



SCADPAD

small space *big idea*

SCADPAD.COM

[#SCADPAD](https://twitter.com/SCADPAD)



SCADpad (n.)

- 1: a community of three micro-residences on the fourth floor of SCAD Atlanta's parking deck
- 2: an active and sustainable use for redundant parking structures
- 3: a working prototype
- 4: a mindful consideration of global population and commuting trends
- 5: a multi-dimensional, temporary fine art installation
- 6: a relevant and replicable answer to the growing need for suitable, affordable, efficient housing in cities worldwide
- 7: an invitation for dialogue among creators, residents, and guests
- 8: a study of small living and life as art

UTILITY | STRENGTH | DELIGHT

This century belongs to the city.

Around the world, millions of people are returning to the urban core. SCADpad reimagines 20th-century parking decks that otherwise face obsolescence by repurposing these decks as 21st-century vertical neighborhoods. In its concept, design, and execution, SCADpad embodies and advances timeless architectural principles for the millennial age.

According to the ancient Roman architect Vitruvius, the three essential components of great architecture are utility, strength, and delight. SCADpad's **UTILITY** lies in its space-conscious urban living. SCADpad's **STRENGTH** is evident in its principles of adaptive reuse. SCADpad's **DELIGHT** is illuminated in its fusion of art and technology, consideration of beauty, celebration of elegant solutions, and continually evolving point of view.

The present of parking decks

- Colliers International's *2012 Parking Rate Survey* predicts that rising gasoline prices "could prompt more urban commuters to carpool or take public transportation, decreasing demand for paid parking and dropping rates."¹
- No new parking decks are expected to be added in the next 24 months in the 10 most expensive cities for renting an apartment.²
- *The Atlantic Cities* reports that "developers themselves . . . [have] been receptive to the idea [of designing parking decks with an eye toward reuse] . . . perhaps because they see a less car-dependent future and [are] 'worried about building parking garages that don't really have a long-term use'."³

““ The parking industry is facing tremendous price resistance among consumers these days. The industry faces the reality of fewer cars coming into Manhattan, a weaker economy as well as higher rents, higher real estate taxes, and higher insurance costs. Because of this, it is becoming more and more difficult to maintain profitability. ””

-The New York Times, February 3, 2012

The future of parking decks

- Waning personal automobile ownership and use indicate that “by the end of the 21st century, parking garages may go the way of the horse stables that were an omnipresent part of the city 100 years ago.”⁴
- “Over the last decade . . . the share of workers who get to work by private car declined in 99 of America’s 100 largest urbanized areas.”⁵
- “[I]s there a shared mindset among millennials on commuting? Absolutely. They want to spend as little time as possible doing it.”⁶
- Millennials perceive that “[c]ars are a hassle.”⁷

Maximizing parking deck revenue by transitioning from parking to housing

“In the real estate world, investors and developers naturally follow jobs.”⁸

“Metropolitan areas in the United States represent over 80 percent of the gross domestic product (GDP) of the country.”⁹

“Institutional investors increasingly make apartments their much-preferred property sector.”¹⁰

“Lively places are more enticing, interesting, and friendly, especially for the Gen-Y cohort, which developers want to attract.”¹¹

““Here’s a startling fact:
About 33 percent of New Yorkers live alone. So why doesn’t the housing market cater to them?””

—Bloomberg.com, January 29, 2013

SCADpad enables owners and operators to maximize parking deck revenue

- SCADpad maximizes revenue per parking bay. Parking deck owners and operators across a variety of U.S. markets may maximize revenue per parking bay by capturing the increased margins generated by leasing SCADpad modules at cost-effective rates below median studio rents and above median rates for monthly unreserved and reserved parking bays.

“Over the last three decades, the number of off-street parking spots in Manhattan has fallen by one-fifth . . . In the last six years alone . . . 92 parking lots or garages have been sold and redeveloped . . . The remaining stand-alone parking lots and garages are prime targets.”

