The major development trend of the next generation.
The planning of the 21st century in the US and other developed countries has seen a structural shift in how the country creates its built environment (defined as infrastructure and real estate). The suburbs have played a major role for a century, but that role is fundamentally changing. Understanding the implications of this structural shift requires the introduction of a few basic concepts.

First, it is important to understand that the built environment takes two basic forms: walkable urban and drivable suburban. There are many variations, but broadly speaking there are these two.

Walkable Urban is the oldest form employed in building cities and metropolitan areas. Walkable urban development is the basis of how we have built our cities since Çatalhöyük. In present-day Turkey, it was built around 8,500 years ago, or about the same time as the first cities.

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Walking is the primary means of getting to and getting around a walkable urban place. The distance that most people feel comfortable walking is about 1,300 to 3,000 feet, which is about the geographic size of a walkable urban place. Research conducted at George Washington University has shown the average walkable urban place in metropolitan Washington, DC is 106 acres (423 square kilometers), about the size of three regional malls, including their parking lots.

Beyond that distance, most people will use another means of transport if it is available. Historically that has meant a horse-drawn wagon, bike, public transit (train or bus) or a car. Within that defined and confined walkable urban places, walking provides access to many if not all everyday needs—shopping, social life, education, civic life, and maybe even work. This mixed-use character means the walkable urban place has a relatively high density; measured by gross floor area ratio (FAR), measuring all land within the area being evaluated, including right of way, between 10 and 30. The lowest walkable urban density, such as a small town, could be 10, while the highest walkable urban density, like Midtown Manhattan, is about 90 FAR.

Drivable suburban has been characterized by limited access to walkable urban places and, therefore, is less walkable than the walkable urban places that it is attached to. Drivable suburban development segregates the various land uses within the area being evaluated, including right of way, between 10 and 30. The lowest walkable urban density, such as a small town, could be 10, while the highest walkable urban density, like Midtown Manhattan, is about 90 FAR.

However, most walkable urban places developed today, particularly those in the suburbs, range between 2.0 and 4.0 FAR, assuming they are employment, destination retail, or civic places (defined below as regionally significant places).

The second form of built environment is Drivable Sub-Urban, a term that intentionally uses a hyphen to indicate it is fundamentally different from and less dense than walkable urban. Drivable suburban development incorporates the various needs of everyday life one from the other, either in a shopping centre, work in a business park, housing in a subdivision and the only way to connect these is by car. Walking is generally not a safe or viable option, nor is any other form of transportation, such as public transport or biking.

The early 20th century introduction of cars as a means of transportation was the obvious precedent for drivable suburban development, enabling a new before-known alternative form of building and living.

Drivable suburban has extremely low-density development compared to walkable urbanism, generally less than 30 per cent of the density as measured by floor area ratio. FARs need to range between 0.05 and 0.40. Its various land uses are for-sale housing, rental housing, office, industrial, retail, civic, education, medical, hotel, and more spread out across vast swatches of land. In other words, spread. Most real estate developers and investors, government regulators and financiers have come to understand this model externally well, turning it into a successful development formula and economic driver for the mid and late 20th century. Drivable suburban development provided a foundation for the economy and the doffiled dominant industry of the industrial era—the building of cars and tracks, including the support industries of road building, finance, insurance and oil. Drivable suburban development was essential to American economic growth in the mid to late 20th century.

ECONOMIC FUNCTIONS OF THE BUILT ENVIRONMENT

Metropolitan land use plays one of two economic functions, either regionally significant or local-serving.

Regionally significant locations are sometimes referred to as sub-markets by commercial brokers, here:• Concentrations of jobs;• Civic centers;• Institutions of higher education;• Major medical centers;• Regionally significant;• One-of-a-kind cultural, entertainment and sports facilities.

Regionally significant land use constitutes less than 5 per cent of all metropolitan land mass, according to George Washington University School of Business/GWSB research, yet it is the region’s economic driver for the mid and late 20th century. Regionally significant development provided a foundation for the economy and the doffiled dominant industry of the industrial era—the building of cars and tracks, including the support industries of road building, finance, insurance and oil. Regionally significant development was essential to American economic growth in the mid to late 20th century.

