Sell Walkability on wealth

There are powerful economic reasons to invest in walkability.

IMPROVING WALKABILITY costs money, and most city budgets are tight. The first step in convincing community leaders to invest in walkability is to demonstrate that these investments pay off. Evidence abounds and can be mustered in support of a handful of powerful arguments.

Educated millennials value walkability, and are moving to more walkable places.

Walkability powers property value: One of the clearest correlations in real estate is between walkability and home value. As a typical example, homes in Denver's walkable neighborhoods sell at an 150% premium over those in drivable sprawl. In Charlotte, each Walk Score point (on a scale of 100) translates into about \$2000 of home value. Home values determine local property tax revenue, justifying investments in walkability. Additionally, office space in walkable zip codes has a considerable leasing rate premium over suburban locations, and much lower vacancy rates.

Walkability attracts talent: Educated millennials value walkability, and are moving to more walkable places. Sixty-four percent of them choose first where they want to live, and only then do they look for work; 77% say they plan to live in an urban core. According to a recent study, a full 63% of millennials (and 42% of baby boomers) want to live in a place where they



don't need a car. Companies and cities that wish to attract young talent need to provide the walkable urban lifestyle they desire.

Investments in walkability create more, and better, jobs: A study of transportation projects in Baltimore found that, compared to highway investments, each dollar spent on pedestrian facilities created 57% more jobs, and each dollar spent on bicycle facilities created 100% more jobs. Once built, walkable places have stronger economies. One recent study documents that America's

RULE 1: When advocating for walkability, use the arguments of talent attraction, job creation, affordability, and subsidies/externalities.

Car-dependent cities make their citizens poorer. . . but they also make themselves poorer through the large hidden subsidies that automobiles require. (Discourse Media)

most walkable metros generate 49% more GDP per capita than its least walkable metros.

Car culture doesn't pay: It has been estimated that, between 1970 and 2010, we have doubled the amount of roadway in America. Over the same years, the typical American family has doubled the percentage of its income spent on transportation—from 10% to 20%. By burdening most Americans with mandatory car ownership, our suburban landscape has contributed markedly to the cash-strapped condition of contemporary life.

Create Bikeshare that Works Bring the latest bikeshare technology to your city.

AS OF THIS WRITING, there are only 119 docking bikeshare systems in the United States. We say "only 119" because every city of significant size should have one, and most still don't.

Still, the uptake has been impressive. Modern bike-dock technology has been deployed in the US for less than a decade, and already the country's ten largest systems boast more than 2,500 docks among them. Spartanburg, North Carolina, population less than 40,000, has a successful 5-dock system. But there are 880 US cities larger than Spartanburg.

After more than 100 million bikeshare trips, there is a lot to be known about best practices.

Promote bikeshare as transit: In a Denver study, 41% of bikeshare trips were found to have replaced driving trips. Bikeshare makes transit systems more effective by providing last-mile service. Cities should support bikeshare for the same reasons they support transit.

Build a coalition: Successful bikeshare systems can be city owned or privately owned, but most are privately run. Whatever the structure, leadership should include a steering committee representing all those institutions that see bikeshare as something that supports their mission. Foremost among these is the city itself, which has every reason to provide major support.

Subsidize lower-income riders: About a quarter of all US bikeshare programs offer lower-cost ridership to those who qualify. When such a feature was



Bikeshare programs continue to promulgate.

added in Philadelphia, the percentage of new riders earning less than \$35,000 jumped from 27% to 44%.

Don't stop with bikes: Bikeshare is not well used in places where it is unsafe to bike; it's also potentially negligent. In many places, an investment in bikeshare is unwise without similar investment in improved cycling facilities.

Don't require helmets: While there were other factors involved, it is telling that the only large bikeshare system in the US to fail (Seattle) had to attract

RULE 24: If your city is somewhat bikeable, introduce the most advanced bikeshare system possible, subsidized for those who need it, in conjunction with bike lane investment.

ridership in the face of a helmet law. When Mexico City rolled out its Ecobici bikeshare program, it abolished its helmet law. Because bicyclists are safer in larger numbers, helmets don't make riding safer if they depress ridership. (See Rule 53.)

Use Smart Bike technology: Portland's BikeTown system offers financial incentives for customers to redistribute bikes, rather than relying on vans. Meanwhile, despite some initial hiccups, GPS-enabled dockless bike share threatens to make conventional systems obsolete.

