



**MINISTRY OF FOREIGN AFFAIRS
OF DENMARK**

Invest in Denmark

BENCHMARKING REPORT 2021

1 IN EUROPE FOR EASE OF DOING BUSINESS

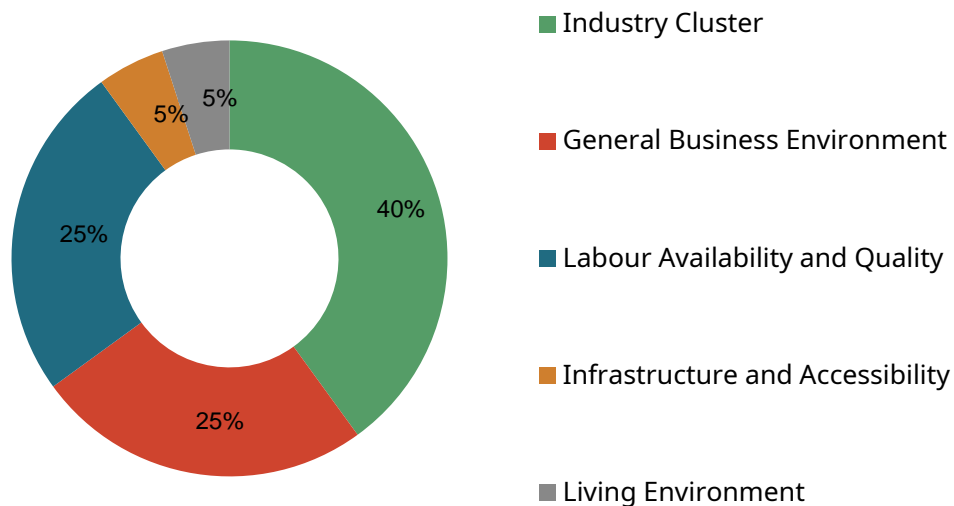
Life Science, Invest in Denmark 2021

SECTOR PROFILE:

PHARMA/BIOTECH MANUFACTURING SITE – COST & QUALITY – REFERENCE CASE 2021

In analysing the competitiveness of locations, fDi Benchmark evaluates the key Quality factors of locations together with the primary Cost inputs of the selected operation.

The Quality model for the 'Pharma/Biotech manufacturing site – cost & quality – reference case 2021' sector profile categorises and weights a total of 88 data points into 20 Tier 2 sub categories, which in turn are categorised into 5 Tier 1 categories.



The fDi Benchmark Matrix shows the trade-off between Cost and Quality across the 7 selected locations for the 'Pharma/Biotech manufacturing site – cost & quality – reference case 2021' sector profile. The average Cost and Quality score is 100 across all the locations.

OVERALL:

The location achieving the best level of competitiveness is **Copenhagen (Region)** achieving the top overall rating of **100** ahead of Dublin (Region) (99.83) and Osaka (92.61).

QUALITY:

The location ranking 1st in Quality is **Copenhagen (Region)** with a score of 132.16. The next best locations in terms of Quality are Dublin (Region) (111.14) and Osaka (110.77).

COST:

The location ranking 1st in Cost is **Dublin (Region)** with lowest total costs of EUR15.10 m. The next best locations in terms of Cost are Osaka (EUR17.43 m) and Copenhagen (Region) (EUR18.08 m).

SECTOR PROFILE:

PHARMA/BIOTECH MANUFACTURING SITE – COST & QUALITY – REFERENCE CASE 2021

The cost model for the 'Pharma/Biotech manufacturing site – cost & quality – reference case 2021' sector profile combines the key inputs of labour and property, based on a facility of 25,300 square metres accommodating 200 employees across 14 job titles.

