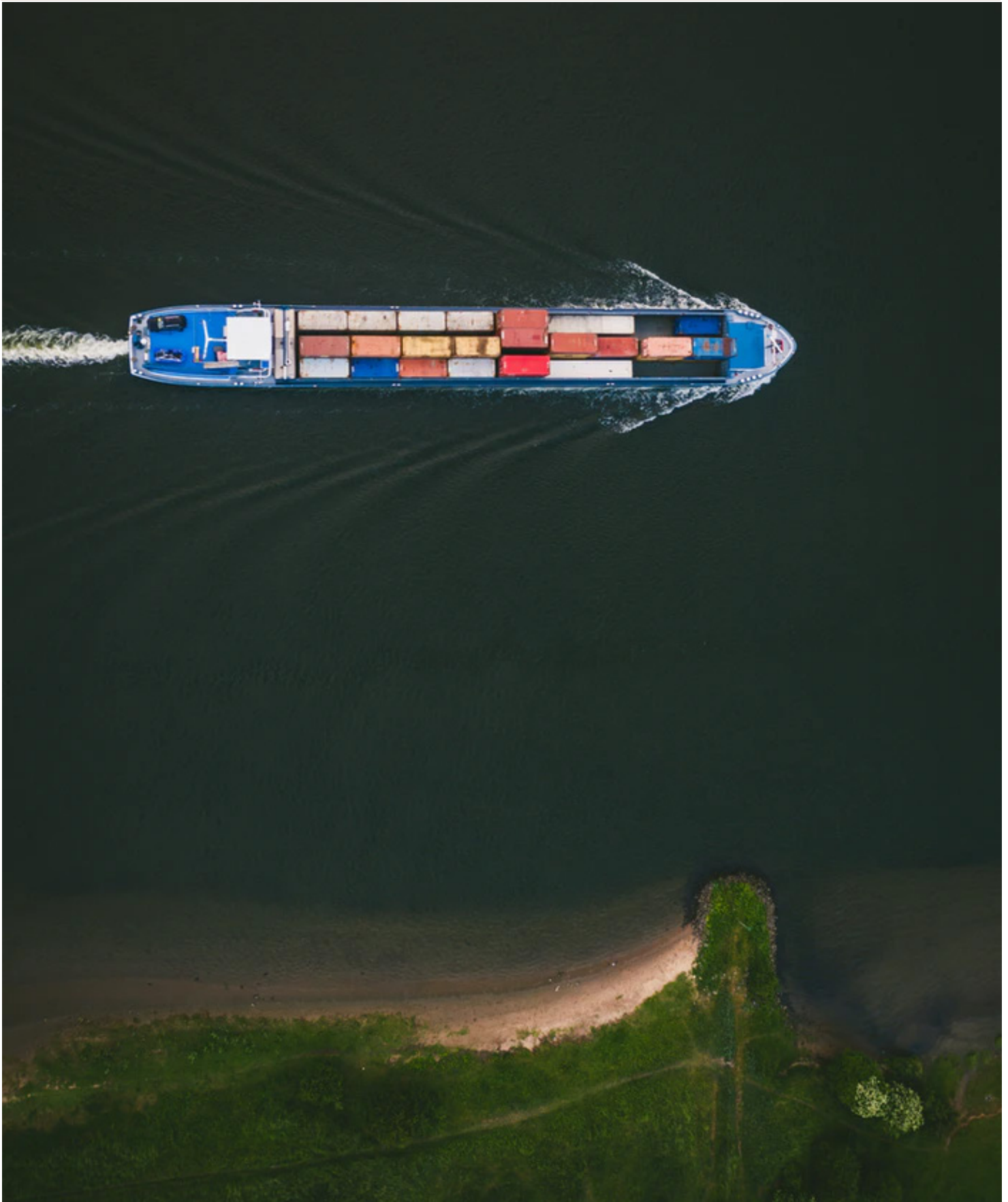


# European Port Logistics- Where Next To Invest?



## What is impacting demand for port logistics?

Globalisation, increased trade in goods and rising populations are placing increased pressure on Europe's established container ports. Automation of port operations is increasing shipping container throughput, creating new demand for logistics space as Europe's supply pipeline is struggling to keep pace.

