LaSalle

PoDs

Paths Of Distribution Score

5 September 2024

This image was AI generated

Introducing LaSalle's Paths of Distribution Score

What is Paths of Distribution Score (PoDs)?

A granular pan–European model evaluating centrality for European logistics markets and regions. The model aims to tell us which locations are optimal from an occupier perspective for distributing goods to consumers at low cost. In the analysis we can vary the input data to test scenarios like fuel price shocks, to identify locations that are expected to manage such headwinds better

How is this approach innovative and different?

It is comprehensive (no geographic coverage gaps), granular (based on 10km hexagons), and an original combination of transport cost data.

We first define a hexagonal lattice across Europe of 158,455 locations. To estimate available demand, we overlay it with a granular map of European population from the Copernicus Human Settlement Layer.

Then we combine those layers with the road transport cost dataset across European regions. A small example of these cost matrices is shown to the lower right. The complete matrix covers Europe with more than 80,961 region–to–region cost estimates for road freight.

The next set of factors is a measure of "reach factor" or road network density. We derive this using a random forest machine learning model applied to a dataset of European roads with drive time analysis around more than 17,000 logistics assets in Europe. The cost along with the ability to reach a wider population is then combined with consumer demand and manufacturing output per capita, to calculate both and overall demand, but also the cost per unit of reaching that demand. Lastly, we factor in available labour pool around each hexagon on the lattice.

Finally, these factors are weighted and combined for each hexagon to determine its score.
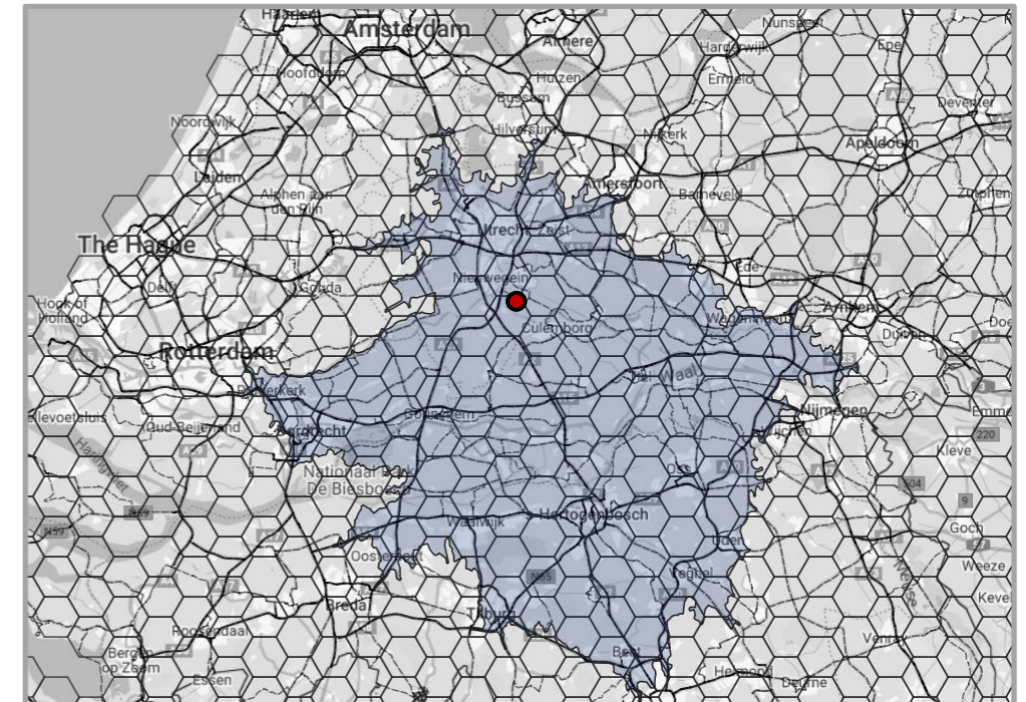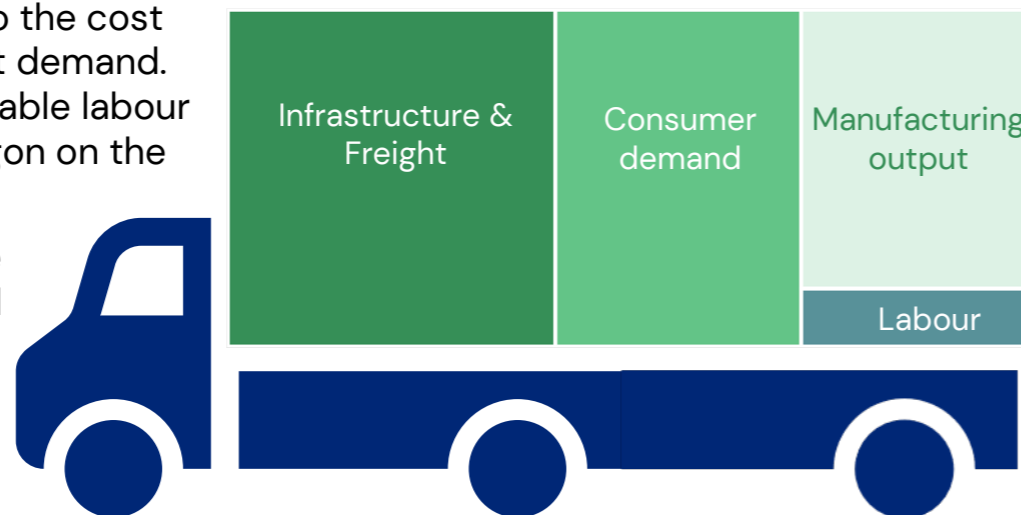
Map of the hexagon lattice with European roads and example of a drive time isochrone

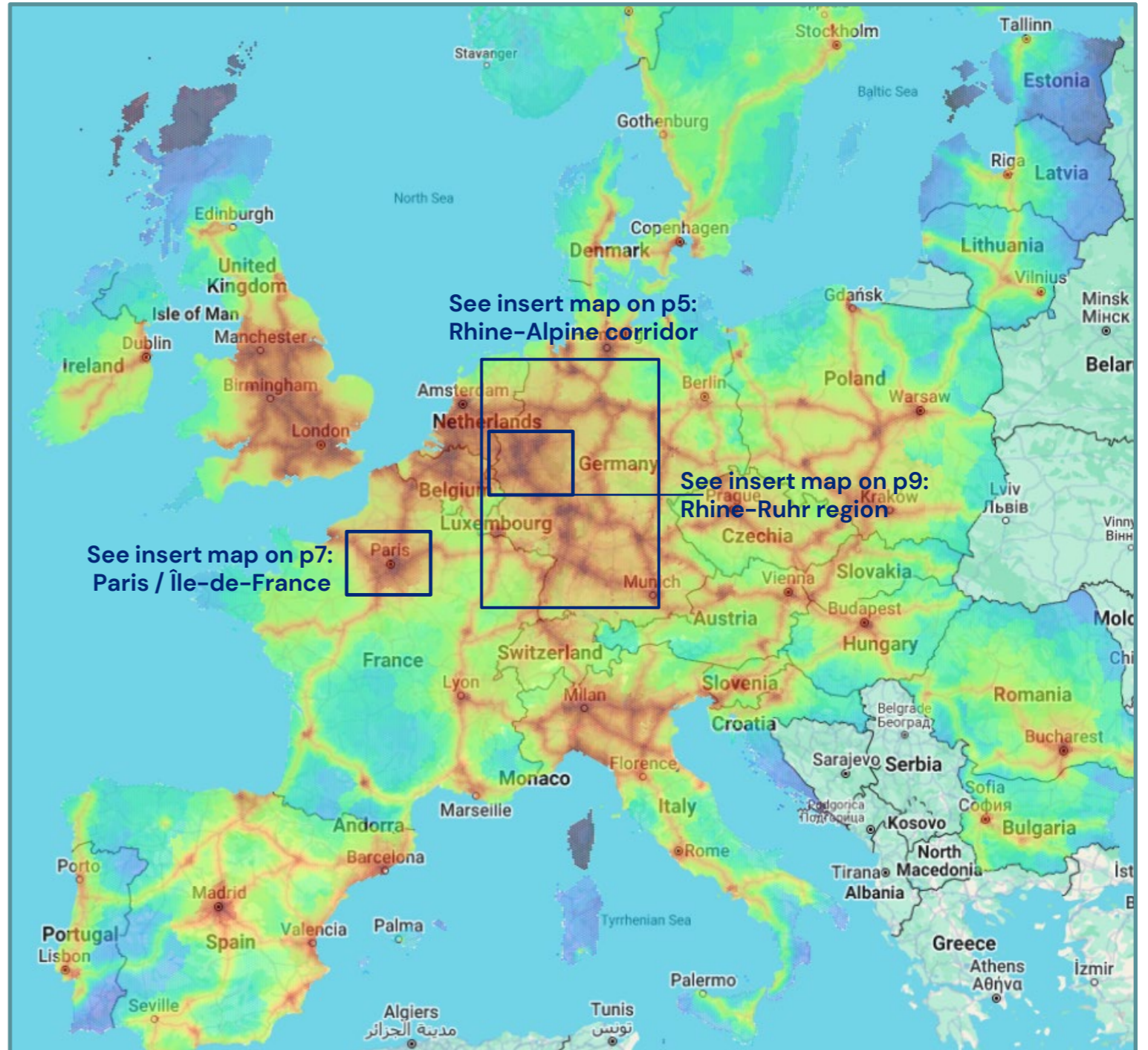| Start \ End	Ruhr	Düsseldorf	Cologne-Bonn	Bremen	Bielefeld	Bremen	Koblenz
Groningen	365	453	537	247	459	312	657
Friesland	390	447	522	320	511	402	685
Drenthe	304	393	463	249	421	353	592
Overijssel	224	292	388	286	371	417	511
Gelderland	259	248	313	394	427	524	472
Amsterdam	335	360	429	376	500	505	577
Utrecht	327	321	389	431	497	568	544
Rotterdam-Den Haag	399	374	433	498	574	653	596
Zeeland	486	412	438	635	643	788	592
Noord-Brabant	313	241	292	476	470	619	443

