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Dell
Women's
Entrepreneur
Network

Dell Technologies & DWEN WE Cities Research 2017

A ranking of top cities in the world for women
entrepreneurs to do more, scale faster and thrive

All-In-One



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PART I:

Scoring 50 Global Cities



Overview

The Dell Women Entrepreneur Cities Index (WE Cities) is

- a measure of a city's ability to attract and support high potential women entrepreneurs (HPWE) i.e., women that want to grow and scale their business.

50 ranked cities chosen for

- their reputation as established or emerging hubs of innovation and entrepreneurship;
- geographic diversity was also a criteria in city selection.

Cities included in the WE Cities rankings are already strong in commercial entrepreneurship

- Strength in **entrepreneurship, though, is not necessarily strength for women entrepreneurs**

We provided additional detailed analysis:

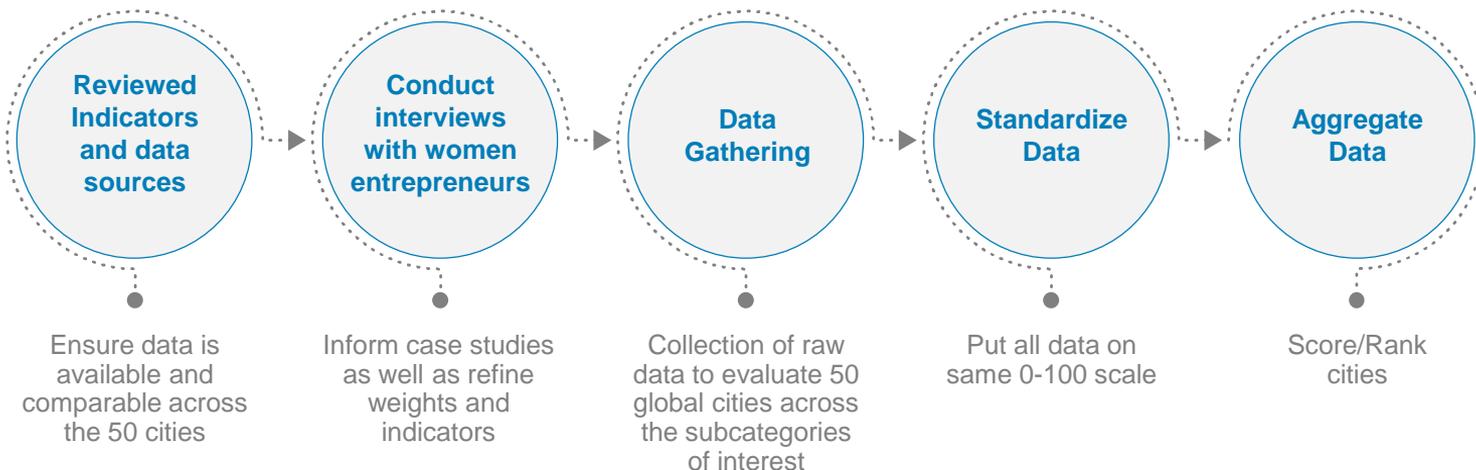
- 5 deep dive case studies were provided separately: **London, Sao Paulo, the Bay Area, Austin** and **Sydney** to better understand how the numbers behind the WE Cities Index look in context.
- 25 city profiles are also provided separately to help illustrate how cities can capitalize on their strengths and improve areas of weakness.

Methodology*

In April 2016 a Symposium bringing together women entrepreneurs, policy makers, venture capitalists, the media and academics was hosted in NYC by the Technology and Entrepreneurship Center at Harvard (TECH).

The symposium informed the sub-categories, indicators and weightings of the Dell WE Cities Index.

For the 2017 update, in addition to adding 25 new cities we:



The Index Construction | Details

The rating has 5 pillars, divided into 2 categories with 4 criteria for weighting:

OPERATIONAL
ENVIRONMENT

Capital
Markets
Talent

ENABLING
ENVIRONMENT

Culture
Technology

*Almost all pillars contain a **Policy** sub-category that captures many of the important policies that help level the playing field for women entrepreneurs.*

Weighting Criteria

1. Relevance
2. Quality of underlying data
3. Uniqueness in the index
4. Contains a gender specific component

The Index Construction | **Details** (CONTINUED)

- The rating is meant to highlight **relative** strengths and weaknesses
 - Robust data-driven analysis covering a multitude of factors, which can help cities leverage their strengths to improve areas where they are less competitive.
 - Indicators measure the **inputs** (or drivers) that attract and support HPWE rather than **outcomes** (the presence of HPWE in the city)
- A tool for cities that helps provide insight to develop actionable strategies for improving cities' ability to attract and support HPWE.
- **The rating has 72 indicators.** Of these:
 - Almost two-thirds (45) have a gender-based component.
 - The vast majority (93% or 67 indicators) were specific to the city/MSA level (rather than country-level).
 - All Indicators use the most current data available, much of it 2016-2017.*
 - The Index incorporates unique data indicators constructed from sources such as: IHSM Smart Cities IoT Intelligence Service, Crunchbase, Github, WEConnect International, Twitter and LinkedIn.

*Data is 2014 or newer except in a few instances where data was not available and older data was used to inform the indicator for the city.

WE Cities Index

PILLARS AND SUB-PILLARS

OPERATING ENVIRONMENT

ENABLING ENVIRONMENT

Markets

Talent

Capital

Culture

Technology

The Markets category measures whether the female entrepreneur operates in a market with sufficient **size** such that scale can be achieved, the **cost** of being a profitable business in that market, the transparency and clarity of steps or ladders to gain **access** to potential customers in that market and the local **policies** that help level the playing field for women owned businesses.

The Talent category measures both the likelihood of finding **women with the training and experience required to run and scale a business** and the availability of a **local labor force with the skills and education necessary** for a woman entrepreneur to build a well functioning team.

As financial Capital is fundamental for businesses seeking to scale but is often particularly hard for women entrepreneurs to access, this category measures the **frequency and value of funding** received by women led businesses, the **proportion of funding** that businesses run by women (compared to men) receive, and the **capital base** that women can draw on.

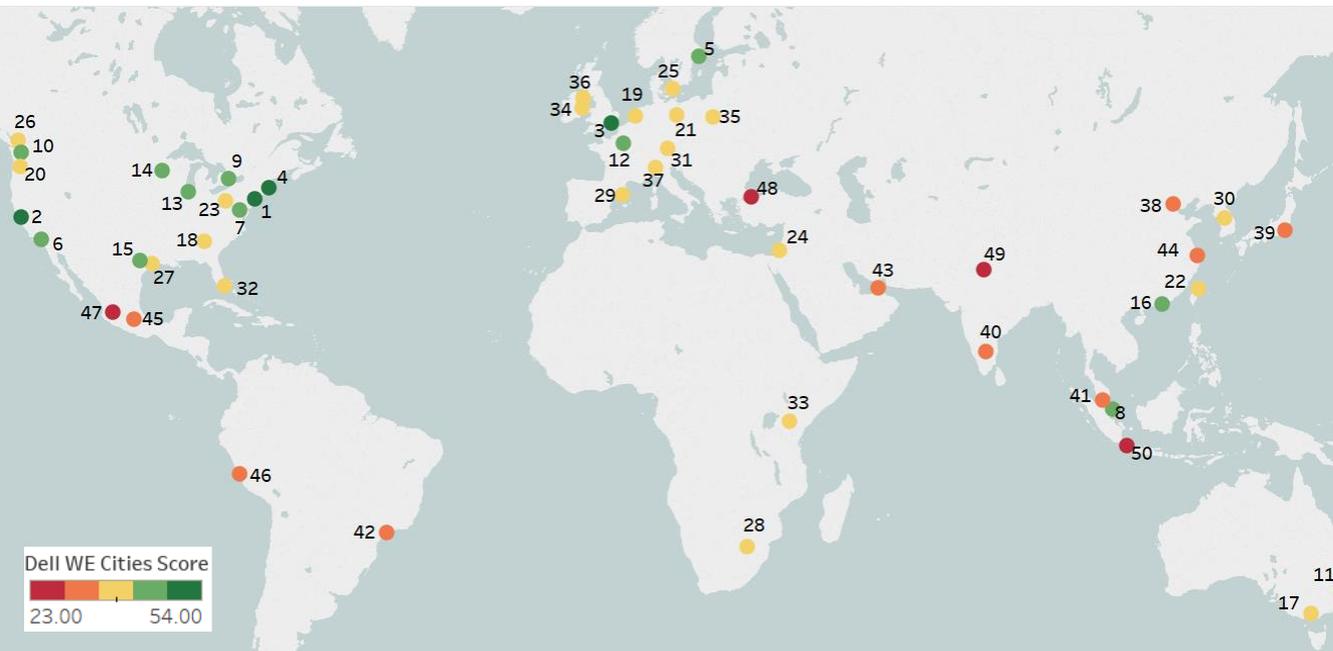
A city's Culture, while less tangible, is believed by women entrepreneurs to be a critical enabler for their participation in commerce. This category measures the prevalence of relevant **mentors, networks, and role models**, the predominant **attitudes & expectations** of that society toward women entrepreneurs that help shape their own expectations, and the **policies** that enable women to assume leadership positions and business success.