Europe has three of the world's 20 busiest ports by container capacity; Rotterdam (11th), Antwerp, (14th) and Hamburg (18th), according to the World Shipping Council, with the European Commission estimating that 12% of goods handled globally pass through these ports. As a result, Rotterdam and Antwerp's throughput, measured by twenty-foot equivalent units (TEUs), have grown by 25% and 29% respectively over the last five years, adding pressure to

undersupplied logistics markets. Antwerp's prime logistics vacancy rate stands at c 4% and low levels of pipeline development could hamper future levels of logistics take up. Likewise, Rotterdam's future land availability and logistics vacancy rate remain low with a shortage of brownfield sites available given persistent occupier demand. Sustained occupier demand for prime space in Hamburg has lifted logistics rents by 4.3% year on year (yoy) to €72 per sq m at the end of Q3 2019.

However, there are rising concerns as to whether future logistics space around Europe's already established ports can be delivered at a sufficient rate to meet growing demand. In Rotterdam, the vacancy rate is now only 6% and rising local market "NIMBY"ism (not in my back yard) combined

with tightened restrictions on building permits, is preventing new development from keeping pace with demand, as latest data indicates that extra-EU28 exports grew by 4.4% (yoy) in 2019.



**+0.46% pa population growth forecast for the Netherlands over the next five years.**



**14.5 million containers handled through the port of Rotterdam in 2018.**

## European Port Logistics Opportunity Index (EPLOI)

To assess where in Europe we see the strongest investment opportunities for port logistics, Savills Research has developed the European Port Logistics Opportunity Index (EPLOI). The index measures the 15 busiest container ports in Europe and draws upon property metrics (logistics rental growth, vacancy rate), demographics metrics (minimum wage, population forecasts, trade growth, ease of doing business) and infrastructure metrics (railway performance index, size and growth of container port capacity, motorway length per capita) to identify emerging trade routes and the strongest opportunities for logistics investment around Europe.

### Demographics

Availability of cheap warehouse labour is one of the key determinants of expansion for logistics operators. Migration flows across Europe, attracted by higher wages due to a shortage of labour

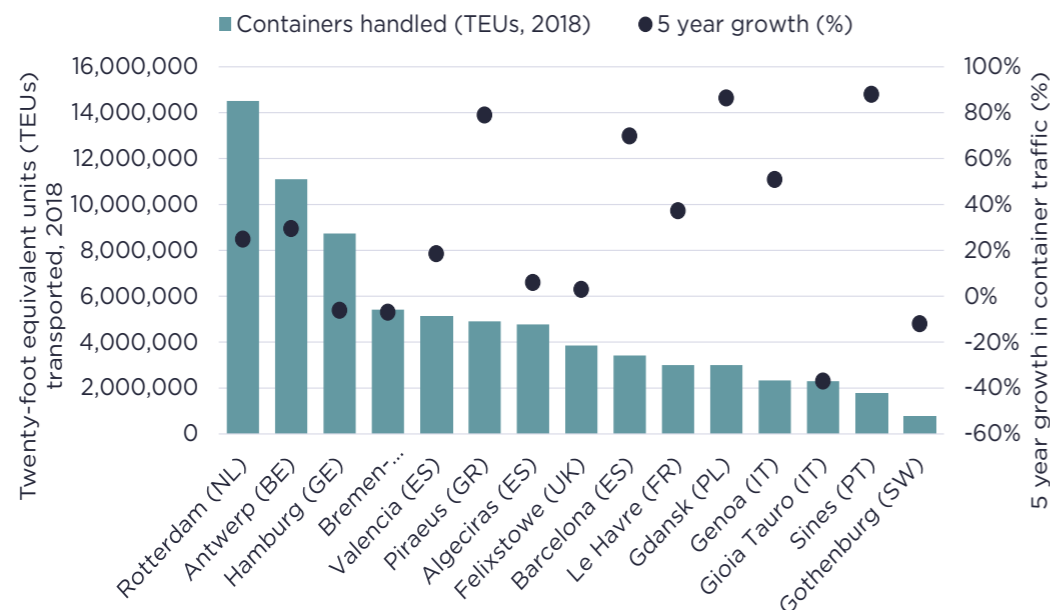
in developed Western European markets, such as the Netherlands and Belgium. Ukrainian and increasingly, Nepalese workers are now working in Polish warehouses on short-term contracts, filling the void left by those workers who have already migrated west. Over the next five years, the Netherlands (+0.46% pa), Belgium (+0.36% pa) and the UK (+0.34% pa) are expected to witness the fastest population growth, whilst Greece (-0.38% pa), Portugal (-0.28% pa) and Italy (-0.18% pa) are forecast to see population decline.