—The New York Times,
February 3, 2012

Top 10 Priciest Cities to Rent an Apartment ^{12*}	Median Studio Monthly Rent ¹³	Median Monthly Unreserved Parking Rate (Single bay) ¹⁴	Median Monthly Reserved Parking Rate (Single bay) ¹⁵	Average Difference in Value, Housing vs. Parking ¹⁶
San Francisco	\$2,295	\$375	\$450	6x
New York City	\$2,300	\$562	—	4x
Boston	\$2,000	\$405	\$400	5x
Washington, D.C.	\$1,675	\$270	\$525	5x
Los Angeles	\$1,405	\$220	\$275	6x
San Jose	\$1,455	\$115	\$200	8x
Oakland	\$1,700	\$195	\$255	8x
Miami	\$1,319	\$125	\$150	10x
Seattle	\$1,210	\$285	\$350	4x
San Diego	\$1,095	\$175	\$240	6x

*All figures calculated to the nearest whole

- SCADpad supports continuous adaptive reuse. The mobility of SCADpad units allows parking deck owners and operators to maximize revenue per bay without losing the ability to return the deck to its original purpose or adaptively reuse the deck for other purposes in response to changing market conditions.

Sustainable adaptive reuse of existing buildings works wonders

- Throughout its 35-year history, SCAD has adaptively reused and rehabilitated more than 100 buildings in Savannah and Atlanta, Georgia; Lacoste, France; and Hong Kong, winning acclaim from UNESCO, the National Trust for Historic Preservation, the American Institute of Architects, and the International Downtown Association, among others.
- “[B]uilding reuse offers an effective means of achieving economic, environmental, and social sustainability goals.”¹⁷
- “[R]euse offers a ‘speed to market’ that is often faster than building new.”¹⁸
- “Demolition is not always the best solution for obsolete, unsightly parking garages.”¹⁹

““ *The greenest building is the one that already exists.* ””

—Carl Elefante

Benefits of sustainable adaptive reuse of existing buildings

- “[T]he renovation and reuse of existing buildings . . . consistently yield[s] fewer environmental impacts than demolition and new construction over a 75-year period.”²⁰
- Buildings renovated “with fewer material inputs have the potential to realize the greatest short-term carbon savings.”²¹

““ *[I]t can take between 10 and 80 years for a new, energy efficient building to overcome the climate change impacts that were created during construction.* ””

—*The Greenest Building: Quantifying the Environmental Value of Building Reuse*, Preservation Green Lab, 2011

SCADpad models an immediate strategy for sustainable adaptive reuse

- SCADpad simultaneously advances cities' economic development, urban core housing, and sustainability goals. Manufactured off-site with minimal materials of maximum quality. SCADpad enhances cities' ability to draw talented, environmentally minded millennials, space-conscious urban living, without requiring investment in substantial amounts of new infrastructure or disruption of undeveloped land to accommodate this growing population.
- SCADpad facilitates multimodal adaptive reuse. SCADpad may be used to adapt a parking deck into individual housing units, or to repurpose the deck as a collaborative live-work nexus that is highly appealing to startup companies.
- Minimal parking deck modifications are required prior to installation and use of SCADpad modules.

“*Gen-Yers harbor green priorities and favor working in more cutting-edge environments. Ignoring sustainability only speeds market obsolescence.*”

—*What's Next? Real Estate in the New Economy*,
Urban Land Institute, 2011

The return to the city

- For the first time in more than 100 years, the urban population growth rate in the United States outpaces the suburban growth rate, marking a return to the urban core sparked and driven by the immigration of those disenfranchised by their suburban options, and the creative class.²²
- Metropolitan areas in the U.S. “contained 269.9 million people in 2013, up about 2.3 million from 2012” and “grew faster than the U.S. as a whole between 2012 and 2013.”²³
- Nearly 100 percent of robust population growth is located in urban areas.²⁴

““*[Millennials] prefer flexible working situations, want to live in stimulating neighborhoods, and don’t mind dealing with less individual space.*””

—*What’s Next? Real Estate in the New Economy*,
Urban Land Institute, 2011

Millennials lead a shift in housing needs and preferences

- The millennials, “now 18 to 35 years of age and the largest age cohort in American history,”²⁵ are leading the move back to the city. A “[w]hopping 88 percent [of millennials] want to be in an urban setting”²⁶ and 77 percent of them want to “live in an urban core.”²⁷