Local-serving drivable sub-urban land use accounts for the vast majority of the total metropolitan land mass, about 90 per cent. Local-serving locations are generally not financial centers or local jurisdictions, but that, they play less of a role in tax revenues (income, sales, property and other taxes) than they cost in terms of public services (transportation, police, fire, regulatory, and legal services), but especially education. In other words, most local-serving jurisdictions have to be subsidised by regionally significant land uses within the jurisdiction or they would have to raise their taxes substantially to pay for these services.

Generally speaking, regionally significant locations are where the metropolitan area earns its living, and local-serving places are where most residents spend their non-work lives and the income and surpluses generated by regionally significant locations.

FORM MEETS FUNCTION

The two forms and two functions of metropolitan land use produce a simple four-cell matrix, shown in Figure 1. This matrix outlines the land use options available for any metropolitan land and includes an estimate of the share of the metropolitan land used for each form/function combination. Each matrix cell, regionally significant walkable urban places, are called ‘WalkUPs’, show they are the focus of the urbanisation of the suburbs. Research from the National Real Estate and Urban Analysis at GWSB shows eight types of regionally significant WalkUPs. These are:

- Downtowns, the traditional centre of the metro’s central city;• Downtown Adjacent, surrounding the downtown, such as Downtown Circle in Washington, Capitol Hill in Seat and Uptown in Dallas;• Urban Commercial, local-serving commercial districts that went into decline in the late 20th century, but have experienced a recent revival as regionally significant WalkUPs, such as Columbia Heights in Washington, Lincoln Park in Chicago and West Hollywood in Los Angeles.
Urban University, institutions of higher learning that have embraced their community, such as UCLA in Los Angeles, Penn and Drexel in West Philadelphia and Columbia in New York; Innovation District, described by The Brookings Institution as “geographic areas where leading-edge anchor institutions and companies cluster and connect with start-ups, business incubators and accelerators”; Suburban Town Centre, 18th and 19th century towns that the metro area grew to include and that have also enjoyed a recent revival, such as Evanston in metro Chicago, Bellevue in metro Seattle and Pasadena in metro Los Angeles; Redeveloped drivable sub-urban, strip and regional malls that have urbanised, such as Belmar in metro Denver, Tysons in metro Washington and Perimeter in metro Atlanta; and Greenfield/brownfield development, complete walkable urban developments built from scratch, such as Reston Town Centre in metro Washington, Atlantic Station in metro Atlanta and Easton Town Centre in metro Columbus.

The first five of these WalkUPs types tend to locate in the central city. The last three types tend to be in the suburbs. The same research shows the most walkable urban metropolitan areas, particularly metro Washington (ranked number two most walkable urban) and Boston (number three), earned their high rankings because they contained 49 per cent and 41 per cent, respectively, of total rental office and multi-family walkable urban inventory in their suburbs (see Figure 2). These are places like Clarendon and Bethesda in metro Washington, DC and Harvard Square and Assembly Row in metro Boston. The Washington, DC and Boston metros are models of development for the future. Boston is an older metro area with a legacy rail system that has redeveloped formerly depressed walkable urban places to accept the majority of new development in recent years. Metro Washington, DC behaved like a Sunbelt boomtown in the late 20th century, akin to Atlanta, Dallas or Phoenix, but more recently has begun building the majority of its development in walkable urban places immediately adjacent to stations on the 1970’s Metrorail system. The Metro has grown to meet demand over the last few decades.