Global populism and rising protectionism have posed a threat to growth prospects in recent years. However, according to OECD, Poland (+4.3% pa) and Greece (+3.6% pa) are forecast to witness the highest rates of international trade growth between 2020-21, which will increase container throughput in Gdańsk and Piraeus. UK international trade is expected to grow only 1.2% pa during this time, the lowest in Europe.

Ports add an additional phase in the supply chain of goods. Once containers are unloaded at the ports, they are either carried by freight train/ inland barge or HGVs to distribution centres/ city ports. From here, the goods are relocated to a regional distribution centre, before moving to either a last mile centre (for end user delivery), or directly to shops (Diagram 1).

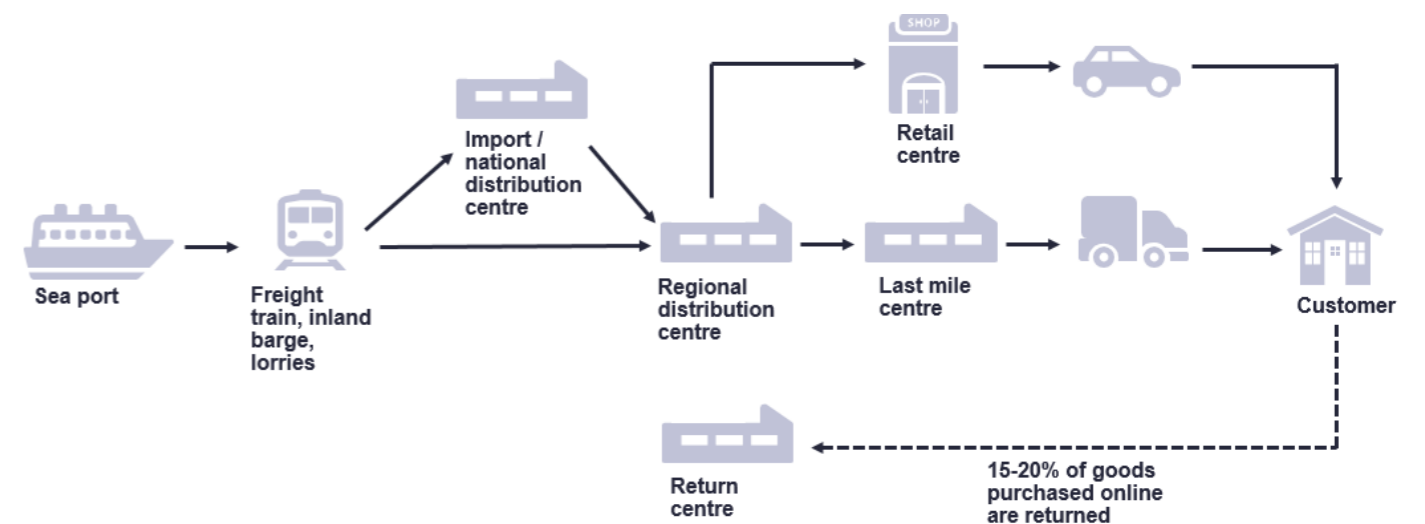
The UK has traditionally been a net importer of goods, and therefore once goods are offloaded at ports, they are transported to warehouses in the "Golden Triangle" at the centre of the country, where 90% of the UK population is accessible within a four hour drive. However, we are now seeing port operators develop warehouses outside the Golden Triangle in order to service both the national and local markets. DP World London Gateway is a good example, being the UK's fastest growing deep sea container terminal. State of the art facilities paired with excellent connectivity

**Chart 1:** Europe's container port capacity and growth



Source: World Shipping Council, Savills Research

**Diagram 1:** A port in the logistics chain



Source Savills Research





to the UK via both rail and road infrastructure, along with the largest consumer markets in Western Europe allow operational efficiencies to be maximised. Consequently, there has been an uptick in occupiers seeking to acquire warehouse space in the London Gateway Logistics Park.