““*Mini-sizing ‘is not a fad.’*””

—*USA Today*, July 31, 2013

- Overwhelming, bright-light urban environments attract the exploding number of career-building, Boomer offspring known as Generation Y. After rooming in college dorms, these twenty-somethings on tight budgets prefer places to congregate with friends — in parks, bar scenes, restaurant clusters, and building common areas — and can tolerate smaller living spaces.²⁸
- By 2020, 27 percent of households will consist of a single person.²⁹

SCADpad meets the demand for space-conscious urban living.

- SCADpad is space-conscious without compromise. Featuring highly customizable exterior and interior surfaces and finishes, including high-touch, technology-infused environments, SCADpad modules meet the needs and tastes of a wide variety of users. Young professionals seeking cost-effective urban core housing will find that, given their efficient packaging, SCADpad modules can be leased at significantly lower rates than median studio rents in major U.S. cities.³⁰ For discriminating buyers seeking artful solutions for space-conscious urban living, SCADpad offers the opportunity to create a personal living space primed for infinite individual expression that incorporates fine materials and clever technology.
- SCADpad is a “now” solution. SCADpad modules can be constructed and ready for installation in less than two months. Each SCADpad module is also self-leveling, allowing for immediate installation in parking decks with sloped as well as flat floors.

- SCADpad is designed by millennials for millennials. SCADpad’s initial development involved more than 75 SCAD students and 12 faculty members across 11 academic degree programs, as well as 37 alumni, establishing SCADpad as a product of millennial minds for the millennial generation. In their many customizable variations, SCADpad modules incorporate Generation Y design trends, as identified by Robert Charles Lesser & Co., some of which include:³¹

- artful design over size
- flexible spaces
- technologically infused environments
- contemporary elevations
- low maintenance
- sustainability

““ *Developers say they can’t build micro-housing fast enough.* ””

-USA Today, July 31, 2013

- ¹ Cook, J., and Jeff Simonson. 2012 *Parking Rate Survey*. Colliers International, 2012, 1. Retrieved from http://www.colliers.com/-/media/files/marketresearch/unitedstates/colliers_2012_na_parking_survey.pdf (last accessed April 2, 2014).
- ² Cook, 4; Glink, Y. "Top ten priciest cities to rent an apartment." *CBS MoneyWatch*, July 15, 2013. Retrieved from <http://www.cbsnews.com/media/top-10-priciest-us-cities-to-rent-an-apartment/> (last accessed April 2, 2014).
- ³ Jaffe, E. "We Need to Design Parking Garages With a Car-less Future in Mind." *The Atlantic Cities*, November 14, 2013. Retrieved from <http://www.theatlanticcities.com/design/2013/11/its-time-design-parking-garages-car-less-future/7583/> (last accessed April 2, 2014).
- ⁴ Hasley III, Ashley. "The search for a parking spot." *The Washington Post*, September 13, 2013. Retrieved from http://www.washingtonpost.com/local/trafficandcommuting/the-search-for-a-parking-spot/2013/09/13/8f69ee14-05bf-11e3-88d6-d5795fab4637_story.html (last accessed April 3, 2014).
- ⁵ Badger, E. "The U.S. Cities Leading the Decline in Driving." *The Atlantic Cities*, December 4, 2013. Retrieved from <http://www.theatlanticcities.com/commute/2013/12/us-cities-leading-decline-driving/7767/> (last accessed April 2, 2014).
- ⁶ Filisko, G.M. "How Millennials Move: The Car-Less Trends," National Association of Realtors, 2014. Retrieved from <http://www.realtor.org/articles/how-millennials-move-the-car-less-trends> (last accessed April 2, 2014).
- ⁷ Filisko.
- ⁸ Urban Land Institute, 21.
- ⁹ Urban Land Institute, 17.
- ¹⁰ Urban Land Institute, 9.
- ¹¹ Urban Land Institute. *What's Next? Getting Ahead of Change*. Washington, D.C.: Urban Land Institute, 2012, 33. Retrieved from http://uli.org/wp-content/uploads/ULI-Documents/WhatsNext_2012.pdf (last accessed April 2, 2014).
- ¹² Glink, Y. "Top ten priciest cities to rent an apartment." *CBS MoneyWatch*, July 15, 2013. Retrieved from <http://www.cbsnews.com/media/top-10-priciest-us-cities-to-rent-an-apartment/> (last accessed April 2, 2014).
- ¹³ Glink.
- ¹⁴ Cook.
- ¹⁵ Cook.
- ¹⁶ For each market featured in the comparison, the average difference in the value of housing versus parking is calculated by dividing the median monthly studio rent by the average of the median monthly unreserved and reserved parking rates.
- ¹⁷ The Partnership for Building Reuse. *Learning from Los Angeles*. The Partnership for Building Reuse, October 2013, 28-29. Retrieved from http://www.preservationnation.org/information-center/sustainable-communities/green-lab/partnership-building-reuse/Learning-from-LA_draft_for-print_100813_FINAL.pdf (last accessed April 2, 2014).
- ¹⁸ The Partnership for Building Reuse, 28-29.