Often taken for granted until it is not there, Technology has become critical for running nearly all business operations. This category measures women entrepreneurs' global **connectivity** via the internet and social media channels, the **cost** of staying connected, and **policies** that enable women to access and utilize information, data and technology.



Dell Global WE Cities Rankings 2017

CITIES IN RANKING ORDER



1. New York	18. Atlanta	35. Warsaw
2. San Francisco	19. Amsterdam	36. Belfast
3. London	20. Portland, OR	37. Milan
4. Boston	21. Berlin	38. Beijing
5. Stockholm	22. Taipei	39. Tokyo
6. Los Angeles	23. Pittsburgh	40. Bangalore
7. Washington, DC	24. Tel Aviv	41. Kuala Lumpur
8. Singapore	25. Copenhagen	42. Sao Paulo
9. Toronto	26. Vancouver	43. Dubai
10. Seattle	27. Houston	44. Shanghai
11. Sydney	28. Johannesburg	45. Mexico City
12. Paris	29. Barcelona	46. Lima
13. Chicago	30. Seoul	47. Guadalajara
14. Minneapolis	31. Munich	48. Istanbul
15. Austin	32. Miami	49. Delhi
16. Hong Kong	33. Nairobi	50. Jakarta
17. Melbourne	34. Dublin	

Dell Global WE Cities 2017

TOP 10

New York
Bay Area

London
BOSTON

Stockholm
LOS ANGELES

Washington, D.C.
Singapore

Toronto
Seattle

OPERATING ENVIRONMENT

ENABLING ENVIRONMENT

Markets Top 10

New York City
Bay Area
London
CHICAGO
KUALA LUMPUR
Seattle
TEL AVIV
BERLIN
Washington, D.C.
BANGALORE

Talent Top 10

Washington, D.C.
Paris
BOSTON
MINNEAPOLIS
London
New York City
BARCELONA
Bay Area
Beijing
Stockholm

Capital Top 10

Bay Area
New York City
London
BOSTON
LOS ANGELES
NAIROBI
Singapore
CHICAGO
Stockholm
Beijing

Culture Top 10

New York City
Sydney
Toronto
Stockholm
Singapore
Bay Area
LOS ANGELES
MELBOURNE
AMSTERDAM
MINNEAPOLIS

Technology Top 10

Austin
London
Stockholm
New York City
Hong Kong
Seattle
Bay Area
MIAMI/FT. LAUDERDALE
BOSTON
Singapore



Comparison of US Cities

METRO AREA	OVERALL RANK	OPERATING ENVIRONMENT RANK	MARKETS	TALENT	CAPITAL	ENABLING ENVIRONMENT RANK	CULTURE	TECHNOLOGY
New York City	1	1	1	6	2	1	1	4
Bay Area	2	2	2	8	1	7	6	7
BOSTON	4	4	12	3	4	11	12	9
LOS ANGELES	6	8	21	14	5	9	7	12
Washington, D.C.	7	5	9	1	15	19	22	16
CHICAGO	13	6	4	11	8	22	28	11
Seattle	10	9	6	20	18	8	14	6
MINNEAPOLIS	14	10	19	4	25	16	10	28
Austin	15	20	16	23	24	13	39	1
PORTLAND (OR)	20	24	17	28	35	18	26	13
PITTSBURGH	23	28	20	30	40	24	20	24
ATLANTA	18	16	18	15	32	25	21	27
HOUSTON	27	14	15	13	19	38	41	29
MIAMT/FT. LAUDERDALE	32	32	35	18	43	31	45	8



HIGHLIGHTS FROM THE RATING: Things to Note

*In the top 10 cities overall
6 are in the U.S., 2 are in
Europe, 1 is in Canada
and 1 is in Asia*

*Of the top 10 cities overall,
NYC, the Bay Area rank in
the top 10 on all 5 pillars*

*41 of the cities in this
index are in the top 5
for at least one pillar
or sub-category; 34 of
the cities are in the
bottom 5 for at least
one of the pillars or
sub-categories –
demonstrating the
competitiveness of
these 50 cities*

*Of the cities in the
top 10 cities overall
only NYC and D.C.
rank in the bottom
5 on any pillar or
sub-category (NYC
for cost of Market
access and NYC
and D.C. for cost
of Technology).*

HIGHLIGHTS FROM THE RATING: *View of the top* TOP 5

1

NYC

NYC ranks 1st overall among the 50 cities for its ability to attract and support HPWE with a top-ranked **Operating Environment** and an **Enabling Environment**. While NYC ranks first for **Markets**, and within that, **Access** and **Policy**, it is 6th in **Talent**, and 2nd in **Capital**, trailing only the San Francisco Bay Area. It is 1st in **Culture**, though 4th in **Technology**.

2

THE BAY AREA

(consisting of the San Francisco and San Jose metro areas)
The Bay Area ranks 2nd overall, ranking 2nd for **Operating Environment** and 7th for **Enabling Environment**. It ranks 1st for **Capital**, 2nd for **Markets**, 8th in **Talent**, 6th in **Culture**, and 7th in **Technology**.

3

LONDON

London ranks 3rd overall and in **Operating Environment**, performing 3rd for **Markets** and for **Capital**. It ranks 4th in **Enabling Environment**, with a 2nd place, to Austin, in **Technology** and 11th in **Culture**.

4

BOSTON AND STOCKHOLM

Boston and Stockholm round out the top 5 in the overall ranking.

Boston is 4th in **Operating Environment**, reaching 3rd in **Talent** and 4th in **Capital**.
Stockholm ranks 2nd in **Enabling Environment**, reaching 3rd in **Technology** and 4th in **Culture**. It also ranks 10th in **Talent** and 9th in **Capital**.

5



HIGHLIGHTS FROM THE RATING: *View of the top* TOP 10

6

LOS ANGELES

(6th overall) ranks 5th for **Capital** and 7th for **Culture** and 8th for the overall **Enabling Environment**.

7

WASHINGTON, DC

(7th overall) excels in the **Operational Environment** foundational pillar (5th), ranking 1st for **Talent** - topping the list for **Women's Skills & Experience** and 9th for **Market**.

8

SINGAPORE

(8th overall) ranks 7th in **Capital**. It is 6th in **Enabling Environment**, with a 5th in **Culture** and 10th in **Technology**.

9

TORONTO

(9th overall) ranks 3rd in **Culture**, 4th for related **Policy**, It also ranks 5th in **Cost of Markets** and 7th in **Women's Capital Base**.

10

SEATTLE

(10th overall) ranks 6th in **Markets** and 4th for **Market** policy and **Connected Technology**; it ranks 8th for **Culture** and **Value** and **Number of Funding for Women Entrepreneurs (Capital)**



HIGHLIGHTS FROM THE RATING: Cities to Watch

CHICAGO (13th overall)

ranks 7th for *Connected in Technology*, ranking 4th for *Markets*, driven by its 4th place ranking in *Market Policy*

KUALA LUMPUR (41st overall)

ranks 5th in *Markets*, ranking 1st in *Cost* and 6th in *Access*. It ranks 8th in *Women's skill & experience* (Talent).

PARIS (12th overall)

ranks 2nd in *Talent*, ranking 1st in *Access to Qualified Personnel*. It ranks 7th for *Operating Environment*, ranking 4th in *Market Access*.

TEL AVIV (24th overall)

ranks 7th in *Markets*, led by 7th in *Policy*. It also ranks 9th in *Value and Numbers of Funding* (Capital) and women get a *proportionate amount* (ranking 4th).

BERLIN (21st overall)

ranks 8th in *Markets*, led by 5th in *Access*. It ranks 3rd in *Technology Cost* and 13th in *Attitudes & Expectations* (Culture).

MINNEAPOLIS (14th overall)

ranks 2nd for *Mentors & Role Models* and for *Women's skill & experience*.

NAIROBI (33rd overall)

ranks 6th in *Capital*; although Nairobi ranks on the lower side for *Women's Capital Base* (48th) it makes up for it in *Gender Proportion in Funding* (1st).

HIGHLIGHTS FROM THE RATING: Strengths to Leverage

MIAMI (32nd overall)

ranks 4th in terms of its technology policy, notably it is one of the few cities to collect gender level data on technology use.

GUADALAJARA (47th overall)

ranks 3rd for *Market Cost* and 11th in *Technology Cost*. It can leverage these strengths by improving policy in these two pillars where it ranks 43rd and 49th respectively.

LIMA (46th overall)

ranks lowest in Capital, ranking in the bottom 10 for all the Capital categories. It can perhaps leverage its relatively good *access to markets* (13th) to attract more talent (43rd) and capital.

