells to consumers (both Yara and third-parties) at delivered terms (e.g. CFR, DAT), reflecting the market value of delivered ammonia including YCA's value proposition

Gross margin

On volumes sourced from Yara and JVs, YCA generally earns a percentage-based remuneration linked to producer price[1]

On externally sourced volumes, YCA generally earns a margin equivalent to the difference in consumer and producer prices, less costs

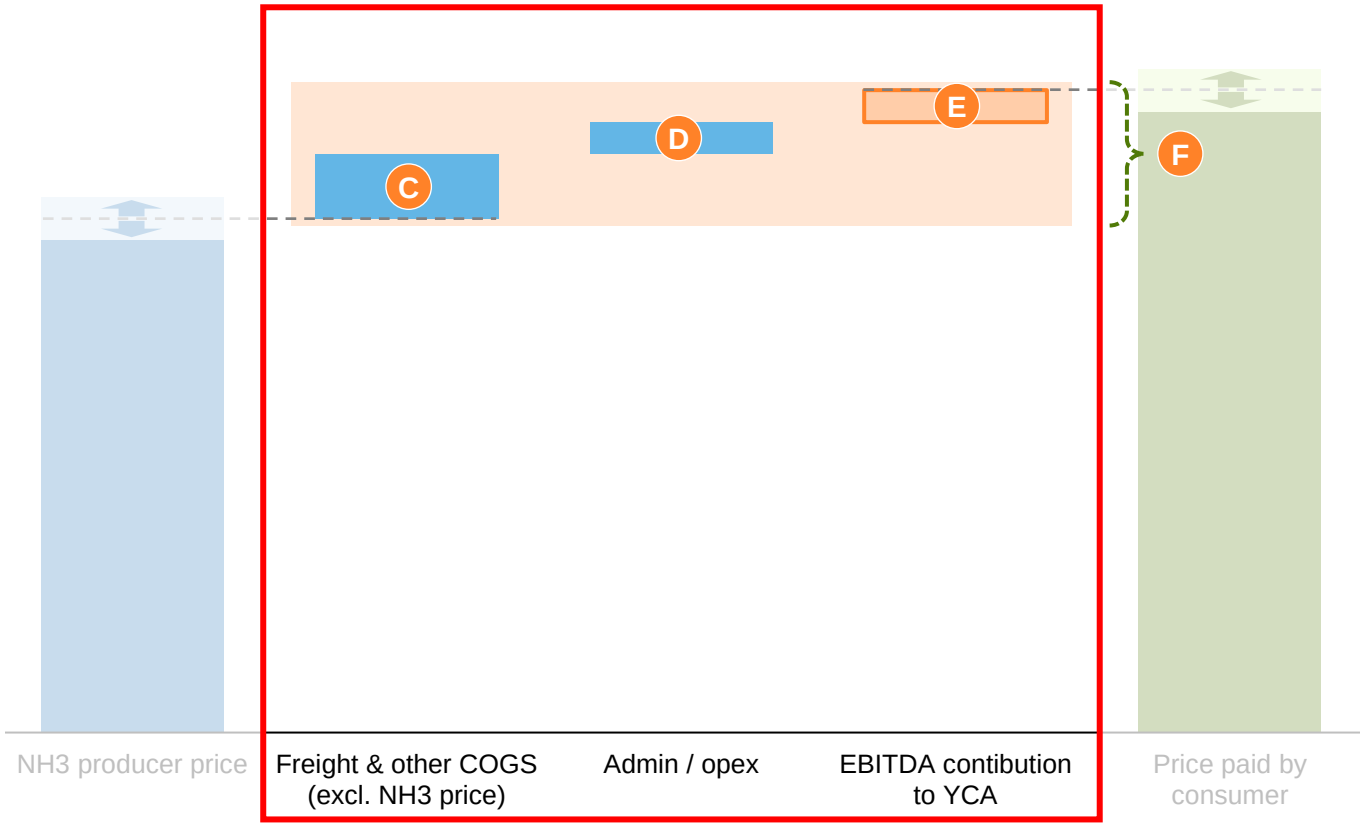
Source: Company information

1) For some volumes, YCA has a timing/lag exposure through inventory positions

Scale effects and optimization support robust margins for YCA

Illustrative margin build-up

ILLUSTRATIVE



C Direct costs related to freight, such as charter rates and fuel in addition to other COGS incurred in operations

Limited through YCA's high level of operational efficiency

D Admin costs with clear benefits from economies of scale, such as management, route optimization and handling of risk and guarantees

E YCA on average earns a margin of >30 USD/tonne, driven by i) superior scale and position, ii) ship-owning and logistics, iii) optimization and iv) value proposition in the market

F On volumes sourced from Yara and JVs, YCA is generally exposed to some commodity price sensitivity given percentage-based remuneration[1]

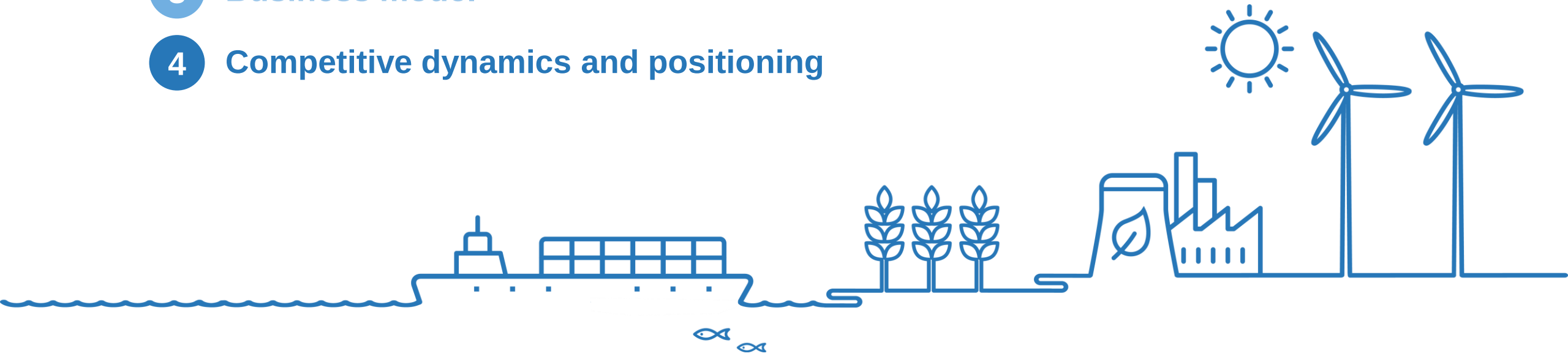
On externally sourced volumes, YCA is generally exposed to commodity price movements between the typically limited time between sourcing and sale

Source: Company information

1) For some volumes, YCA has a timing/lag exposure through inventory positions

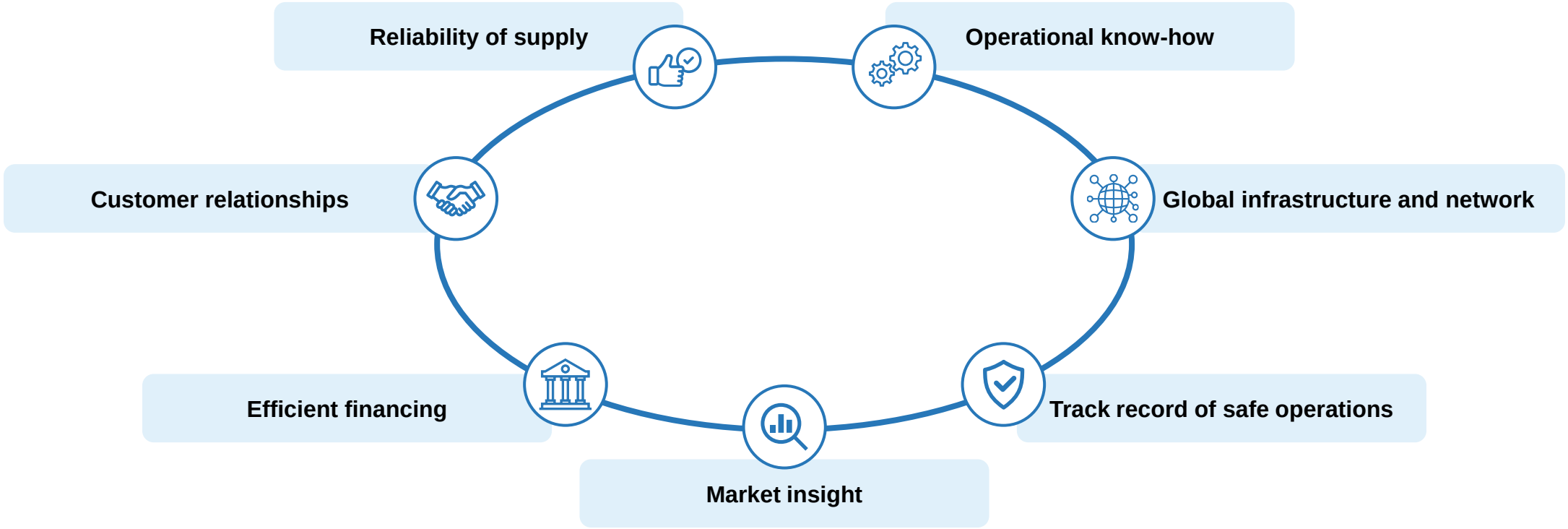
Business overview

1. Introduction to YCA
2. Deep-dive on the current YCA platform
3. Business model
4. **Competitive dynamics and positioning**



A clear set of capabilities is required to succeed across the midstream ammonia value chain

Key success criteria



Clear advantages of having a large and integrated platform, both today and in the future

Source: Company information

YCA has a leading[1] integrated midstream ammonia platform…

Project execution and production[2]	Sourcing, optimization and shipping	Global distribution, storage and sales	Ammonia fuel bunkering[3]	Customers (existing MoUs)
Integrated part of Yara as a major ammonia offtaker	Specialized skills and in-house systems as nucleus of operations	Global and scalable platform with 18 terminals[4]	Production close to most major bunkering hubs	Strong and long-standing customer relationships
Reliable, asset-backed supply complemented by third-party sourcing	12 specialized carriers that handle >20% of globally traded volumes[1]	Industry leading track-record of safe handling	Agreement with Azane for first Scandinavian bunker network	Attractive partner given leading market position[1]

Source: Company information
1) Based on volumes of traded ammonia in 2021 - Argus market study (2022)
2) Production is currently covered by Yara
3) Ammonia fuel bunkering does currently not exist, YCA and other players are working on various solutions
4) YCA has exclusive access, and manages and optimizes use of Yara's ammonia tank infrastructure at terminals through sourcing and supply agreements with Yara

…with a differentiated approach and a clear #1 position

Company[1]	Est. traded volumes (mT)	Number of terminals	Number of vessels (owned + leased)	Asset-backed supply	Global platform[3]
YCA	>4	18[2]	12	✓	✓
Trammo	2-2.5	0	9	✗	(✓)
CF	1-2	6	0	✓	✗
KOCH	1-2	4	4	✓	(✓)
MA'ADEN	1-2	1	7	✓	✗
Nutrien	1-2	4	4	✓	✗
OCI Fertiglobe	1-2	4	4	✓	✗
ТОЛЬЯТТИАЗОТ	1-2	1	4	✓	✗
MITSUBISHI CHEMICAL	<1	1	1	✗	✗
QAFCO / Muntajat	<1	1	2	✓	✗

Source: Argus market study (2022)
1) Selected merchant ammonia players
2) YCA has exclusive access, and manages and optimizes use of Yara's ammonia tank infrastructure at terminals through sourcing and supply agreements with Yara. Number of terminals not including one terminal in Colombia, in which Yara has a ~30% stake. Source: company information
3) Represents globally diversified platform on both export and import

Summary of the current YCA platform

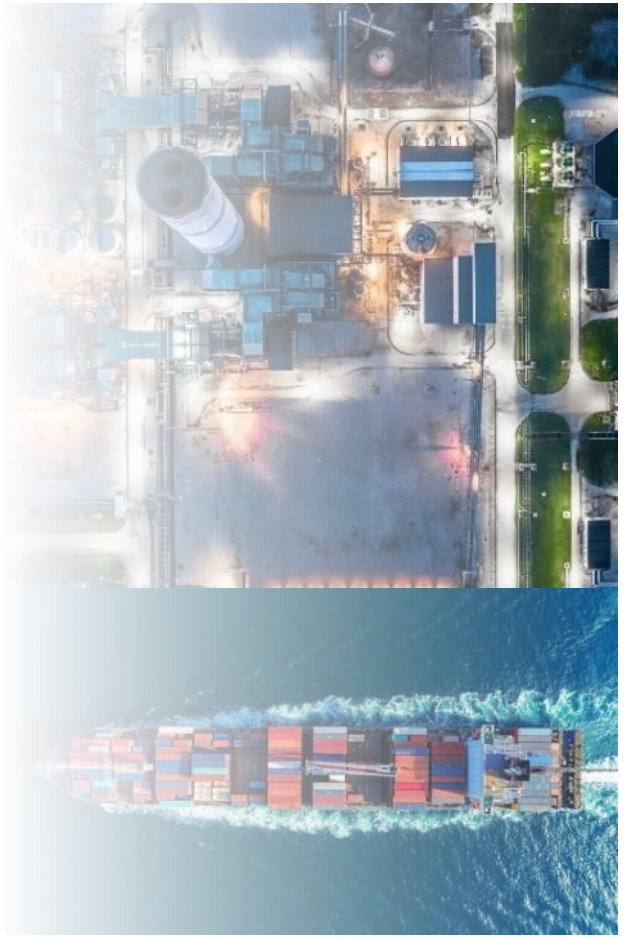
Market position: The #1 midstream player with >20% market share[1], global footprint and integrated platform

Infrastructure: Global network of 12 vessels and 18 strategically located terminals[2], with deep-sea connection to key hubs

Value proposition: A trusted partner to both producers and consumers, supported by diversified asset-backed supply and credibility as offtaker

Business model: Attractive business model with relatively stable volumes and robust margins underpinned by YCA's competitive edges

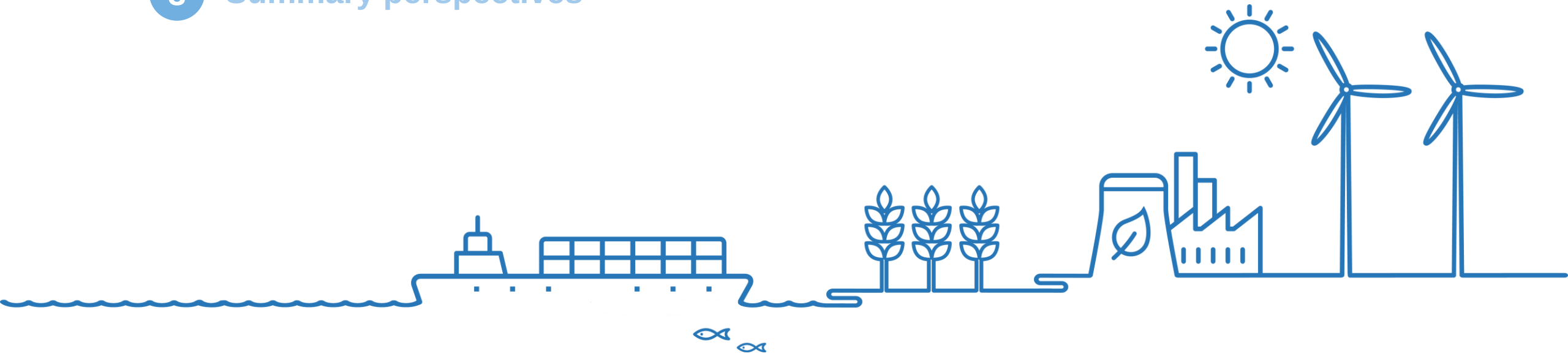
Positioning: Key success factors required to succeed in the integrated midstream position support natural barriers to challenge YCA



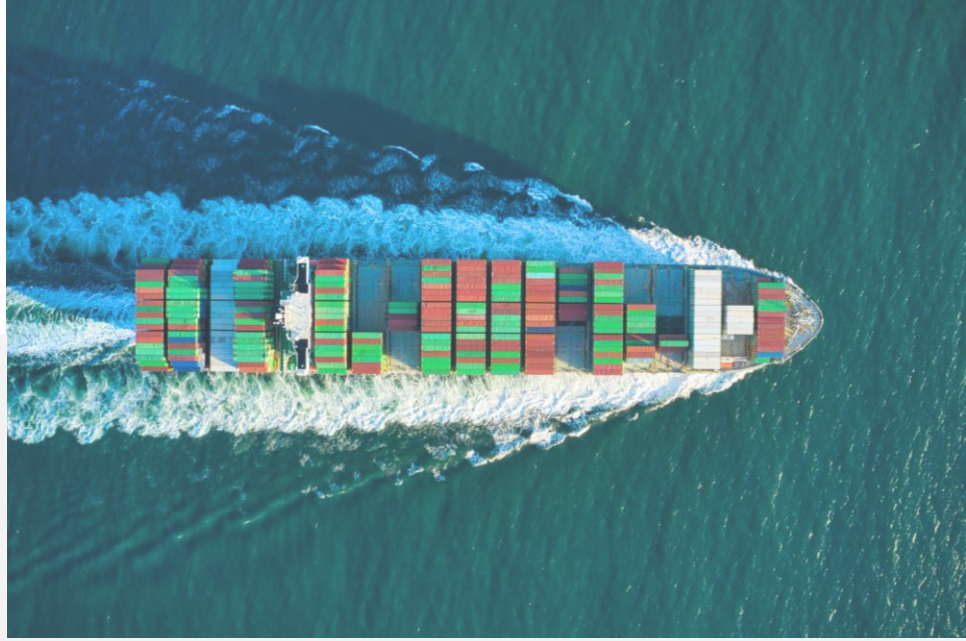
Source: Company information
1) Based on volumes of traded ammonia in 2021 - Argus market study (2022)
2) YCA has exclusive access, and manages and optimizes use of Yara's ammonia tank infrastructure at terminals through sourcing and supply agreements with Yara

Growth and strategy

1. **Ambition and clean ammonia strategy**
2. Deep-dives across the value chain
3. Summary perspectives



YCA's strategic ambition



YCA aims to significantly grow its leading[1] global position as the world's largest ammonia platform, driving the development of clean ammonia globally:

- ***Enabling the energy transition*** *by connecting low-carbon energy sources to food, fuel and energy markets through* ***world-scale production, logistics and sales***
- ***Leveraging existing midstream platform*** *to capture leading* ***market shares*** *across the clean ammonia value chain*
- ***Bold, long-term, trusted, and reliable****;* ***partnering*** *with like-minded industry leaders to* ***unlock the blue and green value chains***

Source: Company information
1) Based on volumes of traded ammonia in 2021 - Argus market study (2022)

YCA's strategy builds on existing success factors and competitive edge

Key success factors

- **Reliable and asset-backed supply**
- **Global scale and flexibility**
- **~100 years of ammonia experience**
- **Track record of safe operations**
- **Market insight**
- **Existing long-term customer relationships**

Unique starting position as the market leader in midstream ammonia[1]

YCA's competitive edge

Upstream	Integrated midstream	Downstream
Handled by Yara today – own production to be developed by YCA	***Current presence*** **#1 global midstream player**	**Leverage commercial partners to create demand "pull" in new segments**
▪ Access to Yara's project portfolio ▪ Project development expertise ▪ Credible offtaker	▪ Asset-backed supply ▪ Existing platform and access to infrastructure ▪ Long-standing relationships	▪ Asset-backed supply ▪ Partnerships with sector leaders ▪ Sites near key hubs and terminals

