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# Tech Cities Ranking 2012

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# Agenda



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- 0 Introduction**
- 1 Technology & know-how**
- 2 Talent**
- 3 Market size**
- 4 Connectivity**
- 5 International business climate**
- 6 Conclusions**

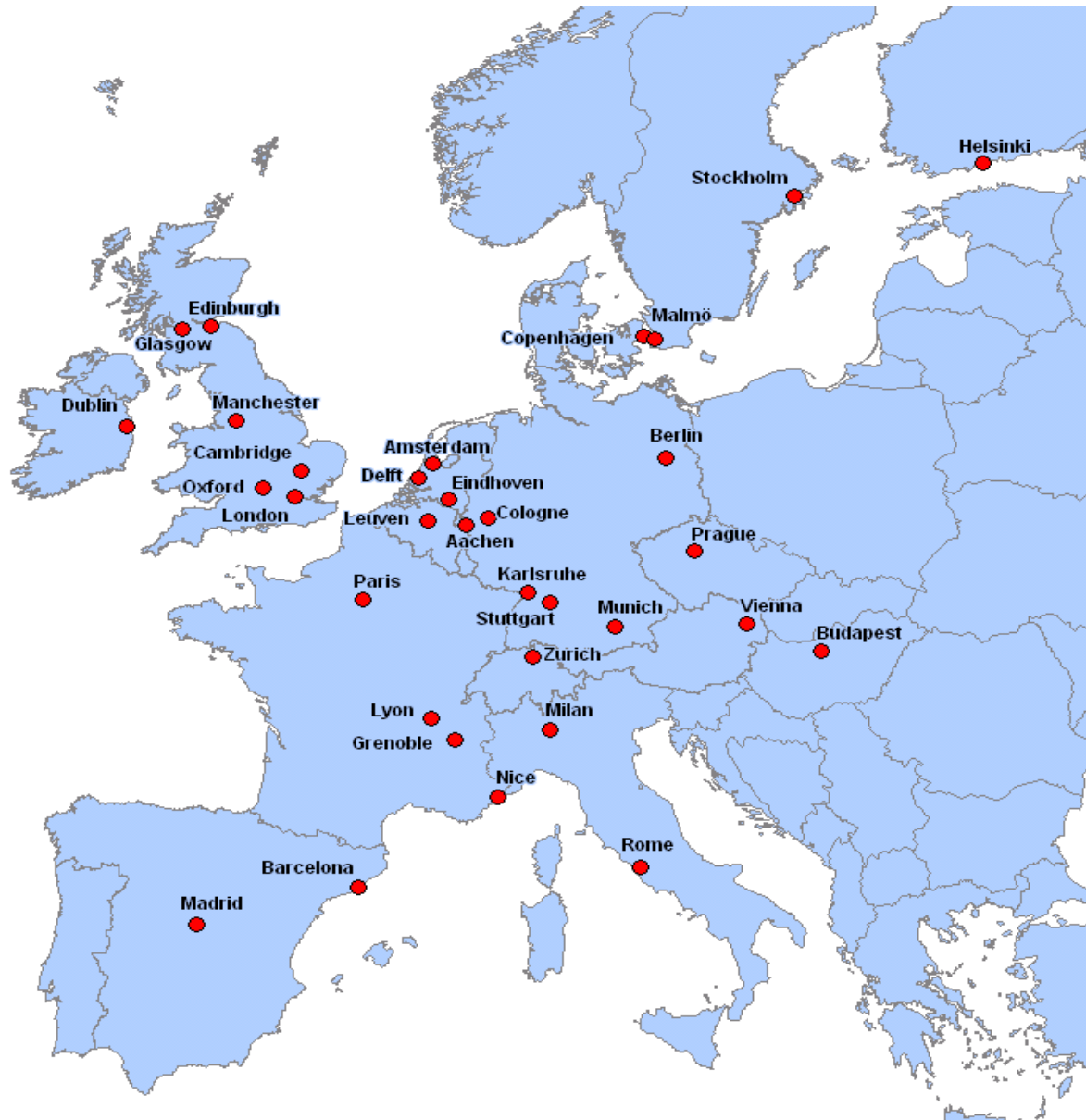
# 0 Introduction

## Objective

Insight and understanding of the competitive strengths of Europe's tech cities

## Methodology

- 1 Technology and know-how
- 2 Talent
- 3 Market size
- 4 Connectivity
- 5 International Business Climate