DELHI (46th overall)

despite ranking 49th overall can leverage its Market Size (ranking 3rd) and low cost of technology (ranking 2nd) to help improve its talent base (where it ranks 50th)

WARSAW (35th overall)

ranks 3rd in *Women's Skill & Experience*, but is held back with a ranking of 27th in *Access to Qualified Personnel*. It can leverage its 1st place rank in the *cost of technology* to attract talent and grow its market size (33rd) if it can improve its *policies* that enable women access to markets (48th).

Note on Comparing to WE Cities 2016



DIFFERENCES BETWEEN THE

2017 and 2016 Index

50 versus 25 global cities

72 versus 71 indicators

Weighting of indicators, sub-categories and pillars changed slightly to account for new data sources, comparability and effective weights.

2 indicators were re-assigned under the capital sub-categories.

Due to the differences between the 2016 and 2017 Index, comparisons cannot be made on an apples to apples basis.

The 2016 index provided the pilot version of the index to test its ability to score cities on its ability to attract and support high potential women entrepreneurs.

This successful pilot led to the scaling this year to a 50 cities WE Cities Index that incorporates the learning from the 2016 Index.

In the 2017 we added the new 25 cities and only updated the data for the 25 original cities when there was a new indicator, data collection/criteria method or for the indicators that required real time data (e.g., some of the website scraping for current member lists, etc.)

SELECT COMPARISONS BETWEEN THE

2017 and 2016 Index

Given the differences between the two years, we cannot compare the scores or rankings directly between the two years.

While we cannot compare scores or ranks across the years, we can see that the leading cities for high potential women entrepreneurs are unchanged.

However, on the indicators that are the same we can make some comparisons.

These include:

- Austin has notably improved in its access to capital for women, both by having more women businesses funded than last year and having more women founded VC firms.
- All 25 cities in the Index last year increased the number of accelerators in their city.
- Nearly all cities have also seen an increase in the number of news articles about successful women entrepreneurs or business women.
- The biggest improvements across most of the original cities is in the area of Markets and Capital, where many cities saw an increase in the number of accelerators as well as an increase in the amount of funding going to women entrepreneurs, perhaps helped by an increase in the number of female founded VC's in many cities.

Changes to Proxy Indicators

PILLAR	2016 INDICATORS DROPPED OR CHANGED	2017 INDICATORS ADDED OR CHANGED
Market	Transportation Cost	Cost of Living (includes Transportation)
Talent	Average % Business school enrollment in that city that is female	Ratio of Female/Male Individuals with MBA's
Talent	Female mentorship programs in place	Ratio of Women/Men with executive Experience
Talent		Female Faculty in top business schools (%)
Capital	Top 20 Most Active Crowdfunding Sites	Amount Raised on Crowdfunding Sites
Capital	Number of crowdfunding platforms	Total Projects on Crowdfunding Sites
Capital	Ratio Women/Men who saved to start a business	
Culture	% of women in parliament (moved to policy sub-category)	Entrepreneurial Network (population with entrepreneurial experience)
Culture	Women leader in the last generation	Number of national level advocacy or supplier dev't groups specifically for WE or businesswomen (dropped networking as primary function of the organization)
Culture	Intentional Homicide Rate (homicides for 100,000 population) (inverted)	Numbeo.com Worry about being attacked (inverted)
Culture	Requirements for women on boards or executive leadership	
Culture	Government explicit gender policy	
Technology	Gender equality in Twitter use: ratio of female/male (max = 1.0)	Gender equality in LinkedIn use: ratio of female/male (max = 1.0)
Technology		Number of Smart City Projects
Technology		Gender equality in Facebook use: ratio of female/male (max = 1.0)



Appendix

- A** WE Cities Scoring Methodology
- B** How this rating differs from other entrepreneurship measures
- C** How to read the Rating Workbook
- D** Using the Rating
- E** Acknowledgements

Appendix

A WE Cities Scoring Methodology *Indicator Selection*

B How this rating differs from other entrepreneurship measures

C How to read the Rating Workbook

D Using the Rating

E Acknowledgements

Building on Dell's years of research on High Potential Women Entrepreneurs (HPWE), IHS identified five important categories of city characteristics (pillars) that influence them.

IHS conducted a literature review to identify important sub-categories within those pillars as well as potential indicators that could be used for measuring those sub-categories.

Dell, Harvard TECH Professor David Ricketts, and IHS convened a Research Symposium bringing together women entrepreneurs, funders, thought leaders, policy makers and researchers to discuss what cities need to attract and support HPWE.

IHS took feedback from DWEN Symposium participants into account when determining which indicators to include in the rating. The Symposium surfaced three new indicators that hadn't previously been proposed: paternity leave, initiatives to collect gendered data, and safety of transportation systems (which relates to the city safety/security overall).

Culture (including mentoring/networking, internal mindsets/expectations and relevant nondiscrimination/ level playing field policies) carried much of the discussion. **Capital** was identified as the biggest constraint in the survey and discussed as critical to business scaling; crowd-funding in particular emerged as a growing source of capital for WE. **Talent** (both in terms of the entrepreneurs' own talent, including education & experience) and getting the right team in place (staff skills) also came out as highly important. All of these were thus given higher weight in the final index scoring.

A higher order categorization of city characteristics emerged from the symposium: factors that influence the **Operating Environment** and factors that influence the **Enabling Environment**. The five pillars were thus re-organized to fit into these two foundational pillars, with related Policy included as a component of each.

Appendix

A WE Cities Scoring Methodology *Data Collection*

B How this rating differs from other entrepreneurship measures

C How to read the Rating Workbook

D Using the Rating

E Acknowledgements

IHS identified indicators and proxy indicators to measure the important categories (Markets, Capital, Technology, Talent and Culture) and individual components of each.

IHS colleagues around the globe supported data collection, as they were able to leverage their familiarity with the city, the local language and available data sources.

Social media analytics and website scraping were used to get city level data for the Talent, Technology and Culture categories. Key sources include: Twitter, LinkedIn, Crunchbase, Github and Kickstarter.

Data was leveraged (where possible) from organizations that participated in the NYC Symposium and the organizations and websites mentioned there. These include:

- the headquarters of the member companies of the Open Compute Project (<http://opencompute.org/>)
- the headquarters of member companies of WEConnect (companies that have committed to instituting vendor programs for WOB that are certified through this organization)
- 2020WOB.com (lists global companies and the percent of women on their boards)
- Chapters of WPO, WeConnect, Women Who Code, Girls in Tech, PWN, etc.

Appendix

A WE Cities Scoring Methodology *Scoring & Ranking Cities*

B How this rating differs from other entrepreneurship measures

C How to read the Rating Workbook

D Using the Rating

E Acknowledgements

IHS weighted indicators based the four criteria described on slide 3:
1) relevance, 2) data quality, 3) uniqueness, and 4) gender-specific focus.

The few instances of missing data were handled by either giving the city the average of all the other cities (this neutralized the impact on the city when the data is standardized) or using a proportion found in a related data source to adjust the data point of interest (e.g., using the ratio of female to male literacy rates in New Delhi to come up with an equivalent ratio of tertiary educational attainment for women in New Delhi).

IHS standardized all data using the method $x - \min / (\max - \min)$ to put all scores on a 0-100 scale so they could be added together.

IHS aggregated the weighted data to get sub-category, category and overall WE Cities ranking scores for all 25 cities.



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A WE Cities Scoring Methodology

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E Acknowledgements

The WE Cities Score is different in that:

- It is *city* level
- It is a *global* rating (many city level studies rank US cities only).
- It specifically focuses on *women* entrepreneurs versus all entrepreneurs.
- It specifically focuses on women who have the *potential to grow and scale* their business (versus all women owned businesses and versus women's ability to start a business).
- Indicators are chosen to be *actionable* (things that reflect drivers of a city's ability to attract and support HPWE versus outcomes – looking at the current state of whether a city is in fact attracting HPWE).
- Many indicators were uniquely constructed (via *social media and website scraping*) using *2016 sources and data*.



Appendix

A WE Cities Scoring Methodology

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E Acknowledgements

There are two Foundational categories: **Operating Environment** and **Enabling Environment**. They are equally weighted at 50% and an overall score for each is provided for each of the 25 cities.

Within the two Foundational categories are five High Level Pillars (with the weights of each indicated in parentheses):

- in Operating Environment: **Capital** (40%), **Talent** (30%), and **Markets** (30%) and
- in Enabling Environment: **Culture** (50%) and **Technology** (50%)

Sub-categories scores within each of the pillars (with the weights of each indicated in parentheses) include:

- MARKETS: **Size** (15%), **Cost** (20%), **Access** (35%), **Policy** (30%)
- TALENT: **Women's Skills & Experience** (60%), **Access to Qualified Personnel** (40%)
- CAPITAL: **Funding Frequency & Value** (30%), **Gender Proportion** (35%), **Women's Capital Base** (35%)
- CULTURE: **Access to Mentors/Role Models** (35%), **Societal Attitudes & Expectations** (30%), **Policy** (35%)
- TECHNOLOGY: **Connectivity** (35%), **Cost** (30%), **Policy** (35%)



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A WE Cities Scoring Methodology

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E Acknowledgements

The WE Cities rating is useful for highlighting relative areas of strengths and weaknesses within a city that can help it improve by leveraging existing strengths and improving areas that are less strong.