Job title	Head count	Job title	Head count
Production Operative (Highly Skilled)	70	Head of Research and Development	4
Laboratory Specialist	40	Quality Control Specialist	4
Scientist	40	Secretary	2
Production Operative (Skilled)	10	Facilities/Office Services Specialist	2
Production Operative (Unskilled)	10	Quality Control Manager	1
R&D Team Leader	10	Production Manager	1
Laboratory Technician	5	Head of Manufacturing	1

Utilities / Property	Usage	
Industrial space	Property	23,000 metres squared
Office space	Property	2,300 metres squared

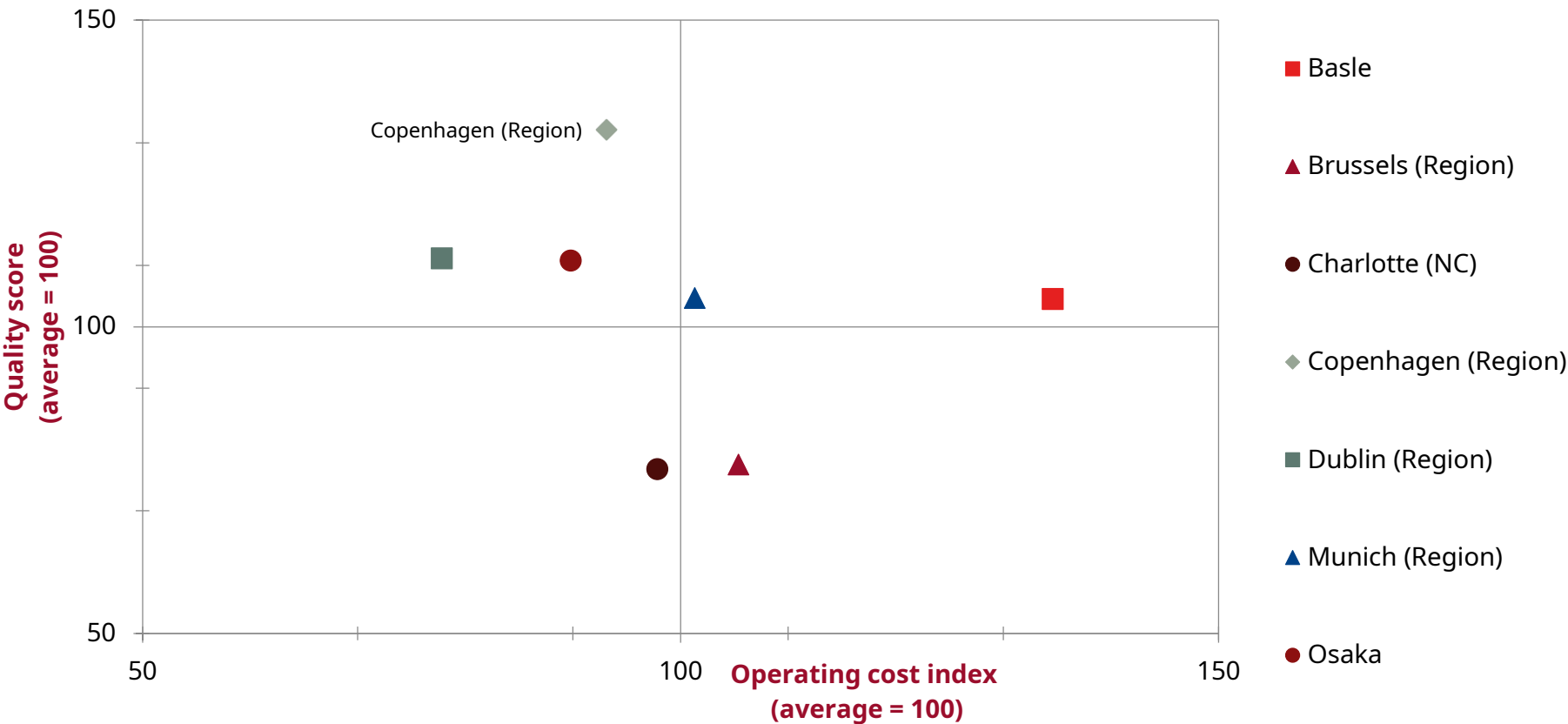
MATRIX

PHARMA/BIOTECH MANUFACTURING SITE – COST & QUALITY – REFERENCE CASE 2021

The matrix is based on the Cost model and Quality model for the 'Pharma/Biotech manufacturing site – cost & quality – reference case 2021' sector profile.