Track record of safe handling and operations

Integration will remain critical in building scale and creating value in the developing clean ammonia market

Source: Company information
1) Based on volumes of traded ammonia in 2021 - Argus market study (2022)

Three-pronged strategy to capture a leading position in the clean ammonia market

Scale integrated midstream platform while expanding into upstream and downstream segments

Integrated midstream

Upstream

- ✓ **Develop ~2.1mT of blue asset backed supply with focus on North America**
- ✓ **Flexible approach** to technology and project/ownership structures, including **capital-light offtake**
- ✓ **Leverage partnership with Yara,** providing access to existing sites and infrastructure
- ✓ Support **mid- and downstream expansion**

Scaled based on today's setup

- ✓ **Utilize existing scale** to capture a leading market share of clean ammonia growth
- ✓ Further **expand scale** of current platform
- ✓ Complement existing terminal access with **selective investments**
- ✓ **Flexible fleet** ownership model
- ✓ Monetize scale benefits and **capture optimization opportunities**

Downstream

- ✓ **Develop new demand together with customers and partners,** with focus on shipping fuel and power generation
- ✓ Secure **long-term outlets** for new upstream production
- ✓ **Partner** with industry-leading customers to **establish efficient infrastructure**
- ✓ Drive ammonia **bunkering solutions** to solve **last-mile distribution**

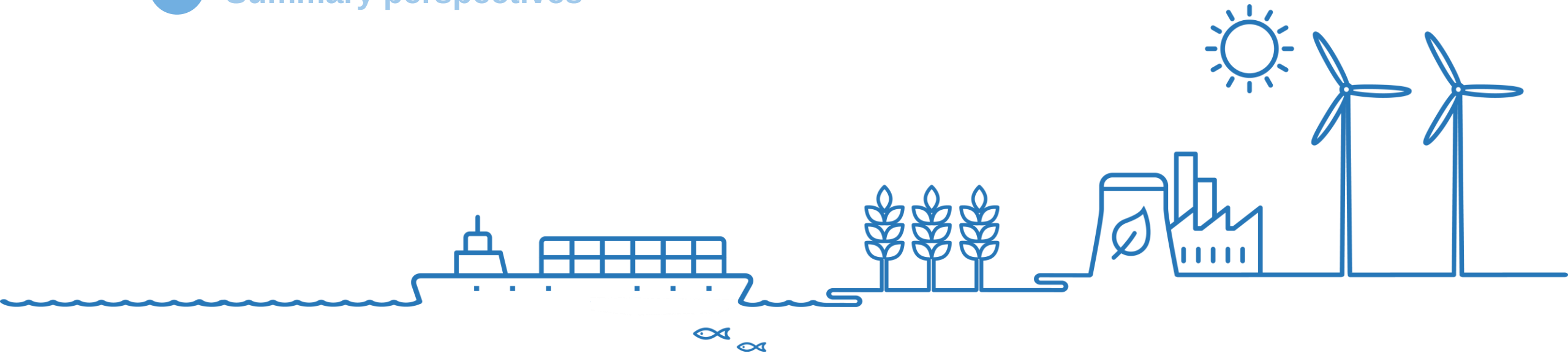
Developing the global integrated industry leader across the value chain

Upstream projects are more capital intensive yet an important pillar to support value capture in mid- and downstream segments

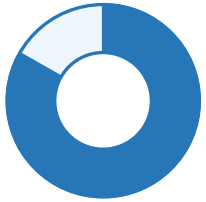
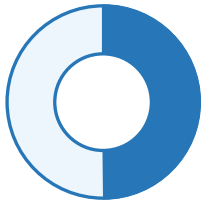
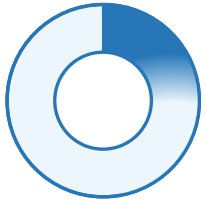
Source: Company information

Growth and strategy

1. Ambition and clean ammonia strategy
2. **Deep-dives across the value chain**
3. Summary perspectives



Integrated midstream platform requires less than proportional capex to scale

Key assets	Current platform	Scalability	Synergies
Organization and systems 	**100's** of years of combined experience from **47** dedicated employees[1] across the globe		▪ **Existing capabilities in place** that can handle significant volume increase without material incremental investments ▪ **Clear differentiator** in the market
Terminals 	**18** terminals in strategic locations with **~600kT** capacity[2]		▪ **Available capacity** in existing terminal network and incremental throughput from inventory optimization ▪ Leveraging **on-site terminals at production** plants and **terminals on customer sites**
Vessels 	**12** owned and leased vessels with total capacity[3] of close to **284kcbm**		▪ Building a merchant ammonia fleet (from scratch) **requires "oversizing" to maintain necessary capacity buffer, creating a natural barrier to entry** ▪ YCA requires **close to proportional investments** (vs. volume growth) given high utilization

Scalability: 100% is fully scalable without incremental capex, while 0% scales 1:1 with volumes

Capex synergies from existing platform and integrated model (up-and-downstream)

Source: Company information
1) Including FTEs working for YCA through SLAs with Yara
2) YCA has exclusive access, and manages and optimizes use of Yara's ammonia tank infrastructure at terminals through sourcing and supply agreements with Yara
3) Excluding volumes from 1 barge

Integrated midstream

Upstream | Downstream

Value accretive growth plan builds on existing infrastructure and co-investments with partners

YCA's mid- and down-stream investment principles

- Selective capacity investments to scale volumes
- Focus on partnership/co-investments across the value chain
- Flexible ownership models (including leasing)
- Back-end loaded investment profile, aligned with expected volume trajectory

Terminals

- **Selective (co) investments** in new capacity in **strategically located areas**
- Investments in terminals at new YCA production sites included in **upstream capex**
- **Downstream terminals at customers' sites** principally covered by **external capex**

Vessels

- **Additional vessel capacity required** as volumes scale given YCA's currently high vessel utilization
  - Some scale effects, however partially offset by an expected increase in average travel length
- YCA operates a **flexible vessel strategy**, with room to own or lease when financially favorable

Bunkering solutions

- Scale benefits from **leveraging YCA's terminal and route network**
  - Initial investments will be tilted towards **developing mobile units** for last-mile coverage
  - Over time, the **majority of investments are expected to be covered by partners**

Investments of up to USD 0.4bn by 2030 expected to significantly increase midstream capacity and add downstream presence[1]

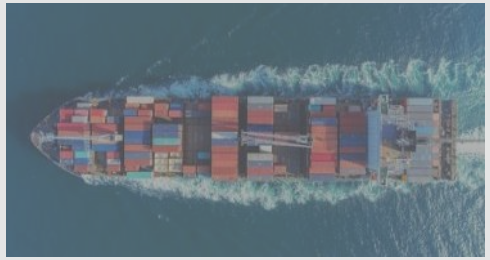
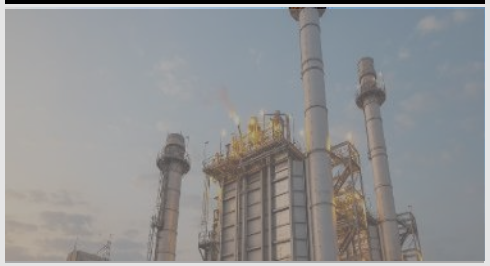
Source: Company information

1) Up to USD 250m expected to be invested in terminals and vessels, and up to USD 150m expected to be invested in bunkering solutions

Upstream | Integrated midstream | Downstream

Shipping fuel | Power generation | Agriculture/Industrial | Hydrogen carrier

Clear prioritization of key end-use applications, leveraging YCA's partnerships and market access

Timing	Development and roll-out to 2030			After 2030
Segment	**Shipping fuel**	**Power generation**	**Agriculture/Industrial**	**Hydrogen carrier**
				
YCA's mid term focus			*Through Yara*	
YCA's strategic approach	▪ **Global market** with volumes and early investments focused on **key bunkering hubs** ▪ New bunker **solutions needed** ▪ **YCA investments in last-mile infrastructure** to strengthen reach and market position	▪ **Point-to-point delivery** ▪ **Downstream infrastructure** based on receiving terminals ▪ Import terminals and distribution **likely developed by partners**, potentially with YCA (co-) investments (if needed)	▪ Yara is a front-runner in **developing green food chains** ▪ Yara developing green fertilizer markets **providing demand for YCA** ▪ **Yara leads marketing/ downstream efforts**	▪ **Limited volumes and activity pre-2030** ▪ **YCA will await investments** until hydrogen network/ infrastructure is established

Source: Company information

YCA will primarily focus on commercial operations in the downstream segment

Key principles of YCA's downstream focus

	YCA investments	Commercial operations
Shipping fuel	✓ Bunkering solutions	✓ Customer interface + last mile delivery
Power generation	✗ Covered by customers/partners	✓ Customer interface
Agriculture/ Industrial	✗ No downstream investments	(✓) Jointly with Yara
Hydrogen carrier	To be developed in the future	

Strategy focused on developing downstream markets via commercial organization

Downstream capex limited to shipping segment and integrated with midstream investments

Capital-light approach to develop downstream markets together with customers and partners

Source: Company information

Phased bunkering strategy with selective investments in last-mile solutions

YCA's existing terminal and vessel network provide coverage of major bunkering hubs

World's largest bunkering ports (ranked)[1]	Singapore	Rotterdam	Fujairah, UAE	Hong Kong	Panama	Zhoushan, China	Busan, South Korea	Gibraltar	Gothenburg, Sweden	Houston, USA
YCA coverage	(✓)	✓	✗	(✓)	✓	(✓)	(✓)	✓	✓	✓
	Pilbara and third-party terminals	Sluiskil and European network	No terminals in Middle East	Pilbara and third-party terminals	Coverage from Trinidad	Pilbara and third-party terminals	Pilbara and third-party terminals	European network	European network	Freeport and Tampa

Key focus areas to 2030

Develop-ment	1 Initial phase	2 New markets	3 Maturing markets
	Mobile units North Sea/ Northern Europe	Mobile units globally	Develop large-scale permanent solutions
Last-mile bunkering strategy	▪ **Together with partners**, invest in **mobile flexible bunkering solutions** with focus on the **North Sea** ▪ Will cover the need **until region has reached sufficient scale**	▪ Build new/move the mobile bunkering solutions to **provide infrastructure in new markets** ▪ **Leverage experience and best-practices** from initial phase	▪ When markets scale, **develop larger permanent (onshore) bunkering solutions** ▪ Will be **pursued together with partners**

Mobile units

- ✓ Capital efficient
- ✓ Flexible barges
- ✓ No need for permits (ease of regulations)

Source: Company information
1) "2020 Global Bunker Rankings by Port" and "2020 Global Bunker Rankings by Supplier" published at IPEC 2021

Partnering with industry leaders to decarbonize the shipping industry

Coalition with Jurong Port in the Castor Initiative

The Castor Initiative is an **ammonia-fueled tanker joint development project**. The members of the coalition are MISC Berhad, Lloyd’s Register, Samsung Heavy Industries, Man Energy Solutions and joined by Yara and Jurong Port in Feb ‘21

- **Develop the world’s first ammonia fueled tanker**
- The coalition has a **diverse circle of maritime expertise** to ensure and support the complete ecosystem required for the ammonia-fueled tanker to operate

Agreement with AZANE Fuel Solutions

The project partners, spanning the entire value chain for ammonia as a maritime fuel, **will develop the world’s first ammonia bunkering terminals,** enabling cost efficient and safe distribution, storage and transfer

- **World’s first green ammonia bunkering terminals**, both onshore and floating concepts
- **April 1 2022: Announced that YCA pre-ordered 15 floating bunkering terminals** from Azane

Further details on next page

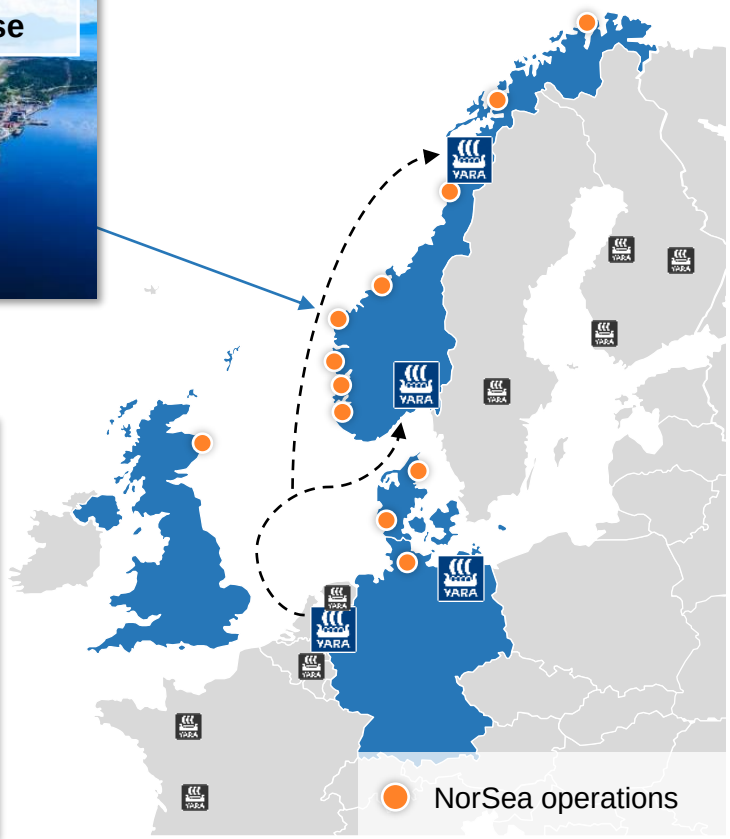
Source: Company information

MoU with NorSea to establish a new, secure supply chain for ammonia bunkering

Overview of the NorSea network

NorSea | Wilhelmsen

- Founded in 1965
- 4.5m sqm base area
- >10,000 port calls



Key highlights

- NorSea and YCA have signed an MOU for to **establish ammonia bunkering infrastructure for the North Sea**
- **NorSea is the largest logistics operator for North Sea activities**, with over 10,000 landings per year, including all large oil and gas players in the region
- The first green ammonia bunkering is **targeted to start in 2024**
- At the outset, **the scope includes all NorSea bases in the North Sea**

NorSea involvement

- **NorSea will operate** the bunkering terminals
- *Commercial and ownership strategy to be defined*

YCA invovlement

- **YCA will supply clean ammonia** to terminals and handle **safety aspects**
- YCA will, in close cooperation with partners, **develop and scale the logistics** to ensure sufficient supply

NorSea | YARA YCA + AZANE Fuel Solutions

- *Operations*
- *Commercial*

- *Technology*
- *Construction*

Source: Company information; NorSea

Partnering with industrial leaders in Japan to develop local demand and infrastructure

MoU with Jera (Power)

Yara and Jera, Japan’s largest power generation company, will **collaborate on the production, delivery and supply chain development for blue and green ammonia, to enable zero-emission thermal power generation in Japan**

- Clean ammonia **bunkering and distribution in Japan**
- YCA to develop **clean ammonia for co-firing**
- Separately, **in May 2022**, Jera announced **acceleration of its ammonia co-firing pilot** at the Hekinan power plant

MoU with SUMITOMO CHEMICAL (Industrial)

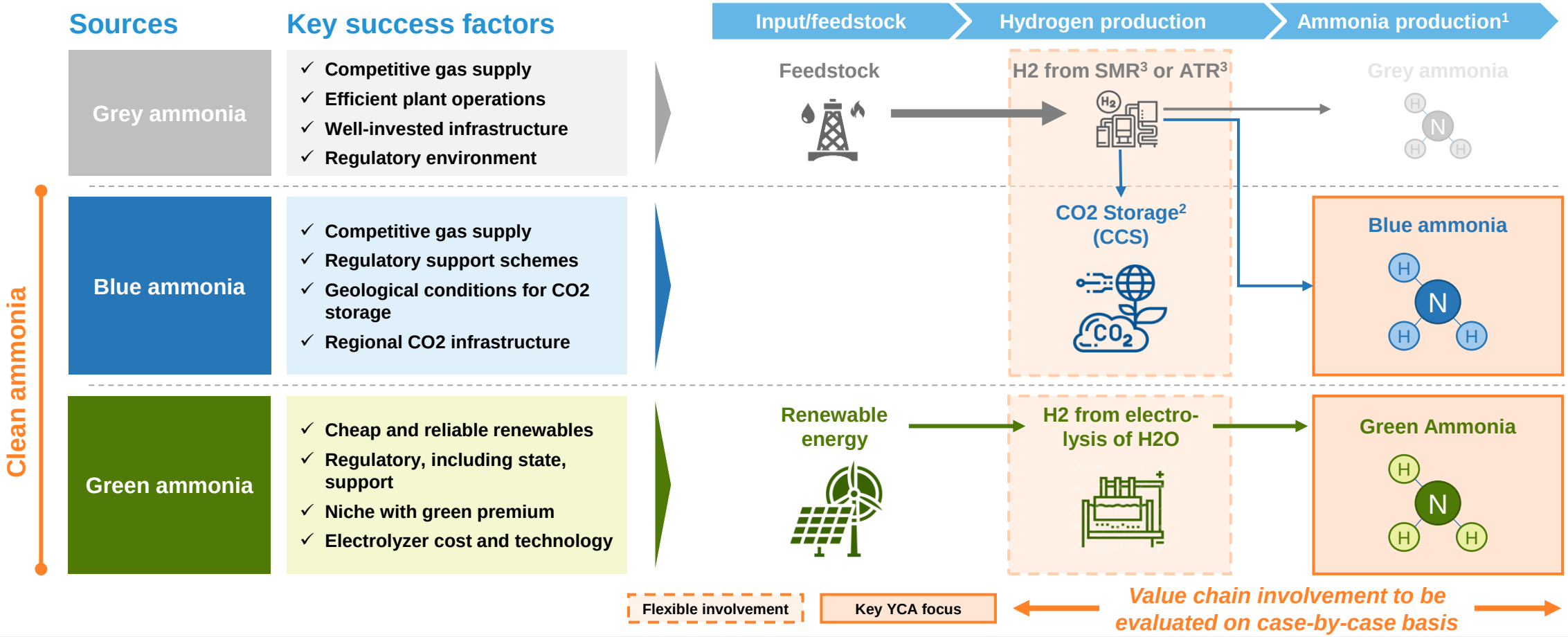
Yara and Sumitomo Chemical, one of Japan’s leading chemical companies, will **collaborate on the potential supply of clean ammonia to Sumitomo Chemical**

- Clean ammonia supply for **petrochemicals, plastics and/or energy**
- **Distribution** based on Sumitomo Chemical’s plants in Japan

Source: Company information

Integrated midstream | Upstream | Downstream

YCA's value chain involvement and investment approach to upstream projects



Source: Company information
1) Combining hydrogen with nitrogen from the air
2) YCA will not be directly involved in storage of CO2
3) SMR = Steam Methane Reforming, ATR = Autothermal Reforming

Upstream roadmap builds on a flexible approach to select and develop the most robust projects

YCA's upstream investment principles

- **Upstream perimeter:** *Hydrogen production and third-party sourcing thereof*
- **Hydrogen shade:** *Blue and green, with a mid-term focus on the former*
- **Project structure:** *Majority/minority equity participation and offtake-only*
- **Type of construction:** *Brownfield and greenfield*
- **Project sourcing:** *Access to Yara's asset portfolio and third-party projects*
- **Buy vs. build:** *YCA may opportunistically engage in M&A*