Consider ebikes: It appears that Raleigh, NC is pioneering electric bikeshare in the US, following the lead of Madrid. More hilly cities should be even more interested.

Locate stations with care: Do not rely solely on conjecture or polling. (The most likely cyclists are often underrepresented in on-line outreach.) Be sure to review the valuable NACTO Bike Share Station Siting Guide.

Focus on Speeding

Street improvements should be linked back

to keeping speeding in check.

IT'S THE SPEED, STUPID.

Roughly the next fifty points-half of this book-address different aspects of the street, and how they are designed and managed. Many of these points may serve multiple objectives and audiences, but they all aim back, in one way or another, at a single issue: vehicle speed.

While many different factors influence the safety of humans in cities, none matters nearly so much as the speed at which vehicles are traveling. The relationship between vehicle speed and danger is, to put it mildly, exponential.

The diagram above is one of many that can be found to communicate this relationship. Others show people falling out of buildings, with 20 mph equaling the second floor and 40 mph equaling the seventh. The basic message to remember is that you are about five times as likely to be killed by a car going 30 as a car going 20, and five times again as likely to be killed by a car going 40.

This threshold zone of 20 to 40 mph, is basically where it all happensthe difference between bruises, broken bones, and death. And 20 to 40 is roughly the range of speeds that we find cars traveling on the best downtown streets. Keeping cars on the lower end of that range, therefore, must be the central objective of urban street design.

The speed of the impact itself is not the only factor. As cars move faster, the likelihood of a crash also rises. Drivers and pedestrians alike have less time to respond to conflicts, stopping distances lengthen, and the driver's



cone of vision narrows. These factors multiply the impact of speed beyond those indicated in the above graph. It is safe to say that a car traveling 30 mph is probably at least three times as dangerous as one going 25.

Many cities have a downtown speed limit of 25. All should-or lower, as discussed in Rule 35. These limits simplify the conversation, because it is no longer necessary to talk about "slowing drivers down." Who wants to be slowed down? That sounds like congestion.

Instead, we can simply talk about "reducing illegal speeding." Streets need to be redesigned so that fewer people will speed on them. This cannot be accomplished with speed limits alone, because people do not drive the posted speed; they drive the speed that is implied by the street design. Streets must be designed to encourage the speeds that we have set for them, or the result

RULE 31: Street design and design discourse should focus on reducing illegal speeding.

will be illegal, deadly speeding. That is the central message, and the street designer's mandate

Re-stripe to a 10-foot Standard Put dangerously wasted pavement to better use

NOW THAT WE'RE GOT A 10-FOOT STANDARD, what do we do with it? The answer to this question is wondrous indeed.

Every urban lane in your city that is more than 10 feet wide represents both an obligation and an opportunity. The obligation is clear: the extra width is only doing one thing, and that's causing drivers to speed, creating a completely unnecessary risk to themselves and others. The opportunity is manifold, and depends on the total number of extra feet available.

If it's less than 5 feet, there are few options. But don't give up too soon. . . if the parking stalls are more than 7 feet wide, they can be narrowed too. Harvard Street in Boston has 5 foot bike lanes sandwiched between 10 foot driving lanes and 7 feet of parking—hardly ideal, but much better than the wide-lane alternative. But if 4 feet or less is all you have to play with, the safest solution is to add it to the width of the parking lanes. This will slow drivers slightly.

5 feet and above, the best approach is usually to add a bike lane. Beyond 7 feet, you could instead add a flank of parallel parking, if one is missing. The choice between bik-

ing and parking is a tricky one, and must be considered with an eye to the larger bike network. (More on that in Rule 56.) As more space becomes available, more options present themselves, including cycle tracks, angle parking,

and—if there's a good budget—wider sidewalks. Most often, economy dictates a solution in which curbs are not moved. (see Rule 97.)

What about buses?

When all other hurdles to 10 feet lanes seem to have been cleared, that's when the transit agency shows up and demands 11 feet for its buses.

Most buses are 8'-6" wide, plus mirrors. When a bus in a 10-foot lane passes a car in a 10-foot lane, there is no friction. When a bus passes another bus under similar circumstances, the resulting squeeze requires the bus to slow down slightly for a moment that is too short to impact bus schedules but has a positive impact on the street's safety to all users.