- 31 cities
- Data on
  - City level
  - Regional level
  - Country level

# Factors and indicators

Factor	Weight %	Indicators	Weight %
<b>1 Technology &amp; know-how</b>	20	1.1 R&D spendings	30
		1.2 Number of patent applications	25
		1.3 Ranking of universities	20
		1.4 Innovation index	25
<b>2 Talent</b>	35	2.1 Number of high skilled people	25
		2.2 Workers in R&D/tech industries	20
		2.3 Flexibility labour market	10
		2.4 Labour costs (for lab technicians, engineers and R&D supervisors)	45
<b>3 Market size</b>	10	3.1 Size regional market	35
		3.2 Size national market	65
<b>4 Connectivity</b>	20	4.1 Position in trans-European road network/ centrality index	35
		4.2 International accessibility by air	65
<b>5 International business climate</b>	15	5.1 Availability of venture capital	50
		5.2 Fiscal climate	30
		5.3 Risk forecast	20
	<b>100</b>		

# 1 Technology & know-how



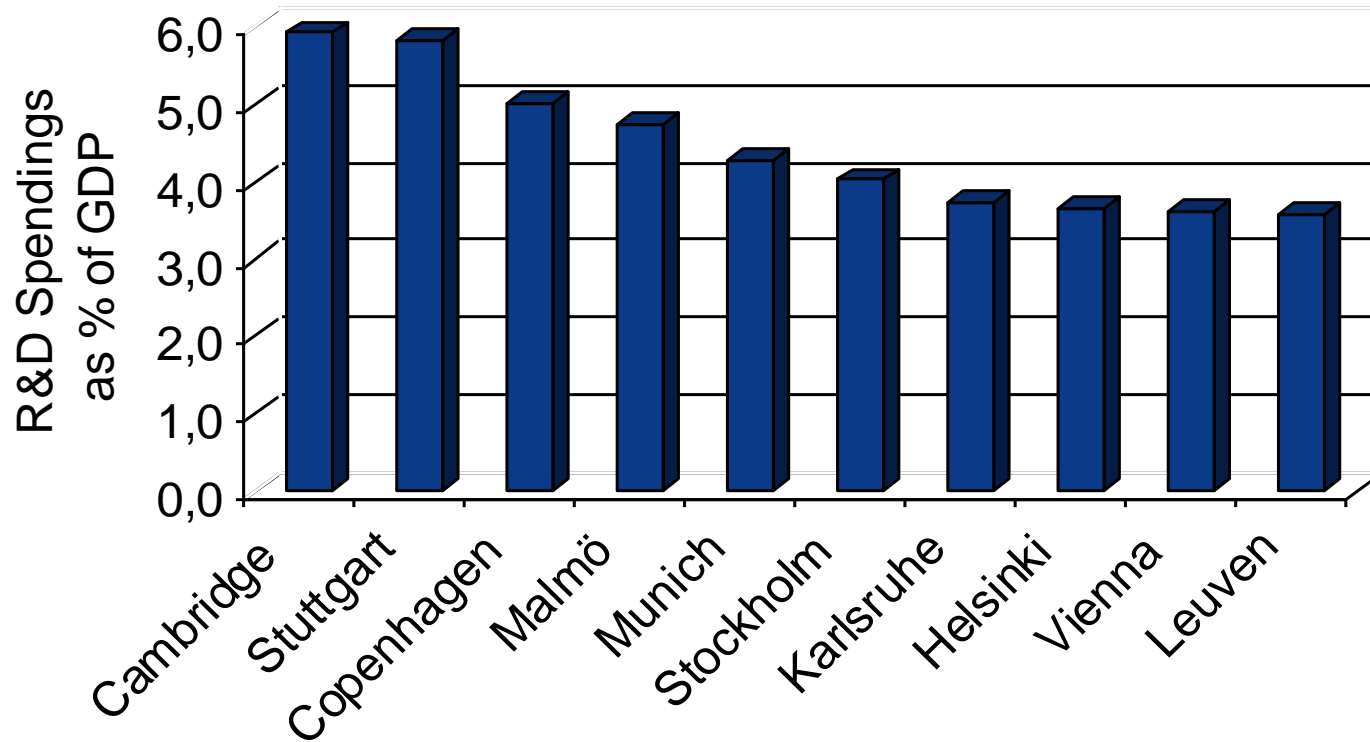
**1.1 R&D spendings**

**1.2 Number of patent applications**

**1.3 Ranking of universities**

**1.4 Innovation index**

# Top 10 R&D spendings



Source: Eurostat 2012

# Ranking of universities

## Shanghai Jiao Tong Top 500 universities 2011

Rank	City	University
1	Cambridge	University of Cambridge
2	Oxford	University of Oxford
3	London	University College London
4	Zurich	Swiss Federal Institute of Technology Zurich
5	London	Imperial College London
6	Manchester	University of Manchester
7	Paris	University Paris Sud
8	Paris	University Pierre Marie Curie
9	Copenhagen	University of Copenhagen
10	Stockholm	Karolinska Institute

## Times World's Top 400 universities 2011-2012

Rank	City	University
1	Oxford	University of Oxford
2	Cambridge	University of Cambridge
3	London	Imperial College London
4	Zurich	Swiss Federal Institute of Technology Zurich
5	London	University College London
6	Stockholm	Karolinska Institute
7	Edinburgh	University of Edinburgh
8	Munich	Ludwig Maximilians universität
9	Lausanne	École Polytechnique Fédéral de Lausanne
