NEW URBANISM 101: What & Why
Designing Thriving Places

Marina Khoury
DPZ Partners

KCF
March 19, 2017
• 35+ years of successful & pioneering practice; including TODs;

• Designs for over 400 new and existing communities;

• +120 built communities

• Prominent & influential projects, locally calibrated, and of their place;

• Innovative development & implementation of design codes;

• Founders and recognized leaders of New Urbanism & Smart Growth;

• Educators
new urbanism: theory, principles & its evolution
Epidemic of sprawl development patterns: USA

- Areas dominated by single-use
- Car dependence
- Excessive automotive traffic
- Lack of transportation alternatives
- Lack of useable open space
- Excessive land consumption
- Degraded wilderness & habitat
- Increased air pollution
- Increased burden on municipal infrastructure
- Diminished quality of life
2 patterns of development since beginning of time

**Complete Community:**
Walkable Urbanism
(up to 1940’s)

**Fragmented Development:**
Drivable Sprawl
(since 1940’s)

+600 new cities, of 10 million each estimated to be built over next century to accommodate new urban dwellers.
The Theory of New Urbanism

The City of Neighborhoods, Districts, and Corridors

2017: DPZ Partners
Seaside: renaissance of place, 1980

- Achieve and restore time-tested forms of urbanism
- Provide vitality, walkability and economic resilience to our towns and cities
- Preserve natural environment and cultural heritage of areas.
Kentlands: First full-time community, 1988
1. The Neighborhood has a discernible center.
This is often a square or green, and sometimes a busy or memorable street intersection. A transit stop would be located at this center.
2. Most of the dwellings are within a five minute walk of the center. This distance averages one quarter of a mile.
3. There is a variety of dwelling types within the Neighborhood. These usually take form of houses, rowhouses and apartments, such that younger and older people, singles and families, the poor and the wealthy, may find places to live.
13-pt Checklist of NU

4. There are shops and offices at the edge of the neighborhood. The shops should be sufficiently varied to supply the weekly needs of a household. A convenience store is the most important among them.
5. A small ancillary building is permitted within the backyard of each house. It may be used as one rental unit, or as a place to work.
6. There is an elementary school close enough so that most children can walk from their dwelling. This distance should not be more than 1.5 km.

- 1969: > 41% of children walked or biked to school
- 2001: < 13% of children walked or biked to school
7. There are small playgrounds quite near every dwelling. This distance should not be more than one eighth of a mile.
8. The streets within the neighborhood are a connected network. This provides a variety of itineraries and disperses traffic congestion.

A = vehicular & cycling street
B = parking street / court
C = pedestrian Street
9. The streets are relatively narrow and shaded by rows of trees. This slows down the traffic, creating an environment for the pedestrian and the bicycle.
10. Buildings at the neighborhood center are placed close to the street. This creates a strong sense of place.
11. Parking lots and garage doors rarely front the streets. Parking is relegated to the rear of buildings, usually accessed by alleys.
12. Certain prominent sites are reserved for civic buildings. Buildings for meeting, education, religion or culture are located at the termination of street vistas or at the Neighborhood center.
13. The Neighborhood is organized to be self-governing. A formal association debates and decides on matters of maintenance, security and physical change (but not on taxation which should be the responsibility of the larger community).
Smart Growth Principles

1. Create range of housing
2. Create walkable neighborhoods
3. Encourage community and stakeholder collaboration
4. Foster communities’ sense of place
5. Make development decisions predictable and fair
6. Mix land uses
7. Preserve open space, farmland, natural beauty, critical environmental areas
8. Provide transportation choices
9. Develop existing communities first
10. Encourage compact building design
Partnerships

The Partnership Turns 5!

In celebration of the fifth anniversary of the Partnership for Sustainable Communities, HUD, DOT, and EPA released “Partnership for Sustainable Communities: Five Years of Learning from Communities and Coordinating Federal Investments”.