Indicators were selected that had an action component (e.g., increasing tertiary education; instituting Vendor Diversity programs, etc.)

- While the WE Cities rating can point to areas that a city could strengthen to increase its overall WE Cities score, further analysis is required to identify the context and develop appropriate improvement strategies.



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A WE Cities Scoring Methodology

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E Acknowledgements

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APPENDIX D

Correlation with Future Ready Economies



Future Ready Economies attract innovative people that help their economies grow and adapt to the ever changing future.

Women are more likely to reinvest their profits in education, their family and their community, contributing to bolstering the human capital pillar of the Future Ready Economies Rating (Brush, 2013).

Future Ready Economy

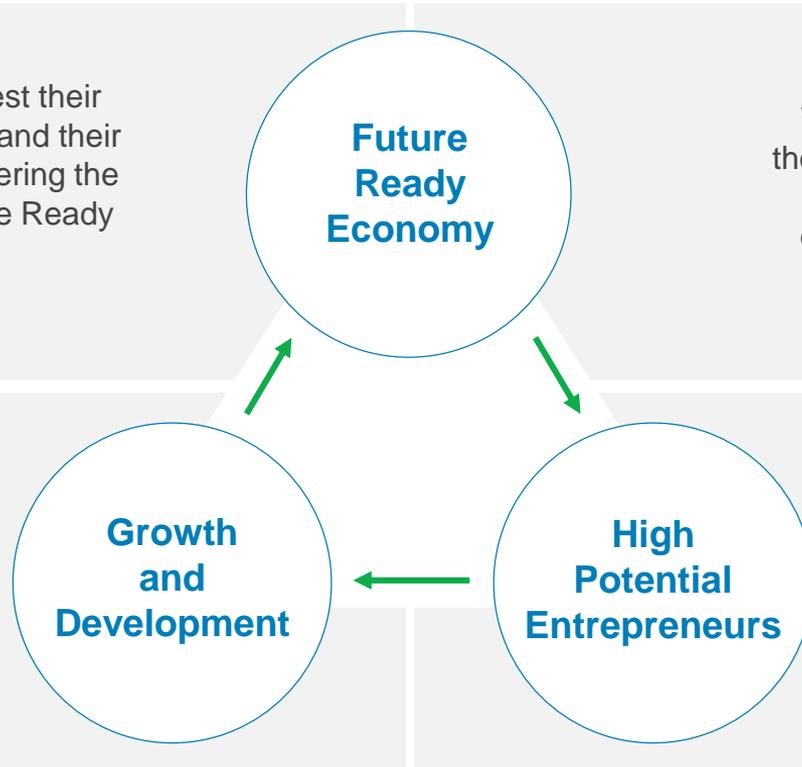
Where the only thing certain about the future is uncertainty – innovators are needed to make the adaptive changes that will help an economy continue to thrive.

High potential women entrepreneurs grow business revenue on average 20% or more per year, creating jobs and economic growth (NWBC, 2014).

Growth and Development

High Potential Entrepreneurs

Entrepreneurs (both men and women) are innovators. Innovation is what drives new growth and development.



Recap | The Future Ready Economies Index



FUTURE READY INDEX

Human Capital Pillar

(weighting: 40%)

Commerce Pillar

(weighting: 30%)

Infrastructure Pillar

(weighting: 30%)

DELL GLOBAL FRE RANKING

The 50 cities were chosen based on average growth over the past 5 years and size of the economy.

The Global Index combined the US and International rankings.

A global score was calculated by using the indicators that were the same or very close on both the US and International ranking; for indicators that were not compatible, a new indicator was found to reconcile the US and International cities.

See full list at:

<http://www.futurereadyeconomies.dell.com/the-top-50-ranking-future-ready-cities-around-the-globe/>

Cities in both WE Cities and FRE

San Jose	Taipei
San Francisco	Munich
Singapore	Tokyo
London	Sao Paulo
New York	Delhi
Beijing	Milan
Sydney	Jakarta
Austin	Istanbul
Washington DC	Mexico City
Hong Kong	Boston
Toronto	Portland
Stockholm	Atlanta
Seoul-Incheon	Houston
Shanghai	Los Angeles
Seattle	Minneapolis
Paris	Pittsburgh

With the additional cities ability to attract and support high potential women entrepreneurs is **87% correlated with its Future Ready Score** (compared to 86% last year).

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Dell Global WE Cities Rankings 2017



- 1. New York City
- 2. Bay Area
- 3. London
- 4. Boston
- 5. Stockholm
- 6. Los Angeles
- 7. Washington, D.C.
- 8. Singapore
- 9. Toronto
- 10. Seattle
- 11. Sydney
- 12. Paris
- 13. Chicago
- 14. Minneapolis
- 15. Austin
- 16. Hong Kong
- 17. Melbourne
- 18. Atlanta
- 19. Amsterdam
- 20. Portland, OR
- 21. Berlin
- 22. Taipei
- 23. Pittsburgh
- 24. Tel Aviv
- 25. Copenhagen
- 26. Vancouver
- 27. Houston
- 28. Johannesburg
- 29. Barcelona
- 30. Seoul
- 31. Munich
- 32. Miami
- 33. Nairobi
- 34. Dublin
- 35. Warsaw
- 36. Belfast
- 37. Milan
- 38. Beijing
- 39. Tokyo
- 40. Bangalore
- 41. Kuala Lumpur
- 42. Sao Paulo
- 43. Dubai
- 44. Shanghai
- 45. Mexico City
- 46. Lima
- 47. Guadalajara
- 48. Istanbul
- 49. Delhi
- 50. Jakarta

Top 10

Overall	OPERATING ENVIRONMENT			ENABLING ENVIRONMENT	
	🏢 Markets	👤 Talent	💰 Capital	👥 Culture	💻 Technology
New York City	New York City	Washington, D.C.	Bay Area	New York City	Austin
Bay Area	Bay Area	Paris	New York City	Sydney	London
London	London	BOSTON	London	Toronto	Stockholm
BOSTON	CHICAGO	MINNEAPOLIS	BOSTON	Stockholm	New York City
LOS ANGELES	KUALA LUMPUR	London	LOS ANGELES	Singapore	Hong Kong
Stockholm	Seattle	New York City	NAIROBI	Bay Area	Seattle
Singapore	TEL AVIV	BARCELONA	Singapore	LOS ANGELES	Bay Area
Washington, D.C.	BERLIN	Bay Area	CHICAGO	MELBOURNE	MIAMI/FT. LAUDERDALE
Toronto	Washington, D.C.	Beijing	Stockholm	AMSTERDAM	BOSTON
Seattle	BANGALORE	Stockholm	Beijing	MINNEAPOLIS	Singapore

*Cities highlighted in bold are cities not in the top 10 overall ranking. Cities in all CAPS were added in 2017. Cities were hand picked and are not an exhaustive representation of every potential city.



DWEN

Dell
Women's
Entrepreneur
Network

Dell Technologies & DWEN WE Cities Index 2017

A ranking of top cities in the world for women entrepreneurs to do more, scale faster and thrive

Manifesto



“Access to capital and technology, as well as cultural and political barriers, continue to limit the success of women-owned businesses. With the release of the WE City Deep Dives and Blueprints, leaders and policymakers can confidently move from ‘analysis to action,’ accelerating positive change that allows women entrepreneurs to thrive – which benefits local communities, wider society and the global economy.”

- Karen Quintos, executive vice president and chief customer officer, Dell

We believe that access to and development of financial and human capital is essential to fostering women's entrepreneurship; this can be supported through:

- Incentives for individuals and organizations to invest in women-owned companies through venture funds, corporate venture, private equity and social capital.
- Modernization of existing government certification, grant and loan programs that help women-owned businesses compete to reflect changing investment models.
- Promotion and marketing of existing government programs to encourage broader awareness and use.
- Continuing to or start to foster small-business lending programs.
- Creating new sources of capital such as crowdfunding and impact investments.
- Encouraging enterprise corporations, federal departments and state/local contracts to increase supplier diversity with a percentage of contracts being awarded to women-owned businesses.
- Considering a shortening of government payment cycles from 90 days to 30 days for small women-owned suppliers.
- Expanding access to family-friendly policies including access to high-quality, affordable child care, care-giving and paid family leave policies.



As women entrepreneurs and business owners turn to each other for help, we believe that local governments and business leaders can help facilitate connections by increasing access to local and global networks and markets, by:

- Supporting trade agreements that further liberalize trade and open new markets for businesses of all sizes.
- Promoting global and open standards, and reliable mechanisms for cross-border data transfers and business support services and networks, while providing sufficient protections for privacy and information security.
- Supporting mentorship efforts through financial support and encouragement of multiplier platforms such as accelerators, continuing education and training programs, and facilitated networking events.
- Encouraging conscious placement of women on boards, in venture partnerships and on executive teams.
- Promoting positive success stories of female founders and business owners through the media, conferences and leadership movements.