The Cost model shows the primary cost inputs for the operation and the Quality model identifies the most important location determinants for the project.

The Cost and Quality scores are calculated using real data on all the locations.



MATRIX

PHARMA/BIOTECH MANUFACTURING SITE – COST & QUALITY – REFERENCE CASE 2021

The table lists the performance of all 7 locations on Cost score, Quality score and Competitiveness Rating.

Location	Rank	Rating	Quality Rank	Quality Score	Cost Rank	Cost Index	Total Cost (EUR)
Copenhagen (Region)	1st	100.00	1st	132.16	3rd	93.14	18,075,348
Dublin (Region)	2nd	99.83	2nd	111.14	1st	77.83	15,104,683
Osaka	3rd	92.61	3rd	110.77	2nd	89.80	17,428,309
Munich (Region)	4th	84.83	4th	104.69	5th	101.33	19,665,930
Basle	5th	74.70	5th	104.50	7th	134.62	26,125,802
Charlotte (NC)	6th	74.48	7th	76.77	4th	97.87	18,994,492
Brussels (Region)	7th	71.81	6th	77.55	6th	105.40	20,455,861

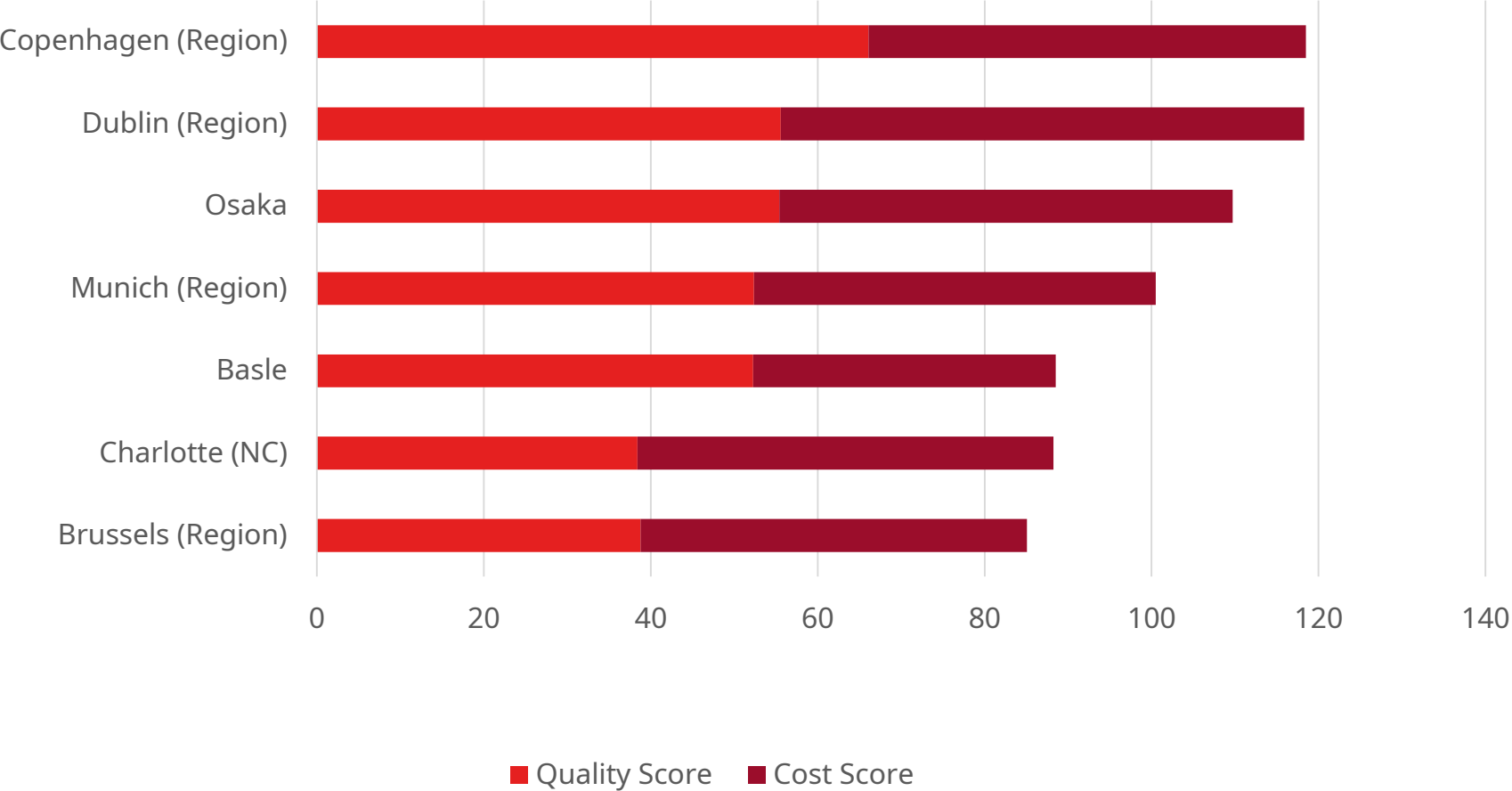
ATTRACTIVENESS INDEX - CHART

The ratios set for this report are Cost: 50% importance and Quality: 50% importance.

This Index measures the attractiveness of the locations based on the overall performance in both Operating Cost and Quality

The index uses the pre-selected Cost to Quality ratio when totalling the overall attractiveness score.

A location is more attractive, shown by a higher Attractiveness rating, if it has a high Cost score (which is an inversion of the Cost index) and/or a high Quality score.



QUALITY OVERVIEW

These are the overview benchmarking Quality results for the 'Pharma/Biotech manufacturing site – cost & quality – reference case 2021' sector profile. The Quality overview is comprised of 5 Tier 1 categories. The average total score for this study is 100 across the 7 locations.