Upstream investment roadmap

Short-term → Mid-term → Long-term

Selected pilot projects

- Ongoing projects **leveraging Yara's existing asset portfolio**
- Develop **technical and commercial insights**
- Cargos for **early testing of end-markets**
- **Progress mid-term project portfolio**

Build commercial-scale capacity

- **Blue projects** key in this **transitional phase**
- Focus on projects where **government support is present**/with favorable **regional conditions**
- Potential investment in a **green project** (depending on **sufficient government support**)

Large supply growth to meet demand

- **Large-scale projects** both in **blue and green**
- **Green** likely the **main volume driver** in most competitive regions **when cost parity approaches**
- **"Subsidized" green** ammonia projects could breach the **blue cost curve by 2035+**

Mid-term focus weighted towards large-scale blue projects, with green becoming more important in the long-term

Source: Company information

Integrated midstream | Upstream | Downstream

Mix of different project structures with varying levels of commercial and capital exposure for YCA

Blue ammonia project structures and YCA involvement

Value chain	Model 1: Offtake-only (asset-light)	Model 2: Ownership or cost of CCS + offtake	Model 3: Fully integrated
Ammonia production (incl. Haber-Bosch)	–	–	✓
Carbon-capture and sequestration[1] (CCS process)	–	✓	✓
Clean ammonia offtake	✓	✓	✓
Example projects (Large scale projects)	*Sluiskil CCS*	*Grey to blue (CCS) (North America)*	*New project (North America)*

Green ammonia project structures and YCA involvement

Value chain	Model 1: Offtake-only (asset-light)	Model 2: Ownership of hydrogen/ ammonia prod.
Hydrogen production (via electrolysis)	–	✓
Ammonia production (incl. Haber-Bosch)	–	✓
Ammonia offtake	✓	✓
Example projects (Large scale projects)	*Multiple third-party projects ongoing*	*HEGRA*

Source: Company information
1) YCA will not be directly involved in storage of CO2

YCA and Yara will cooperate extensively in developing clean ammonia production and sourcing

Governance structure/framework

Joint Development Agreement

Yara Clean Ammonia

Key principles

- YCA will be **Yara's preferred supplier of clean ammonia** and/or clean ammonia **certificates** for **fertilizer and industrial use**
  - YCA will be entitled to have a **Last Look** if Yara would like to source from another supplier
- YCA will be the **preferred "Yara Group" owner of clean ammonia assets**
  - YCA will be entitled to have **a Last Look at the principal investment decision**, as well as a preferred right to acquire any Yara-produced clean ammonia based on a Last Look mechanism
- YCA will take **project lead** for all Yara clean ammonia projects
  - Right to take lead at the first internal decision point or earlier
- If YCA does not exercise its rights to take project lead at the first internal decision point and ownership at principal investment decision, Yara is in principle free to continue the project in **coordination and project participation from YCA**
- No **sunk capital cost** to be charged to the pilot projects Skrei, Haddock and Yuri (at Yara's sites) for the use of Yara's **Haber-Bosch** synthesis plants. **Future projects will pay a capital cost at arm's length reflecting alternative use for Yara**
- Yara offers to **operate and maintain YCA assets** on Yara sites at arm's length conditions based on **cost and 10% mark-up**

Source: Company information

Integrated midstream | Upstream | Downstream

Project pipeline to 2030 weighted towards blue projects in North America

Type	Project names	Framework in place	Volume (kT)[1]	Type	YCA capex	Indic. start of production
Blue ammonia	Grey to blue (CCS) North America	✓	~600	Offtake	-	2026 – 2029
	Sluiskil CCS Europe	✓	~400	Offtake	-	2025 – 2029
	New project North America	✓	~1,100	Majority stake	USD 1.5 – 1.8bn[2]	2028 – 2030
Green ammonia	HEGRA Norway	✗	~400	Majority stake	TBA[3]	2027 – 2030
	Skrei (pilot project) Norway	✓	~20	Owned	USD ~50m[4]	2023
	Yuri (pilot project) Australia	✓	~3	Offtake	-	2025 – 2026

- **4 commercial-scale** projects
- **3 blue projects** for which sufficient **frameworks are already in place**
- Framework, including sufficient level of government support, yet **to be concluded for HEGRA**. Company to revert on capex
- **2 pilot projects** to provide important **technical and commercial insights**
- **Additional** mid-term volumes from **third-party offtake** (not included in the project summary)

Pipeline is continuously evaluated and projects may be replaced from a deeper project hopper

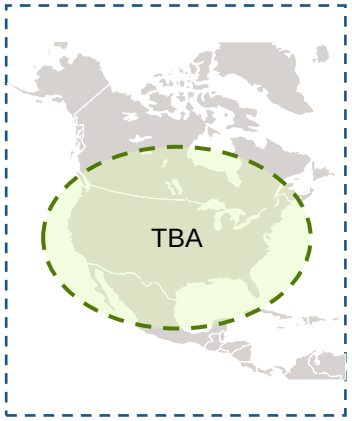
Source: Company information, based on current estimates/expectations

1) Assuming 100% offtake from upstream projects for YCA. Under the current agreement for Sluiskil, YCA has the right to offtake 50% of the gross volume of ~400kT plus any surplus from Yara's 50% share of the volumes
2) Capex calculated based on an assumed 70% ownership for YCA
3) Framework, including sufficient level of government support, yet to be concluded for HEGRA. Company to revert on capex
4) Net capex after ENOVA support, which is still subject to ESA approval

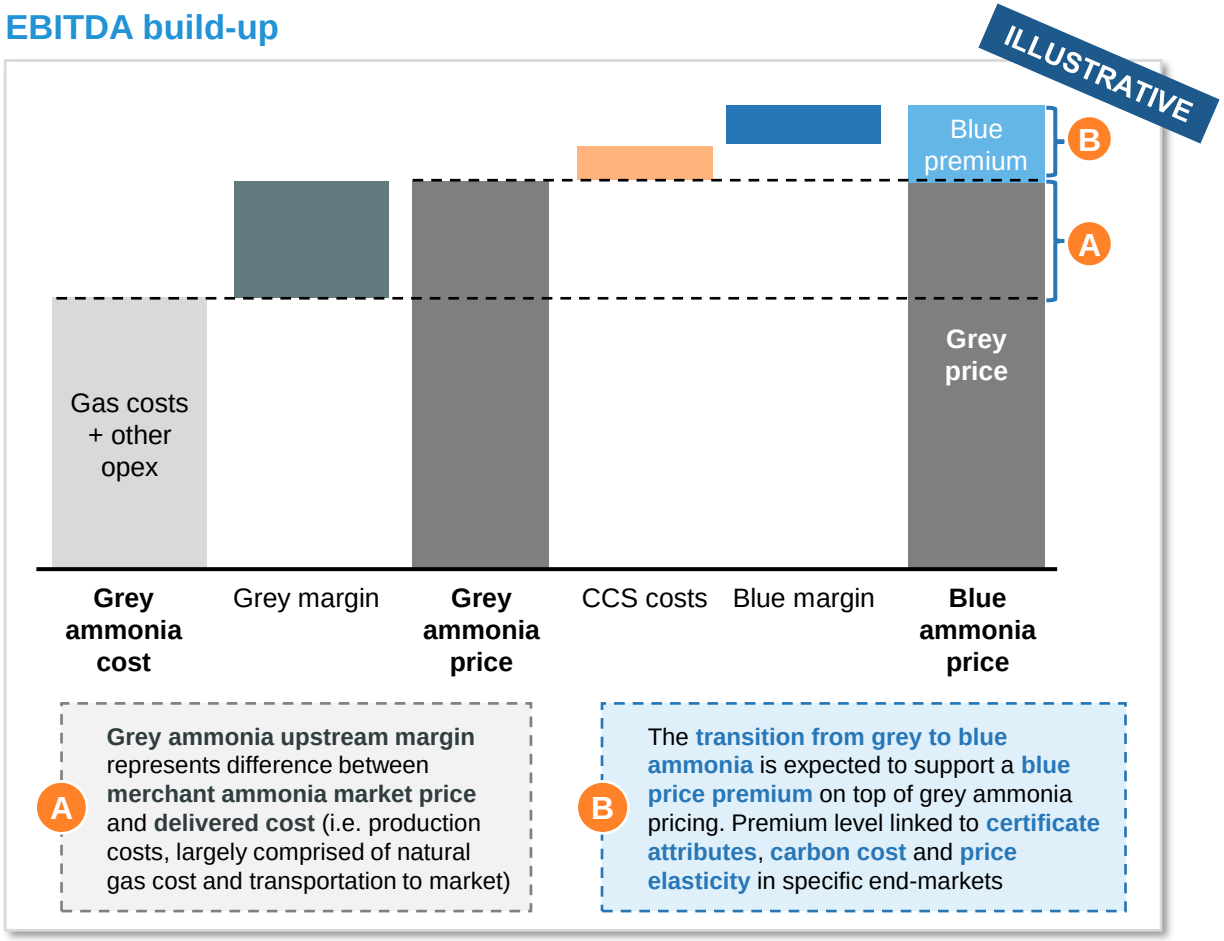
YCA plans to invest in a large-scale new blue ammonia project located in the US

Key highlights

Volume	~1,100kT[1]
Indicative start of production	2028-2030
Investment for YCA	USD 1.5 – 1.8bn[2]
Carbon capture rate	>90%, ATR technology
Commercial exposure	Full equity participation, with 100% offtake for YCA
Strategic rationale	▪ Competitive access to natural gas ▪ High carbon capture rate combined with low cost of CO2 transport and storage ▪ Access to US tax credits (45Q) ▪ Potential to leverage YCA's existing midstream presence in US ▪ Strategically located in the US, with access to deep-sea transportation, connecting the plant to overseas markets



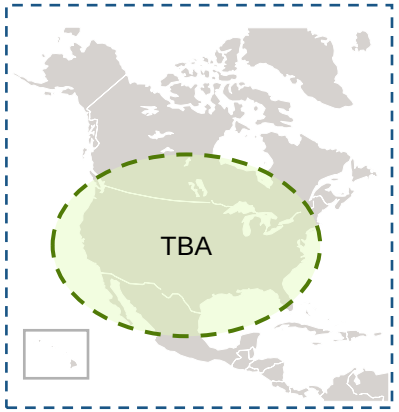
EBITDA build-up



Source: Company information
1) Assuming 100% offtake for YCA on an annual basis when fully operational
2) Capex calculated based on an assumed 70% ownership for YCA

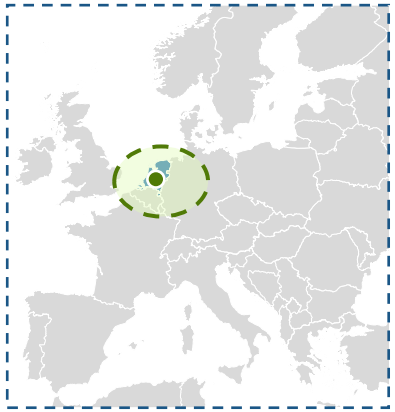
YCA seeks to secure long-term offtake of blue ammonia from CCS additions to grey assets

Grey to blue CCS: Blue offtake and costs of CCS[1]



YCA offtake volume	~600kT[2]
Estimated completion	2026 – 2029
Investment for YCA	None, but long-term CCS contract will be capitalized
Commercial exposure	Fixed costs for CCS and full share of blue margin
Technology type	To be concluded
Strategic rationale	▪ Cost competitive ▪ Leveraging existing production infrastructure ▪ Tax credit (45Q) already in place

Sluiskil CCS: Blue offtake with shared margin capture[1]



YCA offtake volume	~400kT[2]
Estimated completion	2025 – 2029[3]
Investment for YCA	None
Commercial exposure	50/50 profit sharing of blue margin with Yara
Technology type	To be concluded
Strategic rationale	▪ Leveraging existing production infrastructure at Europe's largest ammonia facility ▪ Support future competitiveness for Yara ammonia operations in Europe

Source: Company information

1) Not yet committed by YCA or partners, subject to ongoing discussions
2) Assuming 100% offtake for YCA. Under the current agreement for Sluiskil, YCA has the right to offtake 50% of the gross volume of ~400kT plus any surplus from Yara's 50% share of the volumes
3) Timing subject to final decision on sequestration solution

YCA's HEGRA project represents a competitive green project in a European context

Overview of HEGRA (Yara Herøya plant)

- **Large-scale green ammonia plant** in **Porsgrunn, Norway, utilizing Yara's existing** plant infrastructure
- **Completion during 2027 – 2030**, subject to receipt of necessary **state support**
- **Skrei pilot project** on site with Enova support[2]

100%	~400kT	~800kT
Renewable input as energy in the green ammonia production	Production capacity (tonnes ammonia)	Annual CO2 emission reduction

Strategic rationale

HEGRA can create a substantial impact:

- ✓ One of the largest decarbonization opportunities in Norway, representing 3% of the national 2030 reduction target[1], with annual CO2 removal of ~800,000 tonnes
- ✓ The project is one of the most important contributors within Yara's GHG reduction roadmap
- ✓ Significant learning effects for future projects when levelized costs come down
- ✓ Enables development of new ammonia markets such as shipping, power generation and green fertilizers

HEGRA is likely the most competitive green project in Europe:

- ✓ Access to renewable (RED-II compliant) and competitive grid power, expected to be among the cheapest in Europe
- ✓ Leverages existing infrastructure at Herøya, including the ammonia synthesis plant (Haber-Bosch)

Project dependent external funding support:

- ✓ Access to state support needed to provide (a to be agreed upon) level of reasonable return – ***framework required***

Source: Company information; The Norwegian Environmental Agency, Miljøstatus, 22.02.2022; Energi og Klima, Klimavakten, 08.06.2022

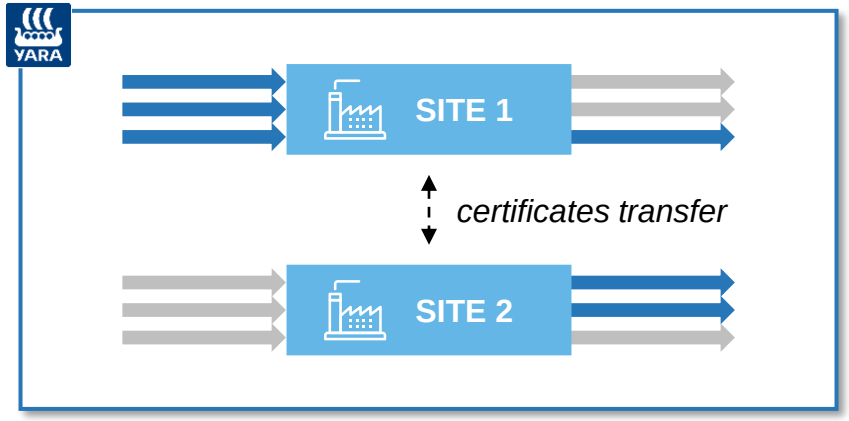
1) Based on 1990 baseline emissions of 51.4mT CO2 equivalents and a 2030 national reduction target of 50%
2) Enova support subject to ESA approval

Robust certification schemes required to enable transition and expected to strengthen YCA's edge

Clear rationale for certification schemes

1. **Grey, blue and green ammonia is the same molecule**, the only difference is how they are produced
2. Initial physical availability of **clean volumes limited to few locations** of production
3. Large share of initial production expected to be produced at existing sites making it **impossible to physically separate volumes**
4. Requiring physical flow of products would **increase need for shipping small volumes** and slow down the rate of adoption/roll-out

Yara's certification scheme is based on multi-site mass balance within company borders[1]



Various other similar ammonia certification schemes are also under development

SMART ENERGY COUNCIL

fertilizers europe

AMMONIA ENERGY ASSOCIATION AUSTRALIA

GH2

RED III-compliance schemes

Benefits for customers and the industry

- ✓ Enabling significantly lower GHG emissions
- ✓ Aggregation of volumes and reduced distance of transportation
- ✓ Better availability of clean products
- ✓ Compatible with regulated markets
- ✓ Similar handling process as e.g. purchase of green or clean electricity

Benefits for YCA

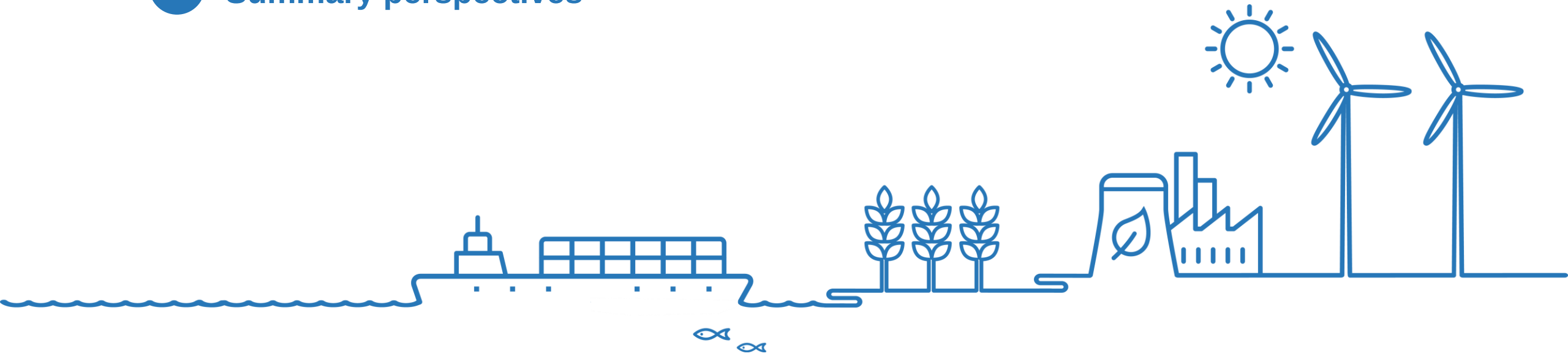
- ✓ Global system can be leveraged to make clean ammonia available
- ✓ Trade flows and logistics can be optimized
- ✓ Scale benefits from large combined volumes