10	London	London School of Economics & Political Science

Source: Times Higher Education, 2011-2012, Shanghai Academic Ranking of World Universities, 2012



# Ranking of cities for Technology & knowhow



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Rank	City	Score
1	Munich	4.11
2	Stuttgart	4.09
3	Zurich	3.88
4	Stockholm	3.78
5	Cambridge	3.76
6	Copenhagen	3.64
7	Karlsruhe	3.48
8	Paris	3.45
9	Oxford	3.41
10	Berlin	3.39

## 2 Talent

- 2.1 Number of high skilled people**
- 2.2 Workers in R&D / Tech industries**
- 2.3 Flexibility of labour market**
- 2.4 Labour costs**

# Top 10 Employed in technology and knowledge intensive sectors



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<b>Rank</b>	<b>City</b>	<b>Total number employed (x 1,000)</b>
<b>1</b>	Paris	407.5
<b>2</b>	London	218.1
<b>3</b>	Madrid	213.9
<b>4</b>	Milan	199.7
<b>5</b>	Rome	149.2
<b>6</b>	Barcelona	145.5
<b>7</b>	Munich	135.8
<b>8</b>	Oxford	110.8
<b>9</b>	Berlin	110.4
<b>10</b>	Aachen/Cologne	109.4

*Source: Eurostat 2012*

# Flexibility of the labour market

<b>Top</b>	<b>Labour relations: productive- hostile</b>	<b>Cooperation in labour relations: cooperative - confrontational</b>	<b>Labour regulations: hinder business or not</b>	<b>Hiring &amp; Firing regulations: regulated- flexible</b>
<b>1</b>	Switzerland	Switzerland	Denmark	Denmark
<b>2</b>	Austria	Denmark	Switzerland	Switzerland
<b>3</b>	Denmark	Sweden/Netherlands	Austria	United Kingdom
<b>4</b>	Sweden	Austria	Ireland	Hungary
<b>Bottom</b>				
<b>13</b>	Spain	Spain	Belgium	France
<b>14</b>	Italy	Italy	Spain	Spain
<b>15</b>	France	France	France	Sweden

Source: IMD, 2011; WEF, 2011-2012

# Ranking of Cities for Talent

<b>Rank</b>	<b>City</b>	<b>Score</b>
<b>1</b>	Madrid	4.15
<b>2</b>	Prague	3.96
<b>3</b>	London	3.91
<b>4</b>	Paris	3.89
<b>5</b>	Budapest	3.87
<b>6</b>	Barcelona	3.73
<b>7</b>	Oxford	3.72
<b>8</b>	Edinburgh/Glasgow	3.60
<b>9</b>	Dublin	3.59
<b>10</b>	Milan	3.50

