Downtown office sector
Changing Trends/Impacting location decisions

We judge the vitality of cities: on-street activity

Upper floor uses & density drives street level activity

High-rise office buildings most dense development within cities & most job intense

Downtown Houston

Downtown Denver
Office building job density

Formula used to be 250 sf per employee.

Offices of Mad Men

Technological innovation (fewer private offices, secretaries) “hotelling” and downsizing pressures =

175-150 sf/ employee

Higher priced workers take up more space

Carry supportive staff within the number

Open office plans: space per employee is shrinking further

Coworking space

Comparative employment density

Average = 8 jobs for every 10 hotel rooms in banquet or convention hotel

600 rooms = 480 jobs

600,000 sf would hold 3,400 office jobs

Sectors cross-fertilize: Diversification has changed the value proposition

Hotels, theaters & restaurants create an environment that attracts business and residents.

The hospitality industry & eds/meds creates work for accounting, architecture & law firms.

Office tenants attract both corporate meetings and business travelers that fill hotel rooms.

55% of business at convention center, eds, meds & pharma

Diversification is key to success

Economic impact of office sector
Amazon in Seattle is an exception

Amazon in Crystal City is an exception

Very few cities have a dominant corporate entity

Amazon’s impact in Seattle: 20% of occupancy

- Added 50,000 employees in 9 years
- Occupies 47 buildings in Downtown
- 11.5 million sq. ft.

Salesforce Tower in San Francisco: tech dominance
38% is occupied by tech companies

Comcast Philadelphia: 5.5% of downtown inventory
Energy sector in Houston

Banks & financial services, Charlotte

Typical private sector office sector tenants

NAICS = North American Industrial Classification System
At the 2-digit level, the Office Sector is roughly the following:

- 51: Information & communications
- 52: Finance & Insurance
- 54: Professional, Scientific, & Technical Services
  Law, accounting, engineering, architecture
- 53: Real Estate Rental & Leasing
- 55: Management of Companies & Enterprises
- Corporate headquarters: Energy in Houston, Technology in San Francisco, Amazon in Seattle, Comcast & Aramark in Philadelphia (neither own)
- Banks in Charlotte

Constructing an office building and hotel of comparable size will both generate about 1200 construction jobs

Source: BLS, QCEW 2014

Philadelphia: Average Salary by Sector: 2015

<table>
<thead>
<tr>
<th>Industry</th>
<th>Jobs</th>
<th>Avg Pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational &amp; Health Services</td>
<td>214,520</td>
<td>$60,554</td>
</tr>
<tr>
<td>Office Sector</td>
<td>140,240</td>
<td>$100,263</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>49,253</td>
<td>$28,018</td>
</tr>
<tr>
<td>Food Service &amp; Drinking Places</td>
<td>52,473</td>
<td>$21,177</td>
</tr>
<tr>
<td>Transportation and Warehousing</td>
<td>23,839</td>
<td>$54,418</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>20,207</td>
<td>$63,055</td>
</tr>
<tr>
<td>Construction</td>
<td>11,384</td>
<td>$78,108</td>
</tr>
<tr>
<td>Hotels &amp; Accommodation</td>
<td>7,486</td>
<td>$59,399</td>
</tr>
</tbody>
</table>

| Public Sector                   | 104,260| $69,012 |
| Private Sector                  | 571,788| $63,502 |

Philadelphia: Average Salary by Sector: 2015

2019 Jobs report

Fig. 7: Proportion of Job Growth 2015-2018 by Avg Wage in Sector

Priv. $60k | $60k-$100k | $100k-$150k | $150k-$200k | $200k+$ | Total

- 30%
- 35%
- 25%
- 10%
- 10%
- 100%
Local workforce participation

51%  60%  80%

Impact of 500,000 sf of office space

Job growth strengthens the demand for construction jobs, retail services and hotel rooms.

Every 500,000 square feet of occupied office space:
- Provides 3,335 office jobs, 5 building engineering, 16 cleaning and 12 security positions.
- Supports 11,000 hotel rooms filled with business travelers.
- Generates $2.8 million in retail demand.
- Adds 2,335 riders to SEPTA.

2015: Office sector jobs
Paying between $20,000 & $59,000

The fiscal impact of office jobs

The average office job generates **2.5 times** as much in salaries as the average hotel job.

Out of box: 59% of expenditures of hotel guests Made outside hotel on shopping & dining

<table>
<thead>
<tr>
<th></th>
<th>Dollars of Shoppers' Expenditures</th>
<th>Non-Hotel Shopping &amp; Dining</th>
<th>Food &amp; Lodging</th>
<th>Expenditures</th>
</tr>
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<td>Office</td>
<td>$126,789,360</td>
<td>$75,613,230</td>
<td>$51,176,130</td>
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Source: Department of Commerce, Bureau of Economic Analysis

Diverse downtown sectors reinforce each other

Dominance of office employment in CBD's

With a handful of exceptions, Las Vegas, San Antonio, office employment is the largest sector of jobs in American downtowns.