Source: Company information

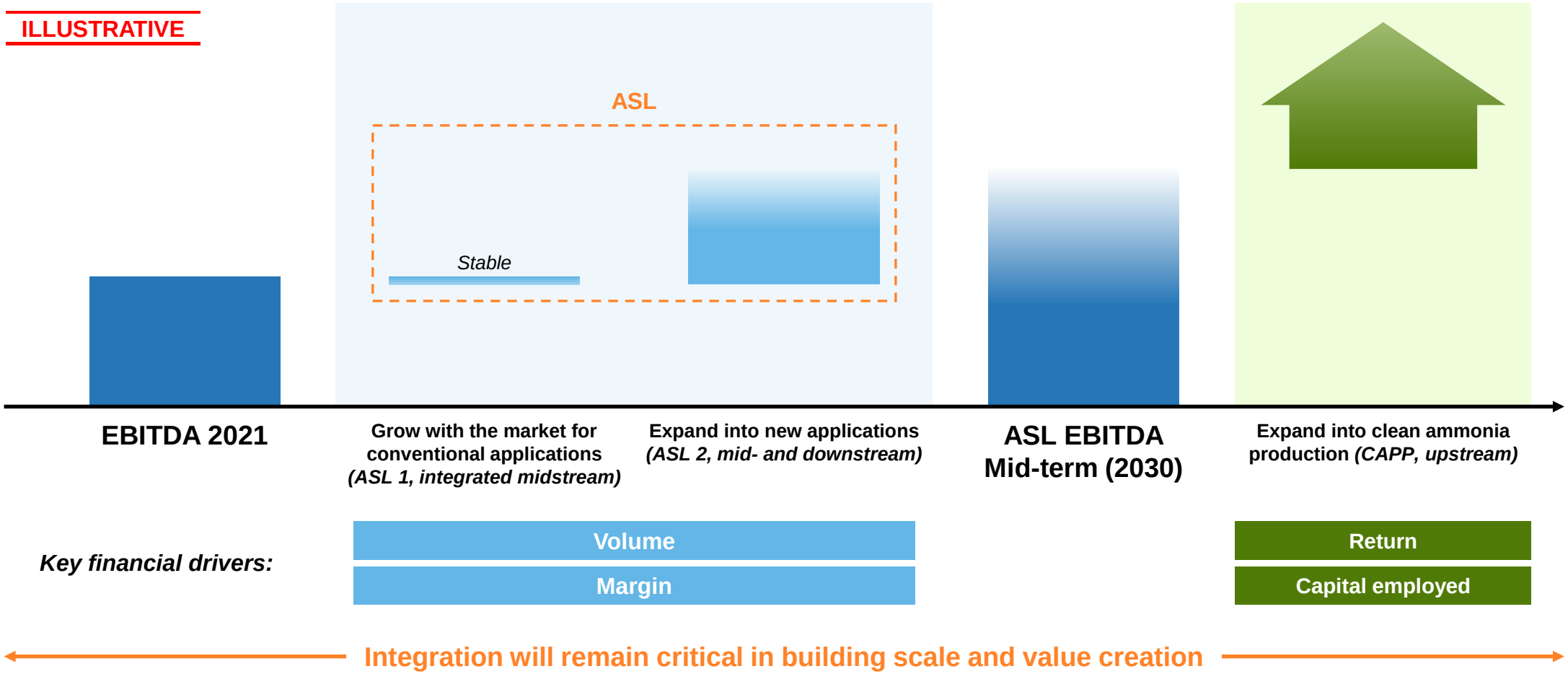
1) Based on ISO 14067 and 22095 standards and verified by DNV. Concept already used in e.g. food and plastics supply chains

Growth and strategy

1. Ambition and clean ammonia strategy
2. Deep-dives across the value chain
3. **Summary perspectives**

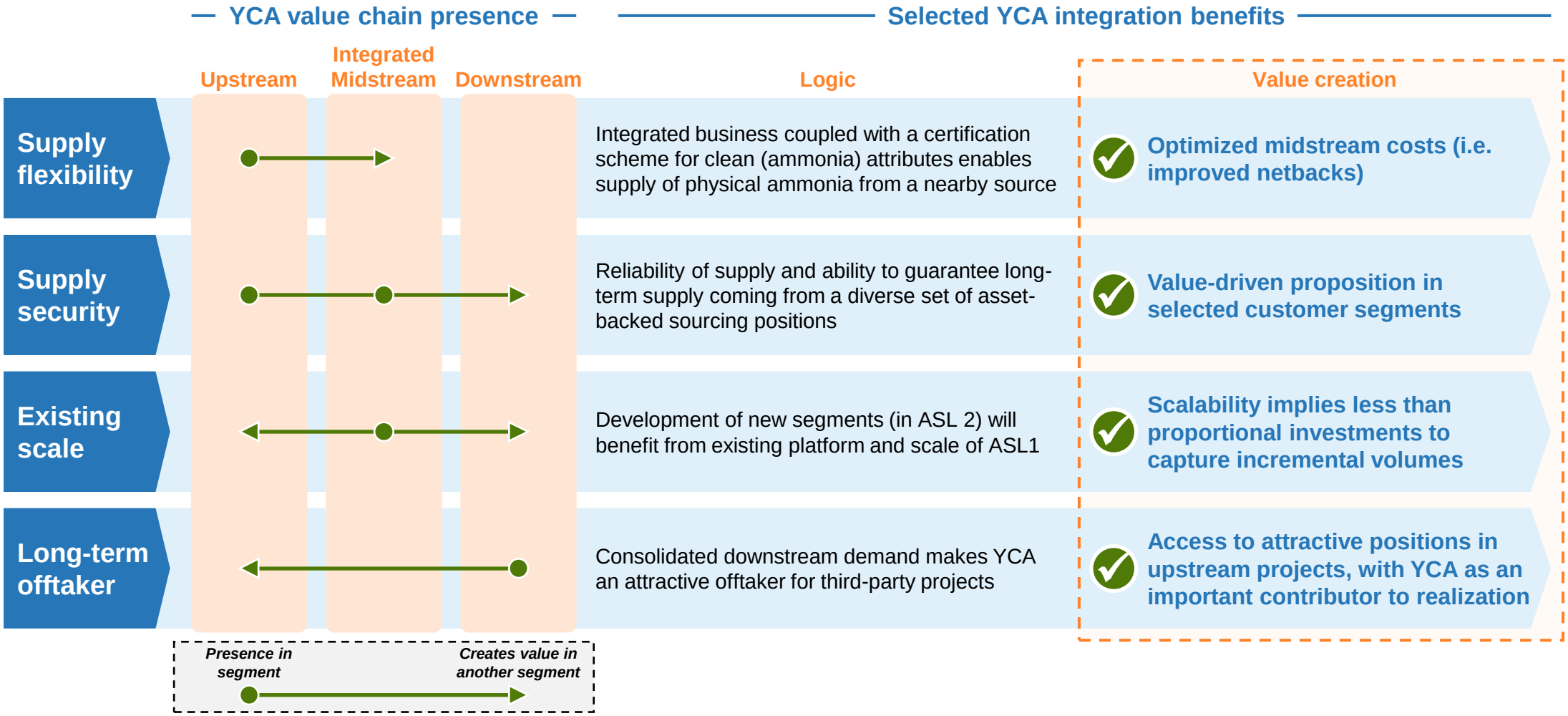


Three-pronged strategy to capture profitable growth opportunities as the clean ammonia market develops



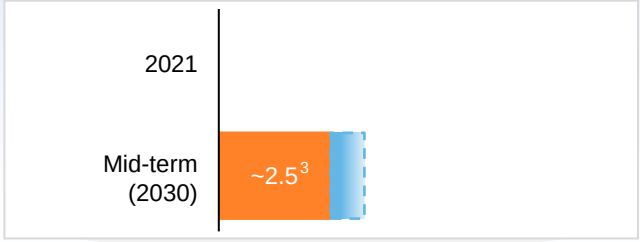
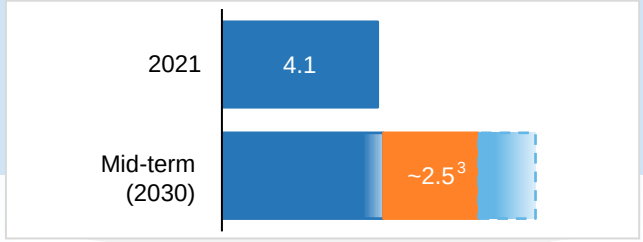
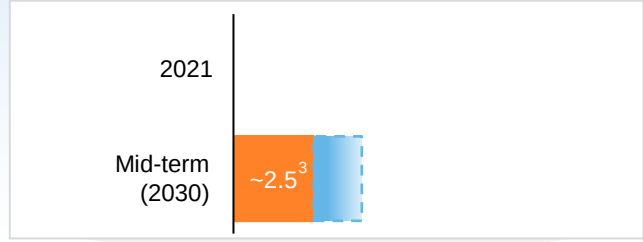
Source: Company information

Integration across the value chain has clear benefits and will remain an important pillar going forward



Source: Company information

Growth investments of USD 2.0 – 2.3bn[1] + HEGRA[2] to capture leading share in clean ammonia by 2030

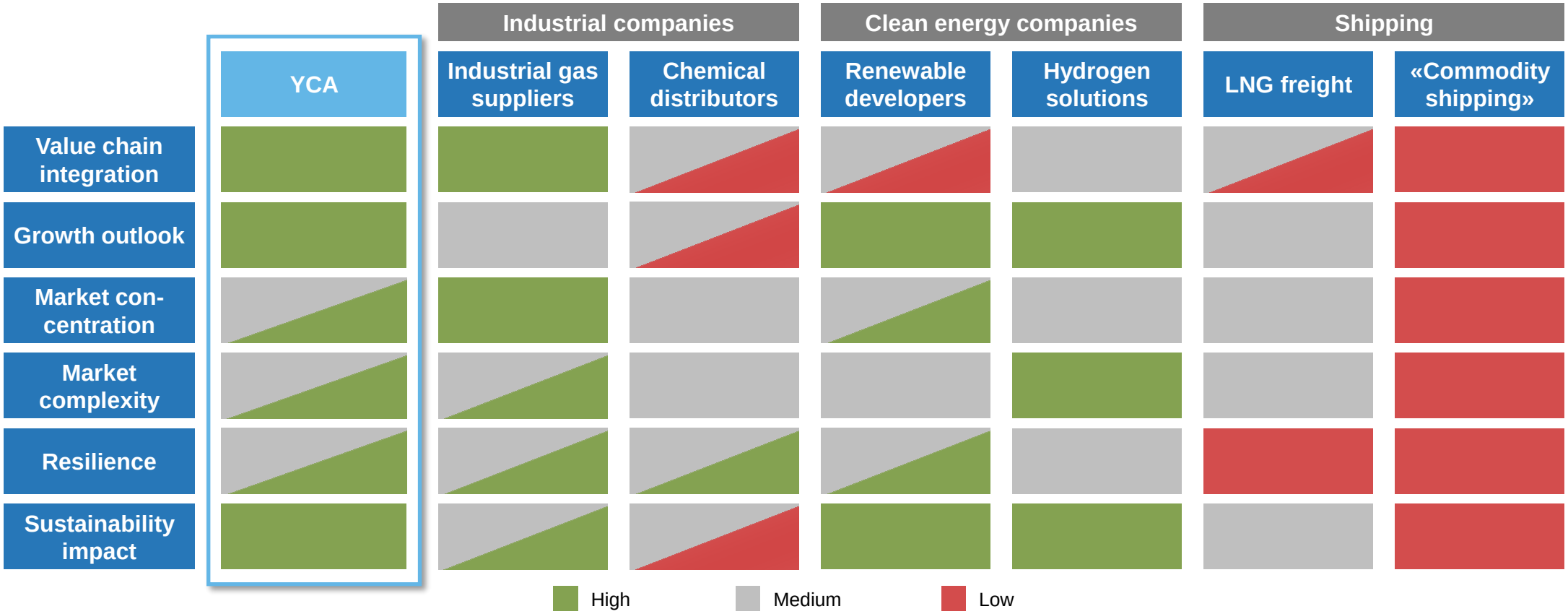
	Upstream	Integrated midstream	Downstream
Investment strategy	Investments in blue and green ammonia production capacity (including offtake): ▪ **Step 1:** Invest selectively in pilot projects for green ammonia (ongoing) ▪ **Step 2:** Target large-scale investments primarily in blue ammonia ▪ **Step 3:** Greenfield investments in blue (mid-term) and green (long-term) ammonia	Capacity investments to scale platform to accommodate clean ammonia: ▪ **Terminals:** Less than proportional investments required due to existing capacity and leveraging infrastructure across the value chain ▪ **Vessels:** Scaled in line with volumes, but with a flexible ownership strategy	Selective investments in targeted end-markets, primarily ship bunkering: ▪ Most short-term investments will be in **mobile bunkering solutions** ▪ YCA's existing terminal and ship infrastructure provide **backbone** – hence **lowering capex requirement** **Lead with commercial organization and leverage partners to spread investments**
Illustrative **Capacity/ volume impact (mT)**			
Investments by 2030E	**USD 1.6 – 1.9bn[1] + HEGRA[2]**	**Up to USD 400m**	

Existing midstream volumes · Asset-backed clean ammonia volumes · Additional third-party offtake

Yara Clean Ammonia

Source: Company information
1) Capex calculated based on an assumed 70% ownership for YCA
2) Framework, including sufficient level of government support, yet to be concluded for HEGRA. Company to revert on capex
3) Assuming 100% offtake from upstream projects for YCA. Under the current agreement for Sluiskil, YCA has the right to offtake 50% of the gross volume of ~400kT plus any surplus from Yara's 50% share of the volumes

Benchmarking YCA's positioning vs. adjacent industry groups and value chains

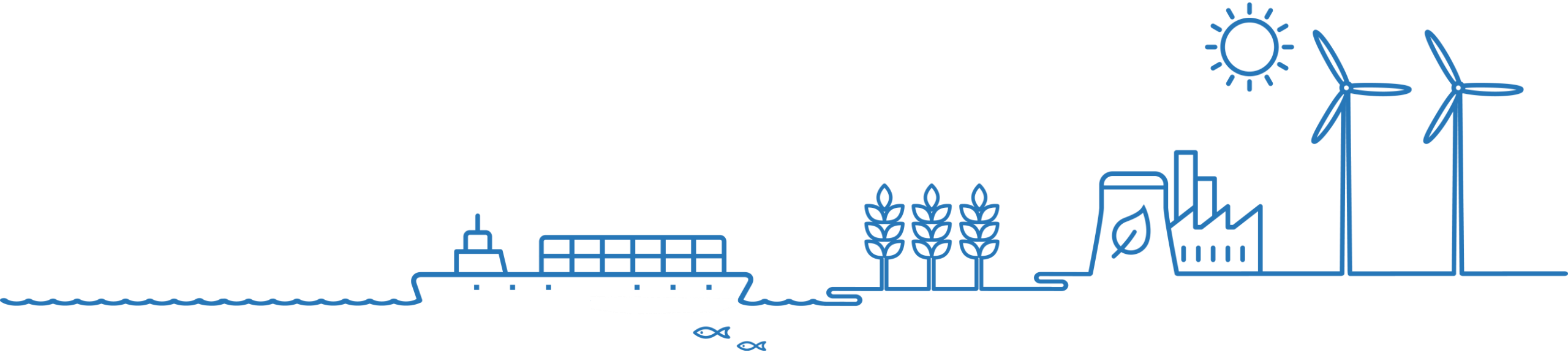


YCA combines attractive growth prospects – underpinned by energy transition/decarbonization focus – and a strong market backdrop

Source: Company information

Financials and financial targets

1. **Historical financials**
2. **Financial targets**

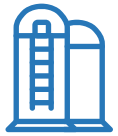


Financial performance is normally a consequence of business attractiveness and competitive edges

Few businesses are expected to be more attractive than ammonia going forward if expected growth materializes

Key competitive edges

Asset-backed sourcing



Access to terminals

Optimization options

Business intelligence

Global platform

Source: Company information

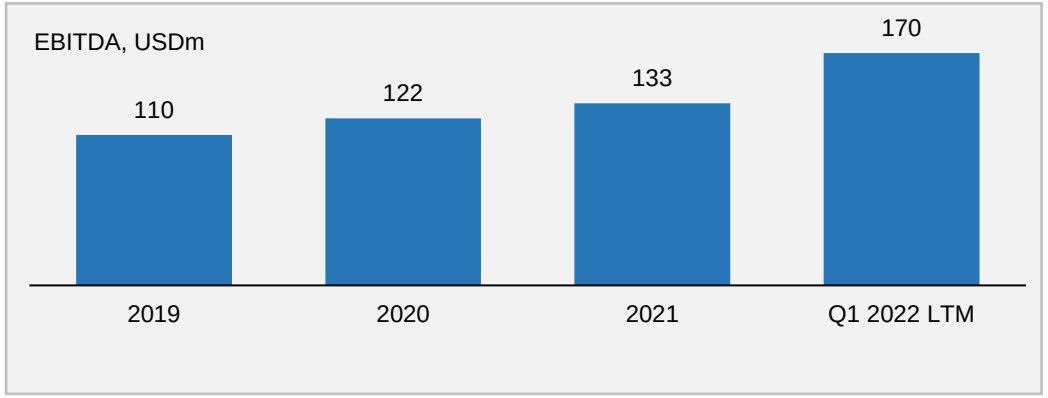
Combined financials shows somewhat lower results vs. segment financials due to the following factors

Basis of preparation		EBITDA impact Q1 2022 LTM
Yara segment financials	**Segment financials as presented for Yara's Clean Ammonia segment, reflecting core activities of YCA today (primarily related to the YCA's ASL 1 segment)**	**USD 166m**
− Group/overhead costs	Adjustments related to **allocated costs from Yara** not previously included in segment reporting	**- USD 2m**
− Project costs	Adjustments related to **projects previously booked outside** of Yara's Clean Ammonia segment	**- USD 1m**
− Perimeter adjustments	Adjustments related to **differences in perimeter/scope** of YCA vs. Yara's segment reporting for Clean Ammonia	**- USD 4m**
= Combined financials	**Basis for historical financials and key focus for analysis herein** (unless otherwise stated)	**USD 159m**
+ Standalone adjustments	Adjustments that will be a consequence of the **carve-out and related matters**, but have **not occurred historically, estimated to account for ~USD 4-5m**	
= Standalone financials		

Source: Company information

YCA's reporting structure is based on 2 reporting segments

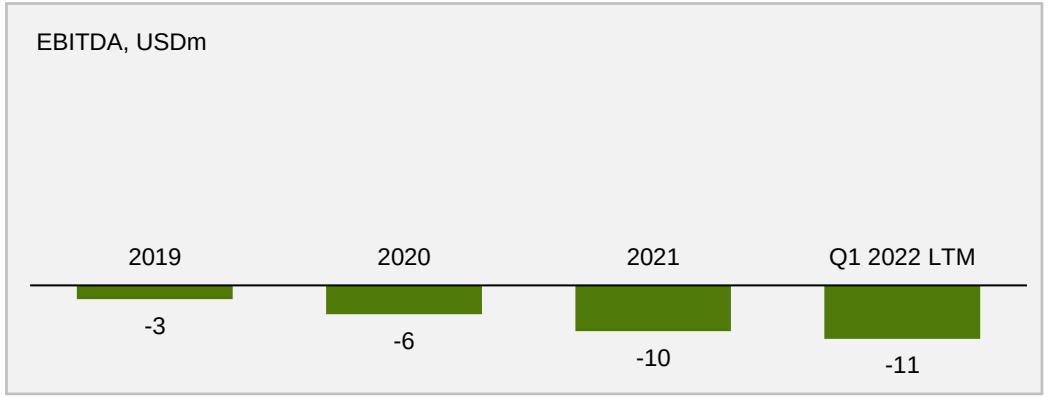
Ammonia Sales and Logistics (ASL)



- Financial results from **existing midstream operations**
- **Costs associated with fleet/vessel management and operations**, as well as current **ASL organization in Geneva**
- ASL will **also cover future mid- and downstream exposure** (referred to as **ASL 2** elsewhere in this presentation)

Key operating segment today

Clean Ammonia Projects and Production (CAPP)



- CAPP segment reflects YCA's **upstream projects**
  - **Today, CAPP is primarily comprising costs**
- Costs include direct **project development costs** as well as **employee and other operational costs** related to project and market development
  - The segment also contains the majority of **group admin and HQ costs**

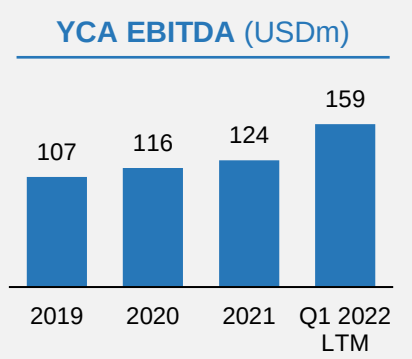
Costs related to upstream projects and group admin