# 3 Market size



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**3.1 Size regional market**

**3.2 Size national market**

# Ranking of cities for Market size (3.1 + 3.2)

Rank	City	Score
<b>1</b>	Paris	5.00
	Barcelona	5.00
	Madrid	5.00
	London	5.00
<b>2</b>	Milan	4.65
	Rome	4.65
<b>3</b>	Berlin	4.30
	Munich	4.30
	Manchester	4.30

Rank	City	Score
<b>4</b>	Nice	3.95
	Cologne	3.95
	Stuttgart	3.95
	Cambridge	3.95
	Edinburgh/Glasgow	3.95
<b>5</b>	Oxford	3.95
	Lyon/Grenoble	3.65

Source: Eurostat 2012

# 4 Connectivity



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## 4.1 Centrality index

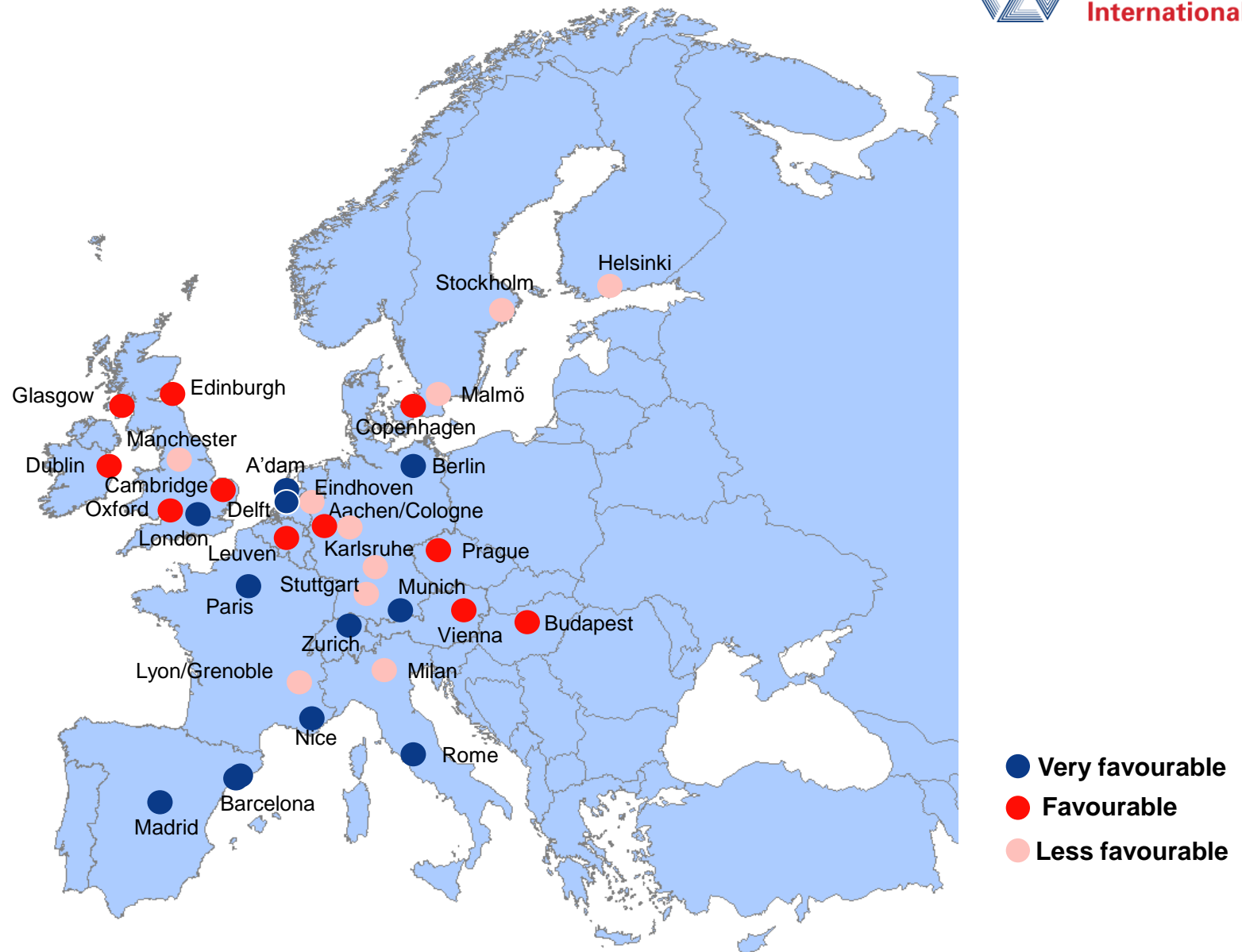
## 4.2 International accessibility by air