- ¹⁹ Alexander Communications Group. "Repurposing existing parking structure pays off." *Downtown Idea Exchange*. Alexander Communications Group, September 2011. Retrieved from <http://www.downtowndevelopment.com/dixarticle1.pdf> (last accessed April 2, 2014).
- ²⁰ Preservation Green Lab. *The Greenest Building: Quantifying the Environmental Value of Building Reuse*. Preservation Green Lab, 2011, 61.
- ²¹ Preservation Green Lab, 66-67, 72.
- ²² Taylor, Mark R. "Back to the City: The What, How & Alpha Opportunity of Urban Regeneration and Placemaking." National Association of Real Estate Investment Managers, February 9, 2014. Retrieved from <http://www.nareim.org/viewpoints/back-to-the-city-the-what-how-alpha-opportunity-of-urban-regeneration-and-placemaking/> (last accessed April 2, 2014).
- ²³ United States Census Bureau. "Energy Boom Fuels Rapid Population Growth in Parts of Great Plains; Gulf Coast Also Has High Growth Areas, Says Census Bureau." United States Census Bureau, March 27, 2014. Retrieved from <https://www.census.gov/newsroom/releases/archives/population/cb14-51.html> (last accessed April 2, 2014).
- ²⁴ Urban Land Institute. *What's Next? Real Estate in the New Economy*. Washington, D.C.: Urban Land Institute, 2011, 17. Retrieved from <http://uli.org/wp-content/uploads/ULI-Documents/WhatsNext.pdf> (last accessed April 2, 2014).
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- ²⁶ Kalita, Mitra S., and Robbie Whelan. "No McMansions for Millennials." *Wall Street Journal*, January 13, 2011. Retrieved from <http://blogs.wsj.com/developments/2011/01/13/no-mcmansions-for-millennials/> (last accessed April 2, 2014).
- ²⁷ Filisko, G.M. "How Millennials Move: The Car-Less Trends," National Association of Realtors, 2014. Retrieved from <http://www.realtor.org/articles/how-millennials-move-the-car-less-trends> (last accessed April 2, 2014).
- ²⁸ Urban Land Institute, 39.
- ²⁹ Urban Land Institute, 14.
- ³⁰ For example, in 2012, CBS MoneyWatch reported that the median studio monthly rent in San Francisco was \$2,295. Assuming double the revenue for the 1.5 spaces occupied by a SCADpad module plus a carry cost of \$250 per module, a SCADpad module in San Francisco could be leased for as low as \$1,375 per month, offering urban core living at a 40 percent savings when compared to median studio monthly rent.
- ³¹ Duggal, M. *The Impact of Gen Y on Housing—The Market and Demographic Perspective*. Robert Charles Lesser & Co., July 23, 2013, 26. Retrieved from <http://www.rclco.com/pub/doc/presentation-2013-07-23-APA-Virginia-Annual-Planning-Conference.pdf> (last accessed April 2, 2014).



