2013

The World's Most Competitive Cities

A Global Investor's Perspective on True City Competitiveness

A report by Site Selection magazine in cooperation with IBM Global Business Services

SITE SELECTION MAGAZINE

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2013

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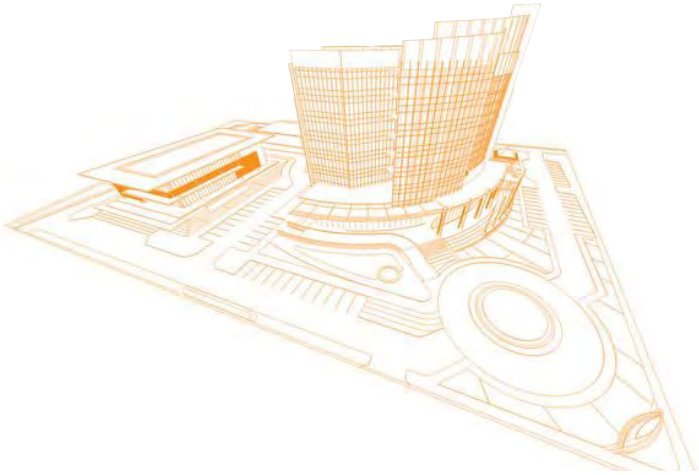


Introduction

With more than 50% of the world's population living in cities in 2007, a figure projected to go beyond 70% by 2050, it is clear that the future welfare of people is increasingly tied up with the prospects and opportunities for cities. As cities are thus viewed as the drivers of economic growth and vitality, the importance of urban competitiveness has been brought to the fore.

Recognition of the importance of city competitiveness has led to the publication of many reports and books that aim to rank and assess cities on their relative competitiveness. These have often been based on conceptual approaches that sought to measure the cities' relative level of economic maturity or development. Valuable as such efforts are, they are not truly reflective of competitiveness or attractiveness from a corporate investor's point of view.

The objective of this report is to develop various rankings of cities around the world based on their competitiveness for attracting international (Greenfield) investment projects from several types of operations. Unlike other city rankings published so far, this report is based on location decision criteria as they are used by corporate decision makers in real life. The location decision criteria used by corporate decision makers vary for each type of investment project and can be quite different from the factors used in other reports which often aim at one generic ranking (across all types of operations). Rather, the rankings in this report demonstrate that the competitiveness of cities is different for different types of business operations, and that therefore cities have varying propositions for attracting companies from different industries.

The rankings in this report demonstrate that the competitiveness of cities is different for different types of business operations.

Accordingly, this report simulates the analysis that corporate investors undertake in the initial stages of the location selection process, using five different investment prototypes that would typically be located in major metropolitan areas. This approach differentiates locations on the basis of their financial attractiveness and their qualitative attractiveness, with the objective to identify the combined "cost-quality" offer of locations and thus the trade-off that locations demonstrate for a particular investment project.

The quality and financial analysis are brought together in so-called cost-quality maps, which are the key analytical outcomes presented in the report. These cost–quality maps, pioneered by IBM-PLI in their location benchmarking work, show the relative competitive position of the contenders for specific investment. They provide a tailored assessment of the relative attractiveness of locations for particular business activities with respect to the quality of the business environment along the y-axis and financial attractiveness along the x-axis. Locations further up the y-axis offer relatively more favorable business environments while locations further to the right offer a more attractive financial proposition. A location's position in the map indicates the cost-quality trade-off available to the investor for their particular project. As such, the maps show the different location solutions available to companies for different sectors and activities.

This report presents the detailed findings for each of the five investment prototypes in separate sections. In each section we first describe the particular investment profile that was used as a prototype for the simulation of location analysis, and set out the key requirements and location drivers used in the analysis. This is followed by a description of the analytical results for the investment prototype: the quality scores, financial attractiveness scores, cost-quality map, and city rankings per individual category of the quality analysis.

We provide more details on the city selection, methodology and location criteria in the Annex.

Executive Summary

Overall, the findings clearly show that the competitiveness of cities varies by sector and business function. As such, they indicate the limitations of looking at one overall index of competitiveness.

Moreover, for all sectors, the results display a clear trade-off between quality and cost, with higher quality locations tending to have lower financial attractiveness (higher costs), and lower quality locations offering higher financial attractiveness (lower costs). This shows that companies are confronted with a multitude of different location options, and need to assess carefully what type of location solution they seek for a particular activity. To do so, they need to weigh operational risks associated with the quality of the business environment against the cost efficiencies they seek to gain.

For cities seeking to attract investment, it is important that they understand their competitive position within each sector and business function, and are able to see how this translates into a particular value proposition to investors within a regional or global context.

For cities seeking to attract investment, it is important that they understand their competitive position within each sector and business function.

For International Headquarters the trade-off between quality and financial attractiveness is particularly evident, with all cities located along a broad diagonal line between the two dimensions. London, Singapore and New York top the quality ranking.

For the analyzed type of Shared Service Center, there are a number of cities that have managed to position themselves as cost attractive locations with good quality environments, such as Kuala Lumpur, Manila and a number of Indian cities within the Asia-Pacific region. In Europe, Prague, Budapest, Birmingham and Manchester stand out with their attractive propositions to investors, while San Jose (Costa Rica) is an example of a strong competitor in Latin America.

In Software Development, London and New York top the quality ranking followed by San Francisco and Paris. A small cluster of cities — Taipei, Birmingham, Manchester and Barcelona — stand out with a combination of high quality and competitive costs. For investors seeking substantial cost efficiencies, the Indian cities of Bangalore, Hyderabad, New Delhi and Chennai all offer highly cost competitive alternatives with large talent pools.

For Financial Services the world's leading financial centers, New York and London, top the quality ranking, followed by Singapore and Chicago. There are then a number of cities that, within their respective regions, offer interesting cost attractive alternatives at somewhat lower quality than the leading financial centers of the world. These findings highlight the importance of financial services companies thinking strategically and carefully about how they structure their global footprints, and considering which activities require a presence in a financial center, and which activities can be done in a location nearby or even further away.

In Life Sciences, Singapore and Dublin have particularly strong value-propositions for Life Sciences R&D and Production, offering a combination of very high quality and high financial attractiveness. Both cities benefit from a substantial cluster presence and talent base, coupled with attractive tax environments. Other mature economies offer similar quality, but are financially considerably less attractive, while most emerging economies offer lower quality but at similar or higher financial attractiveness.

International Headquarters – Investment Profile

The investment profile is an illustrative example of a global company looking to set up a regional headquarter in one of the global geographies (North America, Latin America, Europe, Asia-Pacific). The headquarter will house regional management and key corporate functions (HR, finance & accounting and marketing). The entity will operate as a cost-center within the wider organization, and thus not have any direct revenues. Instead, the entity will run according to a standard cost-plus model.

Key requirements

The facility will require corporate management, HR, finance and marketing staff and have a total headcount of 105. Most staff for the facility will be recruited locally, and some additional international recruitment will take place.

The unit will be located in an office building and require 2,100 sqm.