ARLINGTON, VIRGINIA, AS THE MODEL OF THE URBANISING SUBURB

The most important suburban jurisdiction in the region, and in fact in whole of the US, is Arlington County, just across the Potomac River from Washington, DC. Part of the original district, it was ‘de-annexed’ in 1846 back to Virginia and eventually became Arlington County. At 26 square miles (67 square kilometres) it is the second smallest county in the country. 3 The county has seven WalkUPs, representing 11 per cent of its landmass. A generation ago, most of these places were declining as drivable suburban strip commercial, including the first regional mall in metro DC, known as Parkington (lots of parking, and car dealerships were gradually moving to freeway locations further out. This land was generating roughly 20 per cent of county tax revenue, and falling, in the 1980s. Fast forward to 2018. Redevelopment of these dying strip commercial and car lots has seen a near quadrupling of square footage. Parkington Mall became Ballston Commons in the 1980s, an urban regional mall that is about to reopen as a mixed-use, open-air element of the complex fabric of the Ballston WalkUP. The seven walkable urban places in Arlington County now generate more than 50 per cent of county tax revenues and rising. Counter-intuitively, absolute car counts on the major boulevards have fallen (10-25 per cent) since the 1980s in spite of the remarkable growth in square footage and vitality. The building of a major Metrorail line in the 1980s and its placement underground, beneath the Wilson and Clarendon boulevards, is a major reason for the success of Arlington, coupled with the enlightened leadership of the county and zoning.

“Generally speaking, regionally significant locations are where the metropolitan area earns its living, and local-serving places are where most residents spend their non-work lives and the income and surplus generated by regionally significant locations.”

ESSAY URBANISING THE SUBURBS

CHAPTER 5 THE NEW NORMAL
A ranking of the 13 largest US metro areas by level of suburban urbanisation is shown in Figure 2. The Washington, DC and Boston rankings highlight the current ranking and some of the highest rates of suburban urbanisation. In the case of urbanisation of their suburbs, these metro areas, without urbanising suburbs, face different realities. The first category includes walkable urban metros where the bulk of walkable urbanism is located in the central city, like Washington, DC and Boston both ranked highly in the current ranking and some of the highest rates of suburban urbanisation. In this category are walkable urban places that are not as gritty as some other central cities. Not everyone wants to walk past homeless people on the street, share heatedly about social issues, build real experience other aspects of center city walkable urbanism. WalkUPs are less intense and, quite honestly, more filled with white JEL 16 people who ‘just want the mall’. Suburban walkable urbanism tends to be less gritty and can be nearby Dinner movies in its steadiness and newness. WalkUp/Park Place Rodeo Town Centre in Las Vegas, Arizona is a different story. Another major factor in suburban urbanisation, especially in its inner suburbs, is the quality of schools. While central city school districts are facing numerous challenges, many young Cougars are not willing to walk or work hard to change their situation. WalkUP/Park Place in central cities over the past 10-20 years. However, not all market demand can be satisfied in central cities. A market exists for walkable urban places that are not as gritty as most central cities. Not everyone wants to walk past homeless people on the street, share heatedly about social issues, build real estate development in these metros will have a huge benefit to a school district. If all of those units contain some kind of innovation district 5 and the transformation of browned-out 1960s commercial urban corridors into regionally significant destinations has been amazing and has propelled the emergence of walkable urbanism in the quality of life of the single-family home. The new multifamily developments in their seven cities offer both. Washington, DC and Long Island, NY have put more emphasis on education and walkable urbanism. There is another reason for the urbanisation of the suburbs. It improves the quality of life for the immediate neighborhoods by providing households with the best of two suburban worlds living within walking distance of restaurants, shopping, transit and may work. Preliminary research done at 60% cost of 200 per cent increase in prices per square foot for nearby for-rental housing decreased to zero. In comparison to similar housing in the same school district but not within walking distance of a WalkUP. As a result, suburban Washington DC and Long Island, NY have
began to see NIMBYs turn into YIMBYs (yes in my backyard), advocating for increased density and walkable urban place development, assuming it is well managed. Neither research nor our experience has delivered a final verdict, but it appears likely that at least 50 per cent of the demand for walkable urbanism will be satisfied in the suburbs, as it is in metro Washington, DC the leading urbanising suburban metro. It may be even higher. Yet it is important to note that the demand for walkable urbanism, both in the centre city and in suburbs, will be concentrated in less than 10 per cent of the landmass. The rest of the drivable suburban locations in the suburbs will stay the same, just a little less well-off.