Example of the total estimated average cost of driving a representative 40t articulated truck between the regions

Infrastructure & Freight

Consumer demand

Manufacturing output

Labour

PoDs by country: Transportation gateways take the lead

Top logistics regions	
Ranks by country*:	Best regions in each:
1. Netherlands	Rotterdam
2. Germany	Frankfurt–Mainz
3. UK	Greater London
4. Belgium	Antwerp
5. Italy	Milan
6. CEE3***	Prague
7. Spain	Madrid
8. France	Paris / Île-de-France
9. Nordics	Copenhagen
10. Rest of Europe**	Lisbon

See insert map on p5:
Rhine-Alpine corridor

See insert map on p9:
Rhine-Ruhr region

See insert map on p7:
Paris / Île-de-France

Note: * Ranked highest density of top quartile locations within a country; ** Some of the periphery NUTS2 regions excluded from the analysis; ***CEE3 = Czech Republic, Hungary and Poland
Source: LaSalle PoDs 2024
Disclaimer: No assurances are given that these trends will continue or materialize as expected. Nothing herein constitutes a guarantee or prediction of future events or results and accordingly the information is subject to a high degree of uncertainty

# PoDs by markets: Paris is the highest ranked market in Europe

Top 20 logistics markets
1. Paris / Ile-de-France - France
2. Rotterdam - Netherlands
3. Frankfurt-Mainz – Germany
4. Milan – Italy
5. Greater London – UK
6. Rhine-Ruhr* – Germany
7. Antwerp – Belgium
8. West Midlands – UK
9. Madrid – Spain
10. Dortmund – Germany
11. Amsterdam – Netherlands
12. East Midlands – UK
13. Stuttgart – Germany
14. North West (Manchester) – UK
15. North Brabant (Breda-Tilburg) – Netherlands
16. Karlsruhe-Mannheim corridor – Germany
17. Brussels – Belgium
18. Veneto-Verona corridor – Italy
19. Kent – UK
20. Barcelona - Spain

Top 10 logistics markets in Europe
[sorted by the highest score: PoDs 2024]

1. **Paris / Ile-de-France**
2. **Rotterdam**
3. **Frankfurt-Mainz**
4. **Milan**
5. **Greater London**
6. Rhine-Ruhr
7. Antwerp
8. West Midlands
9. Madrid
10. Dortmund
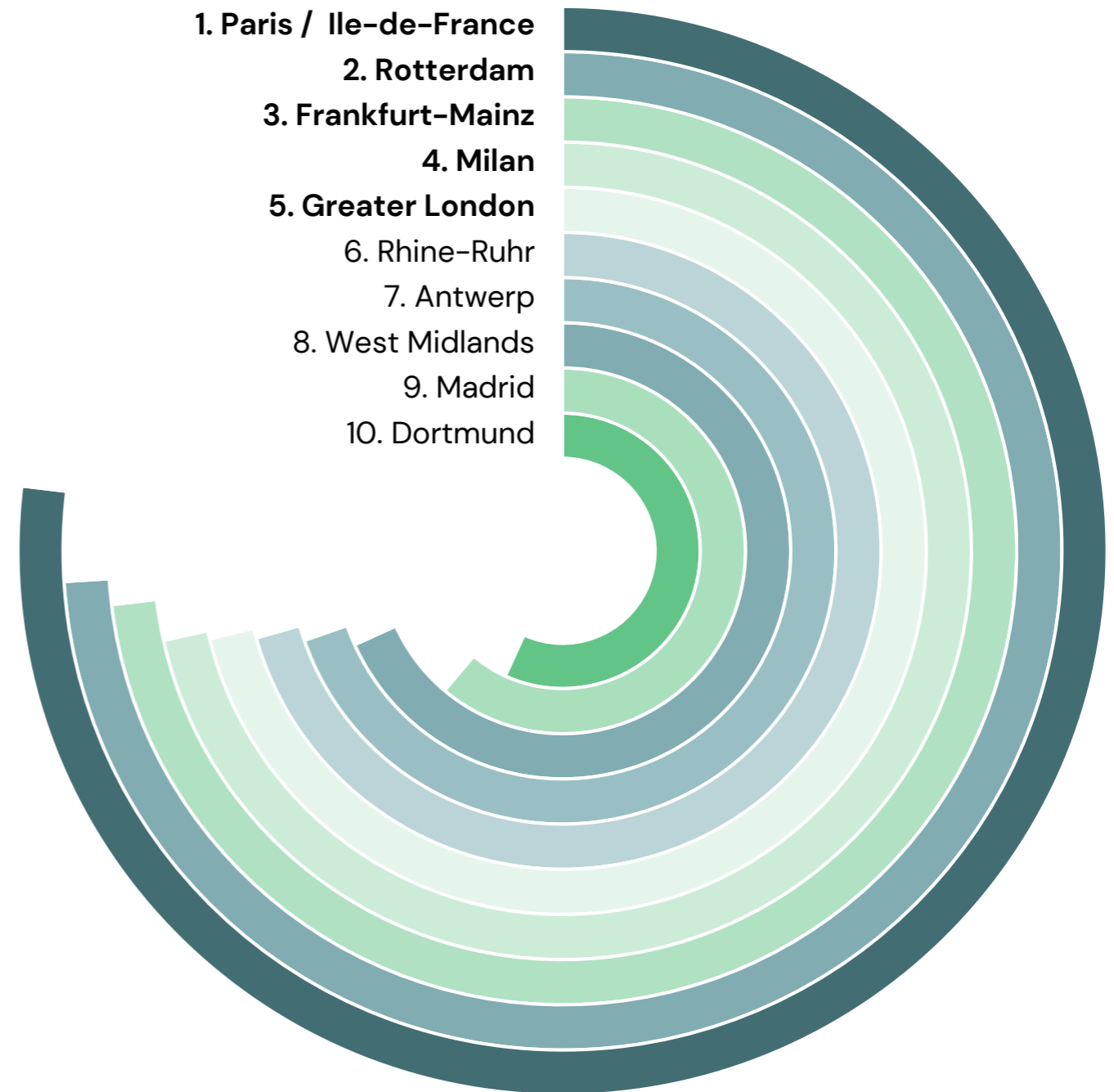
Note: *Defined as Duisburg & Dusseldorf
Source: LaSalle PoDs 2024
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Key findings and conclusions

PoDs gives a more granular view of favourable areas and sub-markets

Logistics rankings aren't like other real estate city rankings. Logistics markets and regions are large and have boundaries that blend into each other. Viable, strong distribution locations can often be situated between city markets or extend far beyond central cities into the transportation corridors and adjoining conurbations. As shown to the right, PoDs highlights these corridors of demand in greater granularity than possible in a simple list.

The Rhine-Alpine corridor linking the port of Rotterdam to the west German markets along the Rhine all the way to Milan features prominently among top locations across Europe, with five German markets in the top 20.

Paris / Ile-de-France is the region with the greatest concentration of top scoring logistics locations driven by its size and centrality to the French market, being the junction of multiple major motorways, as well as having a very strong consumer base.

Northern Italy scores above its market weight, as do markets Madrid and Frankfurt, which has seen 50% higher levels of investment volume in the last five years.

Regional Polish markets stand out **as emerging hubs, with Lodz and Katowice-Krakow corridor** as strong hubs in Poland, linking both North–South and East–West freight corridors.
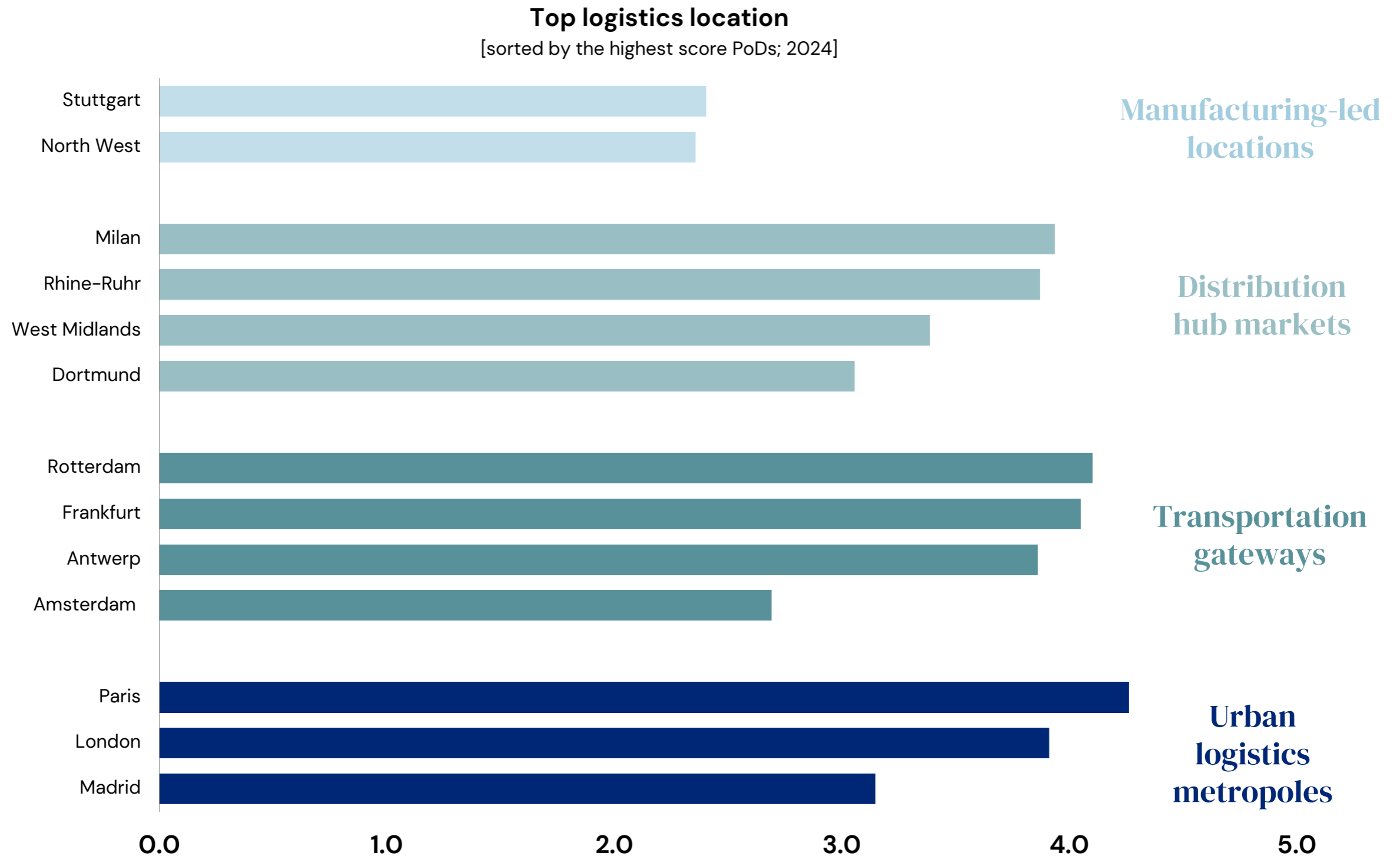
Rhine–Alpine corridor map