In mainland Europe, however, a higher proportion of goods are exported, which makes occupying warehouse space in close proximity to the ports of higher importance. EU laws indicate heavy goods vehicle (HGV) drivers must have a 45 minute break every 4.5 hours of driving. Supply chain managers therefore require prime logistics facilities to be in close proximity to established ports to minimise travel time for export goods.

**Property**

Warehouse costs are only a small fraction of the total costs for logistics operators. Piraeus has witnessed the strongest logistics prime rental growth over the

past three years of c20%, whilst Barcelona (14%), Valencia (13%) and Le Havre (13%) also enjoyed growth in this period. Vacancy rates across the markets are also low with Valencia (2.4%) and Barcelona (3.2%) representing the most undersupplied markets.

**Infrastructure, Technology and Automation**

The current capacity of already established container ports is a key consideration for pan-European investors, with Rotterdam, Antwerp and Hamburg still accounting for the highest proportion of the container traffic in Europe. Higher container throughput growth in Antwerp and Rotterdam in recent years has largely been accommodated by improved digital technology and automation.

Rotterdam port is now preparing for autonomous vessels by 2025 as IBM and Cisco are creating a digital dashboard to replace the communications between ships and terminal

operators. This will reduce vessel waiting times through collecting data around tidal streams, wind strength and visibility. Automated cranes are now hand-picking containers from shipping containers to reduce cost and increase efficiency, with Boston Consulting Group (BCG) reporting that smart-port initiatives could double throughput at the port of Hamburg by 2025.

Railways are an essential means of transporting freight from ports to inland warehouses. BCG's European Railway Performance Index indicates that Germany, France and the Netherlands have the highest quality rail networks in Europe. Likewise, high motorway provision per capita reflects the ease of transport of goods from ports to European distribution centres by road and for these reasons, Rotterdam, Barcelona and Hamburg scored among the higher performers overall.

“ Railways are an essential means of transporting freight from ports to inland warehouses. ”

## Port Logistics Ranking

Port Logistics Market	EPLOI Score
Rotterdam (NL)	100.00
Barcelona (ES)	94.33
Valencia (ES)	89.93
Antwerp (BE)	84.14
Hamburg (GE)	79.83
Piraeus (GR)	78.84
Sines (PT)	77.26
Algeciras (ES)	76.41
Gdańsk (PL)	74.66
Le Havre (FR)	73.30
Genoa (IT)	70.52
Felixstowe (UK)	67.77
Gothenburg (SW)	67.62
Bremerhaven (GE)	66.55
Gioia Tauro (IT)	62.76

The final rankings show that Rotterdam, Barcelona, Valencia, Antwerp and Hamburg top the European rankings as the most attractive port locations for logistics investment. We anticipate increased investor demand for logistics assets in corridors linking these locations.

*Rotterdam achieved the highest overall score on the European Port Logistics Opportunity Index and scores have been reweighted to base of 100.*

1) **Rotterdam (NL)** – The Netherlands economic growth is forecast to outperform the rest of Europe and will also become Europe's fastest growing population over the next five years, which will create new demand for prime logistics space. A shortage of new development land and the tightened restrictions on building permits will help to sustain upward rental pressure in the market, and maintain low logistics vacancy. Strong freight railway links to the rest of Europe also help give Rotterdam the top spot.

2) **Barcelona (ES)** - Increased international trade has grown Barcelona's port capacity by 70% over the past five years, the fastest growth of the top five markets. Relatively low national minimum wages will provide more favorable conditions for logistics operators to expand, given the high availability of workers in the labour market. Spain has a proportionally lower level of ecommerce penetration, but by 2023, we expect this to be hovering around the 10.7% tipping point. With a metropolitan population of five million and a shortage of brownfield land, prime logistics yields remain attractively priced

to the rest of Europe at 5.15% (Q4 2019).

3) **Valencia (ES)**- Prime rents are currently in the region of €54 per sq m, lower than Barcelona, and this follows rental growth of 13% over the past three years. Spain's international trade growth is also forecast to outperform Europe's average over the next two years.