Key location drivers

Category	Weight
General Business Environment	15
Regulations	15
Talent	25
Sector Specialization	10
Infrastructure and Connectivity	20
Living Environment	15

International Headquarters – Analytical Summary

The 100 cities are clustered along a broad diagonal line from top-left (high quality, low financial attractiveness) to bottom-right (low quality, high financial attractiveness), indicating that companies are faced with a clear trade-off between the two dimensions (quality and cost) when making location decisions for regional headquarters. This clearly illustrates the importance for companies of thinking strategically and carefully about what type of location solution is most appropriate for their headquarter.

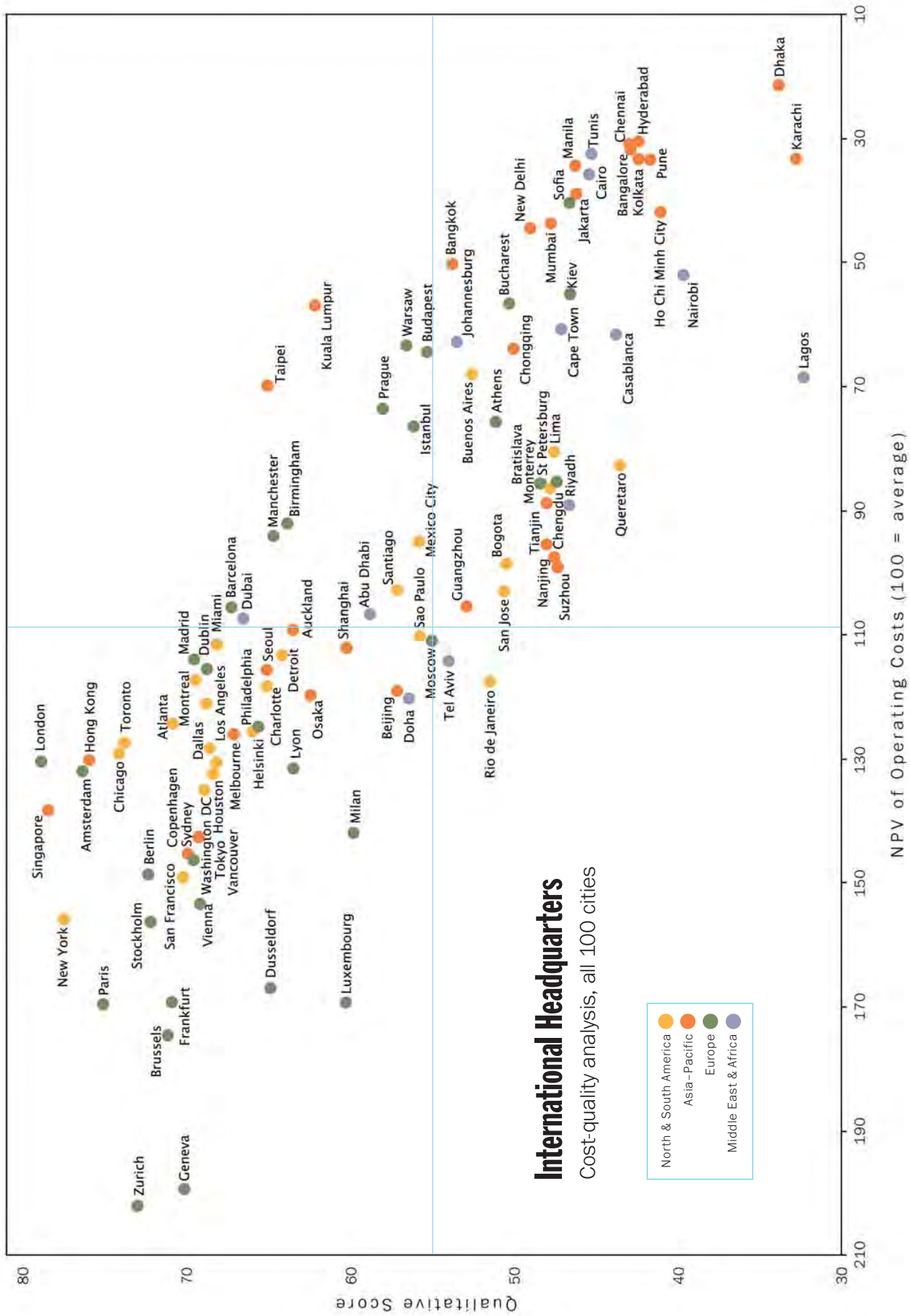
At one end of the quality dimension, there are cities like London, Singapore and New York, which offer very strong business environments for headquarters, with large talent pools, conducive regulatory and general business environments, high quality infrastructure and an attractive quality of life for international executives. In a North American context, New York is facing strong competition from Chicago and Toronto, while London is up against strong competition from Amsterdam in Europe and Hong Kong is positioned as a strong alternative to Singapore in the Asia-Pacific region.

However, all these cities are also among the more expensive cities of the world, meaning that their high quality comes at a price. Indeed, all cities in the top 20 for quality are located in Western Europe, North America or Australia, with associated high operating costs.

In contrast, Dhaka, Hyderabad and Chennai are the three cities that offer the lowest operating costs, although all three of these cities are among the bottom 10 on quality. For an activity such as headquarters, where the quality of the location is often more important than cost efficiencies, such locations will struggle to compete for investment.

However, there are several cities that offer an interesting proposition of above average quality and below average operating costs, placing them within the top-right quadrant of the cost-quality map, for example, Dubai, Manchester, Birmingham and Prague in an EMEA context and Kuala Lumpur and Taipei in the Asia-Pacific region. These cities offer attractive alternatives to the more established headquarter locations, and may increasingly be contenders for this type of investment in the future.

In Latin America, leading cities such as Santiago, Sao Paulo and Mexico City offer a comparatively high quality without being radically less financially attractive than key regional competitors. Whilst not competing directly with leading North American cities, these cities will be key contenders for Latin American headquarters.


International Headquarters
Cost-quality analysis, all 100 cities
North & South America
Asia–Pacific
Europe
Middle East & Africa
Qualitative Score
NPV of Operating Costs (100 = average)
80
70
60
50
40
30
10
30
50
70
90
110
130
150
170
190
210
Singapore
London
New York
Hong Kong
Amsterdam
Paris
Toronto
Chicago
Berlin
Stockholm
Brussels
Frankfurt
Zurich
Geneva
Copenhagen
Sydney
San Francisco
Washington DC
Vienna
Tokyo
Houston
Vancouver
Atlanta
Montreal
Dallas
Los Angeles
Melbourne
Madrid
Dublin
Miami
Philadelphia
Helsinki
Charlotte
Seoul
Lyon
Detroit
Osaka
Dusseldorf
Barcelona
Dubai
Auckland
Milan
Luxembourg
Manchester
Birmingham
Taipei
Shanghai
Kuala Lumpur
Abu Dhabi
Santiago
Beijing
Doha
Sao Paulo
Mexico City
Moscow
Tel Aviv
Prague
Warsaw
Budapest
Istanbul
Rio de Janeiro
Guangzhou
Bangkok
Johannesburg
Buenos Aires
Bogota
San Jose
Athens
Bucharest
Chongqing
Bratislava
Monterrey
St Petersburg
Lima
Riyadh
Tianjin
Chengdu
Nanjing
Suzhou
New Delhi
Mumbai
Kiev
Cape Town
Queretaro
Casablanca
Sofia
Manila
Jakarta
Tunis
Cairo
Chennai
Hyderabad
Bangalore
Kolkata
Pune
Ho Chi Minh City
Nairobi
Dhaka
Karachi
Lagos

Shared Services Center – Investment Profile

Description

The investment profile is an illustrative example of a global company looking to set up a Shared Services Center providing internal support for the companies activities in a wider region. The center covers multiple functions in the areas of Finance, HR, Customer Support and IT, and is therefore a more complex "middle office," rather than a "lower end back office" that focuses mainly on transactional activities.