# Ranking Connectivity (4.1 + 4.2)



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# 5 International Business Climate



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**5.1 Availability of venture capital**

**5.2 Fiscal climate**

**5.3 Risk**

# Top 4 countries – Special corporate R&D tax regimes

Top	Examples of special R&D Tax incentives programs
1 France	<p>Tax credits, cash grants &amp; accelerated depreciation such as</p> <ul style="list-style-type: none"> <li>● Research tax credit of 30% for the first €100M of qualified R&amp;D expenditures incurred during the tax year; plus an additional 5% of any amount in excess of the €100M Threshold</li> <li>● Cash grants for R&amp;D and acceleration of depreciation deductions for fixed assets used in qualified research</li> </ul>
2 United Kingdom	<ul style="list-style-type: none"> <li>● Super deduction &amp; tax credit such as 130-175% volume based super deduction for resp. large and small/medium sized companies (SMEs)</li> </ul>
3 Netherlands	<p>Tax rate reduction and tax credits such as</p> <ul style="list-style-type: none"> <li>● WBSO - Wage Tax Credit of 50% (can be as high as 60% for start-up companies) of the first €220K in R&amp;D wage costs and 18% for the remaining wage costs (with a max. reduction of Euro 14 mln per taxpayer)</li> <li>● Innovation Box: reduced tax rate for revenue attributable to patents &amp; innovation</li> </ul>
4 Belgium	<p>Special deduction such as</p> <ul style="list-style-type: none"> <li>● Tax deduction of 13.5% (2011) of the value of qualifying R&amp;D expenditures for investments in scientific research and development of new products or a current deduction of 20.5% of depreciation related to R&amp;D assets</li> <li>● Patent Income Exclusion</li> </ul>

# Ranking International Business Climate



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<b>Rank</b>	<b>Country</b>	<b>Score</b>
<b>1</b>	Sweden	3.90
<b>2</b>	Switzerland	3.90
<b>3</b>	United Kingdom	3.83
<b>4</b>	Denmark	3.68
<b>5</b>	Belgium	3.68

# 6 Conclusions

## Overview ranking total weighted scores tech cities

Rank	City	Score
31	Malmö	2.56
30	Budapest	2.63
29	Vienna	2.69
28	Eindhoven	2.73
27	Dublin	2.82
26/25	Karlsruhe	2.85
26/25	Milan	2.85
24	Cologne	2.86
23	Helsinki	2.89
22	Prague	2.94

Rank	City	Score
21	Aachen	2.95
20/19/18	Rome	3.06
20/19/18	Stockholm	3.06
20/19/18	Leuven	3.06
17	Nice	3.07
16	Zurich	3.08
15	Manchester	3.09
14	Lyon/Grenoble	3.11
13	Stuttgart	3.16
12	Edinburgh/Glasgow	3.17

# Overview ranking top 10 Tech Cities



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Rank	City	Score
<b>1</b>	<b>Paris</b>	<b>3.89</b>
2	London	3.73
3	Oxford	3.69
4	Berlin	3.61
5	Cambridge	3.60
6	Madrid	3.57
7	Munich	3.36
8	Copenhagen	3.29
9	Delft	3.23
<b>11/10</b>	Amsterdam	3.21
<b>11/10</b>	Barcelona	3.21