We see technology-driven implications for both government and business. Government and business leaders can help women entrepreneurs thrive in the changing-face of technology, through:

- Streamlining the process of partnering and applying for government resources,
- Emphasizing Science, Technology, Engineering and Mathematics (STEM) and digital literacy in education and early training programs.
- Working with business leaders and educators to encourage technology training programs to end unconscious biases in the STEM fields, government, corporations and institutions.
- Enabling access to broadband globally.
- Increasing awareness of options women have to the hardware, software and digital resources they need to scale their companies.



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DW EN

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Dell Technologies & DWEN WE Cities Research 2017

A ranking of top cities in the world for women
entrepreneurs to do more, scale faster and thrive

Methodology



Methodology: Dell Women Entrepreneurs (WE Cities) Index

**Measuring a city's ability to attract and support High Potential Women
Entrepreneurs**

June 2017



Introduction

As part of its thought leadership and commitment to Women Entrepreneurs, Dell has set out to benchmark and rate cities on their ability to attract and support High Potential Women Entrepreneurs (HPWE), defined as women entrepreneurs that are scaling and growing existing businesses with the potential to break through the \$1 million or more mark in annual revenue.

In order to gain more insight and perspective on what HPWEs need, Dell partnered with Dr. David S. Ricketts of the Technology and Entrepreneurship Center at Harvard (TECH), Palisades Media Ventures, and IHS to host a research symposium on April 5, 2016 at the Harvard Club in New York City. The symposium was invitation only and convened key stakeholders and experts including: successful women entrepreneurs, policymakers with a focus on supporting women owned businesses, venture capitalists that invest in companies with female founders, organizations that train entrepreneurs and media professionals and researchers who study entrepreneurship, women's issues, and global cities' economic performance.

The symposium provided new insight into the ways that female entrepreneurs' needs differ from those of their male counterparts and the importance of specific aspects of the operating and enabling environment in which they live and work, e.g. access to crowdfunding, paternity leave policies, women's own expectations about their ability to succeed in business, and the collection of gendered data.

Building on themes highlighted in previous literature on this topic and the April NYC Dell Research Symposium, IHS, Inc. was commissioned by Dell to develop an index (WE Cities) to compare the following 25 global metropolitan areas on their ability to attract and support HPWE:

Austin	London	Sao Paulo	Taipei
Beijing	Mexico City	Seattle	Tokyo
Delhi	Milan	Seoul	Toronto
Hong Kong	Munich	Shanghai	Washington DC
Istanbul	New York City	Singapore	
Jakarta	Paris	Stockholm	
Johannesburg	San Francisco Bay Area	Sydney	

In 2017 an additional 25 cities were added:

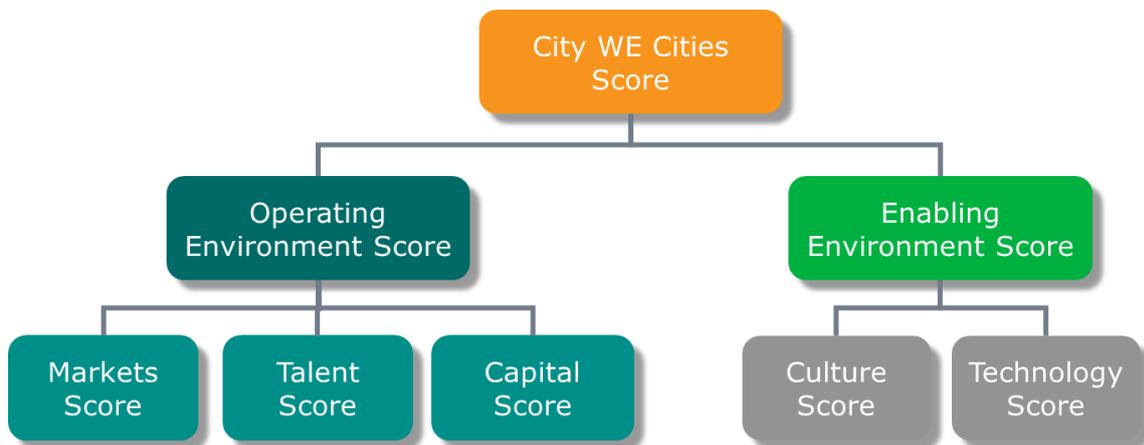
Pittsburg	Portland (Or)	Berlin	Nairobi
Boston	Houston	Copenhagen	Tel Aviv
Chicago	Atlanta	Dublin	Dubai
Los Angeles	Vancouver	Barcelona	Kuala Lumpur
Miami/ Ft. Lauderdale	Amsterdam	Warsaw	Bangalore
Minneapolis	Belfast	Melbourne	Guadalajara

25. Lima

Previous research by Dell in conjunction with their Dell Women's Entrepreneur Network (DWEN) found four critical pillars for HPWE: Markets, Capital, Talent and Technology. Subsequent to the Symposium and IHS' own research on the sub-components of these pillars (and corresponding metrics or indicators that could be used to measure each), IHS proposed the inclusion of a fifth pillar: Culture. This pillar captures women's role models, networks, attitudes and expectations as well as the policies that help shape a culture where women are seen as equal and have a level playing field.

Construction of the rating

The rating was constructed to measure the Operational and Enabling Environment each city provides for women entrepreneurs. Between these two foundational categories, more than 70 indicators are divided among 5 main pillars as follows:



The data collected to support each of these indicators was undertaken by IHS consultants, analysts, and country experts drawing from more than 10 global IHS offices and their own familiarity with that city or country's local language, culture and databanks. Further, to offset the challenge of finding globally comparable, government sanctioned, city-level, gender-specific data, IHS developed proxy indicators where necessary, and used innovative social media analytics and website scraping techniques to draw information from Twitter.com, Factiva's database of news articles, Crunchbase.com, and other websites that play a role in supporting the growth of women owned businesses.

In the 2017 Index, a few indicators were added and some replaced indicators in the 2016 index due to: (1) a better quality data source was found that was more comparable for all 50 cities or (2) a new data source was found that provided a better proxy measure of a sub-category (3) a new indicator was identified via our interview process

The overall enabling and operational environment, as well as the pillars, sub-categories, and individual indicators were weighted using four (4) criteria:

1. The relevance of the indicator for measuring what it is intended to measure (e.g. its ability to reflect city versus country level characteristics).
2. The quality of the underlying data for that indicator (e.g. comparability across cities, data collection methodology, etc.)
3. Its uniqueness in the index (e.g. whether it is measuring something that is also captured by other indicators included in the rating).

4. The gender-specific component (e.g. whether it is measuring something important to women entrepreneurs rather than entrepreneurs in general)

Differences between the 2016 and 2017 WE Cities Index

In the 2017 index 25 global cities were added. The index now relatively ranks 50 versus 25 cities. Some indicators needed to be adjusted or changed depending on the availability and comparability of data. Weights were also adjusted to account for the new data sources following our weighting criteria outlined above.

Specifically, the 2017 index now has 72 versus 71 indicators with changes detailed in Table 1

Table 1: Indicator differences

Pillar	2016 Indicators dropped or changed	2017 Indicators added or changed
Market	Transportation Cost	Cost of Living (includes Transportation)
Talent	Average % Business school enrollment in that city that is female	Ratio of Female/Male Individuals with MBA's
Talent	Female mentorship programs in place	Ratio of Women/Men with executive Experience
Talent		Female Faculty in top business schools (%)
Capital	<i>Top 20 Most Active Crowdfunding Sites</i>	<i>Amount Raised on Crowdfunding Sites</i>
Capital	<i>Number of crowdfunding platforms</i>	<i>Total Projects on Crowdfunding Sites</i>
Capital	Ratio Women/Men who saved to start a business	
Culture	% of women in parliament (moved to policy sub-category)	Entrepreneurial Network (population with entrepreneurial experience)
Culture	Women leader in the last generation	Number of national level advocacy or supplier dev't groups specifically for WE or businesswomen (dropped networking as primary function of the organization)
Culture	Intentional Homicide Rate (homicides for 100,000 population) (inverted)	Numbeo.com Worry about being attacked (inverted)
Culture	Requirements for women on boards or executive leadership	
Culture	Government explicit gender policy	
Technology	Gender equality in Twitter use: ratio of female/male (max = 1.0)	Gender equality in LinkedIn use: ratio of female/male (max = 1.0)
Technology		Number of Smart City Projects
Technology		<i>Gender equality in Facebook use: ratio of female/male (max = 1.0)</i>