Two exceptions: San Antonio & Las Vegas

Midtown Manhattan most dense employment center in US

With 902,306 jobs; 920 jobs per acre
Downtown Chicago: 294 jobs per acre

LA - Downtown: 285 jobs per acre

San Francisco 217 jobs per acre

Center City Philadelphia, 203 jobs/acre

Office, largest sector, 40% downtown jobs

62% of BID revenue in Philadelphia
80% of BID revenue Houston

85% of BID revenue: Charlotte

Typical office occupant
Tenant; most buildings multi-tenanted (some corporate headquarters are owned)
Signs a 10 or 15 year lease; locks in rent; fit up allowance; pass-thrus
May have offices elsewhere in region (suburbs)
With digital technology the cost of moving is no longer major cost; plug in & function
Footloose

Manufacturing jobs tied to place by significant Capital investment & transportation systems

Laptops and cell phones, office work in general is far more portable, flexible & footloose

Health care & education
More tied to fixed assets; labs, beds, technology, classrooms

European path
Historic center of Paris; Height controls

Most European city centers historic: Copenhagen

Amsterdam

Amsterdam, corporate headquarters in historic bdlg

Amsterdam: modern office outside the core
Office park at Schiphol Airport, outside Amsterdam

La Defense in Paris

Dimly visible in the distance

Canary Wharf in London

Rotterdam, Netherlands
North American style CBD; historic city was blitzed in WW 2

Rotterdam, Netherlands South side: across river
1948: high density commercial no residential
100% of commercial office space in CBDs

Sequence of suburbanization

Residential: 1946-47, accelerates through 1950s
1960: 31% population suburbs
2010: 51% population suburbs

Regional shopping centers, 15,000 - 1955-1977
Office parks

Gas prices: 1950’s; 1968; 1970
1973: Arab Oil Embargo

1970: 74% of commercial office space in CBD
2010: 65-70% commercial office space in suburbs
Push: urban decline; pull: auto-orientatation
Landscaping; green amenities

“Campus” Selling tranquility

Close proximity to CEO residence

Closely connected to suburban based workforce

Families with children; public schools

1950s urban renewal
Federally funded efforts to regain market share
Resulted in new downtown office buildings
Offer state of the art options within downtowns

West Market & JFK Boulevard Office District

1960's-1980 downtown renewal built new office buildings
Bunker Hill drew commercial life out of old downtown & towards the freeway

Leaving 1920s downtown vacant, under-performing

Regional distribution

<table>
<thead>
<tr>
<th>Top Markets</th>
<th>Total Inventory*</th>
<th>CBD Inventory</th>
<th>CBD as % of Total Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Calgary, AB</td>
<td>57,581,709</td>
<td>42,248,220</td>
<td>73.4%</td>
</tr>
<tr>
<td>2. Manhattan, NY</td>
<td>677,660,816</td>
<td>405,851,420</td>
<td>59.9%</td>
</tr>
<tr>
<td>3. Vancouver, BC</td>
<td>49,964,056</td>
<td>29,093,481</td>
<td>58.2%</td>
</tr>
<tr>
<td>4. Chicago, IL</td>
<td>214,485,349</td>
<td>121,070,599</td>
<td>56.4%</td>
</tr>
<tr>
<td>5. Toronto, ON</td>
<td>167,403,119</td>
<td>83,950,592</td>
<td>50.1%</td>
</tr>
<tr>
<td>6. Portland, OR</td>
<td>49,274,720</td>
<td>20,964,416</td>
<td>49.0%</td>
</tr>
<tr>
<td>7. Minneapolis, MN</td>
<td>80,506,894</td>
<td>35,759,222</td>
<td>44.4%</td>
</tr>
<tr>
<td>8. San Francisco, CA</td>
<td>170,182,771</td>
<td>62,165,730</td>
<td>36.5%</td>
</tr>
<tr>
<td>9. United States</td>
<td>1,181,549,703</td>
<td>1,129,572,895</td>
<td>36.4%</td>
</tr>
<tr>
<td>10. Washington, DC</td>
<td>351,309,890</td>
<td>117,597,552</td>
<td>33.5%</td>
</tr>
<tr>
<td>11. Boston</td>
<td>192,798,876</td>
<td>60,776,193</td>
<td>33.3%</td>
</tr>
<tr>
<td>12. Philadelphia, PA</td>
<td>131,459,119</td>
<td>43,716,633</td>
<td>33.3%</td>
</tr>
<tr>
<td>13. Miami</td>
<td>48,862,139</td>
<td>13,763,468</td>
<td>28.2%</td>
</tr>
<tr>
<td>14. Houston</td>
<td>166,867,198</td>
<td>37,022,646</td>
<td>22.2%</td>
</tr>
<tr>
<td>15. Los Angeles</td>
<td>191,888,798</td>
<td>37,300,591</td>
<td>14.2%</td>
</tr>
</tbody>
</table>

Los Angeles: a multi-centered city
Post-911 buildings have been engineered in response to World Trade Center terrorist attacks.