View Case Studies

Learn About Local Projects

Discover Sustainability Indicators

HUD + DOT + EPA
“We stand for the restoration of existing urban centers and towns within coherent metropolitan regions, the reconfiguration of sprawling suburbs into communities of real neighborhoods and diverse districts, the conservation of natural environments, and the preservation of our built legacy.”
Principles of NU: 4 scales

The Region: Metropolis, City, and Town

1. Metropolitan regions are finite places with geographic boundaries derived from topography, watersheds, coastlines, farmlands, regional parks, and river basins. The metropolis is made of multiple centers that are cities, towns, and villages, each with its own identifiable center and edges.
2. The metropolitan region is a fundamental economic unit of the contemporary world. Governmental cooperation, public policy, physical planning, and economic strategies must reflect this new reality.
3. The metropolis has a necessary and fragile relationship to its agrarian hinterland and natural landscapes. The relationship is environmental, economic, and cultural. Farmland and nature are as important to the metropolis as the garden is to the house.
4. Development patterns should not blur or eradicate the edges of the metropolis. Dept development within existing urban areas conserves environmental resources, economic and social diversity, and existing community life.
5. Metropolitan regions should develop new conurbations that are integrated with the existing urban areas and villages that have their own urban edges, and planning policies to facilitate the development of new conurbations.
6. The development and redevelopment of towns and communities should be accompanied by the development of improved public transit systems.
7. Cities and towns should be provided with high-quality transit systems, and pedestrian and bicycle systems should be integrated into the system.
8. Revenues and resources can be shared more cooperatively, avoiding destructive competition for tax base and public services, housing, and community institutions.

The Neighborhood, The District, and The Corridor

10. The neighborhood, the district, and the corridor are the essential elements of development and redevelopment in the metropolis. They form identifiable areas that encourage citizens to take responsibility for their maintenance and evolution.
11. Neighborhoods should be compact, pedestrian friendly, and mixed-use. Districts generally emphasize a special single use, and should follow the principles of neighborhood design when possible. Corridors are regional connectors of neighborhoods and districts; they range from boulevards and rail lines to rivers and parkways.
12. Many activities of daily living should occur within walking distance, allowing independence to those who do not drive, especially the elderly and the young. Interconnected networks of streets should be designed to encourage walking, reduce the number and length of automobile trips, and conserve energy.
13. Within neighborhoods, a broad range of housing types and price levels can bring people of diverse ages, races, and incomes into daily interaction, strengthening the personal and civic bonds essential to an authentic community.
14. Transit corridors, when properly planned and coordinated, can help organize metropolitan structure and revitalize urban centers. In contrast, highway corridors should not displace investment from existing centers.
15. Appropriate building densities and land uses should be within walking distance of transit stops, permitting public transit to become a viable alternative to the automobile.
16. Concentrations of civic, institutional, and commercial activity should be embedded in neighborhoods isolated in remote, single-use complexes. Schools should be sized and located to enable children to walk to and from them.
17. The economic health and harmonious evolution of neighborhoods, districts, and corridors can be fostered by large-scale development that is planned and designed with graphic urban design codes that serve as predictable guides for change.
18. A range of parks, from city parks and community gardens, should be provided in neighborhoods. Conservation areas and open lands should be used to define and connect different districts.

The Block, The Street, and The Building

19. A primary task of all urban architecture and landscape design is the physical definition of streets and public spaces as places of shared use.
20. Individual architectural projects should be seamlessly linked to their surroundings. This issue transcends style.
21. The revitalization of urban places depends on safety and security. The design of streets and buildings should reinforce safe environments, but not at the expense of accessibility and openness.
22. In the contemporary metropolis, development must adequately accommodate automobiles. It should do so in ways that respect the pedestrian and the form of public space.
23. Streets and squares should be safe, comfortable, and interesting to the pedestrian. Properly configured, they encourage walking and enable neighbors to know each other and protect their communities.
24. The architecture and landscape design should grow from local climate, topography, history, and building practice.
25. Civic buildings and public gathering places require important sites to reinforce community identity and the culture of democracy. They deserve distinctive form, because their role is different from that of other buildings and places that constitute the fabric of the city.
26. All buildings should provide their inhabitants with a clear sense of location, weather and time. Natural methods of heating and cooling can be more resource-efficient than mechanical systems.
27. Preservation and renewal of historic buildings, districts, and landscapes affirm the continuity and evolution of urban society.
# CNU reach