A few rare transit agencies appreciate the trafficcalming value of 10-foot lanes. The administrators of



Before and after: Many streets that should have been built 35 feet wide are 40 feet wide. Inserting a bike lane, whether it is needed or not, will make these streets safer. *(Cupola Media)*

DART, in Des Moines, advocate for 10-foot lanes, reminding us that "every transit ride begins and ends with walking, and without walkable streets we are undermining the opportunities for public transit in the community." But DART is the exception, so most transit agencies need to be reminded that streets that kill pedestrians threaten their customer base.

What about snow?

It is useful to discover that some of the communities with the skinniest streets have a ton of snowfall. Somehow they manage, even under many feet of snow, to maintain higher property values than nearby places that have been designed around the needs of the snowplow. Allowing snow-emergency inconvenience to override neighborhood livability is to confuse the end with the means.

But try telling that to a local public works department. More useful arguments include the fact that, in a snow emergency, a parking lane is typically a snow storage lane, and that, in a true crisis, bike lanes can serve the same purpose—at least in America. In Copenhagen, they plow the bike lanes first.

Cities should be admonished to remember that, the wider a street is, the more there is to plow.

Dream Big *Great cities still need great visions*

THIS BOOK is mostly about fixing problems and creating short-term wins. Such an approach makes sense when the goal is to impact the day-to-day walkability and livability of a city. But it ignores the fact that North America's most walkable and most livable cities did not turn out that way through fixing problems and creating short-term wins. Rather, most either started with visionary proposals, like Philadelphia and Savannah, or were the beneficiaries of visionary improvements, like New York and Chicago . . . or both. The ordinary fabric of a city can make it very good, but only big dreams make a city great. In attending to the day-to-day, we can't forget to pursue greatness as well.

Founder of the Mayor's Institute on City Design, Joseph P. Riley served as Mayor of Charleston, SC, for ten four-year terms. He would often visit Mayors' Institute sessions, at which he would occasionally tell the attending mayors: "You should balance the budget, but nobody is going to remember you for balancing the budget. If you want to be remembered, build a park."

A new park is one of many things that Mayor Riley built in Charleston during a tenure marked by a focus

on the physical quality of the public realm. Not trained as a designer, the Mayor explained his motivation thus:

In America we have citizens who have never been to the Great Lakes, or seen the sun set on the Pacific. or seen the purple mountains' majesty or amber waves of grain. They've never been to Europe. All they have is their city. . . That fact brings with it a moral imperative, that the city should be a place where every citizen's heart can sing.

Happily, obeying the moral imperative has practical rewards. Unlike investments in highways, which depress real estate value, investments in public spaces tend to create real estate value—so much that they end up paying for themselves in increased tax revenue, generally pretty quickly.

Chicago is a City that has regularly invested in making itself more spectacular. Mayor Daley was attacked roundly for the City's \$270 million contribution to the construction of Millennium Park in the early 2000s. But within ten years-slow years for real estate-the



A summer swing dance in downtown Grand Rapids' redeveloped main plaza, designed by Maya Lin. (Speck)

City saw \$3 billion invested in new private construction near the park, which now attracts more than five million visitors each year. Similar stories attend to the other big park projects of this century. The first phase of New York's High Line cost \$260 million to build-of which the City paid \$50 million—but it has since contributed close to \$1 billion to the City's tax revenue.

Like new parks, transit projects can also have outsize effects on long-term returns. From 2000-2010, fully 70% of the population growth in Arlington County, VA, occurred in only 6% of the County's land area, that being the corridor of the DC Metro's Orange Line. Yet Metro service declines as the system struggles for funds. Vision, call your office!

Rule 101: Parallel with efforts to improve walkability, set ambitious goals for improved transportation, open space, and institutions downtown.



Riverfront Park, Charleston, SC. https://www.facebook.com/markvandykephotography/?ref=hl

In 1974, the city of Grand Rapids wanted to celebrate the new presidency of native son Gerald Ford with a parade downtown. "Not so fast," said the Secret Service: too many empty windows for snipers. This was a wake-up call to local business leaders, who collectively pledged to move more of their offices downtown, while building a new Arena and Convention Center. A medical school, hotels, and other key institutions followed. Before long, Grand Rapids had one of the healthiest downtowns in the Midwest.

Daniel Burnham was half wrong; small plans are important, too. But they must be pursued in parallel with big ones, especially around open space and transportation, because it is the big plans-the visions and the dreams—that can make a city great.