Indicators and Sources

Indicators and Sources			
Pillar	Indicator	Description	Source
MARKETS	City Population	This indicator gives a general size of the market	Brookings.edu; IHS Sources; Eurostat; UN
MARKETS	GMP	This indicator gives a general size of the market and opportunity	Brookings.edu; IHS Sources
MARKETS	Forecasted economic growth rate of city/region or country over next 5 years	This indicator gives a general size of the market and opportunity	Brookings.edu; IHS Sources
MARKETS	Corporate Income Tax Rate	This indicator is inverted such that lower income tax rates are more beneficial for attracting and supporting entrepreneurship	Deloitte 2017
MARKETS	Cost of Living	This indicator is inverted such that lower cost of living; a cheaper cost of living allows women to put more capital towards scaling their business vs. overhead costs	2017 https://www.expatistan.com/cost-of-living
MARKETS	% Company Boardmembers that are Female	The more women on boards of companies signals willingness of companies to engage diversity (country level or avg from sample of city's top employers)	MSCI, WoB2020, IHS local sources
MARKETS	Accelerators (with WOB)	Accelerators provide a powerful way for entrepreneurs to scale their business through networking, training and access to capital	http://www.seed-db.com/accelerators/all ; https://www.f6s.com ; www.gan.co
MARKETS	Presence of a city portal/website for business creation (transparent process, centralized information, etc.)	A hurdle for starting and growing a business is often just knowing how to obtain the right permits and registration as well as knowing what resources the city provides. Many cities are providing portals as one stop shops for business owners to find all the relevant information they need.	google search and search of city government websites
MARKETS	Private sector – corporate vendor programs that try to get women owned businesses as vendors (Weconnect International)	Many entrepreneurs reach scale by becoming a supplier for a larger company. A hindrance is that women owned businesses are often discriminated against (intentionally or unintentionally) when it comes to winning lucrative contracts. Large companies in a city that are committed to diverse supply chains can help women entrepreneurs reach scale.	2017 Corporate Member list HQ and Staff Locations
MARKETS	Government goals for WOB procurement	Similar to private sector companies, many city governments are passing ordinances to ensure they have a diverse supply chain and give women owned businesses the opportunity to secure contracts.	google search and search of city government websites
MARKETS	Most female entrepreneurs as % of startups in city	Research and our interviews with women entrepreneurs shows that having more women entrepreneurs in the city can help foster female entrepreneurship.	Crunchbase 2017
MARKETS	Ease of starting a business	Lower barriers to starting a business is a first step to scaling.	2016 PWC
TALENT	Labor force participation rate (women age 15+)	Women's ability to participate in the labor force is often a first step to gaining the experience required to run a business.	IHS, Inc. Country statistical agency
TALENT	Business management or finance training courses or programs for WE or women executives	Women's ability to scale often requires skills in finance and business management.	2017, Goldman Sachs 10000 Women partner locations, PWN locations, US SBA Womens Center locations, google search (max =5)
TALENT	Ratio of Women/Men with executive Experience	This indicator shows whether women are proportionately gaining executive experience that could be transferred to scaling a business.	2017 LinkedIn
TALENT	% of population with tertiary education or above	An educated workforce is often a pre-requisite to getting the talent a women owned business needs in order to scale.	IHS, Country statistics

TALENT	% of female population with tertiary education or above	This is an indication of both womens own education and educational equality that signals whether women are getting educational opportunities that could help them scale a business.	IHS
TALENT	% of Labor Force in Professional Services (finance, marketing, accounting, law) within city	This is an indication of whether necessary talent is available for women that want to scale their business.	2017 LinkedIn
TALENT	% of Labor Force who are IT professionals	In today's internet and enterprise software driven environment, businesses that want to scale need a sophisticated IT staff.	2017 LinkedIn
TALENT	Number of accredited business schools in city	Many new businesses are birthed in business schools where writing business plans and running a business is part of the curriculum.	FindMBA.com, IHS
TALENT	Number of globally top-ranked business schools in city	Topped ranked business schools tend to attract people with talent and vision that can be catalysts for scaling a business.	2017, Financial Times Global MBA Ranking
TALENT	Average % enrollment in top universities that city who are female	This is an indication of the equality of opportunity for women in higher education. It is a proxy for the attractiveness of the city for women in general and women entrepreneurs in particular.	2017 Time Higher Education Global Ranking
TALENT	Ratio of Female/Male Individuals with MBA's	This is both an indication of equality and a proxy for the potential for women entrepreneurs in the city, since MBA programs can be a place where business ideas are hatched.	2017 LinkedIn
TALENT	Female Faculty in top business schools (%)	Studies have shown that one reason women drop out of business school programs is due to a lack of female faculty role models.	2017 FT and individual searches at top business school in city
TALENT	Number of top ranked global universities in city	Top ranked universities attract talent to the city.	2017, US News & World Report, Best Global Universities, 2017 Rankings
TALENT	Top Ranked University in that City (inverted)	Top ranked universities attract talent to the city.	2017, US News & World Report, Best Global Universities, 2017 Rankings
CAPITAL	Value of VC funds given to businesses with at least 25% female executives	Indicates relatively how well women owned businesses are attracting funding from VCs (a powerful source of capital for scaling and where women have historically not done comparatively well).	2017 crunchbase
CAPITAL	Number of female founders or executives in 2nd round or higher funding round in the city	Indicates relatively how many women in the city are trying to scale and their success at getting to higher rounds of funding.	2017 crunchbase
CAPITAL	Most active Corporate VC Firms (top 50)	Corporate VC is another source of capital and their prevalence in a city indicates an additional access point for capital.	2017 cbsights
CAPITAL	Number of potential investors (population of HNWI)	Women often rely on friends and family for funding. This indicates the prevalence of qualified investors in the city that could be potential investors for women entrepreneurs.	2016 Frank Knight Wealth Report; Phoenix Marketing International 2016; IHSM calculations
CAPITAL	% of total investment companies with at least 1 female executive	Research shows that investment companies or VCs with women executives or partners tend to invest more in women entrepreneurs.	2017 crunchbase
CAPITAL	% of city businesses in 2nd round or higher funding round with a woman founder or executive	This indicates whether women are proportionately getting to higher rounds of funding (scaling).	2017 crunchbase
CAPITAL	Number of weeks of paid maternity leave (full pay or partial pay)	Taking time off to start and grow a family causes women to lose income that provides a base to build wealth. To the extent that this income is not disrupted women are better able to accumulate wealth to invest in their own business or in others.	google search of individual city policies on maternity leave
Capital	Number of Women Founded VC Firms	Research shows that women who found VC firms are more likely to invest in diverse businesses. Thus this indicator is a proxy for gender proportionate funding	2017 crunchbase
CAPITAL	% of VC funds given to businesses with at least 25% female executives	This indicates whether women are getting proportional access to funding.	2017 crunchbase

CAPITAL	Amount Raised on Crowdfunding Sites	Crowdfunding may help level the playing field for women entrepreneurs when it comes to attracting capital. The relative amounts funded in the city is a proxy for greater access to capital for WE.	2017 kickstarter.com and city specific equivalents
CAPITAL	Measure of Equality: Women/Men who saved to start, operate or expand a farm or business	Many women use personal savings to start a business. However saving may be more difficult for women if, for example, their income is interrupted. This is an indication of equality both of the ability to save and aspiration for starting a business.	World Bank 2014
	Total Projects on Crowdfunding Sites	Crowdfunding may help level the playing field for women entrepreneurs when it comes to attracting capital. To the extent sites are active in the city is a proxy for greater access to capital for WE.	2017 kickstarter.com and city specific equivalents
CAPITAL	VC's with 25% partners who are female?	Research shows that investment companies or VCs with women executives or partners tend to invest more in women entrepreneurs.	2017 Crunchbase
CULTURE	Presence of role models: # of globally recognized successful WE	Women often don't dream big because they don't see other women scaling businesses. This indicates how many local role models women in the city have when it comes to being a successful WE.	IHS, 2017 [a combination of Forbes 2000 CEOs, Fortune 500 CEOs, and Forbes 100 most powerful women]
CULTURE	Female Mayors in last 3 terms	Females in political leadership can be both role models and also help influence legislation that provides a level playing field for women.	IHS, 2017 (google search)
CULTURE	Number of national level advocacy or supplier dev't groups specifically for WE or businesswomen	Organizations that advocate for WE and/or help WE secure contracts with governments and larger companies helps WE scale and helps to change the perception about WE. Cities do not operate in a vacuum and often national level policies and culture can permeate to cities.	IHS, 2017 (WEConnect International locations, BPW-International locations, WBE and WBNEC (regional locations), Women Entrepreneurship Platform locations, WBII members, as well as country specific searches)
CULTURE	Number of city level organizations specifically for WE or businesswomen	City level organizations can provide valuable networking, education and advocacy that can help WE scale.	IHS, 2017 - meetup.com
CULTURE	Number of city level organizations specifically for entrepreneurs		IHS, 2017
CULTURE	% of women on boards of major business associations' (e.g. Chamber or other influential business group)	Having women on boards of business associations helps women better network with other businesses and helps foster a more diverse business environment in the city.	IHS, 2017 google search
CULTURE	Number of female leaders of major city business associations	Having female leaders of business associations helps women better network with other businesses and helps foster a more diverse business environment in the city.	IHS, 2017 google search
CULTURE	% of major city business associations headed by female leaders	While absolute numbers are important, representation is also key. This shows whether women are proportionately represented in leadership in the business community of the city.	IHS, 2017 google search
CULTURE	Frequency of City events for WE or businesswomen	City level events for WE or businesswomen help women network and gain critical skills.	IHS, 2017; Meetup.com
CULTURE	Ratio of positive to negative Tweets about women	This is a measure of the overall attitude of the city towards women. Often negative messages can have a bigger influence on women's aspirations and self perceptions than positive messages. This indicator measures the ratio of positive to negative messages towards women.	Twitter/ Janys, 2017 (number per capita)
CULTURE	% of relevant articles on successful " women entrepreneurs " in Media for that city	Hearing about role models in the media is another way that helps women dream big.	2012-2017 (5 years) Factiva
CULTURE	Numbeo.com Crime Level (inverted)	Crime and Safety are key concerns for any business, but women in particular tend to evaluate their safety more when deciding whether to scale a business.	Numbeo.com 2017