The entity will operate as a cost-center within the wider organization, and thus not have any direct revenues. Instead, the entity will run according to a standard cost-plus model.

Key requirements

The facility will require finance, HR, Customer Support and IT support staff and have a total headcount of 250. All staff for the facility will be recruited locally.

The unit will be located in an office building and require 5,000 sq. m.

Key location drivers

Category	Weight
Business Environment	10
Regulations	15
Talent	35
Sector Specialization	10
Infrastructure and Connectivity	20
Living Environment	10

Shared Services Center – Analytical Summary

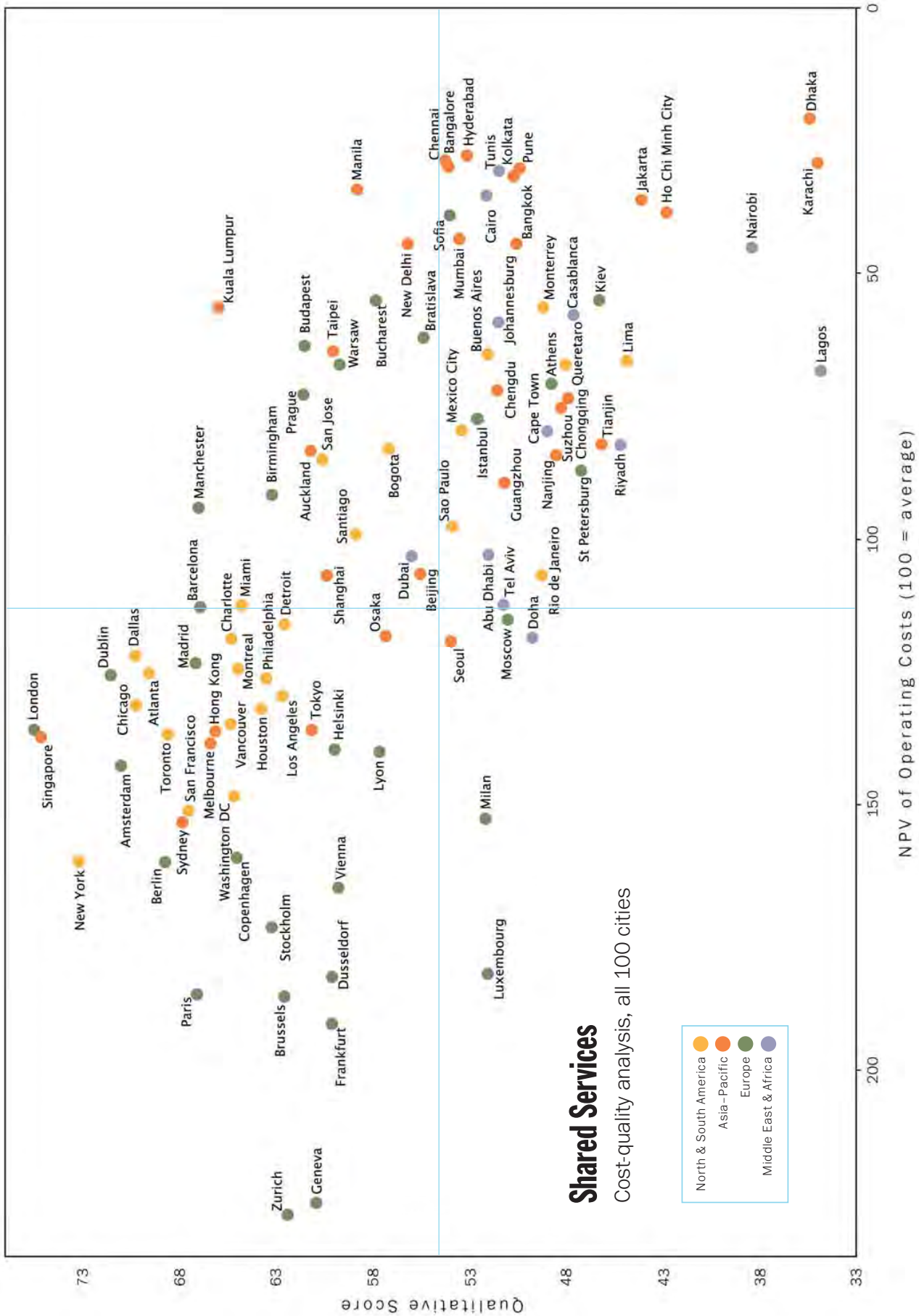
Location selection for Shared Services Centers tends to be more cost sensitive than for the other investment projects studied in this report. Consequently, the selection of appropriate locations will tend to be focused on more financially attractive locations. However, these types of operations have clear requirements for talent, and competitive locations need to offer a combination of good talent pools and cost attractiveness. Striking this delicate balance between talent and costs is key for successful location selection for Shared Services Centers.

Our analysis shows that there are a number of locations that have managed to position themselves as cost attractive locations with good quality environments, placing them in the top-right corner of the cost-quality map. For example, cities like Kuala Lumpur, Manila and a number of Indian cities are strongly positioned within the Asia-Pacific region. Kuala Lumpur is also the city with the highest quality offer among emerging economies. In Europe, Prague, Budapest, Birmingham and Manchester stand out with their attractive propositions to investors, while San Jose is an example of a strong competitor in Latin America. These cities are all cost attractive in their regional contexts, whilst offering large relevant talent pools and good quality business environments for Shared Services Centers.

On the other hand, the most cost attractive locations for Shared Services Centers globally, i.e. Dhaka, Karachi and Ho Chi Minh City, suffer from markedly lower quality, to the extent that they may be considered less competitive than more expensive options.

On quality, London is the leading city in the world, closely followed by Singapore. While both of these cities are among the higher cost locations, their operating costs are only moderately above average, making them key contenders for higher value and smaller scale Shared Services Centers that are less cost driven and require different skill sets than the very large Shared Services Centers focused on more basic activities and operational support.

Within the US, Miami and Dallas offer attractive combinations of quality and cost compared to other US cities, although they remain expensive alternatives to good quality Latin American alternatives, such as San Jose, Santiago and Bogota.