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>新都市主义宪章 / Chinese</td>
<td>按摩城市主义宪章 / Arabic</td>
<td>按摩城市主义宪章 / Turkish</td>
<td>按摩城市主义宪章 / Portuguese</td>
<td></td>
</tr>
<tr>
<td>Karta Nowej Urbanistyki / Polish</td>
<td>American Charta för ett Nytt Stadsbyggande / Swedish</td>
<td>Kongrè Pou Yon Nouvo Ibanis / Kreyol / Créole</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation</td>
<td>Equity</td>
<td>Environment</td>
<td>Emergency Response</td>
<td></td>
</tr>
<tr>
<td>Finance</td>
<td>Health</td>
<td></td>
<td>HUD Hope VI</td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td></td>
<td></td>
<td>Rainwater in Context</td>
<td></td>
</tr>
<tr>
<td>Health Districts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small Scale Developers &amp; Builders</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
• Include transportation energy intensity of buildings into total building’s performance.
• Any green rating system must consider context and pattern of settlement.
Make cities and human settlements inclusive, safe, resilient and sustainable
GOLDAL HUMAN SETTLEMENTS AWARD
MEDAL CERTIFICATE

THE KENTLANDS, GAITHERSBURG, MARYLAND, USA
BY DUNY PLATEZBERK PARTNERS, LLC.

GOLDAL HUMAN SETTLEMENTS
MODEL OF RESIDENTIAL AREA

GRANTED BY: GLOBAL FORUM ON HUMAN SETTLEMENTS (GFHS)
SUPPORTED BY: UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP)

SUSTAINABLE DEVELOPMENT GOALS

10TH GLOBAL FORUM ON HUMAN SETTLEMENTS AND 10TH ANNIVERSARY OF GFHS
UN HEADQUARTERS, NEW YORK - OCTOBER 25-30, 2015
understanding the consequences of sprawl vs smart growth
Sprawl & Health

Need policies that produce walkable urbanism:
- reduce exposure to toxins and pollutants;
- minimize environmental impact;
- encourage a healthy life-style; and
- makes people happier!

Source: Matthre A. Cougan, 2003
“Smart Growth development generates 10 times more tax revenue per acre than conventional suburban development.”
WalkUPs

6 types:
1. Downtown
2. Downtown Adjacent
3. Urban Commercial
4. Suburban Town Center
5. Strip Commercial Redevelopment
6. Greenfields

WalkUPs outperform Drivable Suburbanism
- Economic ranking
- Social equity ranking

Source: Christopher Leinberger, 2013
The cost of sprawl - individually

**Suburban**
City's Annual Cost, per Household

- Parks & Recreation: $129
- Fire Department: $406
- Transportation: $171
- Culture / Economy: $36
- Sidewalks & Curbs: $194
- Roads: $280
- Transfers to Provinces eg. School Boards: $435

**Urban**
City's Annual Cost, per Household

- Parks & Recreation: $69
- Fire Department: $177
- Transportation: $91
- Culture / Economy: $19
- Sidewalks & Curbs: $27
- Roads: $56
- Transfers to Provinces eg. School Boards: $232

**Suburban**
City's Annual Cost, per Household - Total: $3462

**Urban**
City's Annual Cost, per Household - Total: $1416
H+T Index

Municipality: Gaithersburg, MD

Traditional measures of housing affordability ignore transportation costs. Typically a household's second-largest expenditure, transportation costs are largely a function of the characteristics of the neighborhood in which a household chooses to live. Location Matters. Compact and dynamic neighborhoods with walkable streets and high access to jobs, transit, and a wide variety of businesses are more efficient, affordable, and sustainable.

The statistics below are modeled for the Regional Typical Household. Income: $90,540 Commutes: 1.35 Household Size: 2.70 (Washington-Arlington-Alexandria, DC-VA-MD-WV)

Map of Transportation Costs % Income

Location Efficiency Metrics
Places that are compact, close to jobs and services, with a variety of transportation choices, allow people to spend less time, energy, and money on transportation.