[Map showcasing strength of the German portion of the Rhine–Alpine corridor; micro-market hexagons]
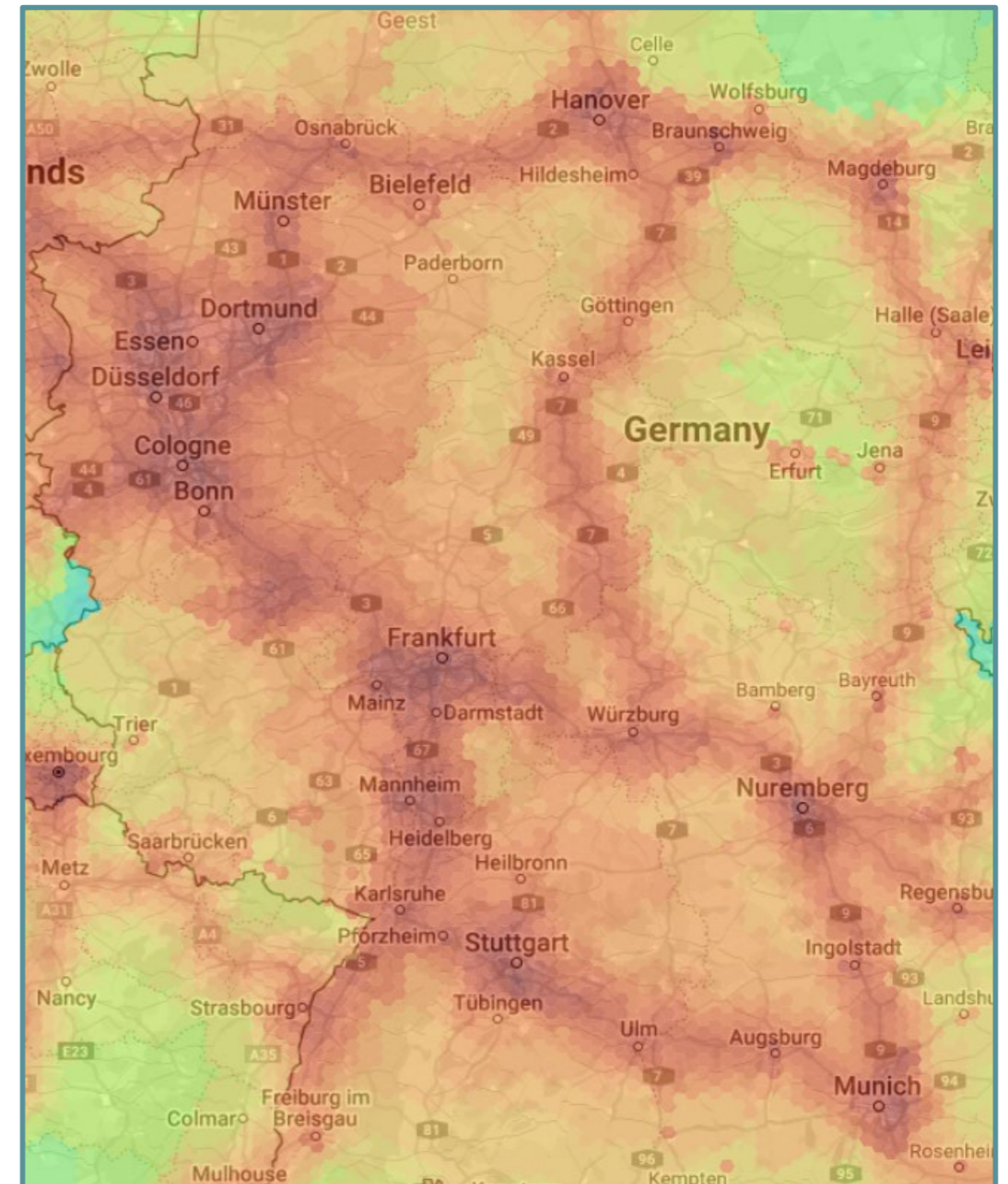
Source: LaSalle PoDs 2024
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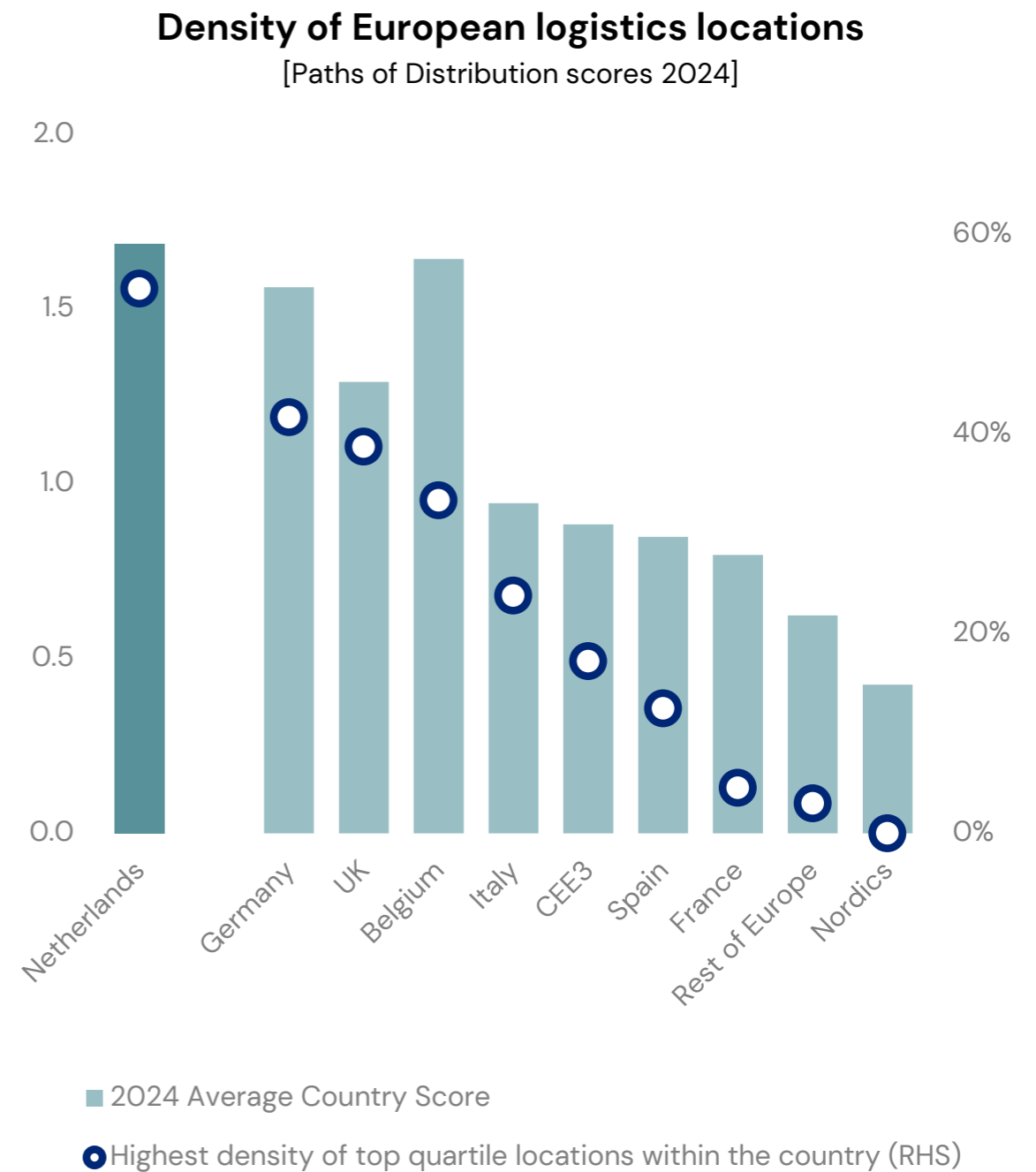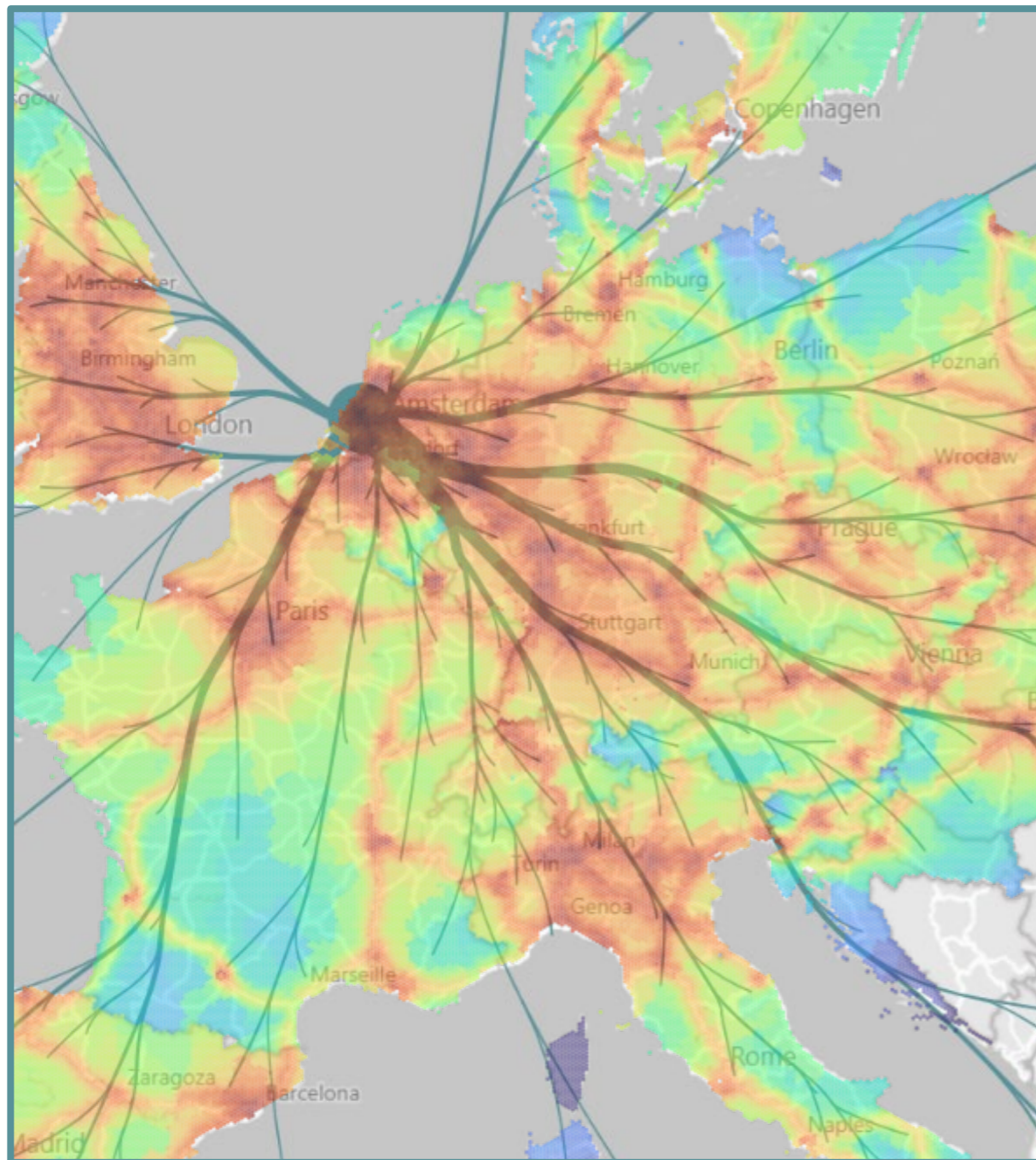
Logistics markets based on different types of tenant demand