4) **Antwerp (BE)**- Antwerp's 11.1 million container throughput in 2018 marked 29% growth over a five year period, as Belgium's retail sales growth is forecast to remain resilient at 3.6% per annum, driven by above average population growth. Rising wage costs will remain a challenge for operators looking to expand. Belgium's logistics vacancy rate remains low, and solid road and rail infrastructure provides opportunities for investment with prime yields remaining attractive at 5-5.25%.

5) **Hamburg (GE)**- Although Germany's industrial economic output has contracted recently, Hamburg's prime rents have risen by 7% over the past three years, and due to the shortage of space, we expect further rental growth to come to the fold. Hamburg's prime logistics yields moved in 50bps yoy to 3.7% at Q4 2019, though, secondary yields hover at 5.2% which we expect to compress further. Europe's highest scoring rail network and technology enhancements at the Port of Hamburg will increase efficiency and create further need for warehouse space.

14%

Barcelona logistics rental growth over the last three years.



4.4%

Extra-EU trade of goods rose 4.4% yoy in 2019.



“ Relatively low national minimum wages will provide more favorable conditions for logistics operators to expand in Spain, given the high availability of workers in the labour market. ”

## Emerging trends impacting port logistics

### China's Belt and Road Initiative (BRI)

China is developing the Belt and Road Initiative to improve trade links with Europe, through providing long-term government infrastructure loans (Map, page 8-9). Most of the countries China wishes to involve are developing nations and so far, 60 nations have expressed an interest in BRI. China has so far gained a foothold in Europe's three largest ports: respectively Euromax in Rotterdam, of which it owns 35%; Antwerp, in which it holds a 20% stake; and Hamburg, where it set to build a new terminal.

China's increasing sphere of influence on Europe has however, caused concern for the EU. Italy signed up for BRI in March 2019 as the first developed country to join the programme, as its European Union allies have expressed a further concern. According to Capital Economics, Italy is forecast for 0% economic growth in 2020 and although Greece's economy is expected to grow 1.5% this year, infrastructure investment is being warmly received. Huge levels of Chinese investment in Piraeus, Greece has generated new trade routes into Central and Southern Europe, which has decreased transit travel time to China by 8-9 days, compared with the North European ports, according to EY. Piraeus is now Europe's sixth largest container port and prime logistics rents have subsequently risen by 20% over the past three years. Despite this, pricing remains attractive, with prime logistics yields at 8.5%, compressing 75 bps over the previous 12 months.

Chinese city, Chengdu, is now rail-linked with Łódź, Poland, with approximately 50 freight trains operating each way every month.

China intends to extend the BRI initiative as far as Rotterdam and fully implement the programme by 2049. A total of €30bn of Chinese foreign direct investment in the EU took place during 2017, most notably the €12.25bn acquisition of the Logisor portfolio in 2017. We expect further Chinese capital will target strategically located logistics assets in the next decade and will heighten investor interest for prime logistics space in Poland.

In the shorter term, US tariffs imposed on imports of EU goods in October 2019 could negatively affect US-EU trade volumes during 2020/21. As a result, this could have a negative impact on the levels of logistics occupational demand in proximity to Europe's established ports. Thus, as EU-China trade increases, supply chains will need to adjust, which could shift trade of goods from Western Europe's established ports, to road and rail which are better placed to serve the Chinese market.

### Energy markets and ESG

As part of the EU's strategy to improve security of supply, the bloc is diversifying its source of imports. The US has become a net exporter of liquefied natural gas (LNG) since 2018 and the EU imported 33% of US exports last year, up from 11% the previous year. Several of the EU's established ports are not designed to cater for LNG arrivals and although trade in this sector is still in its infancy, the number of US vessels entering the EU increased fourfold between 2018 and 2019. This is creating new demand for LNG terminals, before being regasified and transported to nearby specialist storage plants.

Spain currently has more LNG import terminals than any other European country, with Barcelona being the largest terminal. In order to diversify, the European Union approved funding for Croatia to construct a floating terminal at Krk island to transport up to 2.6 billion cubic metres of LNG into Croatia each year from 2021. €352m of EU funding has been committed to the extension of the LNG terminal in Swinoujscie, Poland.