Shared Services
Cost-quality analysis, all 100 cities
North & South America
Asia–Pacific
Europe
Middle East & Africa
Qualitative Score
NPV of Operating Costs (100 = average)
73
68
63
58
53
48
43
38
33
0
50
100
150
200
London
Singapore
New York
Dublin
Chicago
Dallas
Atlanta
Amsterdam
Toronto
San Francisco
Sydney
Berlin
Washington DC
Hong Kong
Melbourne
Madrid
Vancouver
Copenhagen
Paris
Montreal
Houston
Stockholm
Brussels
Philadelphia
Los Angeles
Dusseldorf
Frankfurt
Zurich
Geneva
Barcelona
Charlotte
Tokyo
Helsinki
Manchester
Miami
Vienna
Lyon
Detroit
Birmingham
Shanghai
Osaka
Prague
Auckland
Santiago
San Jose
Milan
Seoul
Bogota
Luxembourg
Dubai
Beijing
Kuala Lumpur
Budapest
Sao Paulo
Abu Dhabi
Tel Aviv
Taipei
Moscow
Doha
Warsaw
Bucharest
Rio de Janeiro
St Petersburg
New Delhi
Manila
Bratislava
Istanbul
Guangzhou
Riyadh
Mexico City
Chennai
Bangalore
Hyderabad
Sofia
Mumbai
Buenos Aires
Chengdu
Cape Town
Nanjing
Suzhou
Chongqing
Tianjin
Johannesburg
Tunis
Kolkata
Pune
Cairo
Bangkok
Monterrey
Athens
Queretaro
Casablanca
Kiev
Lima
Jakarta
Ho Chi Minh City
Nairobi
Karachi
Dhaka
Lagos

Software Development – Investment Profile

Description

The investment profile is a typical example of a global IT company that wants to expand its software development capabilities and is planning to set up a new software development center. The entity will operate as a cost-center within the wider organization, and thus not have any direct revenues. Instead, the company will run according to a standard cost-plus model.

Key requirements

The facility will require software developers, testers, architects and business analysts. The total headcount is expected to be 156, and all staff for the facility will be recruited locally.

The facility will be located in an office building and require 3,120 sq. m.

Key location drivers

Category	Weight
Business Environment	10
Regulations	10
Market	5
Talent	30
Sector Specialization	20
Infrastructure and Connectivity	15
Living Environment	10

Software Development – Analytical Summary

The results show that investors are faced with a number of different options for locating their software development activities around the world.

A small cluster of cities — Taipei, Birmingham, Manchester and Barcelona — stand out with a combination of high quality and competitive costs. Taipei has a particularly compelling proposition of talent availability, sector presence and competitive costs, placing it firmly towards the top-right corner of the cost-quality map.

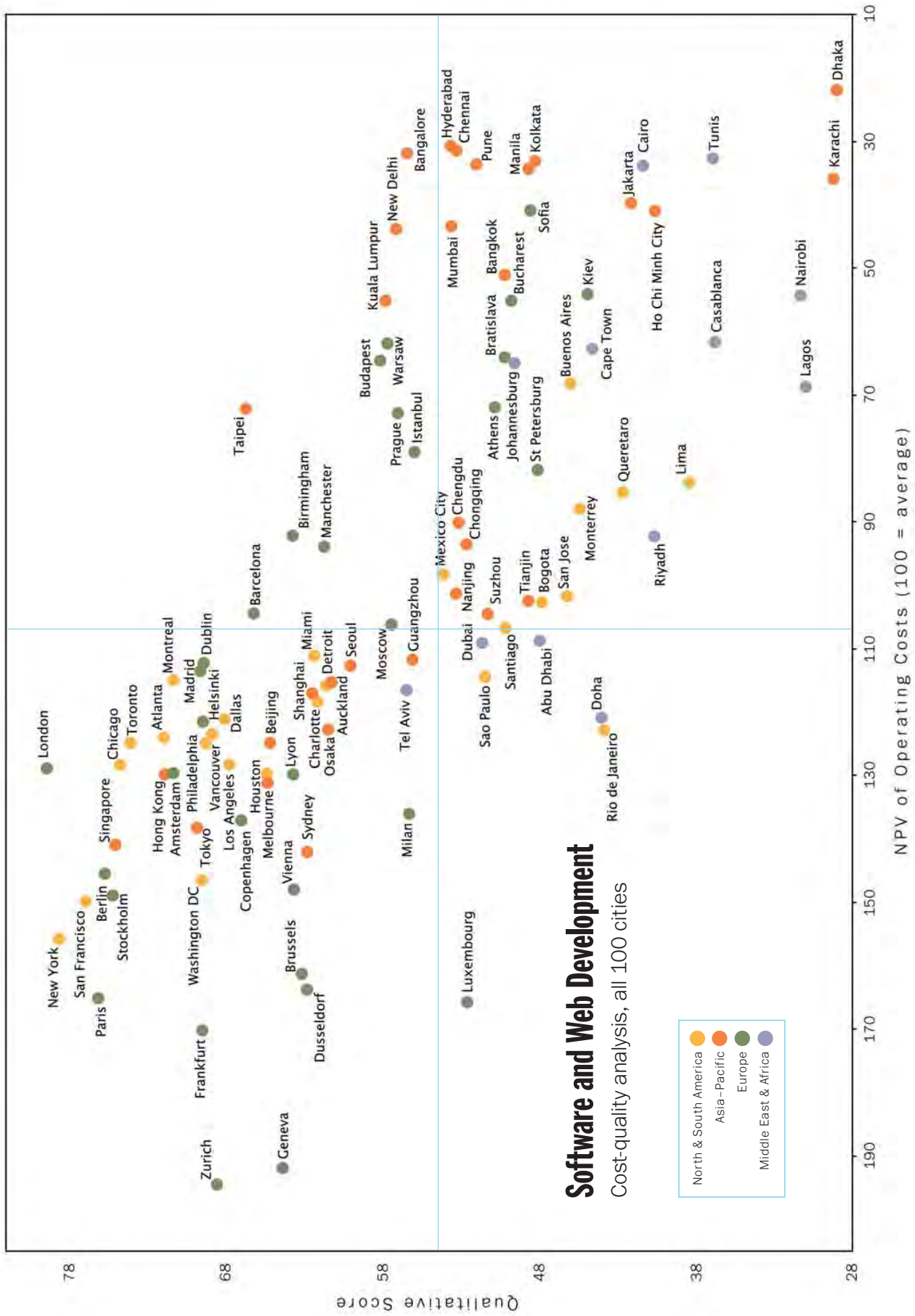
For less cost sensitive investors seeking high quality environments, London and New York top the quality ranking, followed by San Francisco and Paris. All these cities are well established global hubs for ICT in general, and the software industry in particular. However, with the exception of London, they are all among the highest cost locations included in the analysis.

For investors seeking substantial cost efficiencies, the Indian cities of Bangalore, Hyderabad, New Delhi and Chennai all offer highly cost competitive alternatives with large talent pools. However, these cities have more risks associated with infrastructure, regulations and the general business environment.