**ECONOMIC BENEFITS FOR URBANISING SUBURBS**

Research has shown that the participants in the knowledge economy, both companies and their ‘creative class’ workers, have moved to and are demanding walkable urban places today. Many downtown turnarounds have been led by knowledge-based companies, such as Twitter, Yelp, Dropbox and Square, among many others, south of Market in San Francisco; Google, WeWork, and other high-tech firms in the New York’s Meatpacking District (also known as Silicon Alley); and Compuware and Quicken in downtown Detroit. The same benefits are beginning to occur in the urbanising suburbs, such as Cambridge and Somerville in metro Boston and Redmond in metro Seattle. Even the Research Triangle of Raleigh-Durham-Chapel Hill, North Carolina, is planning to urbanise what has been the quintessential driveable sub-urban business park.

Many studies have shown a causal link between increased education and increased economic performance of an individual, household, and metropolitan gross domestic product (GDP) area. In 2013 the Milken Institute released a study of GDP performance of 261 US metros that concluded: “The overall explanatory power of the relationship [between higher education and GDP per capita] is strong and robust. Over 70 per cent of the variation in real GDP per capita across the 261 metros from 1990 to 2010 is explained [by higher educational attainment].”

Our George Washington University (GWU) research also shows a significant correlation between the most walkable urban metros and both higher education (measured by the percentage of the population over 25 years of age with a college degree) and metropolitan GDP per capita. There is an $r^2$ of 0.35 between walkable urbanism and higher education. There is an $r^2$ of 0.49 between walkable urbanism and GDP per capita in the largest 30 metro areas.

The six highest-ranked walkable urban metropolitan areas in the current ranking chart (see Figure 2) have an average GDP per capita of $72,110. The 10 lowest-ranked metros have an average GDP per capita of $48,313. These most walkable urban metros have a 49 per cent premium in GDP per capita. This is the same premium Germany has over economically poorly performing Russia, Latvia and Croatia.

There is no indication in this research as to whether walkable urbanism causes highly educated people to move to or stay in a metro or whether more highly educated people cause a metro area to add more walkable urban places. Either way, educated people seem to prefer walkable urban places. It will probably take another decade to prove or disprove a causal link between walkable urbanism and increased higher education of the workforce and GDP per capita. However, any mayor of a suburban city or county executive would want to pay attention to these correlations. While not proven, it appears that building walkable urban places will assist a community’s economic development and wealth.

<table>
<thead>
<tr>
<th>METRO AREA (USA)</th>
<th>WalkUP Space in Suburbs</th>
<th>Rank</th>
<th>% Share Q1 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Las Vegas</td>
<td>1</td>
<td>53%</td>
<td></td>
</tr>
<tr>
<td>Washington, DC</td>
<td>2</td>
<td>49%</td>
<td></td>
</tr>
<tr>
<td>Houston</td>
<td>3</td>
<td>48%</td>
<td></td>
</tr>
<tr>
<td>Miami</td>
<td>4</td>
<td>46%</td>
<td></td>
</tr>
<tr>
<td>Boston</td>
<td>5</td>
<td>45%</td>
<td></td>
</tr>
<tr>
<td>Phoenix</td>
<td>6</td>
<td>43%</td>
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</tr>
<tr>
<td>Los Angeles</td>
<td>7</td>
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</tr>
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<td>14</td>
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</tr>
<tr>
<td>Philadelphia</td>
<td>15</td>
<td>16%</td>
<td></td>
</tr>
</tbody>
</table>

**FIGURE 3**

THE LARGEST US METROPOLITAN AREAS WHICH ARE URBANISING THEIR SUBURBS. IGNORE LAS VEGAS, WHICH IS A STATISTICAL FLUKE. HOWEVER, WASHINGTON DC, HOUSTON AND MIAMI ARE SURPRISING MODELS.