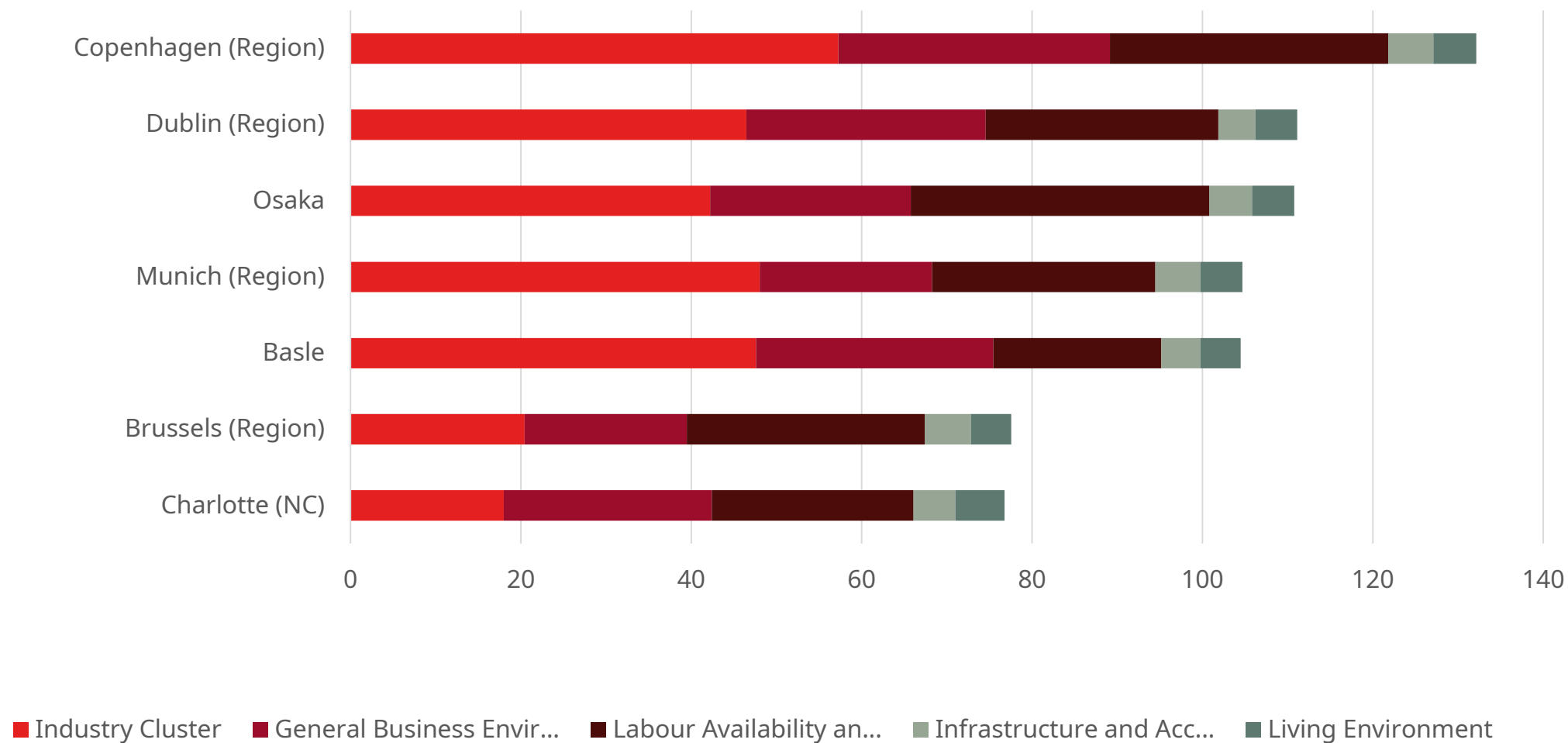
The location that performs best is **Copenhagen (Region)** with a total Quality score of **132.16** followed by Dublin (Region) and Osaka with Quality scores of 111.1 and 110.8 respectively.

Copenhagen (Region) ranks best in *Industry Cluster*; Copenhagen (Region) ranks best in *General Business Environment*; Osaka ranks best in *Labour Availability and Quality*; Brussels (Region) ranks best in *Infrastructure and Accessibility*; Charlotte (NC) ranks best in *Living Environment*.

Tier 1 category	Weight	Top Location
Industry Cluster	40%	Copenhagen (Region)
General Business Environment	25%	Copenhagen (Region)
Labour Availability and Quality	25%	Osaka
Infrastructure and Accessibility	5%	Brussels (Region)
Living Environment	5%	Charlotte (NC)