Of all the regions, Europe offers the widest range of location options to companies, from the top quality locations London and Paris to very cost attractive options in South East Europe, such as Sofia and Bucharest. In between, a number of Central European cities are emerging as key contenders for investment in the software development segment, with Budapest, Prague and Warsaw all offering a competitive talent base and relatively low cost in a regional context. As already noted, Birmingham, Manchester and Barcelona also offer compelling propositions, while Dublin and Madrid offer somewhat higher quality but at moderately higher cost.

In Latin America, Mexico City is the top quality location, and offers a relatively cost-attractive proposition in a regional context. Sao Paulo also offers good quality, but at higher costs, while lower cost alternatives to Mexico City perform substantially worse on quality.

In North America, Chicago and Toronto offer cost attractive high quality alternatives to New York and San Francisco, however, the options are all clustered relatively close to each other compared to other regions.


Software and Web Development
Cost-quality analysis, all 100 cities
North & South America
Asia–Pacific
Europe
Middle East & Africa
Qualitative Score
NPV of Operating Costs (100 = average)
78
68
58
48
38
28
10
30
50
70
90
110
130
150
170
190
London
New York
San Francisco
Paris
Berlin
Stockholm
Singapore
Chicago
Toronto
Atlanta
Montreal
Madrid
Dublin
Helsinki
Dallas
Beijing
Hong Kong
Amsterdam
Philadelphia
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Los Angeles
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Auckland
Miami
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Seoul
Washington DC
Brussels
Dusseldorf
Frankfurt
Zurich
Geneva
Barcelona
Birmingham
Manchester
Taipei
Moscow
Guangzhou
Tel Aviv
Milan
Budapest
Warsaw
Prague
Istanbul
Kuala Lumpur
New Delhi
Bangalore
Mexico City
Chengdu
Chongqing
Nanjing
Suzhou
Tianjin
Bogota
San Jose
Monterrey
Queretaro
Riyadh
Lima
Dubai
Santiago
Abu Dhabi
Sao Paulo
Doha
Rio de Janeiro
Luxembourg
Hyderabad
Chennai
Pune
Mumbai
Bangkok
Bucharest
Bratislava
Johannesburg
Athens
St Petersburg
Buenos Aires
Cape Town
Kiev
Manila
Kolkata
Sofia
Jakarta
Cairo
Ho Chi Minh City
Casablanca
Lagos
Nairobi
Tunis
Karachi
Dhaka

Financial Services – Investment Profile

Description

This project is a global financial services organization (e.g. bank) wishing to broaden its international fund management capability and set up a new competence center. The organization will support the company's global fund management activities with relevant market research and fund management analysis and advice. The entity will operate as a cost-center within the wider organization, and thus not have any direct revenues. Instead, the entity will run according to a standard cost-plus model.

Key requirements

The facility will require fund managers and financial analysts. The total headcount is expected to be 50, and all staff for the facility will be recruited locally. The unit will be located in an office building and require 1,000 sq. m.

Key location drivers

Category	Weight
Business Environment	20
Regulations	20
Market	10
Talent	20
Sector Specialization	10
Infrastructure and Connectivity	10
Living Environment	10

Financial Services – Analytical Summary

The 100 cities are all positioned within a broad diagonal line in the cost-quality map, highlighting the trade-off between cost and quality for these types of activities.

The world's leading financial centers. New York and London, top the quality ranking, followed by Singapore and Chicago. All these four cities are among the higher cost locations, and are thus firmly positioned in the top-left corner of the cost-quality map. Immediately below these four cities, we find a number of cities offering only marginally lower quality at similar cost levels, such as Hong Kong, Amsterdam, San Francisco and Toronto.

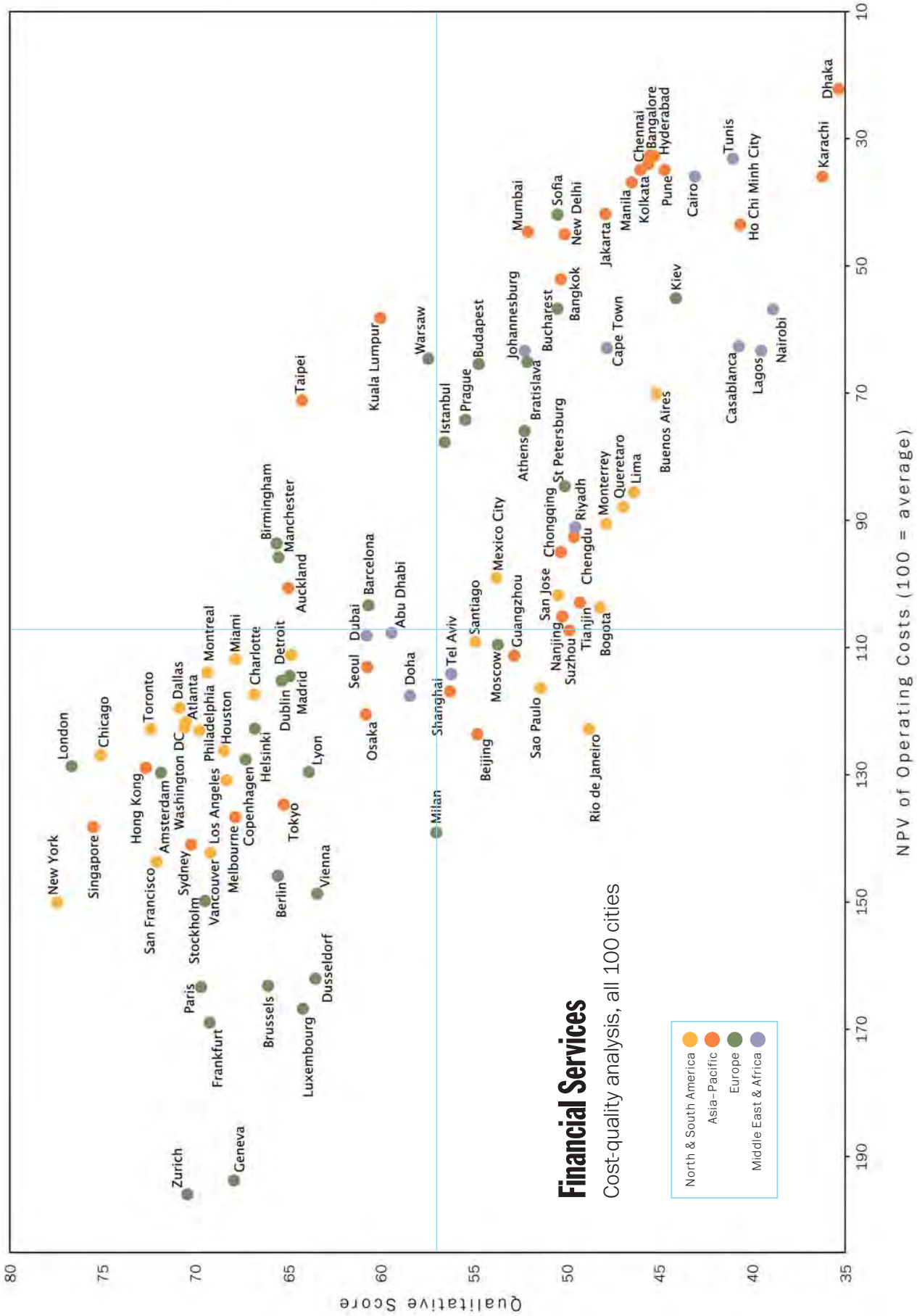
There are then a number of cities that, within their respective regions, offer interesting cost attractive alternatives at somewhat lower quality than the leading financial centers of the world. Hence, in Asia-Pacific, Auckland, Taipei and Kuala Lumpur are all positioned as potential locations for financial services activities that do not require a direct presence in a leading financial center. Mumbai is also positioned as a very cost attractive location with good quality.