Office classification Trophy, A & B buildings:
- Age, technological sophistication, flexibility of layout
- Well tracked by commercial brokerage firms

Leaving 1920s downtown vacant, under-performing

B & C inventory empties out in 1970s & 1980s often converted to other uses: 1990-2015
6.5 million square removed inventory

Basic measures of industry performance

Supply – expressed as square footage; Different brokerage firms count different geography & inventory

Rents – expressed as dollars per square foot; includes cost of occupancy + pass through of operating and maintenance costs (O&M) and municipal taxes, including BID assessments

Asking Rent & effective rent (concessions) Fit-up $

Occupancy/Vacancy Rates

Absorption - Positive & negative

Rents vary dramatically by city

Good measure of office demand/job trends

CBD premium rent premium

National average = 27%

But could also be result of local tax policy

Additional tenant occupancy costs from U&O
Additional tenant occupancy costs: BIRT

This is why rents are far below comparable cities

But comparatively low rents also make us ripe for a well-funded strategy for business attraction

Potential for much stronger growth suggested by number of national & suburban firms testing waters Occupying 773,000 sf of co-working space

Prices vary by class
Prices vary by geography

Occupancy rates track economic trends Usually with 2-3 year lag

2016 – Philadelphia CBD
Large Available Blocks

No Vacancy at the TOP
Full Floors Available Above the 25th

When does tightening space trigger demand for new supply?
Footloose tenants + employees with choice = Improving amenities for office district

90 car parking spaces; 100 bike parking spaces

Commerce Square

Recent renovation
That's what motivated changes at Dow

Traditional factors that drove office relocation

1. Changing Corporate Directions and Priorities
2. Increased Pressure to Reduce Operating Expenses
3. Shifting Staffing Levels
4. Space Utilization Issues Due to Reengineering
5. Profitability Draw From Under-Performing and Surplus Properties
6. Impact of Job Migration and Demographic Shifts on Facility Locations
7. Building Obsolescence/Technology
8. Increased Understanding of Off-Balance Sheet Transactions/Separation Strategies

Comparing locational attributes

- Labor – costs and availability
- Business Climate – taxes, pro-growth attitude
- Workforce Trends – employees, educational attainment
- Real Estate – cost and availability
- Infrastructure – capacity and costs
- Telecommunication – capacity, costs, competitors
- Logistics – management travel, vendors, suppliers
- Incentives – abatements, exemptions, training, relocation, other
- Quality of Life – housing costs, cost of living, crime rates
- Environmental
- Technology infrastructure requirements (current and long-range)

Why CBDs are regaining market share

- Need for quality space and large blocks
- at the center of region & transit systems with rising fuel costs
- Investment returns higher in mixed use centers
- Need to be near competitors, clients, vendors, workforce
- Labor force demographics – Millennial Workers
- Population growth: growing preference for live work environments
- Government – Federal and State
- The “Address”

Maria Sicola
Executive Managing Director
Americas Research
Cushman & Wakefield
**Impacting trends: Office sector retention strategy**

Partnership of Commerce, PIDC & CCD

- 2001-2008 visited over 100 decision makers whose leases were coming due
- 150 out of 155 major commercial leases renewed
- 17 million square feet of space
- Paying attention
- Fixing little problems
- making firms aware of various public programs—training, low-interest loans
- tax and regulatory problems
- Public space & infrastructure

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**Business attraction: World Business Chicago**

Best done at regional scale

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**Market place & labor data**

www.investatlon.com

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**Regional business marketing**

Partnership of county economic development agencies
At the center of the Northeast corridor: Between New York City & Washington, D.C.

Impacting a regional relocation decision

Since 2007, 16 coworking spaces = 773,000 sf
Have opened in Greater Center City & University City

Extraordinarily positive in diversifying downtown & animating our sidewalks

1997-2014: 45 office buildings, 7 million sf converted to other use

Eliminated nearly all the inventory of inexpensive office space that new business could afford in middle of downtown
Coworking & creative office space: Incubators for new pipeline of homegrown office tenants

Goldman Properties on 13th Street

Culture works

Benjamin's Desk: 1701 Walnut

A flexible way for firms from outside Philadelphia to enter the market

SSH Real Estate
A Full Service Real Estate Company