Top logistics location

[sorted by the highest score PoDs; 2024]

Manufacturing-led locations
- Stuttgart
- North West

Distribution hub markets
- Milan
- Rhine–Ruhr
- West Midlands
- Dortmund

Transportation gateways
- Rotterdam
- Frankfurt
- Antwerp
- Amsterdam

Urban logistics metropoles
- Paris
- London
- Madrid

Axis: 0.0, 1.0, 2.0, 3.0, 4.0, 5.0

France: Paris tops with the highest concentration of prime logistics locations

Driven by strong consumer base and centralised infrastructure

Paris / Ile-de-France map
[Paths of Distribution micro-market hexagons]
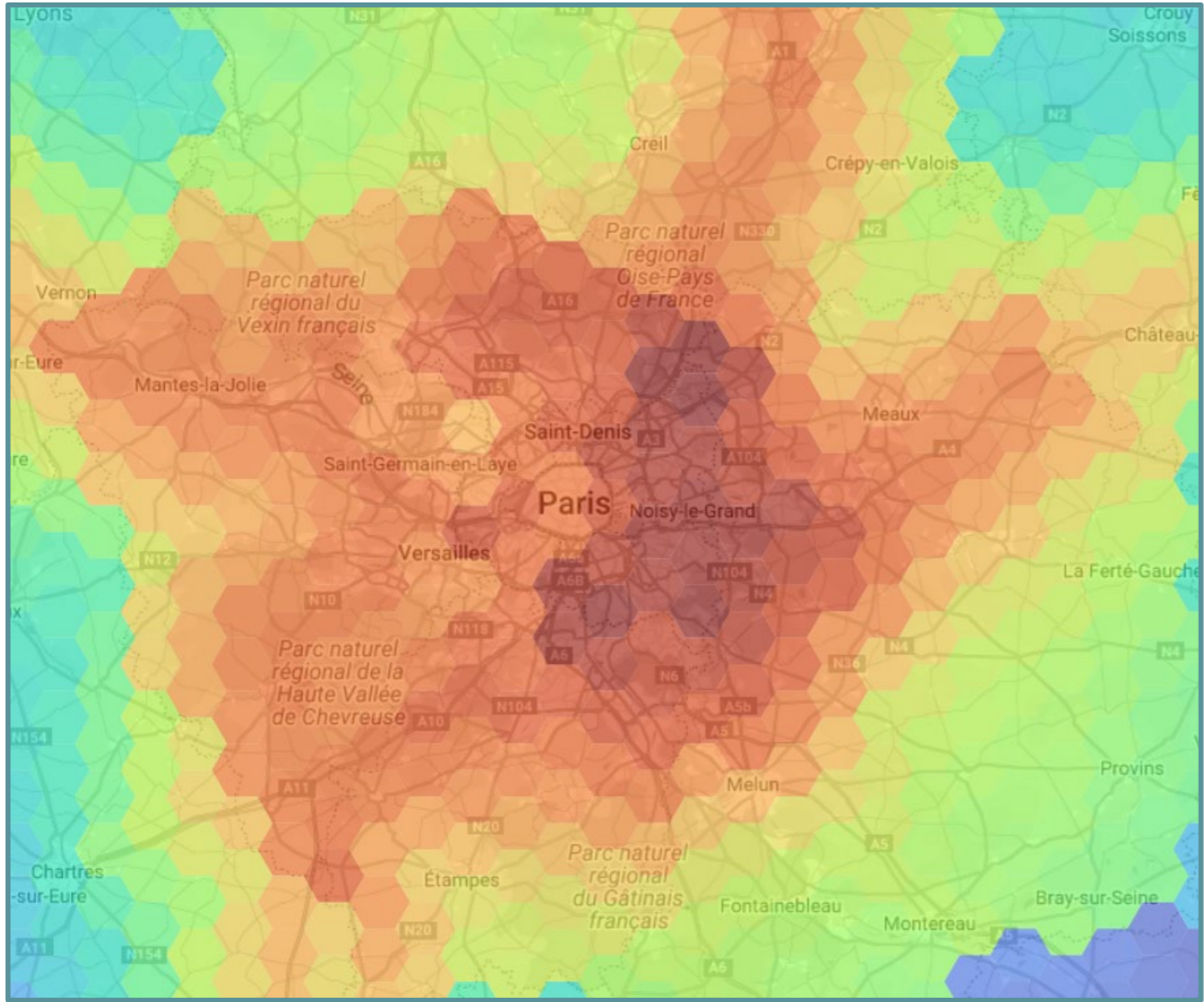
Where French regions stack up
[Paths of Distribution scores 2024]
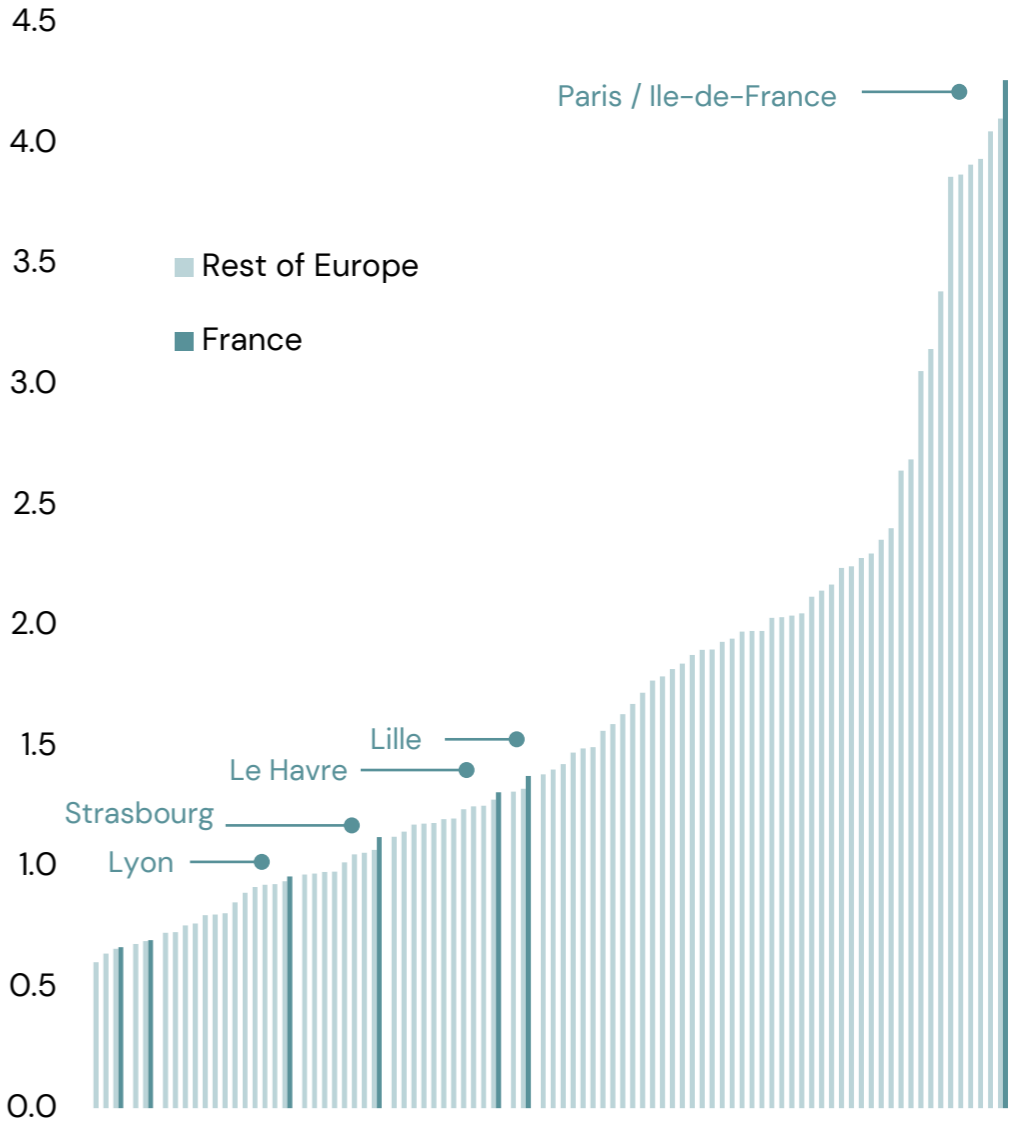
Paris / Ile-de-France