In Europe, Birmingham, Manchester and Barcelona are similarly positioned as alternatives to London for financial services activities that may be more cost sensitive and do not require a presence in the continent's leading financial center. Cities in Central and Eastern Europe, notably Warsaw, Istanbul, Prague and Budapest, are also emerging as potential locations for such activities.

In the Middle East and Africa, Dubai is clearly positioned as the top financial center, ranking highest on quality. However, Johannesburg is a very cost attractive alternative, offering a high quality within a regional context, coupled with substantially lower operating costs than Dubai.

In Latin America, Santiago is positioned as the top quality location, followed by Mexico City and Sao Paulo.

These findings highlight the importance of financial services companies thinking strategically and carefully about how they structure their global footprints, and considering which activities require a presence in a financial center, and which activities can be done in a location nearby or even further away. Indeed, we are witnessing a growing trend among the world's leading financial services companies of moving away from large centralized facilities in a major financial center, and locate operations that do not require a presence in the leading financial center to alternative and more cost attractive cities. This trend opens up opportunities for investment for a number of cities that are not necessarily among the world's leading financial centers.


Financial Services
Cost-quality analysis, all 100 cities
North & South America
Asia-Pacific
Europe
Middle East & Africa
Quantitative Score
NPV of Operating Costs (100 = average)
80
75
70
65
60
55
50
45
40
35
10
30
50
70
90
110
130
150
170
190
New York
Singapore
London
Chicago
San Francisco
Hong Kong
Toronto
Amsterdam
Washington DC
Sydney
Dallas
Atlanta
Vancouver
Los Angeles
Philadelphia
Stockholm
Montreal
Houston
Melbourne
Miami
Paris
Copenhagen
Charlotte
Frankfurt
Helsinki
Detroit
Brussels
Tokyo
Dublin
Madrid
Luxembourg
Lyon
Birmingham
Manchester
Dusseldorf
Berlin
Auckland
Vienna
Zurich
Geneva
Taipei
Seoul
Dubai
Barcelona
Osaka
Abu Dhabi
Doha
Milan
Shanghai
Tel Aviv
Kuala Lumpur
Warsaw
Istanbul
Prague
Budapest
Santiago
Beijing
Moscow
Guangzhou
Mexico City
Sao Paulo
Rio de Janeiro
Johannesburg
Bratislava
Bucharest
Athens
Mumbai
Bangkok
Sofia
New Delhi
St Petersburg
Chongqing
Riyadh
Chengdu
San Jose
Nanjing
Suzhou
Tianjin
Bogota
Monterrey
Queretaro
Lima
Cape Town
Buenos Aires
Jakarta
Manila
Kolkata
Chennai
Bangalore
Hyderabad
Pune
Kiev
Cairo
Casablanca
Lagos
Nairobi
Tunis
Ho Chi Minh City
Karachi
Dhaka

Life Sciences R&D and Production – Investment Profile

Description

The investment is an example of a global pharmaceuticals company that wants to set up a new facility for the development of new drugs, with related pilot production activities. In addition to expected direct revenues of US$60 million the facility will receive intercompany transfers of US$15 million generating annual sales for the facility of US$75 million.

Key requirements

The facility will require a combination of research and laboratory staff (scientists and technicians) as well as skilled production staff. The total headcount is expected to be 150. The staff will all be recruited locally.

In addition, it is assumed that the facility will purchase raw materials and supplies from the company's global suppliers for US$12 million.

The facility will be located in an industrial space of 10,000 sqm. Since the company has global agreements in place with equipment suppliers, it is assumed that key equipment will be sourced internationally at a total investment cost of US$65 million. On top of this initial investment, the facility requires investment in working capital of US$7.2 million.

Key location drivers

Category	Weight
Business Environment	15
Regulations	15
Market	10
Talent	30
Sector Specialization	15
Infrastructure and Connectivity	10
Living Environment	5

Life Sciences R&D and Production – Analytical Summary

Globally, Singapore and Dublin have particularly strong value-propositions for Life Sciences R&D and Production, offering a combination of very high quality and high financial attractiveness. Both cities benefit from a substantial cluster presence and talent base, coupled with attractive tax environments. Other mature economies offer similar quality, but are financially considerably less attractive, while most emerging economies offer lower quality but at similar or higher financial attractiveness.

The top ranking city on quality is London, followed by New York, Singapore and Paris. All these cities have very strong cluster and research presence, coupled with large relevant talent pools.

Sofia is the top ranking city for financial attractiveness, followed by Dubai and Abu Dhabi, largely as a result of their very attractive tax regimes. All three of these cities also offer reasonable quality in a global context, making them potential destinations for companies that are particularly sensitive to the financial attractiveness and willing to take some operational risks.