Christopher Leinberger

“The next great opportunity for economic and real estate development in these metros will lie in urbanising the suburbs, many times taking advantage of the existing or new rail transit infrastructure.”
FUTURE OF SUBURBS THAT DON’T URBANISE

As mentioned, the bulk of the suburb in the US will be left undamaged, but not all single- and multi-lane arterials will remain for decades, serving the market for drivable sub-urban living, shopping and working. However, the US can expect to see a ‘tale of three suburbs’. The first suburb will be walkable urban and prosperous, as described above. The second two will likely be less prosperous, and one could actually suffer decline.

Walkable sub-urban locations in high-income and many moderate-income sections of metro areas will do fine, though they will probably experience weaker economic growth than urbanising suburbs. Why? The overbuilding of drivable sub-urban business parks, regional and strip malls and large-lot housing will shift in demand toward walkable urban office and retail spaces has produced in demand toward walkable urban malls and large-lot housing. The shift business parks, regional and strip malls. Overbuilding of drivable sub-urban experience weaker economic growth income sections of metro areas will be difficult to sell and will probably not appreciate very much. A second group of suburbs has a more limited future: the moderate-income suburbs on the ‘wrong side’ of the metropolitan area face the danger of becoming ‘The Next Slum’, the name of an Atlantic article I wrote in 2010. The overbuilding of large-lot, single-family homes will particularly affect these communities, as was first demonstrated by the 2008-09 housing crash, which hit these communities harder than other locations in their metropolitan area. These communities have a monoculture of tax revenues, which makes it difficult for them to attract industry to replace those lost in the downturn. While these communities can be walkable urban places, they will need to be more mixed-use and transit-oriented to be economically viable.

The third group of suburbs will be less prosperous, and one could actually suffer decline. The urbanisation of the suburbs will affect less than 10 per cent of land in the suburbs but will affect more than 10 per cent of land in walkable urban places. The urbanisation of the suburbs will also occur, especially in suburban Prince George’s County, southeast of Washington, DC. While much of this article has focused on regions with significant walkable urban development, substantial local/localizing walkable urban development will also occur, especially immediately adjacent to the regional walkable urban places.

I have discussed the economic and fiscal benefits of making suburbs more walkable and more urban. Yet benefits that have not been explored here (social equity, if managed, public health benefits of unrestrained exercise, reduced infrastructure costs due to decreased development, and possibly the most effective method of reducing greenhouse gas emissions to address climate change) will make urbanising suburbs will worth the effort as well.

This trend will place an economic foundation under metropolitan economies, similar to the way the building of drivable sub-urban locations did in the late 20th century. It is crucial to provide the vision, leadership, regulatory changes, infrastructure investment and place management to make the coming walkable urban future happen in a suburb near you.

Moving a home to these communities will offer a great value for the money, but that house will just be difficult to sell and will probably not appreciate very much. The third group of suburbs has a more limited future: the moderate-income suburbs on the ‘wrong side’ of the metropolitan area face the danger of becoming ‘The Next Slum’, the name of an Atlantic article I wrote in 2010. The overbuilding of large-lot, single-family homes will particularly affect these communities, as was first demonstrated by the 2008-09 housing crash, which hit these communities harder than other locations in their metropolitan area. These communities have a monoculture of tax revenues, which makes it difficult for them to attract industry to replace those lost in the downturn. While these communities can be walkable urban places, they will need to be more mixed-use and transit-oriented to be economically viable.

The urbanisation of the suburbs will affect less than 10 per cent of land in the US and represent the bulk of the vast majority of new real estate development over the next generation. The highest-ranked walkable urban metros, New York, Washington, DC, and Boston, already have between 93 per cent and 115 per cent of their office and multifamily development being built in walkable urban places taking up a few percentage points of their overall land. While much of this article has focused on regions with significant walkable urban development, substantial local/localizing walkable urban development will also occur, especially immediately adjacent to the regional walkable urban places.

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Christopher B. Leinberger is a partner of Arcadia Land Company, a walkable urban development company based in Philadelphia, Pennsylvania.