Rest of Europe
France

Lille
Le Havre
Strasbourg
Lyon

Source: LaSalle PoDs 2024
Disclaimer: No assurances are given that these trends will continue or materialize as expected. Nothing herein constitutes a guarantee or prediction of future events or results and accordingly the information is subject to a high degree of uncertainty

Netherlands: Rotterdam holds the fundamental role in the European distribution

Europe's largest port, Rotterdam, is pivotal to the region's paths of distribution

Density of European logistics locations
[Paths of Distribution scores 2024]

■ 2024 Average Country Score

◉ Highest density of top quartile locations within the country (RHS)

Note: Illustrative maps showing how goods move across the continent from Europe's largest port
Source: LaSalle PoDs 2024
Disclaimer: No assurances are given that these trends will continue or materialize as expected. Nothing herein constitutes a guarantee or prediction of future events or results and accordingly the information is subject to a high degree of uncertainty

Germany: Rhine–Ruhr region leads the demand for the logistics space in Germany and Europe

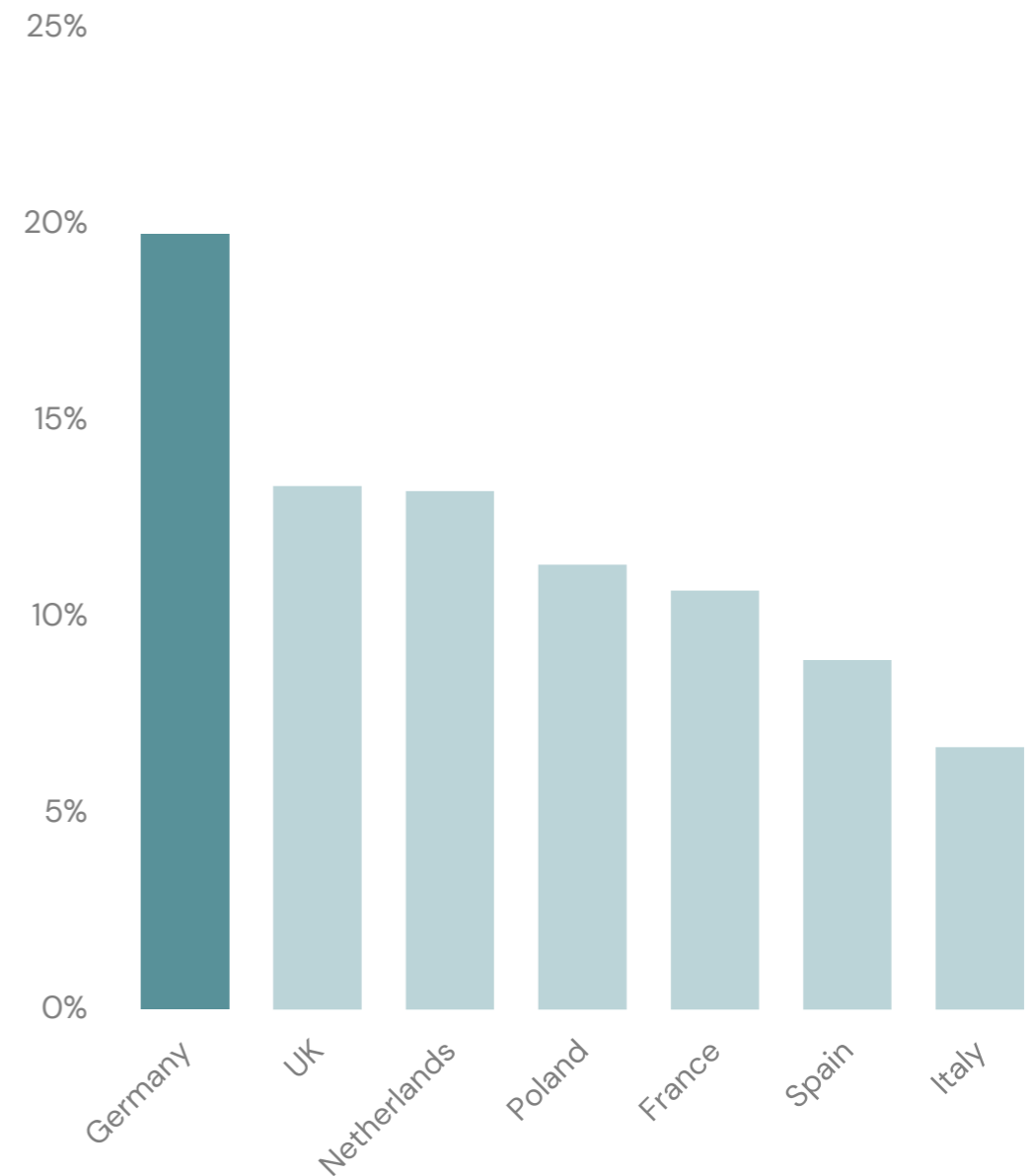Particularly west of Germany is established as a hotspot for manufacturing and transportation

Rhine–Ruhr map
[Paths of Distribution micro–market hexagons]
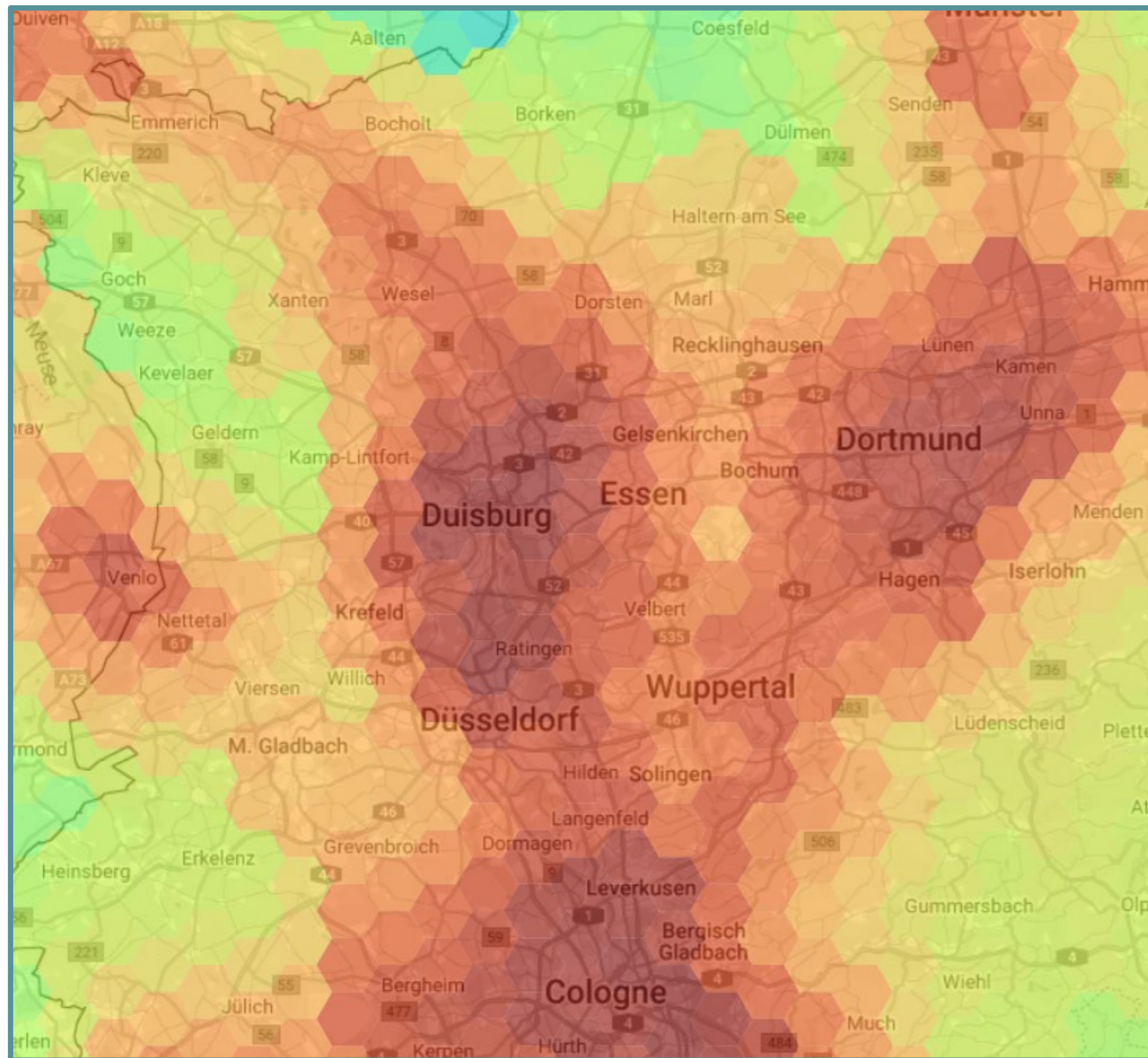
European logistics take–up
[5y average % of European total]