Maritime authorities are under more pressure to implement clean technology and develop offshore renewable energy. It is estimated that for every tonne of goods transported by sea, 16g CO<sub>2</sub> is released, below the 62g CO<sub>2</sub> released by road. New regulation from the International Maritime Organisation (IMO) intends to reduce carbon emissions by 50% by 2050 to ensure ports are environmentally sustainable. Likewise, EU regulation is delaying new building projects take place in Netherlands during 2020-21, due to the way Dutch builders and farmers are dealing with nitrogen emissions, which is likely to push up the value of existing real estate.

Port authorities are also regulating the methods by which imported containers are leaving the ports, with set allocations for rail, road and barge. Increased pressure on institutional investors to acquire environmental logistics assets will increase demand nearer to port and rail terminals to reduce emissions.



12% of goods handled globally pass through the ports of Rotterdam, Hamburg and Antwerp.



Maritime transport reduces carbon emissions by an average of 75% per km travelled.



EU LNG vessel imports from US increased by 3.4% pa over the last five years.



European retail sales are set to increase by 3.4% pa over the next five years.

## Where are Europe's future logistics corridors?

Analysing the growth in container traffic across Europe's ports, existing and future infrastructure developments and demographic changes allows us to envisage where new trade corridors and logistics demand will emerge in the next ten years.

### Blue Banana, Western Europe-Genoa- Milan- Munich- Frankfurt- Antwerp- Rotterdam- Felixstowe

The original "blue banana" is one of the most established routes through Western Europe. China's Belt and Road Initiative investment is likely to attract new Chinese investment into Italian logistics, adding downward pressure on yields. One of the factors which has made the Blue Banana such an important trade route is the inland waterways in Belgium and the Netherlands, which merge on to the Rhine to serve Germany. Barges create a more cost effective solution to transport a higher volume of goods to city based ports, which will help cater to serve European last mile delivery. In the Netherlands, Zalando is building a 140,000 sq m logistics centre in Bleiswijk, as a European gateway to Belgium, Luxembourg, France and UK, whilst Amazon is also expanding operations into the Netherlands this year. Population growth, rising retail sales and urbanisation will increase demand for logistics space serving conurbations in these countries.

### Green Banana, Nordics-Malmö- Copenhagen- Hamburg

The construction of the Fehmarn Belt, an 18km long immersed tunnel between Denmark and Germany will revolutionise trade links, replacing existing ferry links, and reducing rail travel time by two hours and road travel time by one hour between Copenhagen and Hamburg on its completion in 2028. The project is estimated to cost €7.4bn and will create upward rental pressure for logistics space on the Nordics banana. 753,000 containers were transported in Gothenburg during 2018, representing the largest container port in the Nordics. One of the long term factors to Scandinavian port logistics however, is the rising sea levels. Figures from the European Environmental Agency (EEA) indicate that sea levels have risen between 3-4mm per year around Gothenburg since 1993, among the highest rates in Europe. However, melting ice caps could present a long term opportunity for new maritime trade routes around the Arctic Ocean into Russia and China, reducing freight journey times.

### Yellow Banana, Iberia- Lisbon- Madrid- Barcelona, Valencia- Paris- Le Havre

Spain, Portugal and France are forecast to outperform the Eurozone average economic growth rate over the next five years, which will help to contribute to higher retail sales growth. In