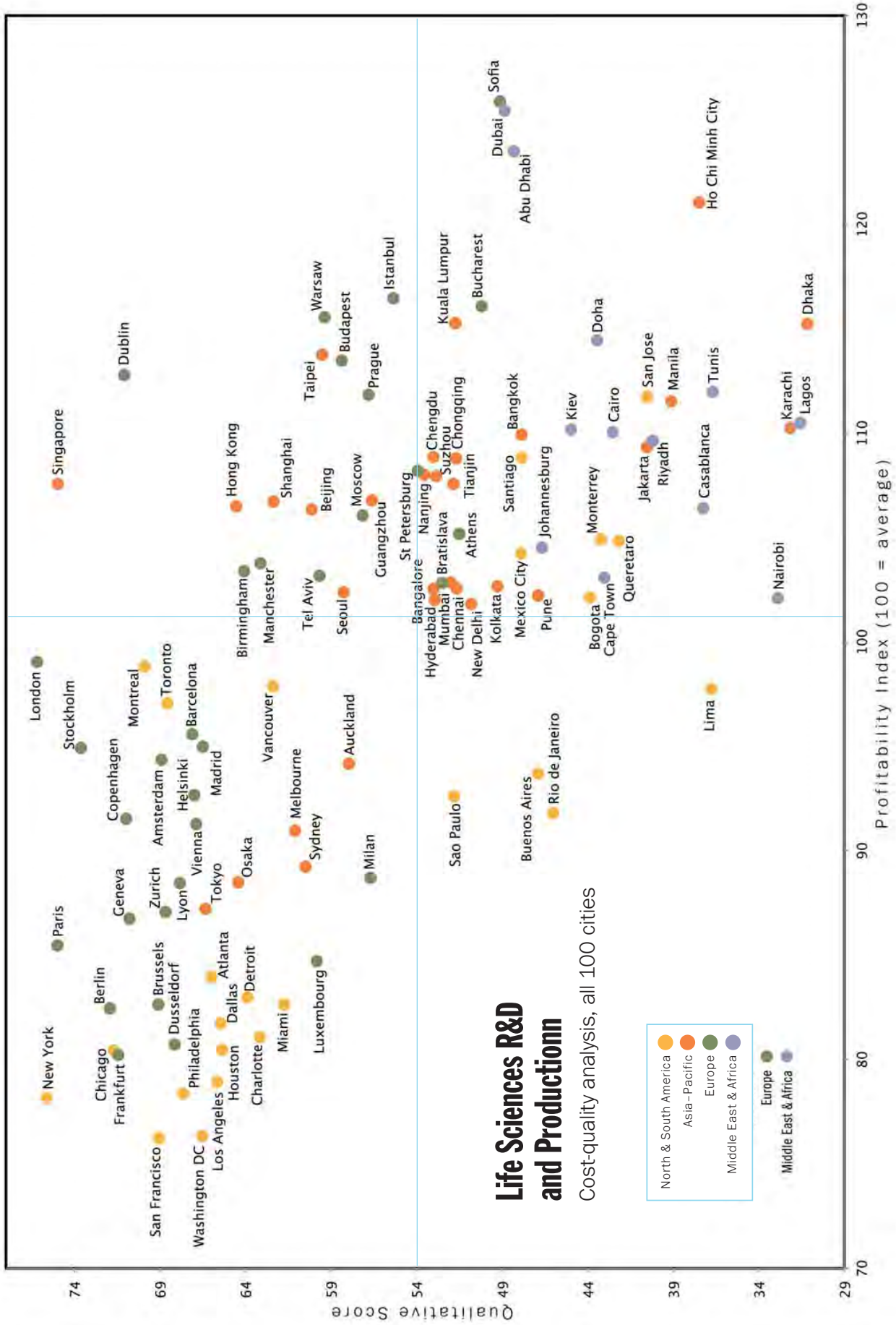
It is of interest to note that due to the tax sensitive nature of this type of investment project, all the US cities are firmly positioned to the left of the cost-quality map, among the less financially attractive locations. However, they all offer high quality in a global context.

While Singapore stands out in the Asia-Pacific region, cities such as Hong Kong, Shanghai and Taipei are all high quality locations, with Taipei also being particularly financially attractive.

As is evident for other sectors, Europe offers the widest variation of location options to companies, with the continent both having the world's top ranking city on quality (London) and financial attractiveness (Sofia), and numerous alternative combinations of quality and financial attractiveness in between. In addition to London, several of the world's other leading pharmaceutical clusters are thus located on the continent in cities such as Paris, Stockholm, Copenhagen and Dublin. Moreover, several Central and Eastern European cities — notably Warsaw, Budapest and Istanbul — offer financially attractive location options with good and improving quality.

In Latin America, Sao Paulo leads on quality, but is also among the region's less financially attractive cities. In contrast, Santiago is financially very attractive, whilst offering a relatively high quality in a regional context.

In the Middle East and Africa, Tel Aviv offers a particularly high quality, largely as a result of its strong research and cluster presence. The favorable tax environment in the Emirates makes Dubai and Abu Dhabi more financially attractive than lower cost alternatives in Africa.


Life Sciences R&D and Productionn
Cost-quality analysis, all 100 cities
North & South America
Asia-Pacific
Europe
Middle East & Africa
Europe
Middle East & Africa
Qualitative Score
Profitability Index (100 = average)
74
69
64
59
54
49
44
39
34
29
70
80
90
100
110
120
130
London
Stockholm
Copenhagen
Montreal
Toronto
Barcelona
Madrid
Helsinki
Amsterdam
Vienna
Zurich
Lyon
Geneva
Paris
Berlin
Brussels
Dusseldorf
Atlanta
Detroit
Dallas
Houston
Philadelphia
Chicago
Frankfurt
New York
San Francisco
Washington DC
Los Angeles
Charlotte
Miami
Luxembourg
Tokyo
Osaka
Sydney
Melbourne
Vancouver
Auckland
Milan
Birmingham
Manchester
Tel Aviv
Seoul
Hong Kong
Shanghai
Beijing
Moscow
Guangzhou
Taipei
Warsaw
Budapest
Prague
Istanbul
Singapore
Dublin
Sao Paulo
Buenos Aires
Rio de Janeiro
Lima
Hyderabad
Bangalore
Mumbai
Chennai
New Delhi
Kolkata
Mexico City
Pune
Bogota
Cape Town
Monterrey
Queretaro
Johannesburg
Santiago
Bangkok
Kiev
Cairo
Doha
Jakarta
Riyadh
San Jose
Manila
Casablanca
Tunis
Nairobi
Karachi
Lagos
Dhaka
St Petersburg
Nanjing
Bratislava
Athens
Tianjin
Suzhou
Chengdu
Chongqing
Kuala Lumpur
Bucharest
Dubai
Abu Dhabi
Sofia
Ho Chi Minh City

Annex A. Cross sector rankings

The main objective of this report is to demonstrate that the competitiveness of cities for attracting "mobile" investment projects varies by type of operation (sector or business function) and even by company.

Hence the report presents various rankings of cities around the world based on their competitiveness for five different types of investment projects.

While the results show that some cities score well across the various investment types, it is also evident that many cities show a (large) variety in rankings across the different investment types and therefore have varying propositions for attracting companies from the different industries.

Nevertheless, many readers will raise the question how cities compare to each other "across the board," and are interested in an overall competitiveness ranking. In response to this, we have developed simulations of a cross sector ranking for the qualitative and financial attractiveness of the cities analyzed in this report. These simulations are presented on the next pages.

It is important to emphasize that a strong disadvantage of cross sector scorings and rankings is that they possibly hide particular strengths of individual cities. After all, by combining various rankings, a high ranking for one sector may be compensated by a weaker ranking for another sector. We therefore strongly recommend that cities market themselves on the basis of their value propositions for individual business sectors and functions.

Annex C. City Selection

In total, 100 cities have been selected for this analysis. For consistency, these 100 cities are the same for all types of operations considered.

The cities have been selected on the basis of their size of the local labor market and the inward investment performance from the past three years. The latter has been analyzed using data from IBM-PLI's Global Investment Locations Database (GILD) which registers new "mobile" investment projects around the world.

To identify eligible cities for this report, the following basic criteria have been used:

- A minimum population of 1 million inhabitants in the local labor catchment area (see Annex B).
- A minimum of 25 foreign investment projects attracted in 2009-2011, as registered in GILD.