Source: LaSalle PoDs 2024; PMA H1 2024
Disclaimer: No assurances are given that these trends will continue or materialize as expected. Nothing herein constitutes a guarantee or prediction of future events or results and accordingly the information is subject to a high degree of uncertainty

UK: Placing third in the country standing with Greater London naturally leading

The top scoring micro–location hexagons are the section of M25 ring road from East London going north until it meets the M1: displaying the prime rental growth across the country.
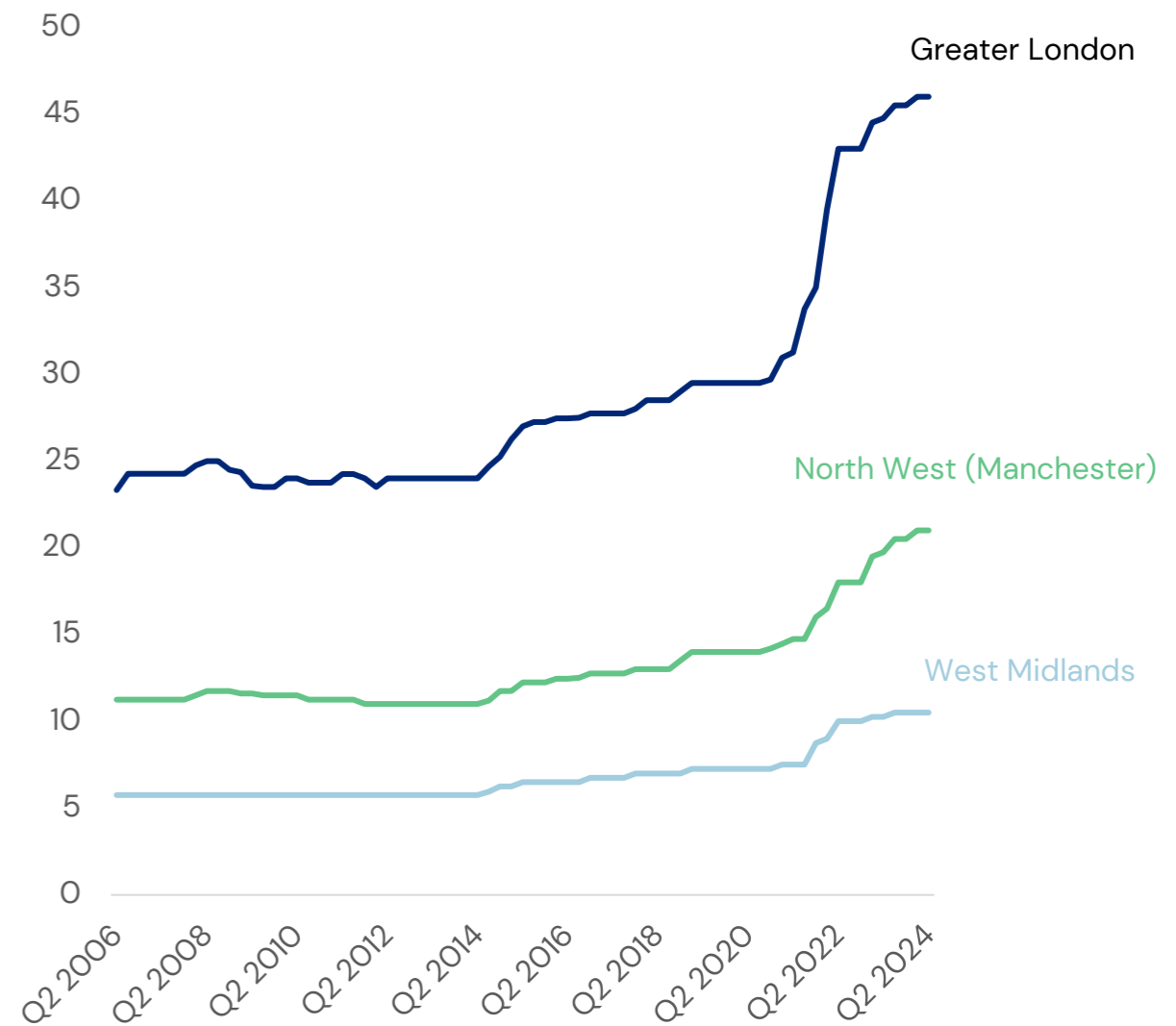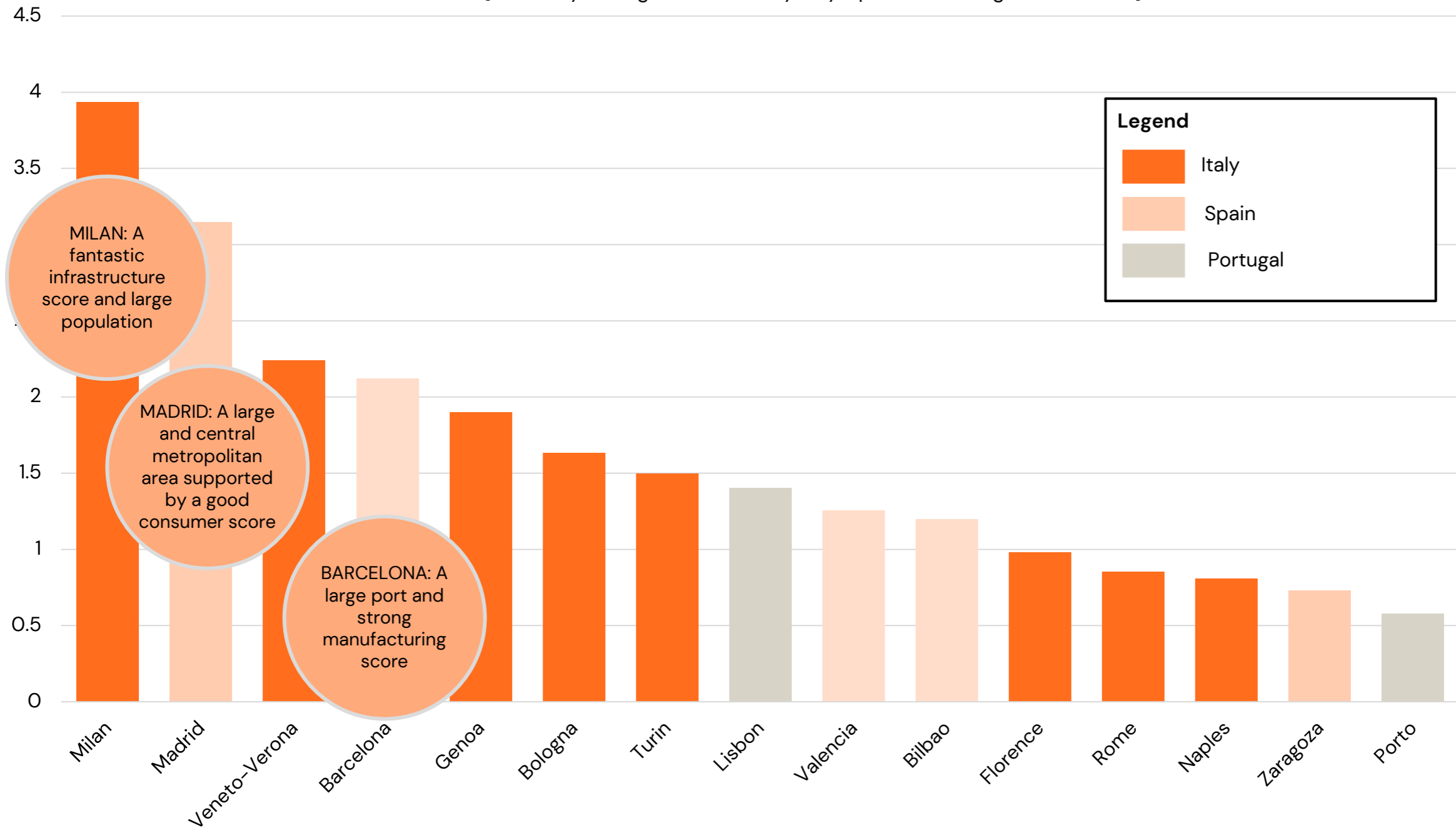
Greater London map
[Paths of Distribution micro–market hexagons]
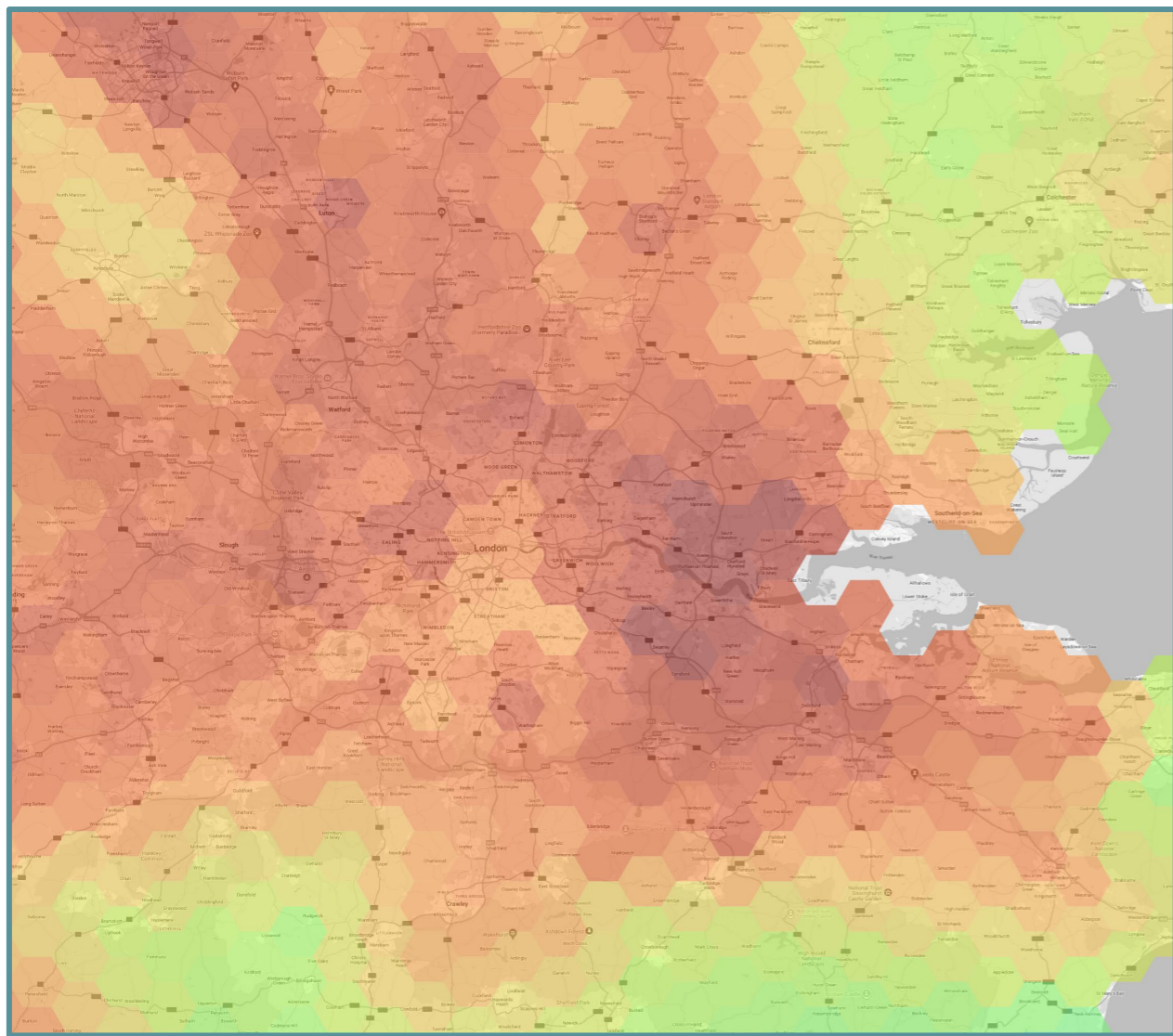
Prime logistics rent
[GBP/ sq ft/pa]