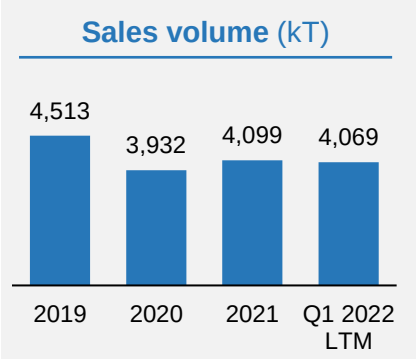
Source: Company information

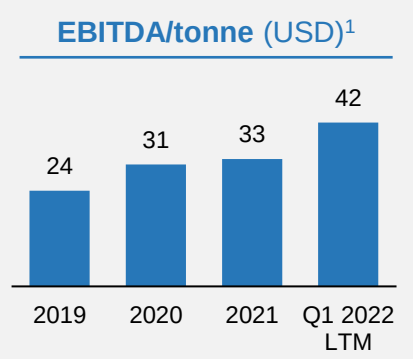
Strong historical financial performance with positive EBITDA momentum

Income statement and selected APMs[1]

USDm	2019[2]	2020	2021	Q1 2022 LTM
Revenue and other income	**1,248**	**1,015**	**2,292**	**3,009**
Finished goods sold and consumables used	-1,133	-884	-2,149	-2,828
Gross profit	**115**	**131**	**144**	**181**
Payroll and related costs	-5	-6	-6	-6
Leasing depreciation[2]	-10	-20	-24	-27
PPE depreciation	-14	-14	-14	-15
Other operating expenses	-8	-10	-15	-17
Operating income	**78**	**82**	**85**	**117**
EBITDA (ASL)	**110**	**122**	**133**	**170**
EBITDA (CAPP)	**-3**	**-6**	**-10**	**-11**
EBITDA (total)	**107**	**116**	**124**	**159**
Ammonia price (fob Black Sea USD/tonne)	235	204	544	N/A







Comments

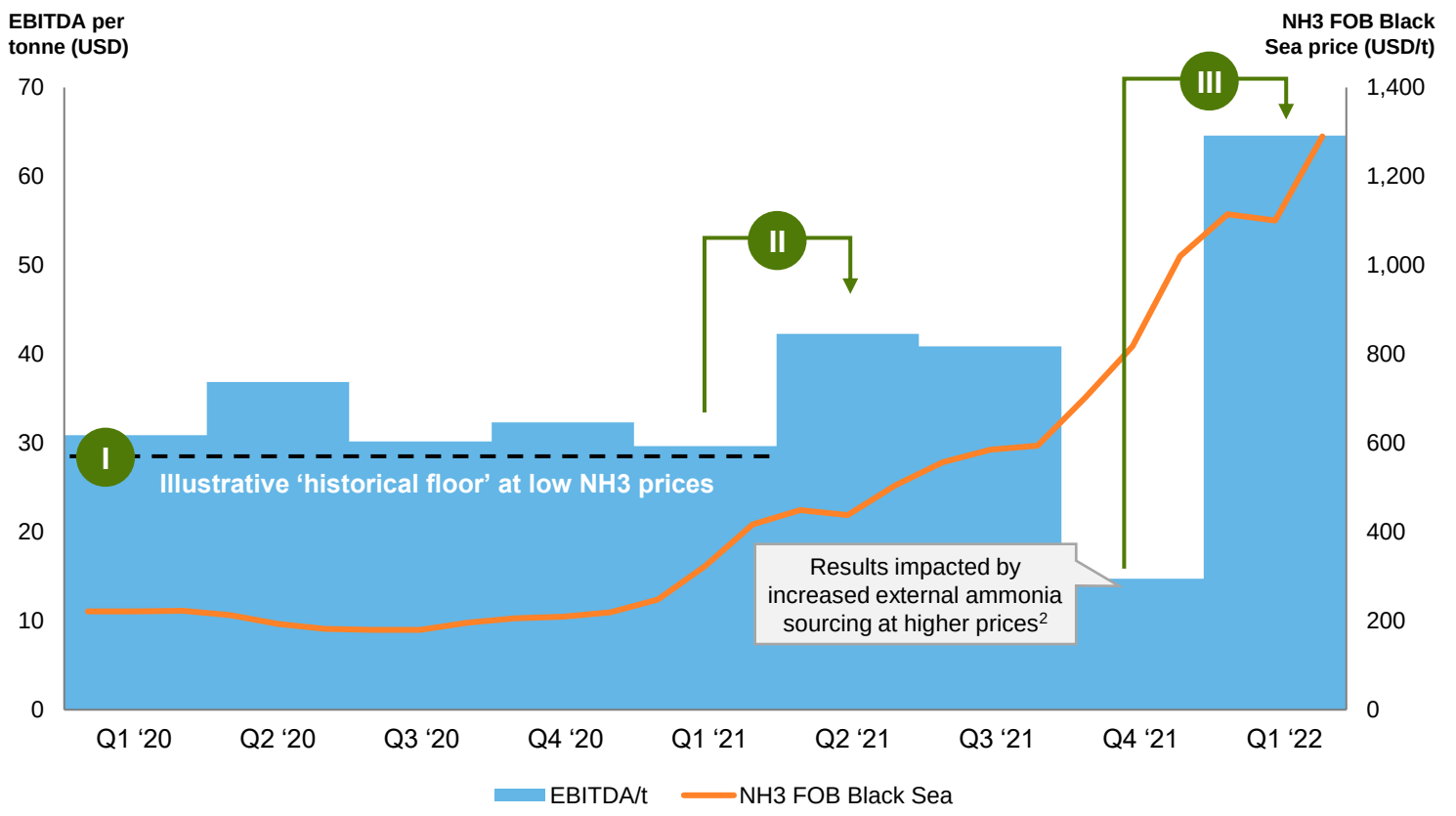
- All **revenue currently generated in the ASL** segment
- Revenue and other income are largely **driven by the ammonia price and volumes sold**
- **Finished goods and consumables** used are **primarily comprised of the cost of ammonia**, typically contributing between **92% and 96%**, in addition to variable costs related to shipping
- **Leasing depreciation** represents depreciation of right-of-use assets (i.e. **leased vessels**)
- **Higher number of leased vessels following dry docking** of own vessels has been the main driver for higher depreciation costs in 2021
- **Relatively stable depreciation of fixed assets** (primarily owned vessels) reflecting use of straight-line method
- **Other operating expenses primarily driven by costs within the CAPP segment**, related to early-stage upstream projects and certain group administration costs

Source: Company information; Argus

1) Alternative Performance Measures (APMs). EBITDA/tonne is an APM for the ASL segment only and not for the CAPP segment
2) Short-term leasing of USD 10m was classified as finished goods sold and consumables used in 2019 in relation to implementation effect of IFRS 16. This is capitalized from 2020 and onwards

YCA's EBITDA is impacted by movements in ammonia prices

Fluctuation in ammonia prices and lag-impact on YCA's EBITDA/t[1]



Robust business with attractive earnings even at low ammonia prices, illustrated by the **"EBITDA margin floor" at ~USD 30/t** during 2020 (I)

For a share of the volumes, **YCA has a direct exposure to ammonia price effects**, as illustrated by 2 recent periods, H1 2021 (II) and around year-end 2021 (III):

1) **Direct price effect:** Higher ammonia prices supports higher profitability since **YCA's margin** for certain volumes is **based on a percentage-reference to ammonia prices**
2) **Volatility effect:** Ammonia revenue and **costs are typically recognized based on current ammonia prices**. However, revenue from sales to Yara European plants and costs of sourcing from Yara's European plants, is based on a **~1-month lag**

Source: Company information; Argus
1) Based on Yara's segment reporting for the Clean Ammonia segment
2) The price increases are passed on to Yara's production plants, but with a time lag of ~1 month

EBITDA sensitivity to changes in ammonia price and sales volumes

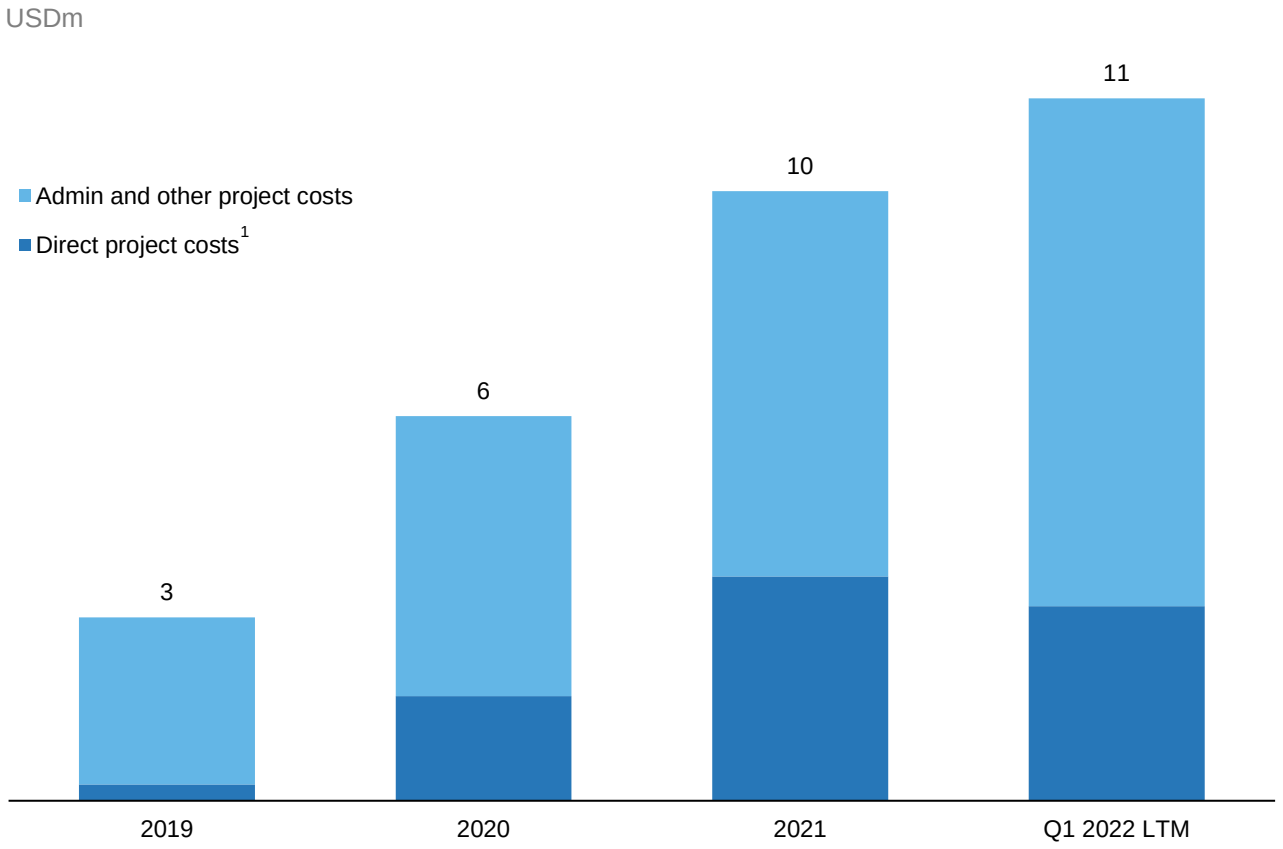
Type of sensitivity		Scenario	Illustrative EBITDA impact	Basis
Price	Underlying price sensitivity ("Direct price effect")	↑ USD 100/t in NH3 market price	↑ ~USD 12m *(Positive impact)*	Annual
Price	Short-term volatility ("Temporary effect")	↑ USD 100/t in NH3 market price	↓ ~USD 5m *(Negative impact)*	Monthly
Volume sensitivity		↑ 0.5mT volumes of transported NH3	↑ ~USD 15-20m *(Positive impact)*	Annual

One-off effects that are temporary/reverses assuming that prices revert to "starting point"

Source: Company information
Note: Based on the structure and composition of YCA's contracts and trading routes, as well as the prevailing ammonia market structure, as of the date of this presentation

As of today, CAPP is primarily comprised of costs related to upstream projects and admin/HQ

Other operating expenses (CAPP)



Comments

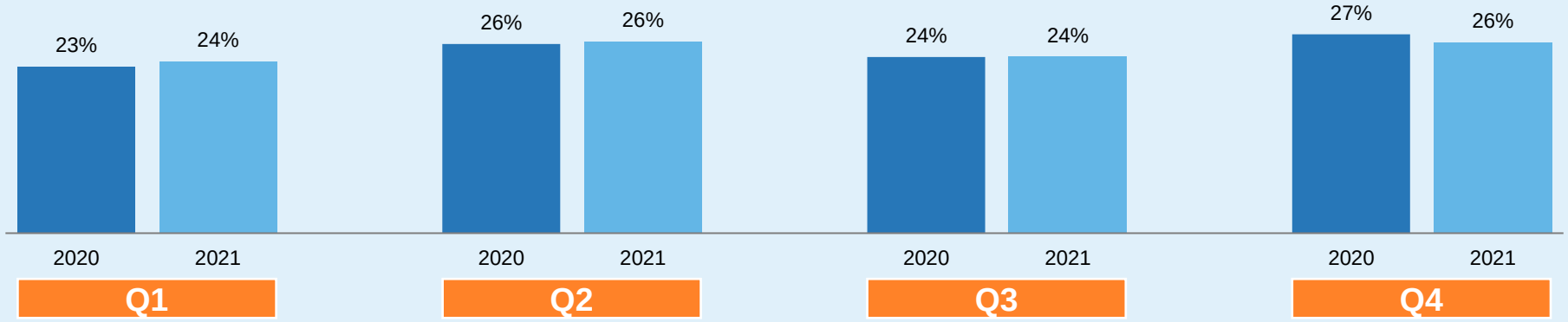
- CAPP segment includes **costs related to early-stage upstream projects** as well as **certain group administration costs**
- Early phase project development costs are **expensed until the project has passed principal investment decision**, after which costs are capitalized
  - During 2021, YCA started to capitalize certain project-related costs for Skrei
- **Group administration/HQ costs are mainly related to costs of operating the group's growth strategy and general project and market development** outside of the current ASL segment
- As YCA accelerates its project development, both **direct project costs and group administration costs are expected to grow accordingly**
- Over time, when upstream projects become operational, **CAPP is expected to be a significant contributor to volumes and earnings**

Source: Company information
1) Includes HEGRA, Skrei and Yuri projects only

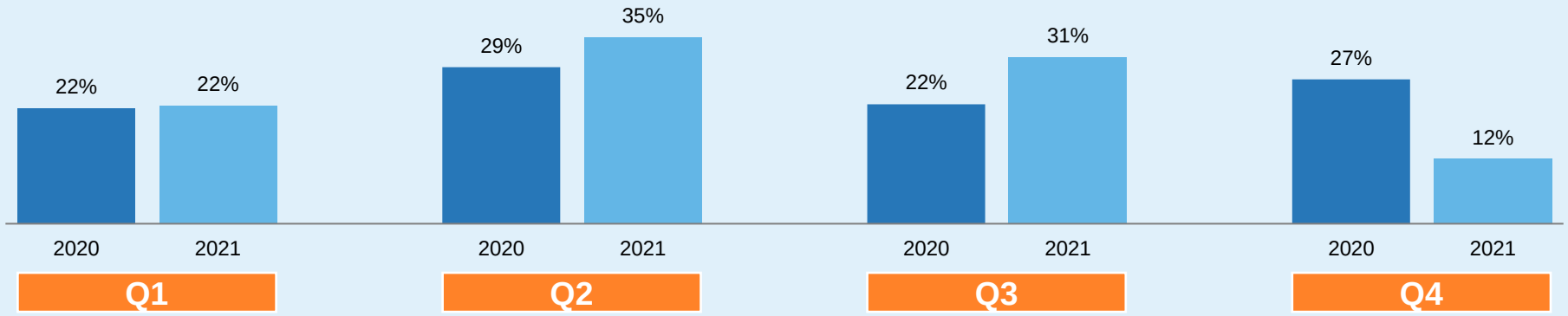
Limited seasonal volume variance as EBITDA fluctuations mainly reflect changing ammonia prices

Quarterly snapshot

Volume
(% of full year)



EBITDA[1]
(% of full year)



Source: Company information
1) Based on Yara's segment reporting for the Clean Ammonia segment

No net interest bearing debt and working capital significantly above normalized levels

Balance sheet

USDm	2019	2020	2021	Q1 2022
Intangible assets	55	55	55	55
Property, plant and equipment	240	227	221	218
Right-of-use assets	33	26	32	42
Other non-current assets	0	2	0	6
Total non-current assets	**329**	**309**	**308**	**321**
Inventories	33	24	120	179
Trade receivables	96	73	280	277
Prepaid expenses and other current assets	3	5	7	10
Gross debit positions[1]	181	133	0	113
Cash and cash equivalents	0	0	0	0
Total current assets	**313**	**234**	**407**	**579**
Total assets	**643**	**543**	**715**	**901**
Total equity	**445**	**399**	**400**	**452**
Deferred tax liabilities	1	1	7	9
Long-term lease liabilities	20	12	16	23
Total non-current liabilities	**21**	**13**	**23**	**31**
Gross credit positions[1]	68	48	80	89
Trade and other payables[5]	81	54	183	292
Current tax liabilities	4	6	0	6
Other current liabilities	10	9	12	9
Short-term lease liabilities	13	15	17	21
Total current liabilities	**176**	**131**	**292**	**417**
Total equity and liabilities	**643**	**543**	**715**	**901**
Net working capital[2]	**41**	**38**	**211**	**164**

Comments

PPE and right-of-use assets

- Fixed assets **mainly comprise YCA's 5 owned vessels** (PPE) in addition to **leasing agreements on vessels**
- **No terminals included** as these are **owned by Yara**

Net debt

- YCA is today **funded by a cash-pool arrangement** with Yara
- Shortly after the organization of Yara's Clean Ammonia assets into a newly established and wholly-owned Yara subsidiary (i.e. YCA), **YCA is expected to have approximately zero net interest-bearing debt,** excluding leases

Net working capital (NWC)

- Primarily comprising trade working capital items[3], which is directly **linked to ammonia price levels**
- Over the period, YCA's **NWC in percentage of revenue** has been relatively stable, typically in the **~5% range**[4]
- **Current NWC of USD 164m (and adjusted of USD 257m**[5]) is **significantly higher than normalized levels**, with subsequent **cash release on retracting ammonia prices**

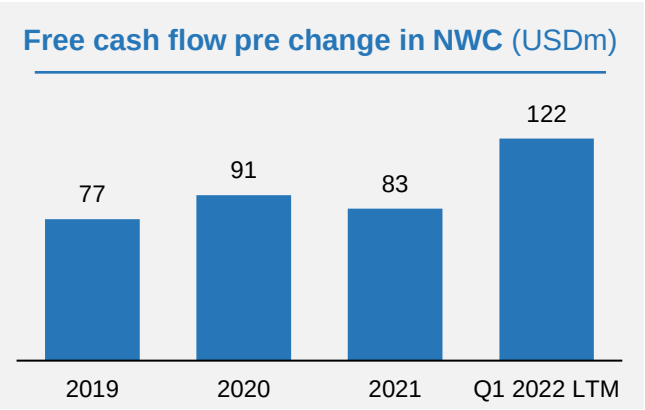
Source: Company information

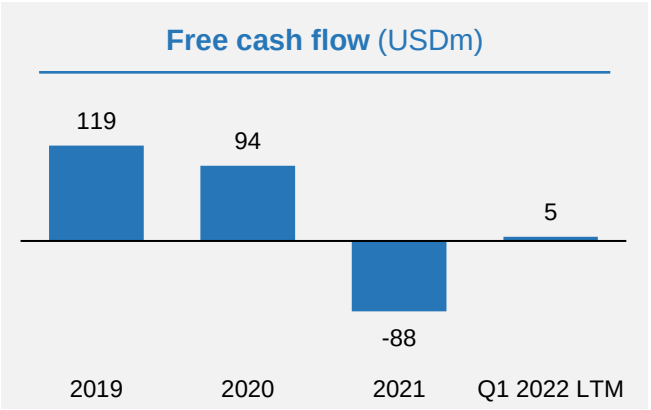
1) In Yara International cash-pooling arrangement
2) NWC is defined as trade receivables plus inventories and prepaid expenses and other current assets, less trade and other payables and other current liabilities
3) Trade working capital is defined as receivables plus inventories, less trade and other payables
4) NWC as % of revenue calculated as average NWC over the year (year start and year end) divided by the revenue for the year
5) USD 93m of overdue payables as of Q1 2022, which will be retained by Yara due to sanctions against Russia and certain Russian entities and individuals, as well as Belarus