QUALITY OVERVIEW - CHART

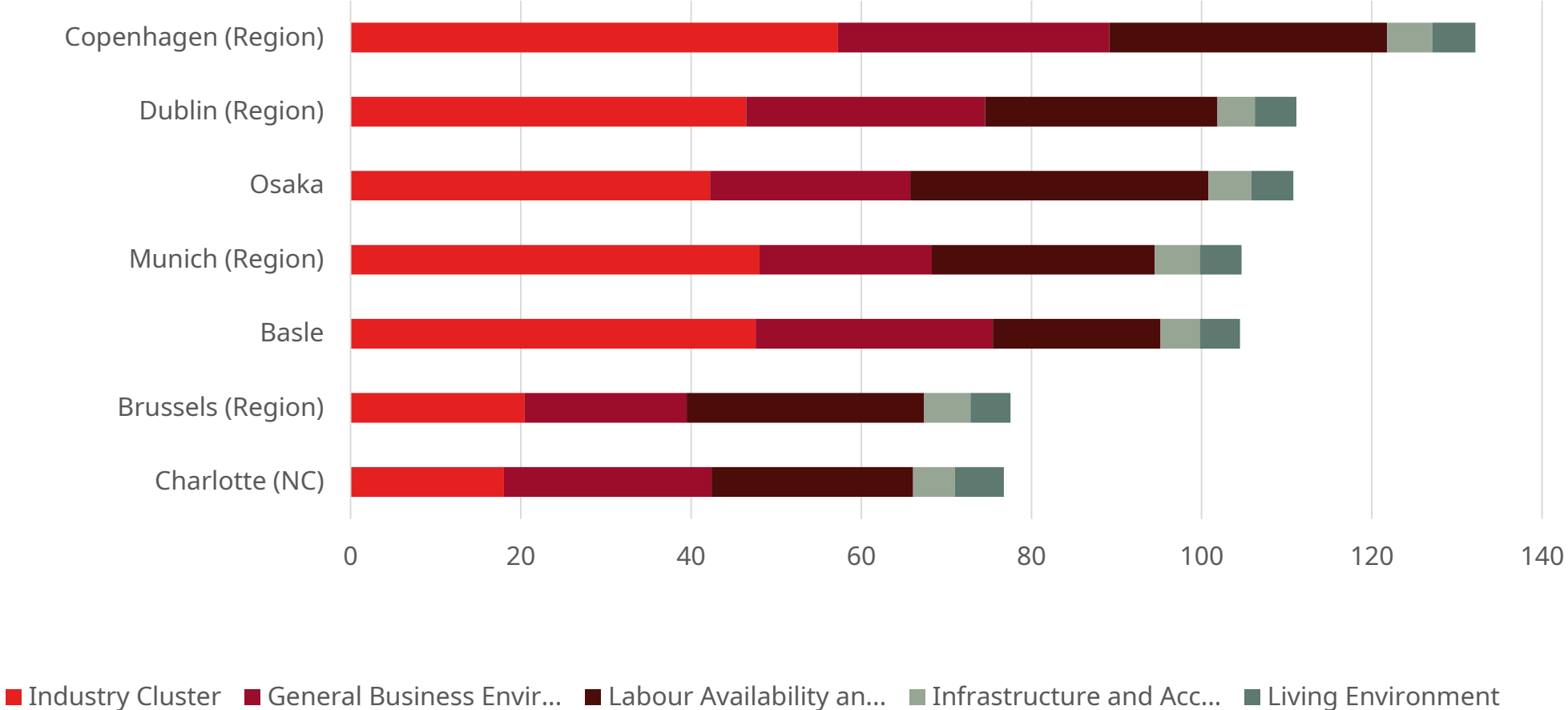
The chart shows the breakdown of the Quality results by Tier 1 category.



Source: fDi Benchmark from the Financial Times Ltd 2021

QUALITY OVERVIEW - SCORES

The table below shows the total score of each location with a breakdown by Tier 1 category.



COST OVERVIEW

PHARMA/BIOTECH MANUFACTURING SITE – COST & QUALITY – REFERENCE CASE 2021

These are the overview benchmarking Cost results for the 'Pharma/Biotech manufacturing site – cost & quality – reference case 2021' sector profile. The annual operating cost calculations are based on the following primary inputs: **Labour costs** and **Property costs**. The average annual operating cost across the 7 locations is EUR 19.41 m.

The location with the lowest costs in the current study is **Dublin (Region)** with operating costs of **EUR 15.10 m** per annum followed by Osaka and Copenhagen (Region) with costs of EUR 17.43 m and EUR 18.08 m per annum respectively. Osaka has the lowest labour costs; Charlotte (NC) has the lowest property costs.