Greater London

North West (Manchester)

West Midlands

Northern Italy looks favourable against most of the Spanish regions

European logistics locations with highest score in 2024

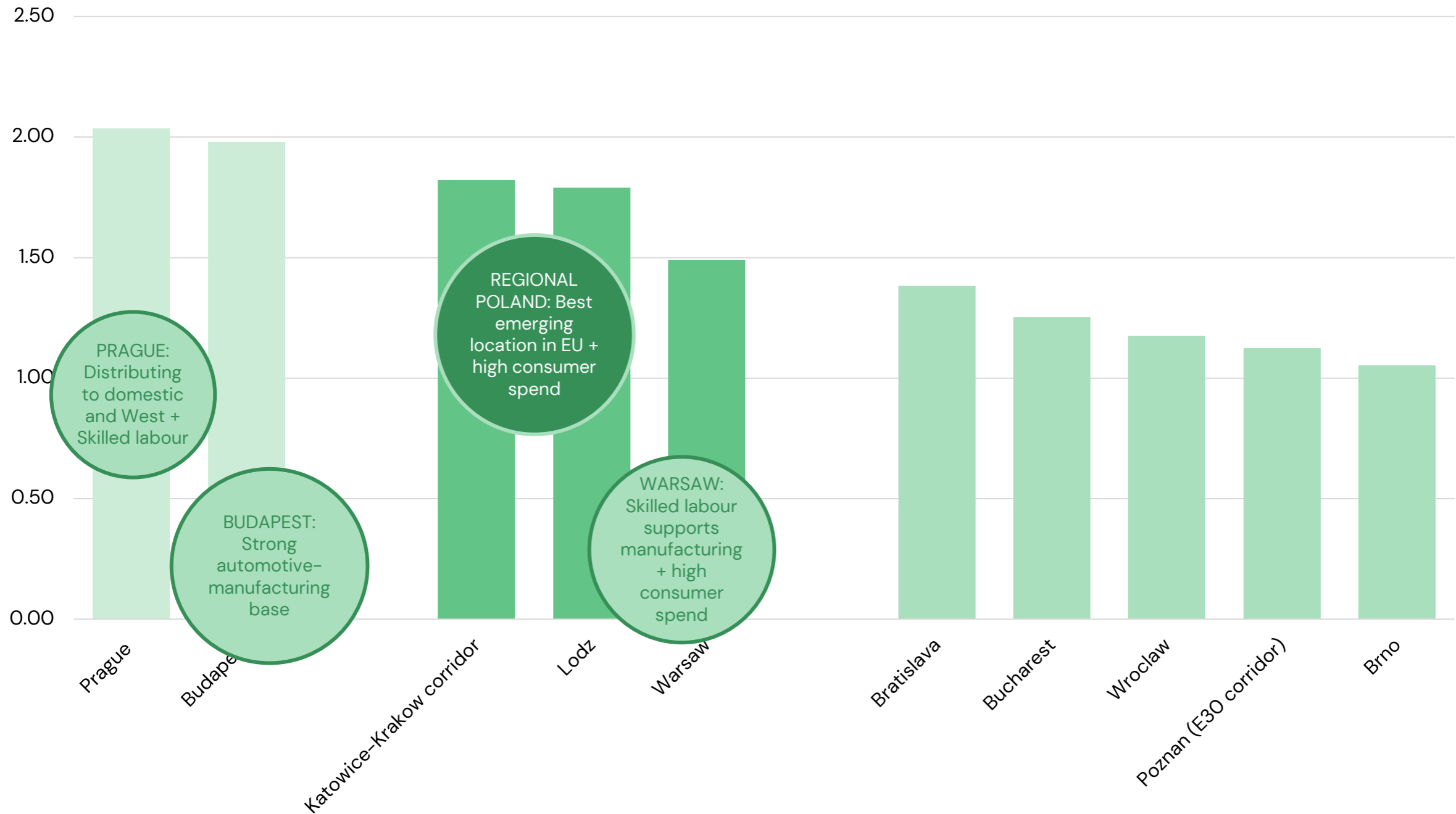[sorted by the highest score, only Italy, Spain and Portugal, PoDs 2024]

MILAN: A fantastic infrastructure score and large population

MADRID: A large and central metropolitan area supported by a good consumer score

BARCELONA: A large port and strong manufacturing score

Legend

- Italy
- Spain
- Portugal

Regional Polish markets emerging and score higher than Warsaw

European logistics locations with highest score in 2024

[sorted by the highest score, only Central and Eastern Europe, PoDs 2024]