Generally strong cash generation is currently impacted by NWC build-up from high ammonia prices

Key cash flow items

USDm	2019	2020	2021	Q1 2022 LTM
Income before tax	**80**	**81**	**88**	**126**
Depreciation and amortization	24	34	38	42
Income taxes paid	-15	-3	-6	0
Other[1]	-1	-1	-4	-10
Operating cash flow pre change in NWC	**88**	**110**	**116**	**157**
Capex	-1	0	-9	-8
Payments of lease liabilities[1]	-10	-19	-25	-27
Free cash flow[2] pre change in NWC	**77**	**91**	**83**	**122**
Change in NWC[3]	42	4	-171	-116
Free cash flow[2]	**119**	**94**	**-88**	**5**





Comments

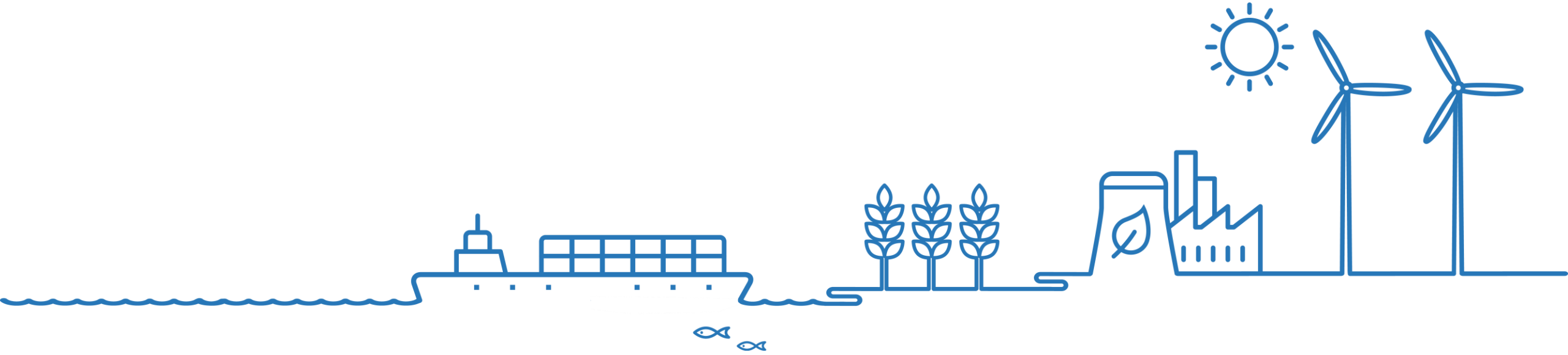
- **Operating cash flow pre change in net working capital has increased gradually since 2019**
- **Limited capex over the period**. Increase in 2021 primarily related to dry docking of own vessels
- Lease payments have increased primarily due to **more vessels to support the operation following dry docking of owned vessels**
- **Net working capital is largely linked to the ammonia price**, driving a significant increase in 2021 and Q1 2022 LTM
- **Higher cash taxes in 2019** due to **changes in tax regime/rates** relating to Switzerland resulting in some **one-off effects**
- **Cumulative conversion of EBITDA into free cash flow[4] of >70%** from 2019 to 2021
- 2021 and Q1 2022 LTM **free cash flow heavily impacted by a spike in NWC**

Source: Company information
1) Interest on lease liabilities are included in "other"
2) Free cash flow is an APM defined as operating cash flow less capex and lease payments, and are consequently excluding financing transactions with Yara
3) Deviations in change in NWC versus delta from balance sheet are primarily related to currency effects
4) Free cash flow pre change in NWC

Financials and financial targets

1 Historical financials

2 Financial targets

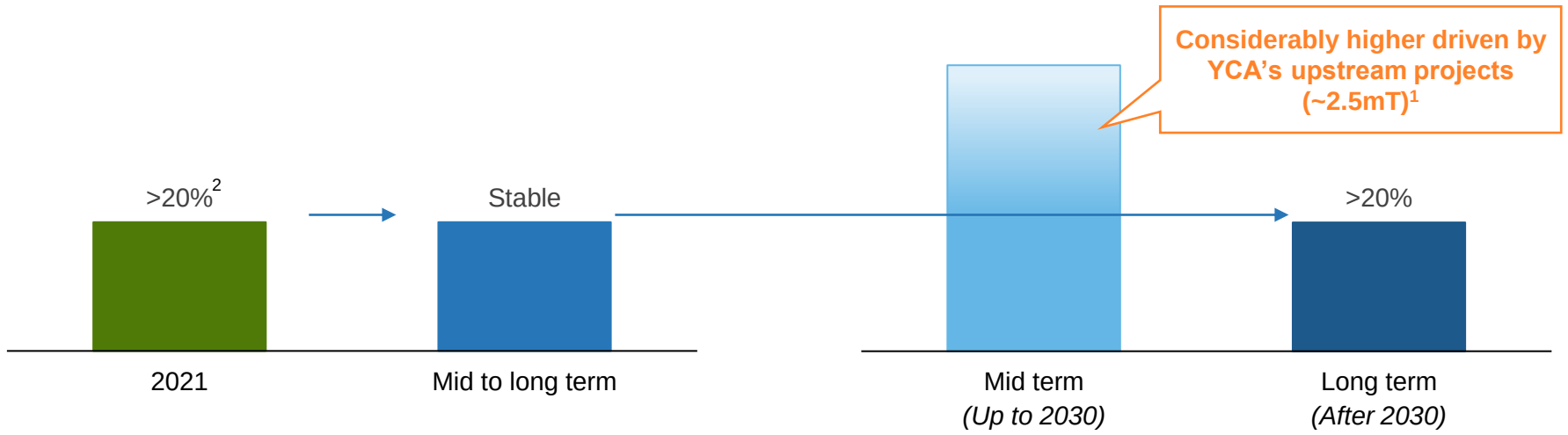


Segment financial targets
Ammonia Sales and Logistics (ASL) (1/2)

Conventional applications (ASL 1)

New applications (ASL 2)

YCA market share in traded ammonia *(%)*



Stable volume development in conventional applications expected where YCA targets to **maintain its market-leading position and replace any converted volumes** (i.e. to blue or green) with additional grey volumes

YCA targets to **extend its market leading position to the rapidly growing clean ammonia market, capturing high volume growth**. **YCA aims to sell all asset-backed production**, with a volume target of ~2.5mT[1] by 2030, plus additional volumes from third-party sourcing. Of these volumes, 300kT are expected to be captively supplied for downstream use in green and blue fertilizers

Attractive potential for profitable growth, combining YCA's leading platform with development of clean ammonia market

Source: Company information

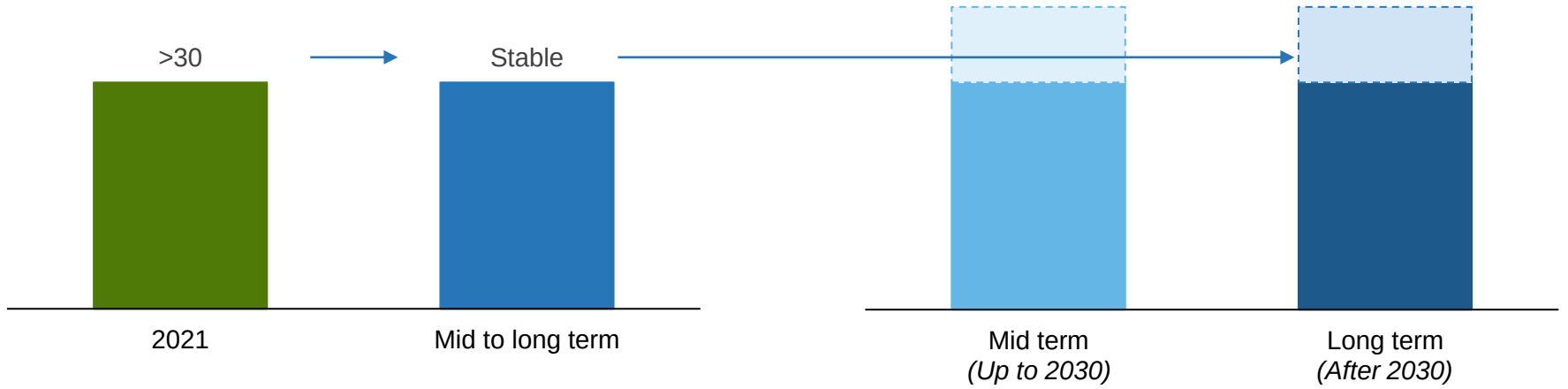
1) Assuming 100% offtake from upstream projects for YCA. Under the current agreement for Sluiskil, YCA has the right to offtake 50% of the gross volume of ~400kT plus any surplus from Yara's 50% share of the volumes
2) Based on volumes of traded ammonia in 2021 - Argus market study (2022)

Segment financial targets
Ammonia Sales and Logistics (ASL) (2/2)

Conventional applications (ASL 1)

New applications (ASL 2)

Profitability
(EBITDA USD/tonne)



Robust margins for conventional applications **supported by YCA's existing margin drivers**. Accordingly, YCA targets **EBITDA margins >30 USD/t**

For **new applications** (i.e. excluding the fertilizer segment), YCA expects **~10 USD/t higher margin than in ASL 1 from optimization from increased scale** and to **cover additional investments**. For **clean ammonia** in the **fertilizer segment**, YCA expects **materially lower margins** given **largely captive volumes** and hence **different level of involvement** from YCA

Attractive potential for profitable growth, combining YCA's leading platform with development of clean ammonia market

Source: Company information

Segment financial targets
Clean Ammonia Projects and Production (CAPP)

Selected upstream projects (to 2030)

Type	Project names	Framework in place	Volume (kT)[1]	Type	YCA capex	Indic. start of production
Blue ammonia	Grey to blue (CCS) North America	✓	~600	Offtake	-	2026 – 2029
	Sluiskil CCS Europe	✓	~400	Offtake	-	2025 – 2029
	New project North America	✓	~1,100	Majority stake	USD 1.5 – 1.8bn[2]	2028 – 2030
Green ammonia	HEGRA Norway	✗	~400	Majority stake	TBA[3]	2027 – 2030
	Skrei (pilot project) Norway	✓	~20	Owned	USD ~50m[4]	2023
	Yuri (pilot project) Australia	✓	~3	Offtake	-	2025 – 2026

Ambitions and targets

Attractive returns

✓ **≥7%** after-tax real rate of return on upstream projects

Flexible ownership strategy

✓ **Investments in both blue and green projects** and in different **constellations** (majority stake, minority stake, offtake-only etc.)

Key enabler

Certificates

✓ **Mix of certificates and physical volumes** to optimize logistics and reduce carbon footprint

~2.5mT of asset-backed clean ammonia volumes targeted by 2030 with additional volumes expected from third-party sourcing

Source: Company information, based on current estimates/expectations

1) Assuming 100% offtake from upstream projects for YCA. Under the current agreement for Sluiskil, YCA has the right to offtake 50% of the gross volume of ~400kT plus any surplus from Yara's 50% share of the volumes
2) Capex calculated based on an assumed 70% ownership for YCA
3) Framework, including sufficient level of government support, yet to be concluded for HEGRA. Company to revert on capex
4) Net capex after ENOVA support, which is still subject to ESA approval

Group financial targets and outlook

Capex	▪ **Ammonia Sales and Logistics (ASL 1 and 2):** YCA expects to invest up to USD 400m in infrastructure related to mid- and downstream until 2030[1] ▪ **Clean Ammonia Projects and Production (CAPP):** Current project pipeline with total capex of USD 1.6 – 1.9bn[2] + HEGRA[3] until 2030 ▪ Minor maintenance capex expected until start of production from the major upstream projects towards the end of the decade
Tax	▪ Long-term corporate tax rate of ~20%, representing a blend of respective corporate tax rates in Norway, Switzerland and US ▪ Tax rate lower at present (14-15%). Production growth expected to increase tax rate towards the end of the decade
Capital structure and allocation	▪ YCA may raise equity to support its accelerated YCA's growth plans ▪ YCA aims to establish a standalone capital structure that is independent from Yara. The final decision will be ratified when further funding is required, and will depend on market conditions at that time ▪ Flexibility to consider various structures to optimize funding, including partner/co-investments, minority stakes, project finance etc. ▪ Over the near to mid term, YCA expects to maximize value creation by executing on its growth plan. Accordingly, YCA's current intention is to re-invest any cash flows that it may generate

Source: Company information

1) Assumes that the future proportion of owned vs. leased vessels remains aligned with today's fleet ownership structure
2) Capex calculated based on an assumed 70% ownership for YCA
3) Framework, including sufficient level of government support, yet to be concluded for HEGRA. Company to revert on capex

Summary of YCA's historical financials and targets

2 reporting segments: ASL has driven robust historical performance while CAPP is currently a cost center that is expected to contribute to future earnings

ASL: Performance driven by sales volumes as well as both "direct" and "temporary" earnings effects from changes in ammonia price

Balance sheet: Robust balance sheet with no NIBD (expected) combined with NWC significantly above normalized levels, providing a potential cash release

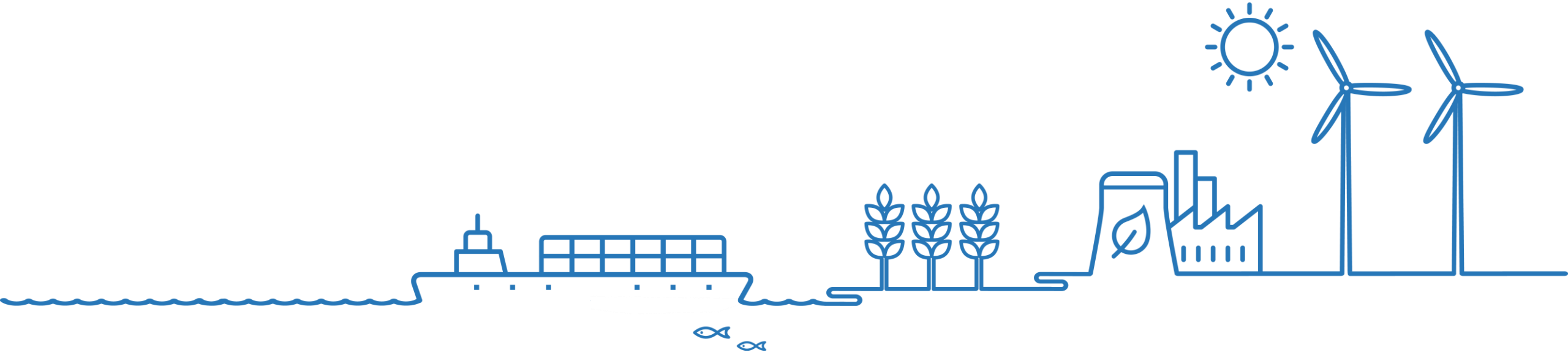
Cash flows: Historically high conversion of EBITDA into cash flows, however, current spike in ammonia prices have caused a build-up in NWC

Financial targets: Well-defined targets anchored on profitable growth as the clean ammonia market develops

Source: Company information

Appendix – Market outlook

1. **Demand side perspectives**
2. **Supply side perspectives**

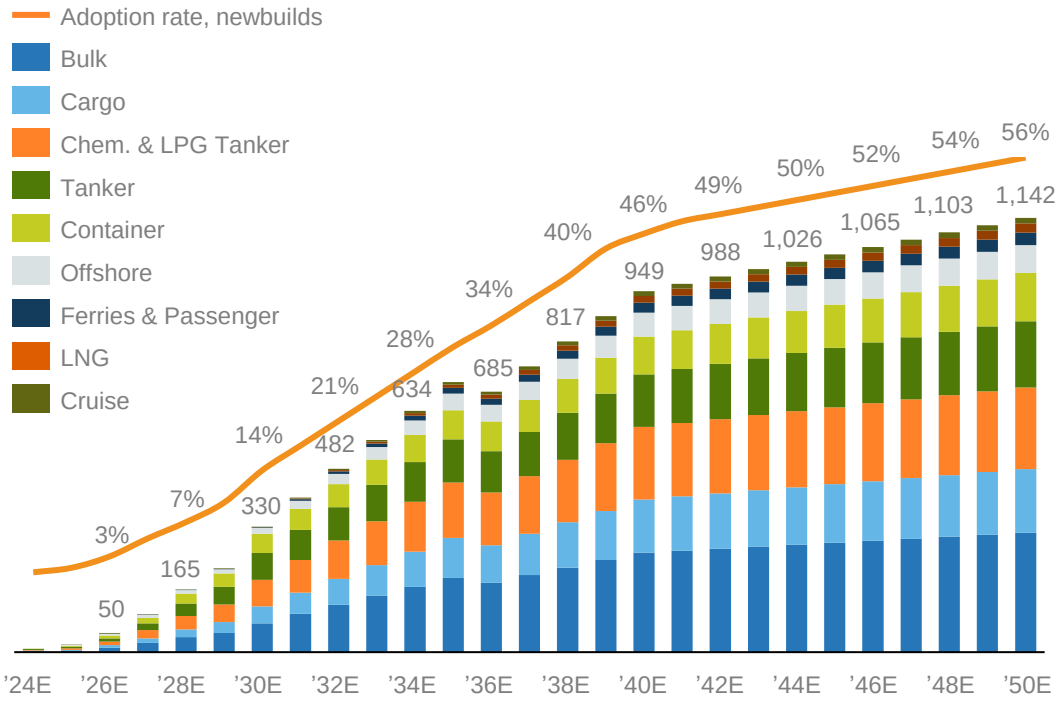


Adoption pace expected to increase rapidly after introduction of the first vessels in 2024