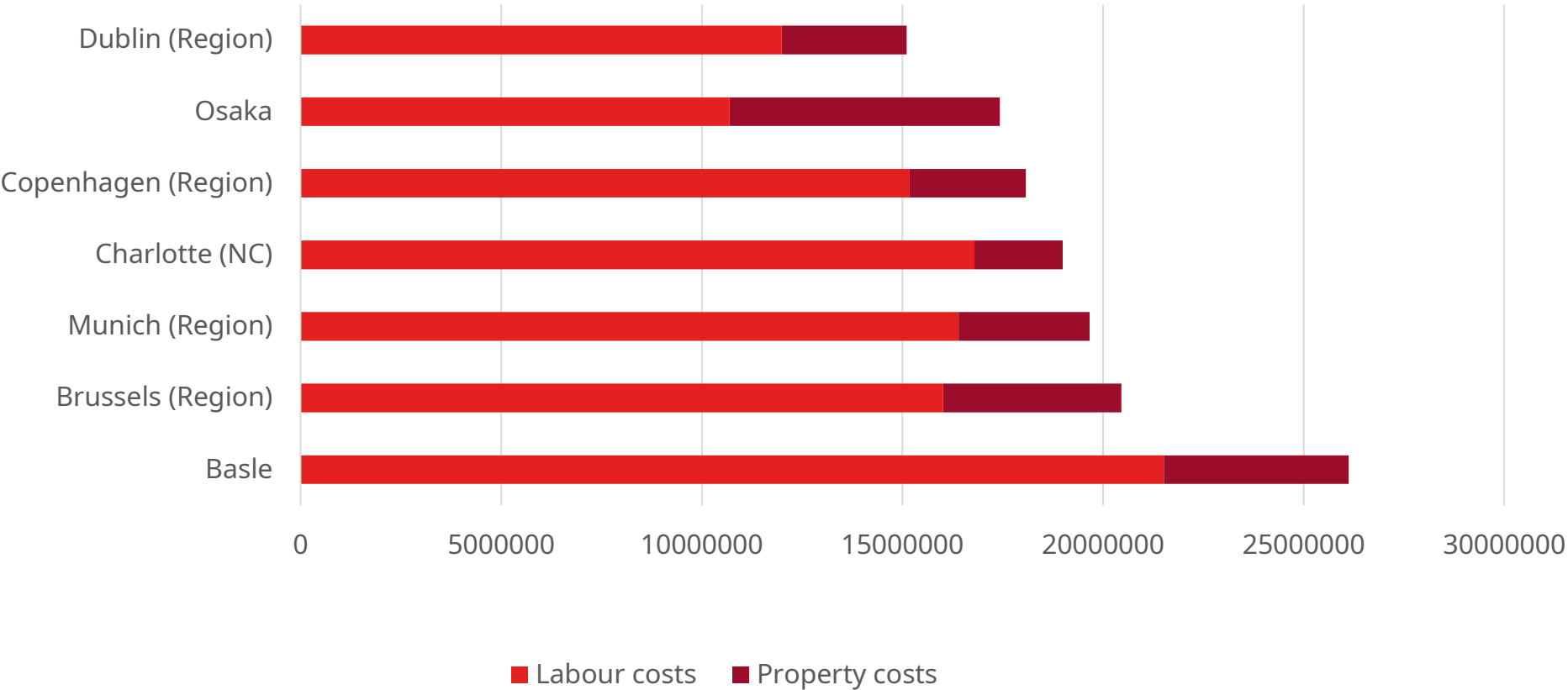
COST OVERVIEW - TABLE

Location	Rank	Total costs	Labour cost	Property cost
Dublin (Region)	1st	15,104,683	11,986,183	3,118,500
Osaka	2nd	17,428,309	10,684,754	6,743,555
Copenhagen (Region)	3rd	18,075,348	15,167,877	2,907,471
Charlotte (NC)	4th	18,994,492	16,796,192	2,198,299
Munich (Region)	5th	19,665,930	16,396,958	3,268,972
Brussels (Region)	6th	20,455,861	16,014,048	4,441,813
Basle	7th	26,125,802	21,515,419	4,610,382

This table shows the rank and **total annual costs** of each location with a breakdown by Labour and Property costs.

COST OVERVIEW - CHART

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COST OVERVIEW – TABLE

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GET MORE INFORMATION

This edition of 'Pharma/Biotech manufacturing site – cost & quality – reference case 2021' is an abstract of a full case report, entailing detailed information on each of the indicators for cost and quality.

Please get in contact with one of Invest in Denmark's sector experts to request the full case report or to request a customised fDi Benchmark-report that fits your personal fDi project profile.

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