91%
Percent of location efficient neighborhoods

Neighborhood Characteristic Scores (1-10)
As compared to neighborhoods in all 955 U.S. regions in the Index

<table>
<thead>
<tr>
<th></th>
<th>Job Access</th>
<th>Transit Access</th>
<th>Compact Neighborhood</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7.5</td>
<td>6.8</td>
<td>8.0</td>
</tr>
<tr>
<td>High access to a variety of jobs</td>
<td>Good access to public transportation</td>
<td>Very high density and very walkable</td>
<td></td>
</tr>
</tbody>
</table>

Average Housing + Transportation Costs % Income
Factoring in both housing and transportation costs provides a more comprehensive way of thinking about the cost of housing and true affordability.

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing</td>
</tr>
<tr>
<td>Transportation</td>
</tr>
<tr>
<td>Remaining Income</td>
</tr>
</tbody>
</table>

Transportation Costs
In dispersed areas, people need to own more vehicles and rely upon driving them farther distances which also drives up the cost of living.

$11,920
Annual Transportation Costs

1.68
Autos Per Household

17,976
Average Household VMT
These Cities May Soon Be Unlivable Thanks to Climate Change
Temperatures could reach 170°F
TIME.COM
<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Feet of pipe/person</th>
<th>Fire Hydrants/1,000 people</th>
</tr>
</thead>
<tbody>
<tr>
<td>1949</td>
<td>33,500</td>
<td>5</td>
<td>2.4</td>
</tr>
<tr>
<td>2015</td>
<td>121,000</td>
<td>50</td>
<td>51.3</td>
</tr>
</tbody>
</table>

Source: Strong Towns, 2015
County Property Taxes/Acre
Ratio Difference of 37 City Sample Set, in 11 States + 1 Province

- Residential
- Commercial
- Mixed-Use

County S-F: $1.00
Walmart: $7.20
City S-F: $8.10
Mall or strip: $14.20
Mixed-Use (2 Story): $76.80
Mixed-Use (3 Story): $119.10
Mixed-Use (6 Story): $402.80
WalkScore & location efficiencies
The wants of American households

**Walking and Commute Time Key to Community Preference, But Detached House Trumps All**

<table>
<thead>
<tr>
<th>Preferred Community:</th>
<th>The neighborhood has a mix of houses and stores and other businesses that are easy to walk to.</th>
<th>The neighborhood has houses only and you have to drive to stores and other businesses.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>60%</td>
<td>35%</td>
</tr>
<tr>
<td>Houses with smaller yards and you would have a shorter commute to work.</td>
<td>57%</td>
<td>36%</td>
</tr>
<tr>
<td>Houses with small yards and it is easy to walk to schools, stores and restaurants.</td>
<td>55%</td>
<td>40%</td>
</tr>
<tr>
<td>Houses with small yards and it is easy to walk to parks, playgrounds, and recreation areas.</td>
<td>53%</td>
<td>42%</td>
</tr>
<tr>
<td>Own or rent an apartment or townhouse, and have an easy walk to shops and restaurants and have a shorter commute to work.</td>
<td>39%</td>
<td>57%</td>
</tr>
</tbody>
</table>

Please select the community where you would prefer to live:
Social Equity: tangibles & intangibles

People in more compact, connected places are:

- Happier
- Safer
- Live longer
- Have greater upwards mobility
Paradigm of Scientific Planning

• Provides for an effective framework for implementation.

• The TRANSECT as a SCIENTIFIC TOOL, for classifying sustainable urban development patterns.

• Calibrated to LOCAL CONTEXT.
Codes Study: FBCs

+584 Codes to date (344 adopted)
+105 million ha impacted
impacting +45 million people

Source: Hazel Borys & Emily Talen | 584 Codes plus 16 Guidelines Tracked as of January 2015 | Creative Commons NonCommercial ShareAlike License
“By far the greatest and most admirable form of wisdom, is that needed to plan and beautify cities and human communities.”

Socrates

marina@dpz.com