30% of the global fleet expected to be ammonia fuelled by 2050

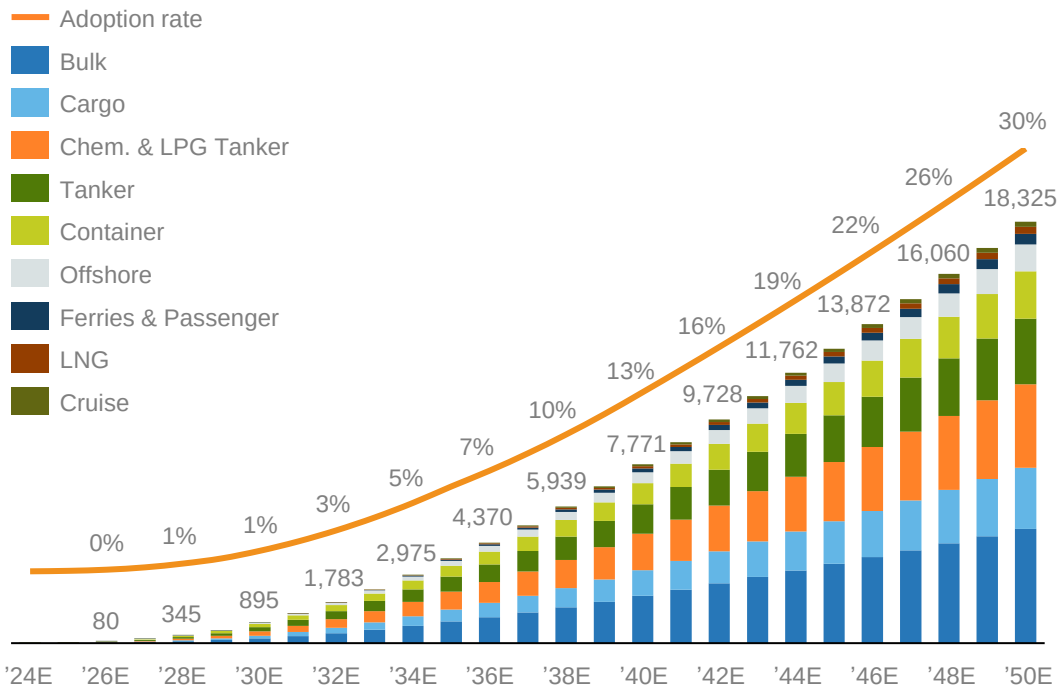
Ammonia newbuilds and retrofits per year

Number of ammonia fuelled[1] vessels built and retrofitted per year



Ammonia fleet development

Number of ammonia fuelled[1] vessels in fleet



Several vessels owners report that they are ready to order ammonia ships once the technology is proven.
The adoption percentage on newbuilds is thus expected to increase fast between 2030 and 2040. Retrofit share expected to be ~10%

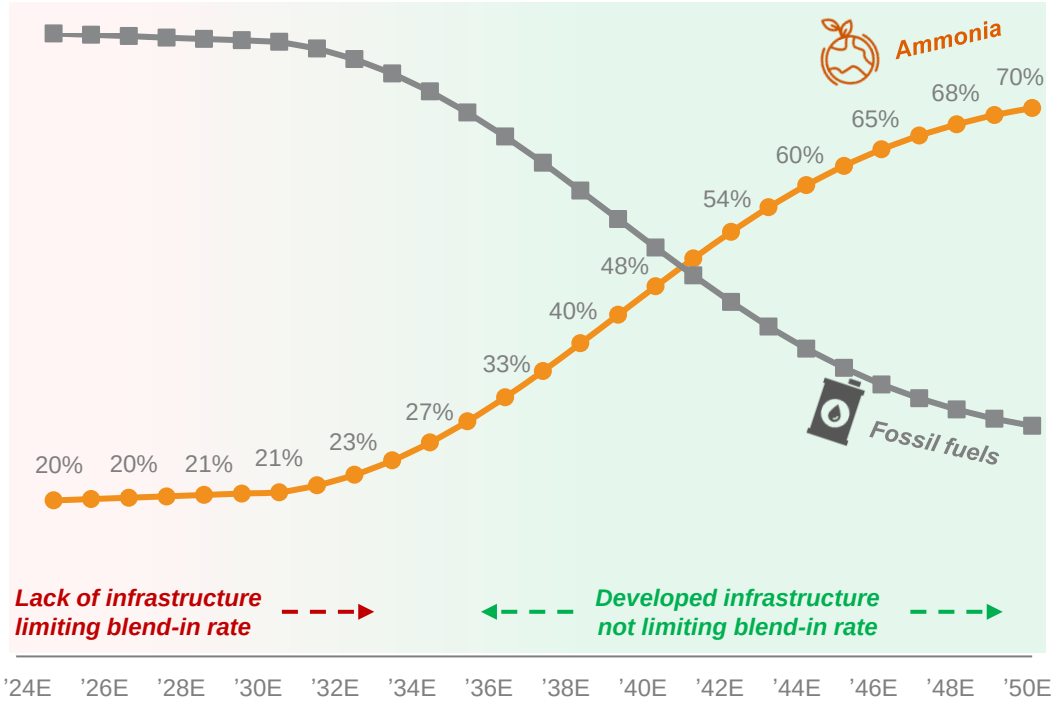
Source: Arkwright market study 2021
1) All vessels capable of running on ammonia

Ammonia blend-in rate expected to start at ~20%

Improved infrastructure, tighter regulations and improved economics are expected to gradually drive the blend-in rate upwards to ~70% in 2050

Ammonia blend-in rate

Average share of ammonia blend-in rate for total ammonia fuelled fleet



Comments

Infrastructure

- **The ammonia infrastructure is expected to be developed over time, starting in the major ports.** Thus, all new vessels will be dual fuels to add flexibility before the ammonia bunkering infrastructure is sufficiently developed on a global scale

Economics and regulations

- Vessel owners will gradually increase the blend-in rate of ammonia to minimize cost while meeting the IMO requirements for year-by-year emission reductions
- Development supported by reduced cost of ammonia

Technology requirements

- **For combustion engines, 80-85% is the current maximum share of ammonia in order to maintain an efficient combustion process**
- The introduction of ammonia fuel cells will enable pure ammonia propulsion, increasing blend-in rate further

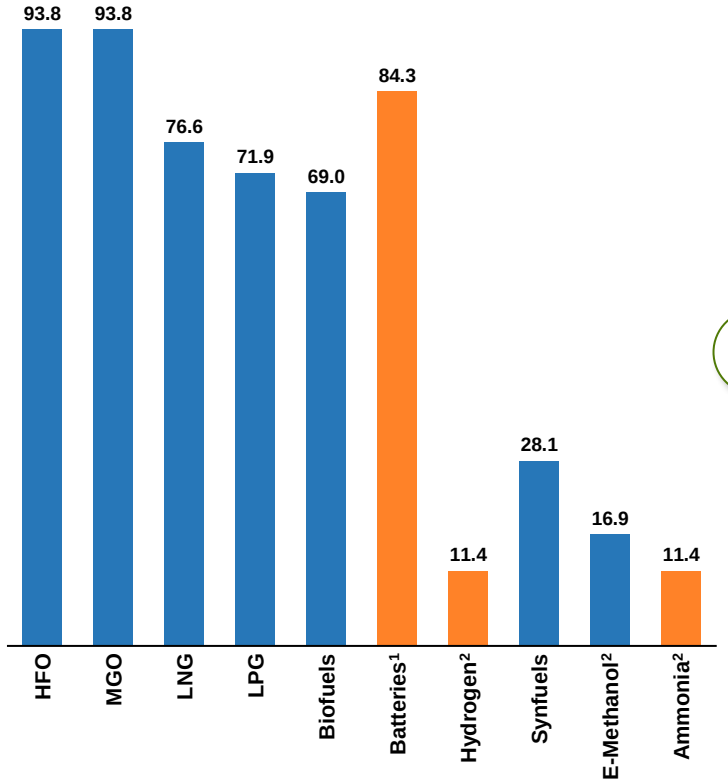
Ammonia blend-in rate expected to be limited by lacking infrastructure and economic incentives in the introduction phase.
In the longer term, blend-in percentage will be driven by a developed infrastructure and regulations tightening in line with IMO targets

Source: Arkwright market study 2021

Ammonia is the best “zero emission” shipping fuel

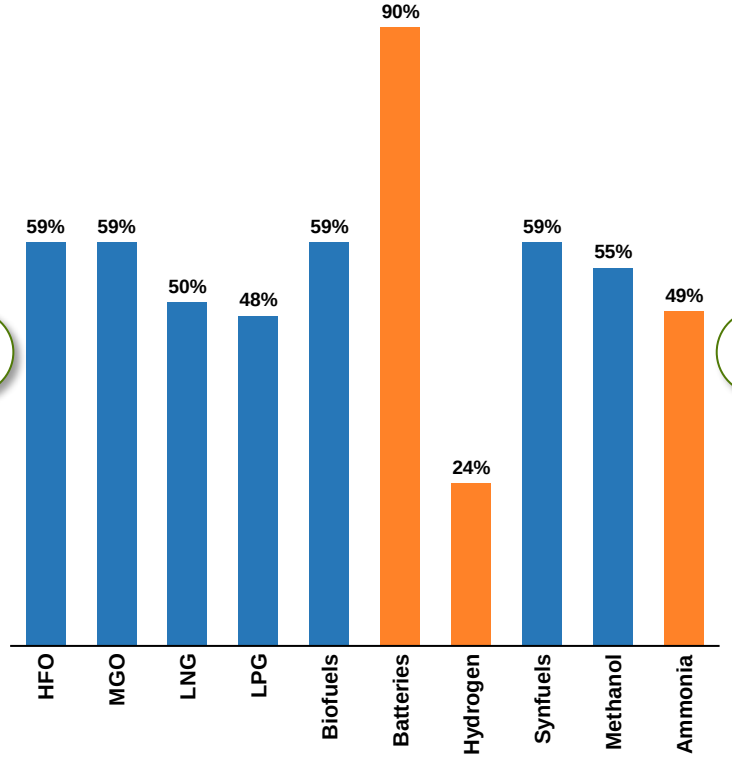
Fuel CO2 intensity

Figures in kg CO2/GJ combustion, 2035E



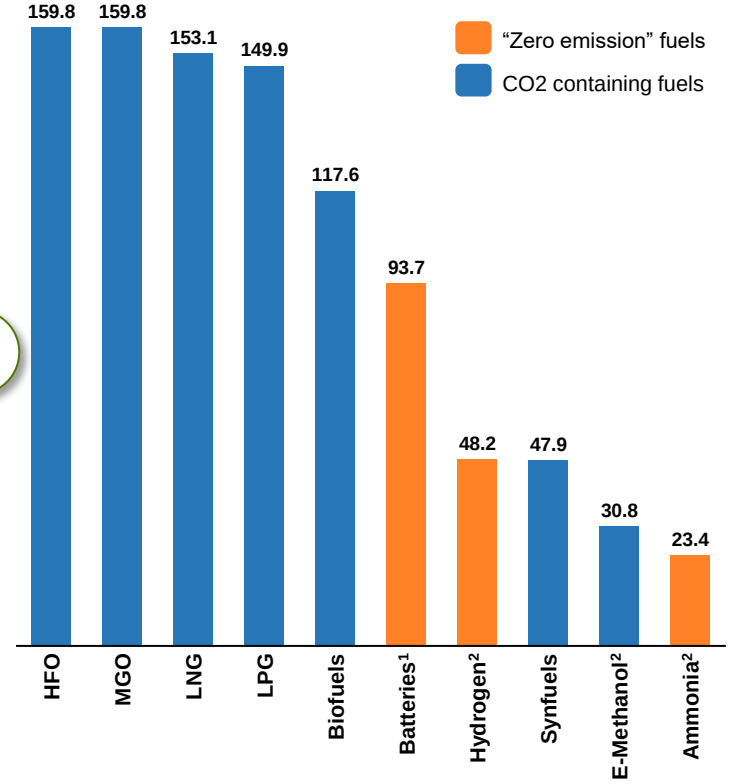
Engine efficiency

Combustion engines, 2035E



CO2 intensity (“well to wake”)

Figures in kg CO2/GJ propulsion, 2035E



Source: Arkwright market study 2021

Note: “Zero-emission” fuels refer to fuels that have zero emissions when combusted/used on the ship; the CO2-numbers indicated show the life-cycle emissions. For ammonia the mix of green and blue ammonia expected in 2035 is assumed

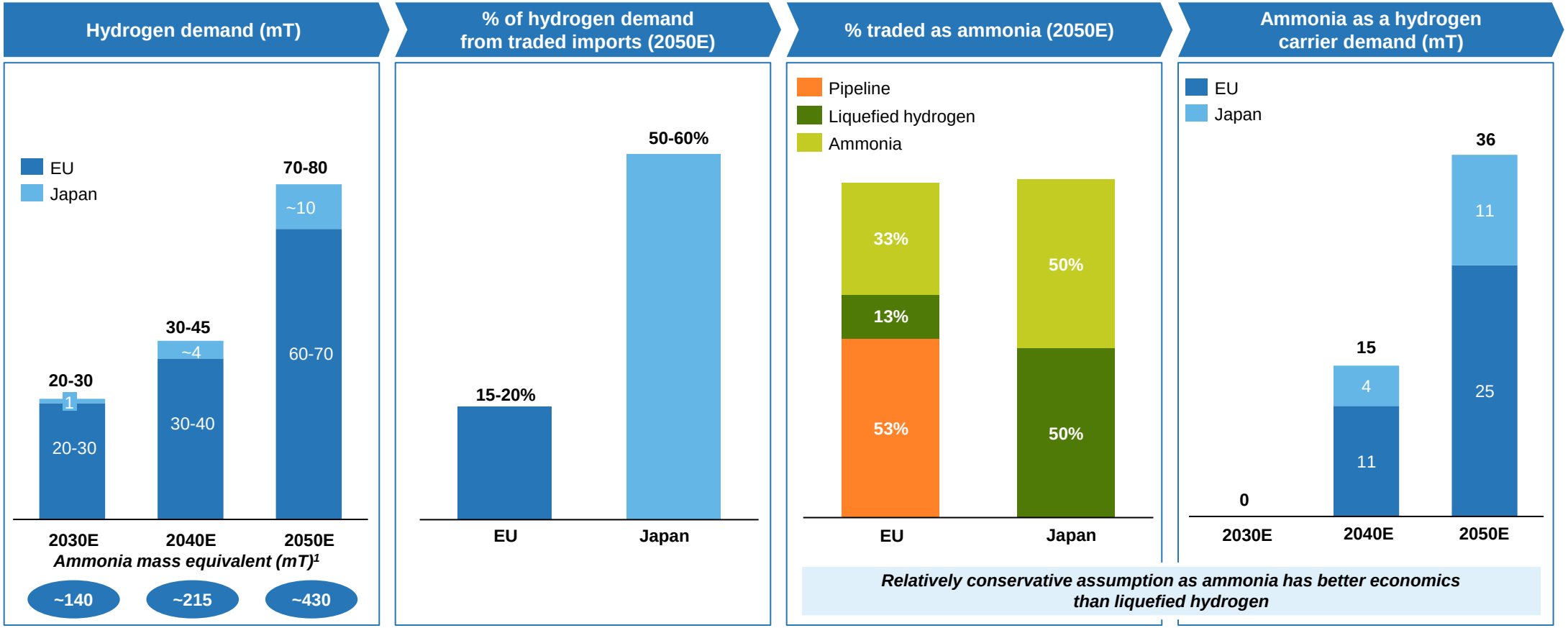
1) Assuming EU 4th tier (marginal CO2 equivalent capacity) electricity supply to charge batteries – renewable power source would equal ~8 kg CO2 per GJ propulsion (battery production emission)
2) Non-grid connected renewable power as electricity source

Overview of fuel cost parity between MGO and blue ammonia

	Historical average 2020-2021			Current market prices			Future assumptions		
CO2 tax (USD/t)	MGO (USD/GJ)	Blue ammonia (USD/GJ)	MGO vs. Blue ammonia	MGO (USD/GJ)	Blue ammonia (USD/GJ)	MGO vs. Blue ammonia	MGO (USD/GJ)	Blue ammonia (USD/GJ)	MGO vs. Blue ammonia
0	23	45	-99%	43	119	-176%	32	57	-78%
50	29	46	-59%	50	121	-142%	38	58	-52%
100	36	48	-34%	56	122	-117%	45	60	-33%
150	42	49	-16%	63	123	-96%	52	61	-18%
200	49	51	-3%	70	125	-79%	58	62	-7%
250	56	52	+6%	76	126	-66%	65	64	+1%
300	62	53	+14%	83	128	-54%	71	65	+9%
Brent price	57 USD/bbl			110 USD/bbl			USD 80/bbl		
MGO price	552 USD/t			1,056 USD/t			750 USD/t		
Ammonia price	379 USD/t[1]			1,100 USD/t[2]			500 USD/t for blue ammonia[2]		

Source: Arkwright market study 2022
1) Black Sea
2) NWE CFR Europe

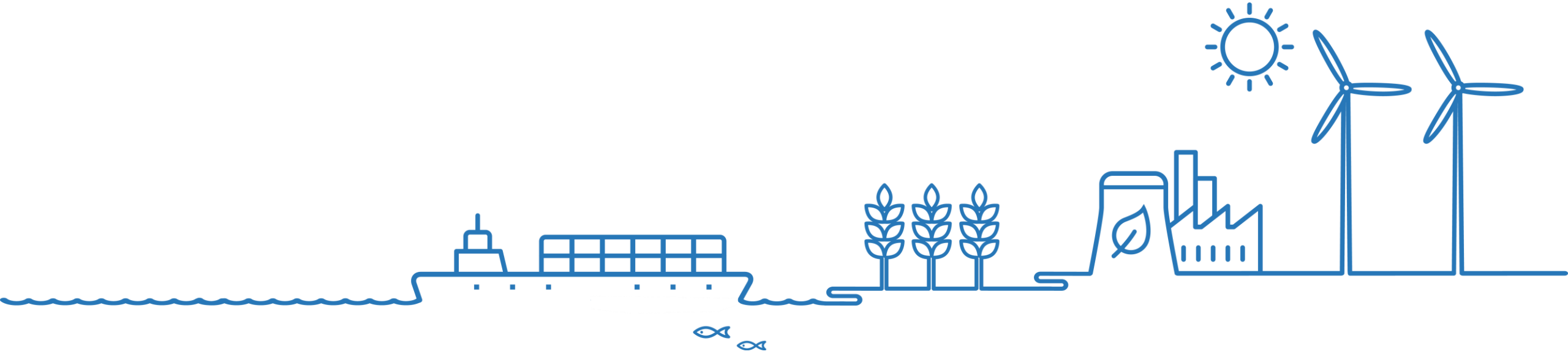
Hydrogen carrier demand outlook methodology



Source: Arkwright market study 2021
1) Limited concrete plans by governments introducing uncertainty around outlook estimates