CULTURE	Numbeo.com Safety Scale	Crime and Safety are key concerns for any business, but women in particular tend to evaluate their safety more when deciding whether to scale a business.	Numbeo.com 2017
CULTURE	Numbeo.com Worry about being attacked (inverted)	Crime and Safety are key concerns for any business, but women in particular tend to evaluate their safety more when deciding whether to scale a business.	Numbeo.com 2017
CULTURE	Collection of city level data on income or employment by gender	This provides an indication of whether the city is concerned about gender equality - particular on economic issues which are critical for WE. What gets measured gets managed - so we include this indicator as a measure of a culture that values gender equality.	IHS, 2017 google search and government website search
CULTURE	Presence of city and/or national level policy advocacy organization specifically for women's equality issues	Organizations committed to women's equality and rights have helped to change the culture and provided women with more freedom - a prerequisite for scaling a business.	World Bank, IHS
CULTURE	Policy for "equal remuneration for work of equal value" (fair pay)	This is another indication of a culture that values gender equality. It is also critical that women earn their economic worth so they can build their savings and wealth.	World Bank, IHS
CULTURE	Policy for "nondiscrimination based on gender in hiring"	This is another indication of a culture that values gender equality. It is also critical that women have equal opportunity in the workplace so they can gain critical skills and experience needed to scale a business.	World Bank, IHS
CULTURE	Paid Maternity leave policy	This is a binary (y/n) indicator that proxies for a culture that is trying to level the playing field for women.	World Bank, IHS
CULTURE	Paid paternity leave policy	This is a binary (y/n) indicator that proxies for a culture that is trying to level the playing field for women.	IHS
CULTURE	Entrepreneurial Network (population with entrepreneurial experience)	Our research found that having other entrepreneurs nearby was valuable for networking and providing help and advice.	2017 LinkedIn
CULTURE	% of women in parliament	Women in leadership are both role models and can put forth legislation that helps level the playing field for women.	Search of websites
TECHNOLOGY	% of women who use the internet	Access to the internet is becoming a necessity for fully engaging with the global economy. This indicator measures the extent that women have access.	2017 consumerbarometer.com (country level); US cities (2015 Pew Research Survey state level)
TECHNOLOGY	% of women with smart phones	Smart phones are also becoming a necessity as both a communication source, information source and increasingly a source of engaging in commerce. This indicator measures the extent to which women are using smartphones.	2017 consumerbarometer.com (country level); US cities (2015 Pew Research Survey state level)
	Measure of equality female/male used an account to make a transaction through a mobile phone	This provides an indication of whether women are using technology to engage in economic transactions. This is both a measure of equality and a measure of women's willingness to use technology for economic purposes.	Country level WB 2014
TECHNOLOGY	Gender equality in LinkedIn use: ratio of female/male (max = 1.0)	This is an indication of whether women are equally engaging in professional social media.	2017 LinkedIn profile search
TECH NOLOGY	Inverse of Average Monthly Cost of Internet (8MB speed) USD	Cost can be a hindrance to access as well as a hindrance to scaling a business, this measures the relative cost of basic technology.	2017 https://www.expatrian.com/cost-of-living
TECHNOLOGY	Inverse of Average Cost 1 min. of prepaid mobile tariff (no discounts or plans) USD	Cost can be a hindrance to access as well as a hindrance to scaling a business, this measures the relative cost of basic technology.	2017 https://www.expatrian.com/cost-of-living
TECHNOLOGY	Open Data Initiatives	Open data is way for cities to share the data collected and generated by people in the city. This data can be used by entrepreneurs to help find solutions to common constraints in the city. It also signals a transparency on the part of city government - this transparency can help ensure that there is a level playing field.	2017 Google Search
TECHNOLOGY	Access to open and flexible technology	Many businesses that want to scale rely on open technology and flexible standards that allow them to more quickly scale their operations at a lower cost.	2017 HQ cities of member companies http://www.opencompute.org/about/membership-organizational-directory/

TECHNOLOGY	Technology training organizations for women	Technology can be intimidating for anyone. Women who want to scale their business need to have basic skills in utilizing technology. Classes specifically for women are also less intimidating/more inviting for women.	2017 Women Who Code, Girls in Tech, other
TECHNOLOGY	Does the city collect use of technology by gender	Technology is increasingly critical for any business to scale. Cities that collect gender level data on technology use and access can better monitor and manage how well their city is doing in leveling the playing field for women.	2017 google search
TECHNOLOGY	Number of Smart City Projects	Smart city projects help to optimize city functions making it more friendly for business and well as signaling the potential for more innovation (attracting entrepreneurs).	IHSM Smart Cities IoT Intelligence Service (2017)
TECHNOLOGY	Gender equality in Facebook use: ratio of female/male (max = 1.0)	This provides an indication of how equally women are engaging with social media, which is increasingly becoming a place to exchange ideas and information.	2017 Facebook search
TECHNOLOGY	Per capita number of open development users	Open development platforms provide a place for developers and users of software applications to meet. These development platforms have allowed entrepreneurs to scale their businesses more quickly and/or at lower cost.	www.github.com

About IHS Markit

IHS Markit (NYSE: INFO) is the leading source of insight, analytics and expertise in critical areas that shape today's business landscape. More than 3,800 business and government clients around the globe rely on the comprehensive content, expert independent analysis and flexible delivery methods of IHS Markit to make high-impact decisions and develop strategies with speed and confidence. IHS Markit operates with a team of more than 5,000 analysts, data scientists, financial experts and industry specialists in 25 offices in the US, Canada, Asia, Europe, the Middle East and Africa.

IHS Markit's Economics and Country Risk (ECR) business unit offers economic and financial analysis, forecasting, and market intelligence for over 200 countries worldwide and coverage of over 170 industries that helps clients to monitor, analyze and interpret conditions affecting their business. Our staff of economists, analysts and industry experts provides clients with subscription forecasts, specialized consulting support, and access to historical and forecast databases and economic software and data services. We provide expertise in international macro economies, individual industries, financial markets, trade, transportation and economic modelling.

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Dell
Women's
Entrepreneur
Network

Dell Technologies & DWEN WE Cities Research 2017

A ranking of top cities in the world for women
entrepreneurs to do more, scale faster and thrive

Press Release



DWEN WE Cities Research - 2017



Press Release

New Dell Research Ranks 10 Cities Globally on Ability to Foster Women Entrepreneurship

SAN FRANCISCO, July 17, 2017 /PRNewswire/ --

- Dell advises city leaders, entrepreneurs and policy-makers on how to improve conditions that enable women-owned firms to thrive
- Developed a deep dive analysis on the barriers and opportunities for women entrepreneurs accessing Capital and leveraging Technology to scale
- Revealed 10 Women Entrepreneur (WE) City Blueprints designed to spotlight actions a city can take to improve the ecosystem for women entrepreneurs
- The Dell WE Cities Index is the only global, gender-specific index that looks at a city's ability to attract and retain women entrepreneurs

Today at the 8th annual Dell Women Entrepreneur Network Summit, Dell announced findings of the 2017 Women Entrepreneur Cities (WE Cities) Index, revealing how 50 top global cities are fostering high-potential women entrepreneurs (HPWE). Building on 2016 WE Cities research, this study ranks cities based on the impact of local policies, programs and characteristics in addition to national laws and customs.