Based on these two criteria, the top ranking cities globally and by main geography were selected on the basis of their number of received foreign investment projects. In this process, the following additional guidelines were used:

- Balance across the world's major regions, based on their share of new ("greenfield") foreign direct investment projects.
- Maximum numbers of cities for individual geographies and important FDI markets (countries).

Metropolitan area: source and definition for charts on the previous spread:

Brookings Global Metromonitor is the main source used for defining the size of the metropolitan areas included in this report.

In the US, each city in the report is part of a well defined metropolitan statistical area.

For European cities, several administrative units are combined into one metropolitan area based on their functional proximity to and economic integration with a large city in the region.

In Asia, Africa and Latin America, national metropolitan area definitions are used where feasible.

If these are not available, estimates for metropolitan areas are made based on the administrative subdivisions (e.g. city, state, province, capital region) deemed to be most relevant given its functional proximity and economic integration with the largest city in the area.

Annex D. Methodology

The report includes rankings and findings for five different types of operations. These have been selected as representative examples for investment projects that typically focus on locating in international metropolitan areas, rather than in rural environments or smaller communities:

- International headquarters, coordination of corporate operations in one of the global regions
- Financial services center of competence
- Software development center
- R&D center for life sciences, combined with pilot production
- Shared services center, providing various internal support functions to corporate operations in one of the global regions: finance, customer support, human resources, IT.

The assessment of competitiveness of the 100 cities for the five different types of operations is based on an approach originally developed by IBM-Plant Location International and now used by many companies for their international location decisions. This approach differentiates locations on the basis of their financial attractiveness and their qualitative attractiveness, with the objective to identify the combined "cost-quality" offer of location and thus the trade-off that locations demonstrate for a particular investment project.

This is the type of analysis that is used in the initial stages of the location selection process, as a method for companies to arrive at a short-list of a few suitable locations for their investment project. The analysis is focused on the location decision factors that are of strategic importance to the company at the stage where they (quickly) have to select the most suitable location options to assess in detail before making a final decision and implementing an investment project. This approach and analysis places less emphasis on more tactical micro-level decision criteria that companies will consider once they are making a final decision.

The location criteria reviewed in this analysis and presented in the report vary by type of operation, and will also have different impact (weights) in the location assessments for different kinds of operations (see Annex E for an overview of criteria assessed in this analysis). The results of the analysis therefore show that there is no such thing as "one overall ranking of best cities to do business" or "most competitive cities," but that the competitiveness varies by type of operation and even by company.

IBM-PLI has developed prototypes for each of the five selected investment projects, which includes key inputs for the financial assessment (such as labor needs, real estate, utilities, etc) as relevant for the types of operation – and qualitative criteria and weightings for the qualitative assessment (see Annex E for overview of criteria)

IBM-PLI then gathered raw data for all identified criteria and cities, and prepared the financial and qualitative analysis.

For the financial analysis a Net Present Value of operating costs or Return on Investment has been calculated over a period of 10 years.

For the qualitative analysis a weighted scoreboard has been developed with individual factor scorings and overall weighted quality scorings for the 100 cities. For this analysis, all (non-comparable) raw data has been transformed into comparative scorings based on IBM-PLI's many years of experience with this approach.

The financial and qualitative analysis are brought together in a so called cost-quality map. These cost-quality maps, pioneered by IBM-PLI in their benchmarking work, immediately illustrate the relative competitive position of the contenders for specific investment. They provide a tailored assessment of the relative attractiveness of locations for particular business activities with respect to the quality of the business environment along the y-axis and cost attractiveness along the x-axis. Locations further up the y-axis offer relatively more favorable business environments while locations further to the right offer a more attractive cost proposition. A location's position on the map indicates the cost-quality trade-off available to the investor for their particular project. As such, the maps show the different location solutions available to companies for different sectors and activities.

Annex E. Location Categories & Criteria

The location criteria that have been assessed in this analysis include the strategic location requirements that companies use when they evaluate a "long list" of location options, with the objective to arrive at a short list of best candidate locations.

More tactical factors that companies assess once they have to choose a final location are therefore not included in this evaluation, since they do not influence the strategic selection of candidate cities for the five analyzed investment profiles.

Companies evaluate location options in a wide range of aspects that may impact the success of their operation. It is important to note that this includes both factors that are determined by a larger geographical context (for example national business regulations), and factors that are impacted by local actors (such as infrastructure or educational facilities) or local dynamics (such as competition for talent).

Cities will therefore not always be in control of the full range of components that make up their business environment, and may need to seek cooperation with other (particularly governmental) stakeholders to undertake actions to improve their competitiveness.

Below we provide an overview of the various location factors that have been used throughout the analysis. Note that for each investment profile different priorities apply for each of these factors.

Category	Factor
General Business Environment	Economic and financial stability
	Political stability
	Transparency of legal system
Regulations	Work time regulation
	Hiring & firing regulations
	Business permitting
	IP protection
	Data Security
	Ease of entry for expatriates and foreign business visitors
Market	Market proximity and access to customers
	Market opportunity
Talent	Presence of scientific / R&D staff
	Presence of experienced sector specific staff
	Presence of non-experienced staff
	Competition for staff
	Social climate and labor-employer relations
	Mastery of English (as corporate) language
	Language skills (regional)
Sector Specialization	Presence of potential partners
	Presence of local support base
	Presence of specialized R&D base
	Presence of academic research
Infrastructure and Connectivity	International accessibility
	Regional accessibility
	Local mobility
	Reliability of power supply
	Quality and reliability of telecommunications
Living Environment	Cultural attraction and clean environment
	Quality of public services
	Public safety

Annex F. About IBM-PLI

Plant Location International (PLI) is a global service of IBM Global Business Services Strategy & Transformation practice, specialized in corporate location and economic development strategies.

Operating as a fully globally integrated service — with a global center of excellence in Brussels, Belgium, supported by industry and functional subject matter experts in key markets around the world — IBM-PLI provides expert services to corporate clients for analyzing international business locations for expanding or consolidating companies to select the optimal location (country/city). IBM-PLI also advises economic development organizations on improving their areas' competitiveness, strategic marketing, developing value propositions, and marketing tools, etc.

Over the past five decades, IBM-PLI has developed various tools and techniques for corporate location analysis and foreign investment monitoring that have become industry standards. These include:

- Cost-quality location screening: a methodology developed by PLI in the mid '90s to assess the cost-quality trade off for a variety of location options for individual business operations, based on the unique location requirements for the operations
- IBM-PLI's Location Benchmarking Tool: an analytical tool developed by PLI in 2000 based on the above cost-quality approach. This tool allows companies and economic development organizations to assess the attractiveness/competitiveness of locations based on tailored location requirements
- Global Investment Locations Database (GILD): a database developed in 2002 to track corporate location decisions around the world for new establishments and expansions by companies making cross border investment. The GILD database forms the basis for IBM's annual Global Location Trends report

For more information on IBM-Plant Location International, contact: Roel Spee, Global Leader IBM-PLI by email at Roel.spee@be.ibm.com or by phone at +32 475 915 832