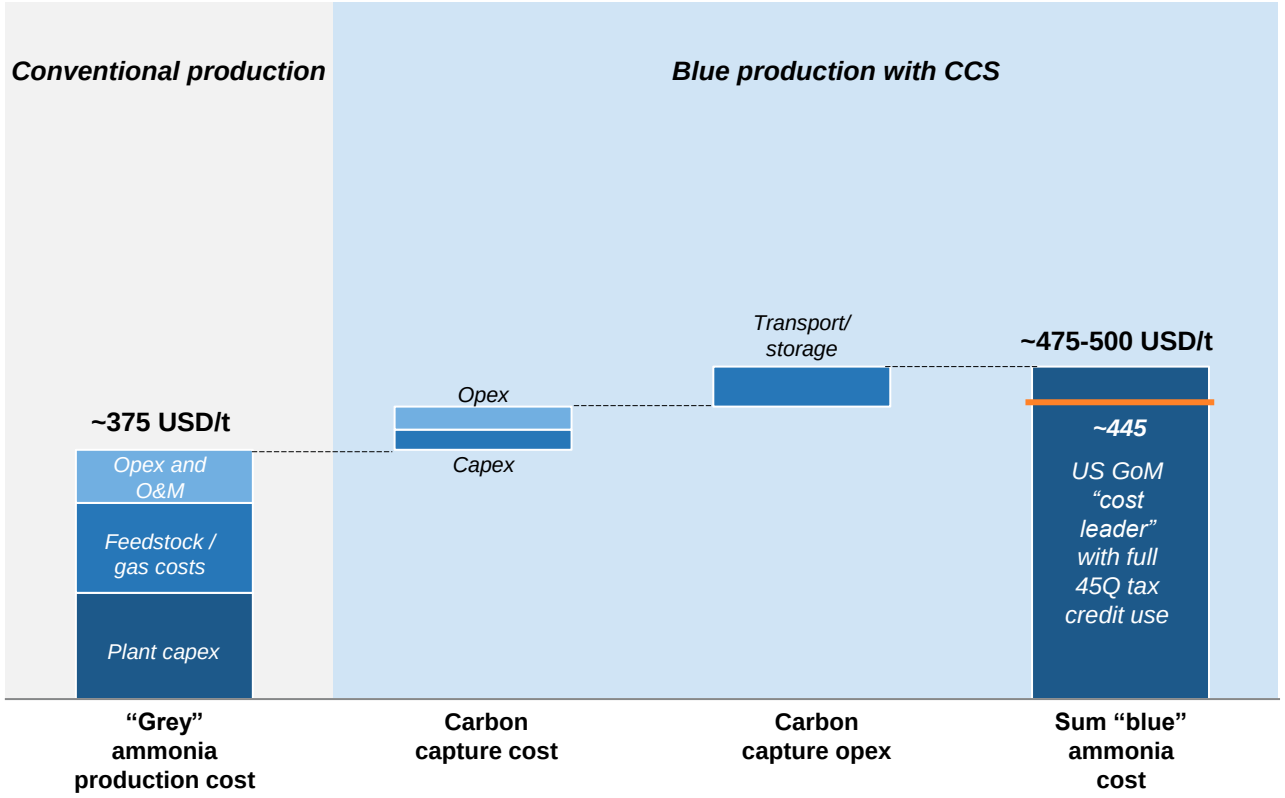
Appendix – market outlook

1. Demand side perspectives
2. Supply side perspectives



Grey and blue ammonia production costs

Long-term production cost (LCOA) USD/t in 2021 real terms



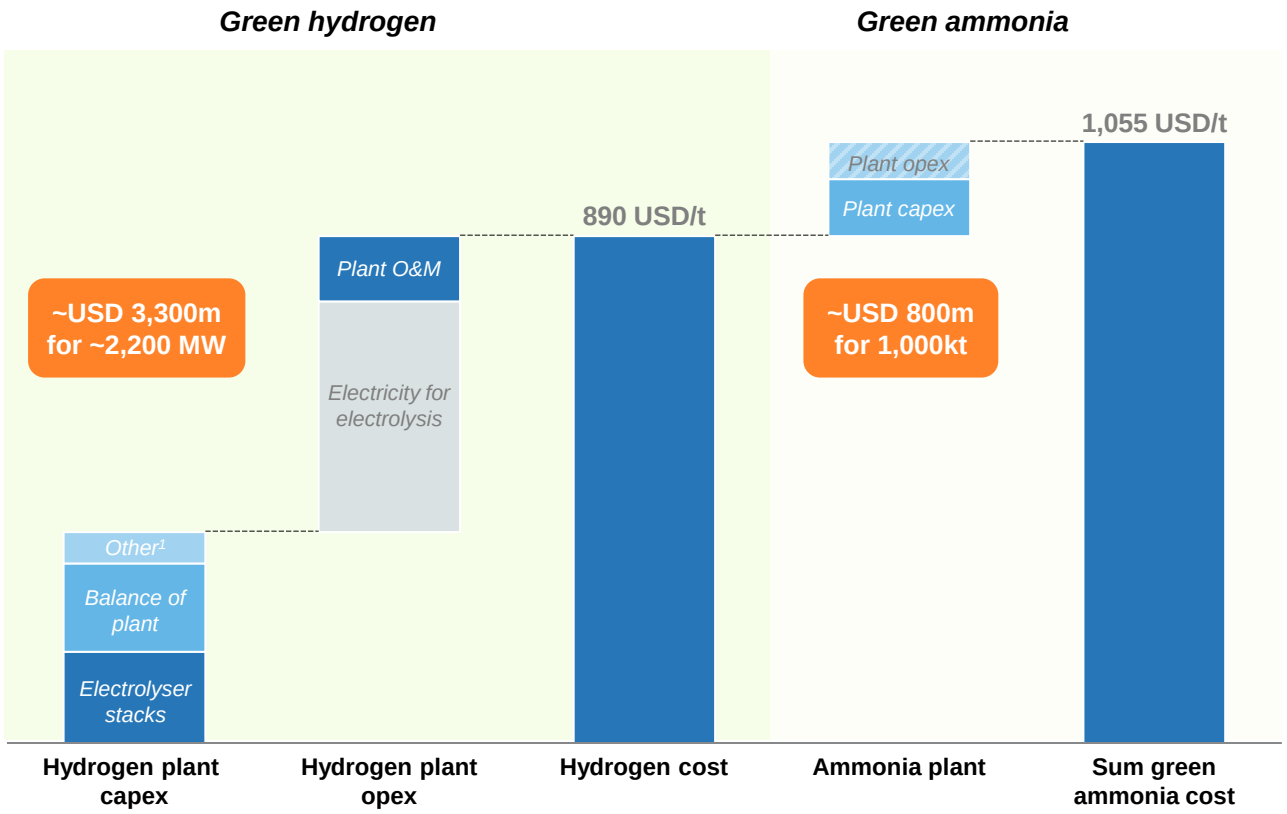
Key assumptions

- Traditional grey production using steam methane reforming (SMR) based on natural gas
- Long-term grey marginal cost based on North America as location for new grey plants
- Blue production with carbon capture and storage as part of the SMR process; entails adding carbon capture to existing SMR technology/facilities
- SMR plant with expected economic lifetime of 15 years
- WACC: 9% for grey, 8% for blue
- Long-term Henry Hub gas price: $4.5/mmbtu
- 1,000 kT ammonia capacity

Source: Arkwright market study 2021

Green ammonia production cost

Current production cost (LCOA) of new-build with FID in 2021, USD/t in 2021 real terms



Key assumptions

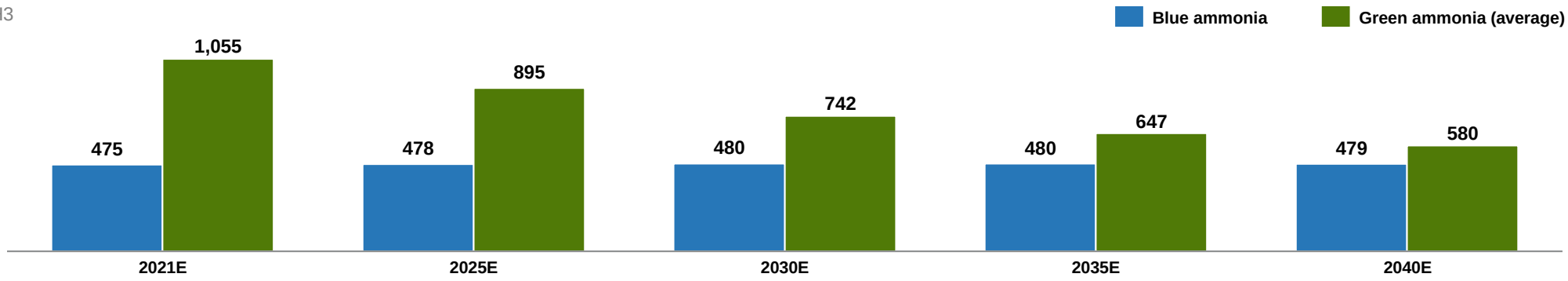
- Green production based on electrolysis with renewable energy sources
- Production in Middle East or similar country with low-cost renewables
- Using current PEM technology
- Dedicated onshore wind; 38% load factor
- WACC: 6%
- Electricity cost: 32 USD/MWH
- 1,000 kT ammonia capacity

Source: Arkwright market study 2021
1) Includes owners costs and costs for buildings

Overview of key assumptions for blue and green ammonia cost

Ammonia production cost

LCOA USD/t NH3

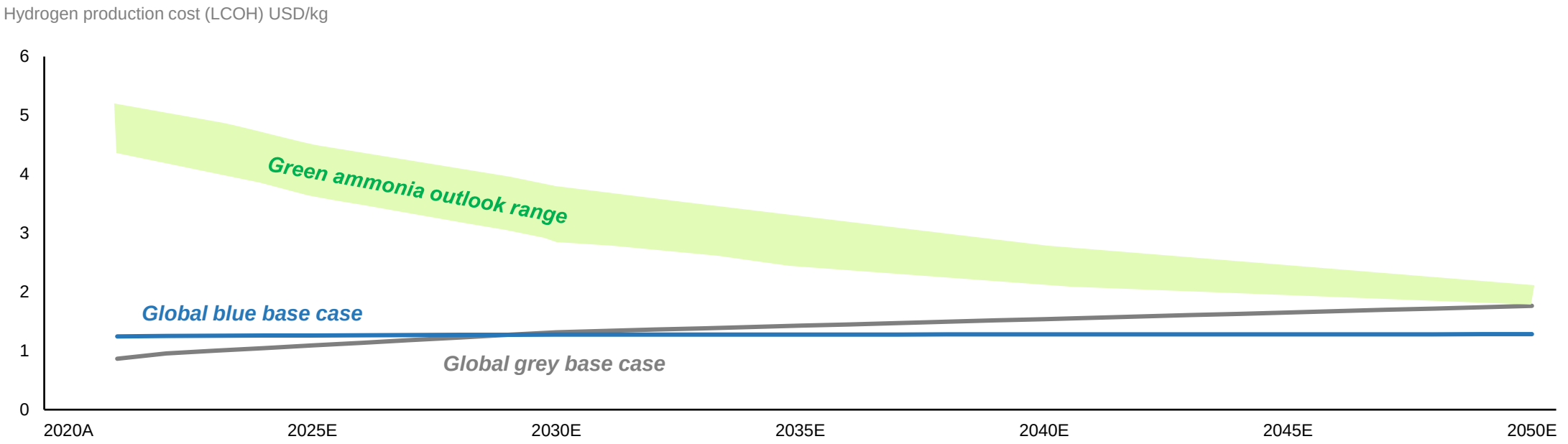


	2021E	2025E	2030E	2035E	2040E
CO2 price *(global)*	0 USD/ton CO2	25 USD/ton CO2	50 USD/ton CO2	62.5 USD/ton CO2	75 USD/ton CO2
Gas price	4.5 USD/MMBTU	4.5 USD/MMBTU	4.5 USD/MMBTU	4.5 USD/MMBTU	4.5 USD/MMBTU
CO2 cost *(capture/storage)*	40/35 USD/ton CO2	40/30 USD/ton CO2	37/25 USD/ton CO2	35/20 USD/ton CO2	35/20 USD/ton CO2
Load factor[1]	38%	42%	45%	46%	47%
Electrolyser efficiency	72%	75%	78%	80%	81%
Power price	32 USD/MWh	29 USD/MWh	24 USD/MWh	22 USD/MWh	21 USD/MWh
Electrolyser cost	490 USD/kW	400 USD/kW	320 USD/kW	250 USD/kW	220 USD/kW
BoP cost	470 USD/kW	400 USD/kW	290 USD/kW	190 USD/kW	140 USD/kW
Contingency & project cost	570 USD/kW	440 USD/kW	360 USD/kW	290 USD/kW	255 USD/kW

Source: Arkwright market study 2021

1) Equals hydrogen plant utilization

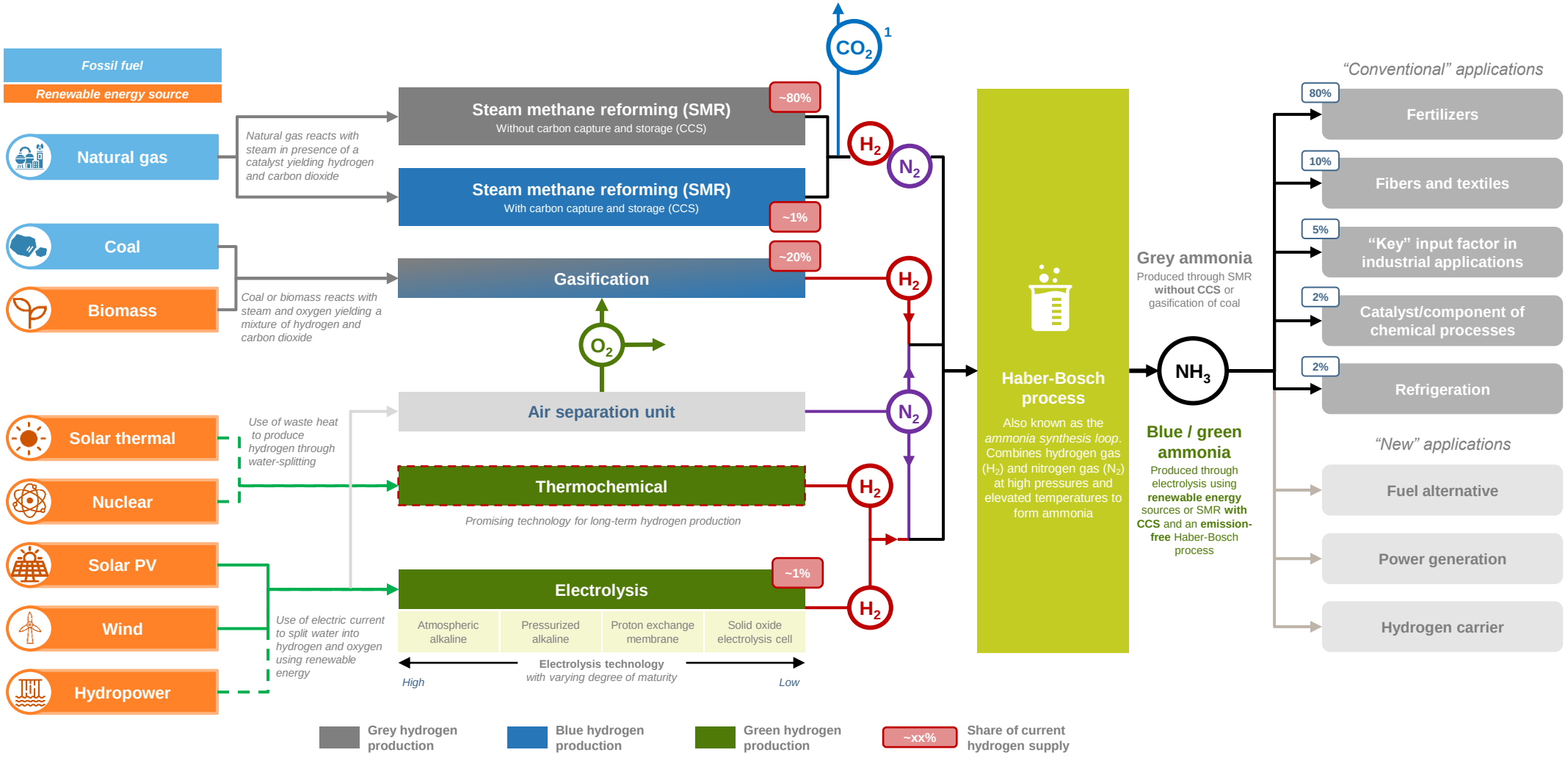
Hydrogen production costs excluding ammonia synthesis



	2020A	2025E	2030E	2035E	2040E	2045E	2050E
Green ammonia outlook range		4.0	3.2	2.7	2.4	2.2	2.0
Global grey base case		1.1	1.3	1.4	1.5	1.7	1.8
Global blue base case		1.3	1.3	1.3	1.3	1.3	1.3

Source: Arkwright market study 2021
Note: Hydrogen assumed to be supplied on stable rates corresponding to minimum 70% load factor/availability to match the technical minimum of ammonia plant (i.e. including large scale hydrogen storage)

The ammonia production process in detail

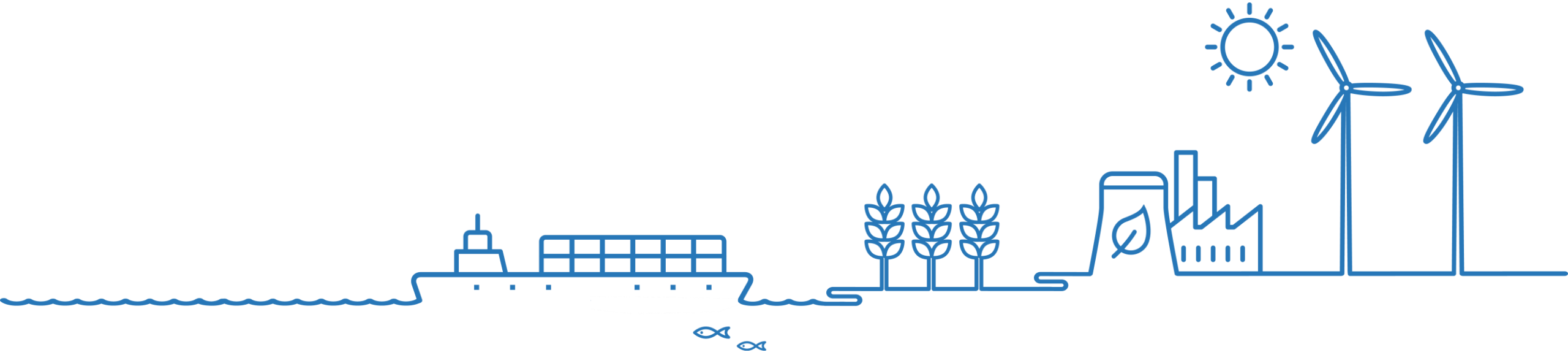


Yara Clean Ammonia

Source: Arkwright market study 2021

1) Either (partly) emitted to air, (partly) liquified and used for various industrial purposes, or fed into Urea fertilizer plants together with NH3 in integrated ammonia-fertilizer plants to produce Urea

Appendix – financials and financial targets



Income statement

USDm	2019	2020	2021	Q1 2022 LTM
Revenue from contracts with customers	1,247	1,014	2,291	3,008
Other income	0	2	1	1
Revenue and other income	**1,248**	**1,015**	**2,292**	**3,009**
Finished goods sold and consumables used	(1,133)	(884)	(2,149)	(2,828)
Payroll and related costs	(5)	(6)	(6)	(6)
Depreciation and amortization	(24)	(34)	(38)	(42)
Other operating expenses	(8)	(10)	(15)	(17)
Operating costs and expenses	**(1,170)**	**(934)**	**(2,208)**	**(2,892)**
Operating income	**78**	**82**	**85**	**117**
Interest income and other financial income	5	1	0	0
Foreign exchange gain	1	1	5	10
Interest expense and other financial items	(4)	(3)	(2)	(2)
Income before tax	**80**	**81**	**88**	**126**
Income tax expense	(8)	(7)	(12)	(17)
Net income	**72**	**74**	**76**	**108**

Source: Company information
Note: quarterly figures are unaudited accounts

Illustrative model for new blue asset in North America

Selected company assumptions

Volume	~1,100kT (100%)
Gas efficiency	30-33 MMBTU/t NH3
CO2 emissions from NH3	2.0 t CO2/t NH3
CO2 capture rate	90% (ATR technology)
Variable production costs	~USD 25/t
Fixed production costs	USD 20-30m

Illustrative model: Calculating EBITDA run-rate basis (USDm) – 100% basis[1]

Source: Company information
1) P&L impact to be scaled according to equity stake in project