From Sustainable Cities to Sustainable People – Making Behavior Change towards Sustainability a Priority in Urban Planning Processes

Dr. Petra Hurtado
Urban Sustainability Advisor and Researcher

Petra.Hurtado@urbanbreezes.com
www.urbanbreezes.com

REAL CORP 2018
23rd International Conference on Urban Planning and Regional Development in the Information Society
Vienna, 4. – 6.4.2018
“largest wave of urban growth in history” (United Nations)

- 50% of the world’s population now lives in towns and cities
- by 2030 this number will go up to about 5 billion
Cities are the main contributor to climate change, “consuming \( \frac{2}{3} \) of the world's energy and creating over 70% of global CO2 emissions” (C40)
Urban Planning towards Sustainability

Green Cities – Eco-Cities – Sustainable Cities – Resilient Cities – Smart Cities

But not every city is successful.....
Solar City Linz, Austria
Solar City Linz, Austria
Phoenix, AZ
Phoenix, AZ
PLAN versus REALITY

- Building public transit systems doesn’t guarantee that people use them.
- Building resource-efficient buildings doesn’t guarantee that the occupants use less energy.

“To plan is human, to implement divine.”
(Janice E. Perlman, Eco-City World Summit 2011)

- Why are some sustainability projects successful and others are not, even though they are following similar strategies and objectives?
- What is missing in current planning approaches?
What can make a sustainability project work out successfully?

(1) Cities focus too much on the technical problem and its technical solution.

- The most important “component” of a city and the factor that can make a city more sustainable are the people who live, work, and play in it.
- Only their decisions can make a sustainability project work out successfully.

“Solutions for this challenge have to be found by combining technological and socio-behavioral strategies […].” (Verdugo et al, 2003, p. 247)

(2) Sustainability is not about technology, but about changing behavior of ordinary people who are living their ordinary lives.

- We can’t expect people to behave sustainably just to behave sustainably.
- Environmental knowledge does not correlate with environmental action.

“Each individual […] is self-interested, that is, behaves mainly so as to advance his or her own interest.” (Gardner/Stern, 2002, p.23)
What can make a sustainability project work out successfully?

(3) Urban planning should be about creating an environment that allows and motivates sustainable behavior.

- Urban planning is not just about buildings and infrastructure, but about how people live.
- Decisions are shaped by the environment people live in.
- The urban planner’s task is to create an environment (a city) that allows people to make sustainable decisions in their self-interest.

“[…] the environment can be manipulated. […] man’s genetic endowment can be changed only very slowly, but changes in the environment of the individual have quick and dramatic effects.” (Skinner, 1971, p. 18f.)
Methodology:

- Field investigations
- Interviews with city planners, consultants, academics, etc.
- Data analysis (mode share, energy consumption, …)
- Case study analyses of select cities
- Literature review

>>> Focus on residential and transportation sectors
What can make a sustainability project work out successfully?

The 5 Factors of Behavior Change

<table>
<thead>
<tr>
<th>The Five A’s</th>
<th>Definition</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Availability</strong></td>
<td>Sustainable options must be available. The availability of unsustainable options has to be limited.</td>
<td>Walkable distance (500m) to at least one bus or train station from any point in the city; limited parking throughout the city; etc.</td>
</tr>
<tr>
<td><strong>Accessibility</strong></td>
<td>Sustainable options must be physically and legally accessible. The accessibility of unsustainable options must be limited.</td>
<td>Public transit accessibility of any point in the city; growth boundaries regulated by law to minimize sprawl &amp; optimize transit use; etc.</td>
</tr>
<tr>
<td><strong>Attractiveness</strong></td>
<td>Sustainable options must be attractive in terms of beauty, comfort, safety, and quality. Unsustainable options must be less attractive than sustainable options.</td>
<td>Bus/train frequencies &lt;5 min. during the day; lighting in stations and pedestrian areas for safety; pedestrian areas and shared streets; traffic lights in favor of busses; etc.</td>
</tr>
<tr>
<td><strong>Affordability</strong></td>
<td>Sustainable options must be affordable and less expensive than unsustainable options.</td>
<td>Road pricing in cities and on highways; attractive transit passes; free transit or incorporation of price in property tax; etc.</td>
</tr>
<tr>
<td><strong>Awareness</strong></td>
<td>People must be aware of the availability, the accessibility, the attractiveness, and the affordability of sustainable options as well as the benefits of choosing them over the unsustainable options.</td>
<td>Create awareness of benefits of sustainable options by obvious design (e.g. visible subway stations), laws and regulations, information and education (e.g. car-free day).</td>
</tr>
</tbody>
</table>
The 5 A Planning Approach towards Sustainability

- Sustainable options have to be available, accessible, affordable, and attractive.

- Unsustainable options should not be / be less available, accessible, affordable, and attractive.

- People have to be aware of the advantages and benefits of choosing the sustainable option over the unsustainable one.

- The five A’s have to be integrated into a planning process as motivators for sustainable behavior and discouragement from unsustainable behavior.

- All five A’s have to be applied.

- The interrelations between the five A’s are important as well!
Availability
Accessibility
Attractiveness - safety
Attractiveness - beauty
Affordability
Affordability and Awareness
Awareness and Availability
The 5 A Planning Approach towards Sustainability

✓ Sustainable options have to be available, accessible, affordable, and attractive.

✓ Unsustainable options should not be / be less available, accessible, affordable, and attractive.

✓ People have to be aware of the advantages and benefits of choosing the sustainable option over the unsustainable one.

✓ The five A’s have to be integrated into a planning process as motivators for sustainable behavior and discouragement from unsustainable behavior.

✓ All five A’s have to be applied.

✓ The interrelations between the five A’s are important as well!
Thank you!

Dr. Petra Hurtado
Urban Sustainability Advisor and Researcher

Petra.Hurtado@urbanbreezes.com
www.urbanbreezes.com