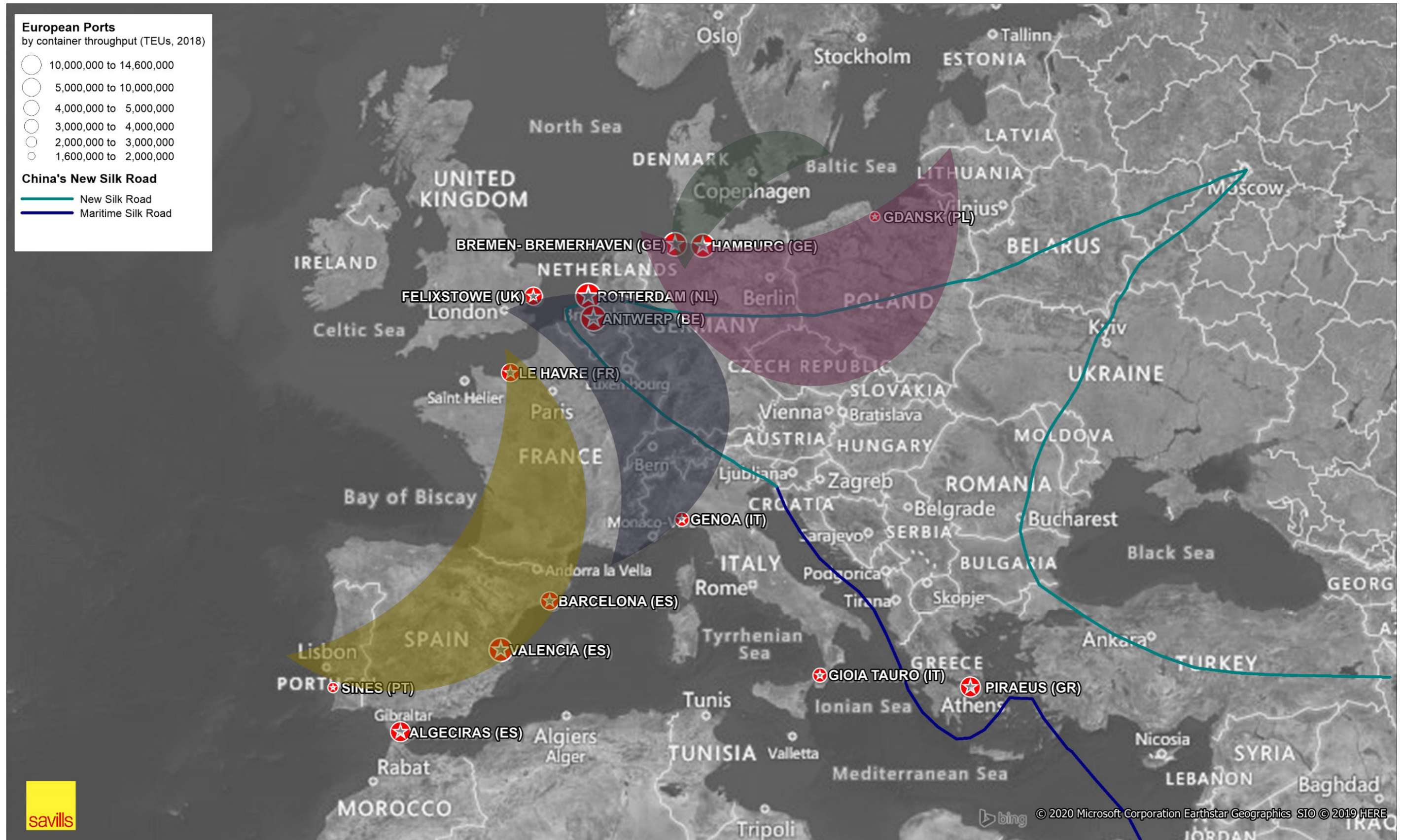
France, logistics rents have grown 13% over the past three years, as prime logistics yields have moved in 25bps yoy and we see expect further yield compression in this market over the next 12 months. France logistics investment increased 82% yoy during 2019, while Spain's volumes increased by 18% over the same period.

### Purple Banana, CEE and Baltics - Bremerhaven- Hamburg- Prague- Lodz- Gdańsk

Gdańsk port is one of the fastest growing European ports following three million containers handled in 2018, making it the first Baltic port to appear in the EU top 15. As a result, over 170,000 sq m of new logistics space was delivered between Q1-3 2019 and stock has more than doubled to 667,000 sq m in the last four years, which is fast being absorbed by new demand. Deepwater Container Terminal, Gdańsk, recently completed will increase capacity to over three million TEUs and increase demand for logistics between Tricity, Central Poland and Germany. Road and rail transport will remain Poland's main route for international transport of goods, particularly through the BRI as trade with China grows. Long-let Amazon warehouses on the Germany/Poland border have attracted global investor interest, compressing Poland's prime logistics yield to 4.25% at end Q4 2019.



Map: Europe's future logistics corridors



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