PRAGUE: Distributing to domestic and West + Skilled labour

BUDAPEST: Strong automotive-manufacturing base

REGIONAL POLAND: Best emerging location in EU + high consumer spend

WARSAW: Skilled labour supports manufacturing + high consumer spend

Prague · Budapest · Katowice-Krakow corridor · Lodz · Warsaw · Bratislava · Bucharest · Wroclaw · Poznan (E30 corridor) · Brno
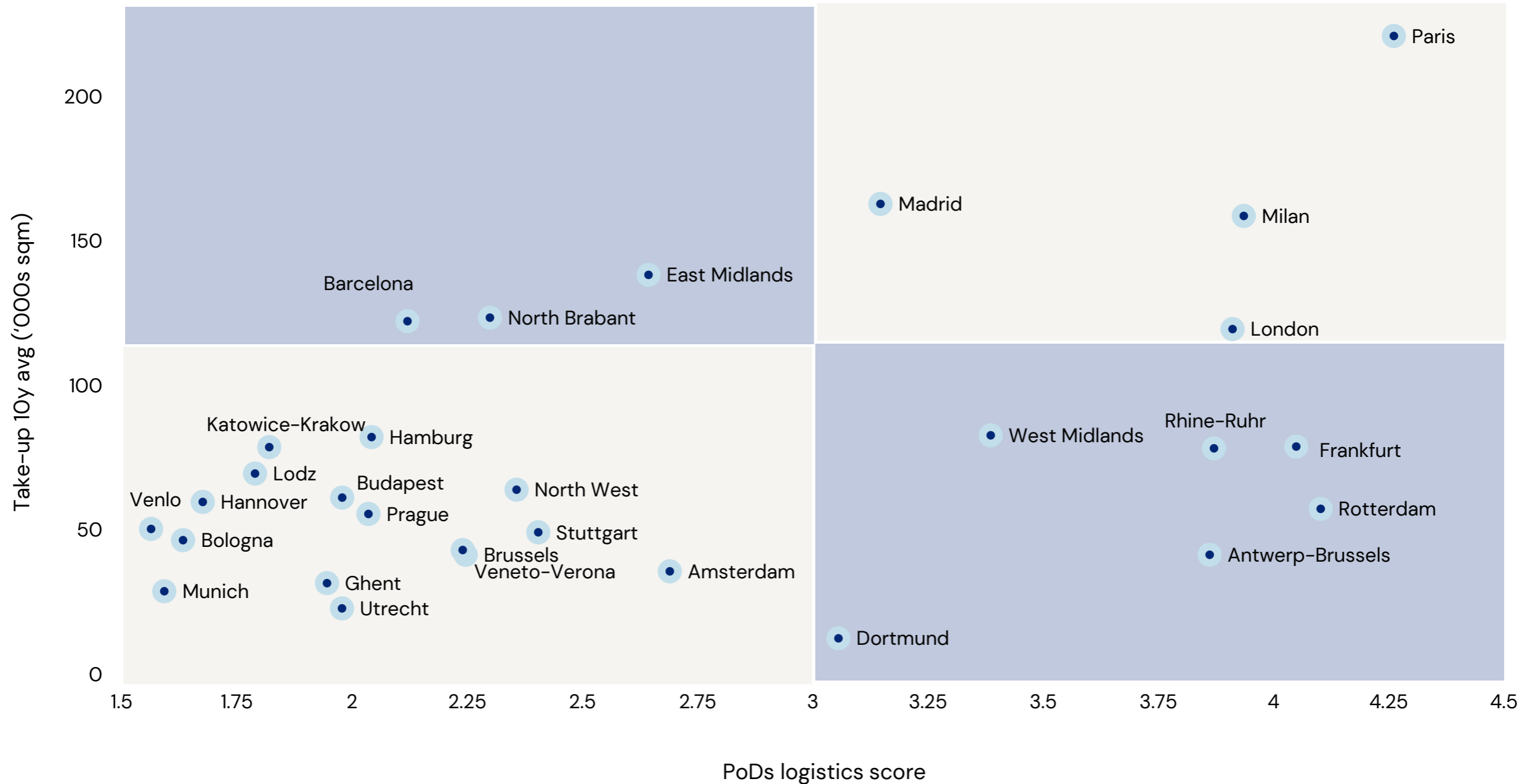
Logistics take-up correlates with PoDs scores

Displaying a potential connection between current and future demand for logistics space

Logistics Take-up versus PoDs scores

[PoDs 2024 vs 10y quarterly logistics take-up]

Scatter plot. Y-axis: Take-up 10y avg ('000s sqm), ranging 0 to 200. X-axis: PoDs logistics score, ranging 1.5 to 4.5.

Data points:
- Paris (~4.25, ~225)
- Madrid (~3.15, ~162)
- Milan (~3.9, ~158)
- East Midlands (~2.65, ~138)
- London (~3.9, ~118)
- Barcelona (~2.1, ~120)
- North Brabant (~2.3, ~120)
- West Midlands (~3.4, ~82)
- Katowice-Krakow (~1.8, ~78)
- Hamburg (~2.05, ~82)
- Rhine-Ruhr (~3.85, ~78)
- Frankfurt (~4.05, ~78)
- Lodz (~1.8, ~68)
- Budapest (~2.0, ~60)
- North West (~2.35, ~63)
- Venlo (~1.6, ~50)
- Hannover (~1.7, ~58)
- Prague (~2.05, ~55)
- Rotterdam (~4.1, ~58)
- Bologna (~1.65, ~46)
- Stuttgart (~2.4, ~50)
- Brussels / Veneto-Verona (~2.25, ~42)
- Antwerp-Brussels (~3.85, ~40)
- Munich (~1.6, ~30)
- Ghent (~1.95, ~32)
- Amsterdam (~2.65, ~35)
- Utrecht (~1.95, ~25)
- Dortmund (~3.05, ~15)

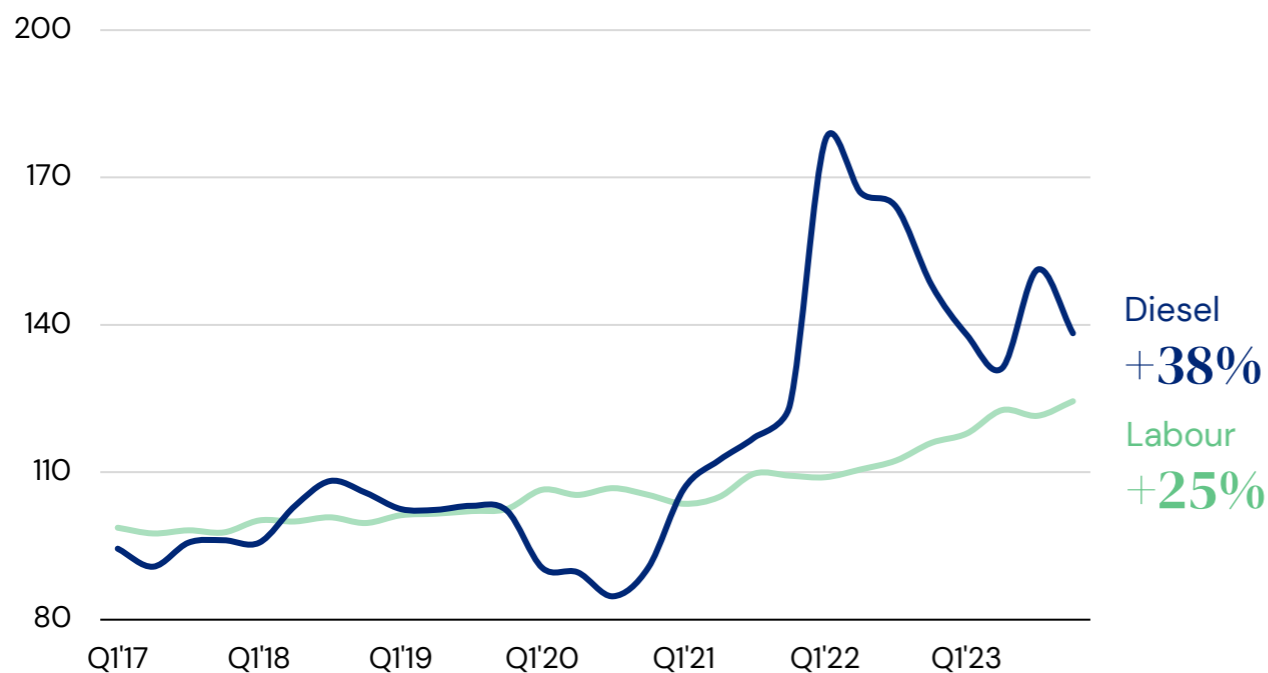# In an uncertain macro environment, choosing optimal distribution locations is more important than ever

More land constrains and overall operational cost will drive occupiers to think more economically

Cost breakdown

Transport					Labour			Other	Rent

0%   10%   20%   30%   40%   50%   60%   70%   80%   90%   100%
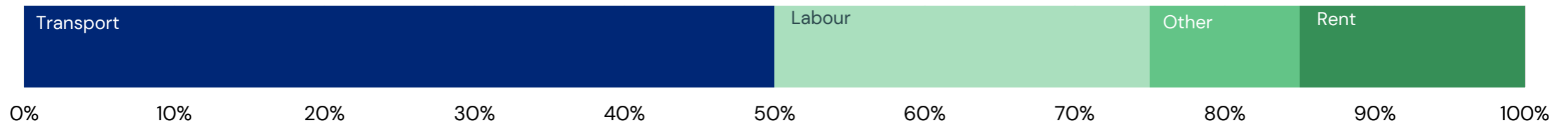
Transport (diesel) & Labour cost breakdown
[Indexed to average of 2017–19]

Diesel
+38%

Labour
+25%

Q1'17   Q1'18   Q1'19   Q1'20   Q1'21   Q1'22   Q1'23

THE SCENARIO OF ENERGY COST INCREASE BY 50%:

- Locations in the heart of Europe benefit incl **Hamburg, Rhine-Alpine corridor and regional France**;

- With higher fuel prices occupiers need to consider locations closer to their customer base.

Source: LaSalle PoDs 2024; Eurostat (04/24), ORS (04/24)
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Europe Outlook 2024

North America Outlook 2024

Asia Pacific Outlook 2024

ISA Portfolio view

Portfolio view

A look at why and how to build diversified, resilient global real estate portfolios

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Author: Zuhaib Rutt, Head of Investment Risk, Strategy and Management, London

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Contributors: Ryan Daily, Strategist, London

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Contributors: Frederik Burmester, Research Analyst, Munich

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Atlanta	London	New York	Singapore
Baltimore	Los Angeles	Paris	Sydney
Chicago	Luxembourg	San Diego	Tokyo
Denver	Madrid	San Francisco	Toronto
El Segundo	Mexico City	Seoul	Vancouver

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Source: LaSalle PoDs 2024; Eurostat (04/24), ORS (04/24)
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