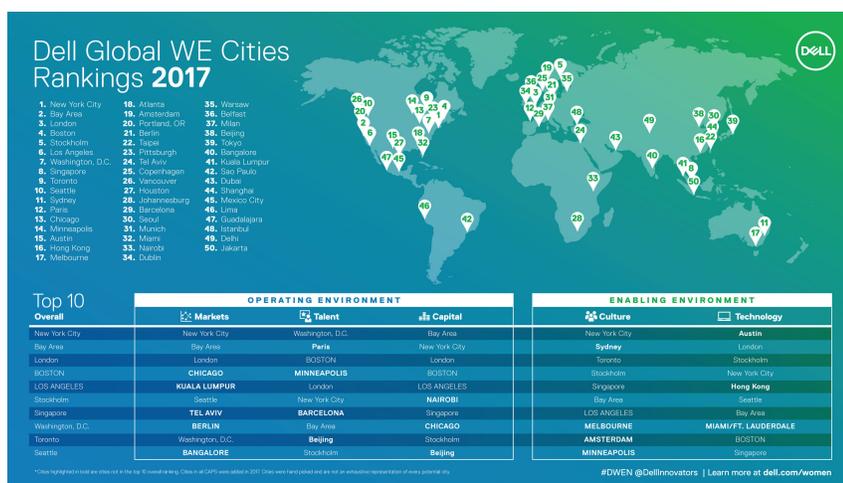
"Globally, women's entrepreneurship rates are growing more than 10 percent each year. In fact, women are as likely or more likely than men to start businesses in many markets. However, financial, cultural and political barriers can limit the success of these businesses," said Karen Quintos, EVP and chief customer officer at Dell. "By arming city leaders and policymakers with data-driven research and clear calls to action, we can collectively improve the landscape for high-potential women entrepreneurs, which in turn dramatically lifts a city's economic prospects — as what is good for women is good for the economy."

"It is in the world's best interest that women entrepreneurs everywhere thrive. The WE Cities Index can be used as a diagnostic tool to help ensure that lawmakers are enabling women entrepreneurs to succeed," said Elizabeth Gore, entrepreneur-in-residence at Dell. "Each of the cities on this list can learn from one another and encourage political change to attract and support women entrepreneurs. The resulting change will be felt at not just a city level, around the world as we develop an ecosystem where all entrepreneurs can thrive regardless of gender."

continued

Top 50 WE Cities Ranking & Methodology

Building on the past five years of Dell research on HPWE, cities were ranked on five important characteristics: capital, technology, talent, culture and markets. These pillars were organized into two groups — operating environment and enabling environment. The overall rating is based on 72 indicators; 45 of these, nearly two-thirds, have a gender-based component. Individual indicators were weighted based on four criteria: relevance, quality of underlying data, uniqueness in the index and gender component. The 50 cities were ranked as follows:



WE City Capital and Technology Deep Dives

Capital and technology are critical for scaling any business, but women face unique challenges with both. In 2017, only 2 percent of venture funding went to female founders. Based on the qualitative analysis of the WE Cities Index and insights from members of the DWEN network, many women entrepreneurs are not leveraging innovative technologies to scale their businesses. The WE City Capital and Technology deep dives uncover:

- How women entrepreneurs are accessing capital, using technology
- How different regions are accessing different sources of capital, using technology
- Industries that women entrepreneurs gravitate towards and how it impacts access to capital and technology
- How access to capital and use of technology differ across leading cities

continued

WE Cities Ranking and Methodology

Built on the past six years of Dell research on High Potential Women Entrepreneurs (HPWE), cities were ranked on five important characteristics: capital, technology, talent, culture and markets. These pillars were organized into two groups — operating environment and enabling environment. The overall rating is based on 72 indicators; 45 of these (nearly two-thirds) have a gender-based component. Individual indicators were weighted based on four criteria: relevance, quality of underlying data, uniqueness in the index and gender component.

The 50 cities were ranked as follows:

1. New York City	18. Atlanta	35. Warsaw
2. Bay Area	19. Amsterdam	36. Belfast
3. London	20. Portland (OR)	37. Milan
4. Boston	21. Berlin	38. Beijing
5. Stockholm	22. Taipei	39. Tokyo
6. Los Angeles	23. Pittsburgh	40. Bangalore
7. Washington, D.C.	24. Tel Aviv	41. Kuala Lumpur
8. Singapore	25. Copenhagen	42. Sao Paulo
9. Toronto	26. Vancouver	43. Dubai
10. Seattle	27. Houston	44. Shanghai
11. Sydney	28. Johannesburg	45. Mexico City
12. Paris	29. Barcelona	46. Lima
13. Chicago	30. Seoul	47. Guadalajara
14. Minneapolis	31. Munich	48. Istanbul
15. Austin	32. Miami / Ft. Lauderdale	49. Delhi
16. Hong Kong	33. Nairobi	50. Jarkarta
17. Melbourne	34. Dublin	

- New York City ranks No. 1 overall among the 50 cities for its ability to attract and support HPWE with a top-ranked Operating Environment and Enabling Environment ranked. While New York City ranks No. 1 for Markets, and within that, Access and Policy, it's No. 6 in Talent, and No. 2 in Capital, trailing the Bay Area. It is No. 1 in Culture, followed by Sydney, and ranks No. 2 in Technology
- While NYC ranked No. 1, its total score out of 100 was 62.9, leaving considerable room for improvement
- The Bay Area (consisting of the San Francisco and San Jose metro areas) ranks No. 2 overall, ranking No. 2 in Operating Environment and No. 7 for Enabling Environment. It ranks No. 1 for Capital, No. 2 for Markets, No. 8 in Talent, No. 7 in Technology and No. 6 in Culture
- London ranks No. 3 overall, and in Operating Environment, performing No. 3 for Markets and for Capital. It ranks No. 4 in Enabling Environment, and ties at No. 2 with Austin in Technology
- Boston and Stockholm round out the top 5 in the overall ranking

continued

- Boston, No. 4 on the overall list also No. 4 in Operating Environment and Capital and reaching No. 3 in Talent
- Stockholm (No. 5 on list) ranks No. 2 in Enabling Environment, No. 3 in Technology and No. 4 in Culture
- In the top 10 cities overall, six are in the U.S., two are in Europe, one is in Canada and one is in Asia
- 41 of the cities in this index are in the top five for at least one pillar or sub-category; 34 of the cities are in the bottom five for at least one of the pillars or sub-categories – demonstrating the competitiveness of these 50 cities
- Of the cities in the top 10 cities overall, only New York City and Washington, D.C. rank in the bottom five on any pillar or sub-category (New York City for cost of Market access and New York City and Washington, D.C. for cost of Technology)
- Of the top 10 cities overall, only the Bay Area and New York ranks in the top 10 across all 5 pillars

The 2016 and 2017 studies differ in several ways, including the total number of cities, number of indicators and the weight of indicators based on new data sources. Given the new elements to the ranking, scores should not be compared year-over-year.

About WE Cities

Dell partnered with IHS Markit — a leading source of insight and analytics that shape today's business landscape — to launch this first-of-its-kind, global research that will measure a city's ability to attract and support high-potential women entrepreneurs.

Research for WE Cities began during the 2016 DWEN Future Ready Research Symposium chaired by Dr. David Ricketts from the Technology and Entrepreneurship Center at Harvard. The research symposium brought together 40 global thought leaders, women entrepreneurs, academics and media to develop insights for the model. Key takeaways from the conversations at the Symposium included:

- Access to capital is still the No. 1 challenge that women entrepreneurs face, although the numbers are showing a slight improvement
- Creating robust ecosystems with incubators, accelerators and mentors makes a world of difference for entrepreneurs — it's all about the network
- Cultural norms and their policy implications put serious binds on female entrepreneurs
- Talent, both in terms of the entrepreneurs' own talent, including education and experience, and having access to a skilled staff also resonated as highly important

The successful pilot of the 2016 Index led to the scaling for the 2017 Index to include 50 cities.

continued

About the Dell Women's Entrepreneur Network

As the visionary outcome of a true entrepreneur, Dell is committed to help power the success of entrepreneurs by developing technology solutions that enable human potential. Through the Dell Women's Entrepreneur Network, Dell supports and nurtures a community of female entrepreneurs by providing access to technology, networks and capital. [Learn more here.](#)

About the Annual Dell Women's Entrepreneur Network Summit

Dell is excited to host the 8th annual Dell Women's Entrepreneur Network (DWEN) Summit in San Francisco from July 17-18, 2017, with its Welcome Reception on Sunday, July 16. Over 150 female founders, CEOs, dignitaries, Dell Leaders and more will convene to connect and discuss today's pressing topics. Through inspiring keynotes, informative panels and innovative workshops, the 2017 DWEN Summit will be the go-to resource for support and solutions that facilitate entrepreneurship. It is Dell's mission to bring vital knowledge and tailored technology for women-led companies small and large. For more on the event, please [click here.](#)

About Dell Inc.

Dell Inc., a part of Dell Technologies, provides customers of all sizes – including 98 percent of the Fortune 500 – with a broad, innovative portfolio from edge to core to cloud. Dell Inc. comprises Dell client as well as Dell EMC infrastructure offerings that enable organizations to modernize, automate and transform their data center while providing today's workforce and consumers what they need to securely connect, produce, and collaborate from anywhere at any time.

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<https://www.prnewswire.com/news-releases/dell-we-cities-index-ranks-top-50-global-cities-for-women-entrepreneurs-300488874.html>