

Carolina Planning

Volume 39 | 2014



Collaborations in Planning

J. PITTMAN

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From the Editors

Bill King
Cara Wittekind

One of the great strengths of communities is their diversity. This can include diversity of thought, class, race, lifestyle, and opinion. As planners, though, we are often challenged to reconcile the many different thoughts and circumstances within our communities to try and reach some solution that improves the places we care about. As such, we must be adept at collaboration, in order to find the best ideas that address the needs and interests of a diverse array of people.

Furthermore, planners are faced with the growing pressure of needing to do more with less. The recent recession left many communities with less tax revenue and fewer resources to work with. Additionally, the recession put even more pressure on communities to revitalize their economies and repair the economic damage done to help put residents back to work. Given these circumstances, planners must rely more and more on collaborations to help meet these demands and leverage as many resources as possible.

Planning also is increasingly a profession that requires breaking down siloes and collaborating across disciplines. For example, the connection between public health, transportation, and land use is more and more apparent in programs like Complete Streets or efforts to address food deserts. Communities across the country are attempting to stimulate economic development through transportation investments like light rail and streetcars or even better urban design. Growing interest in energy efficiency and new technologies are also changing the face of planning and opening new frontiers for planners.

This year's *Carolina Planning* attempts to provide examples of collaborations that may be of use to planners everywhere. The issue includes articles on initiatives that sit at the intersection of different disciplines, as well as many examples of diverse and unique partnerships that are attempting to address some of the biggest challenges in planning. Our hope is that planners and anyone interested in the future of their own communities finds value in this year's issue and *Carolina Planning* continues to further thought and dialogue in the field of planning.

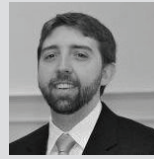
The 2014 issue of Carolina Planning features the following articles:

- *Carolina Planning* is celebrating its 40th year as the oldest student-led planning publication in the country. To commemorate this milestone, two of our alumni, **Nancy Grden '75** and **Kenneth Weeden '75** offer their perspectives on how planning has evolved in the 40 years since this journal began.
- **Andrea Hamre** and **Dr. Ralph Buehler**, Virginia Tech focus on the connection between transportation and economic development with their analysis of their user survey of Washington's Capital Bikeshare to identify economic development impacts of the bikeshare system.
- **Danya Rumore**, Massachusetts Institute of Technology, provides a case study of a large collaboration between communities, government agencies and academics in New England to address the coastal impacts of climate change.
- **Jessica Doyle**, Georgia Institute of Technology, examines the concept of the Megaregion, which calls for collaborative planning on a major scale, and discusses some of the benefits and challenges for this type of planning.
- **Christine Gyovai**, **Dr. Frank Dukes**, **Abigail Ness**, **Lucas Lyons**, and **Allison Spain** of The University of Virginia detail their efforts to foster collaboration among communities in mountainous western Virginia and identify some of the major lessons learned from the Clinch River Valley Initiative.
- As a companion piece to Clinch River, **Sealy Chipley**, **Linda Giltz**, and **Carrie Turner** of the Land of Sky Regional Council of Governments discuss the GroWNC initiative in western North Carolina and provide valuable insights into this collaboration.

- Our **North Carolina Chapter of the American Planning Association** section, introduced by APA-NC Chapter President **Ben Hitchings**, highlights innovative practitioners from across North Carolina and how they are using collaborations in a local context:
 - **Stacy J Guffey and Ben Brown** detail the Opt-In initiative, which is intended to develop a long-term vision that guides policy-making decisions in the southwestern corner of North Carolina over the next 25 years.
 - **Carol Rhea, Darren Rhodes, and Dana Stoogenke** illustrate a collaboration between state agencies, local officials and consultants to develop a transportation plan that addresses a decades-old problem in Red Cross, N.C.
 - **Deborah Ryan**, UNC-Charlotte, discusses an innovative civic engagement strategy in the Piedmont Triad region meant to bring fresh life to planning meetings.
 - **Dean Ledbetter and Lauren Blackburn** explain the benefits of a collaboration on a streetscaping project in West Jefferson and the impact it has had there.
- Continuing our long-standing tradition of recognizing exceptional graduate work at UNC-Chapel Hill's Department of City and Regional Planning, we publish an excerpt from the Best Master's Project of 2013, which was awarded to **Taylor Dennerlein**.
- **Nathan Page** brings you the latest campus news from UNC-Chapel Hill's Department of City and Regional Planning in our annual Student Connection piece.
- Master's students **Adam Levin, Peter Cvelich, Jill Mead, and Ryan Boivin** contribute book reviews on planning related literature.
- To wrap up, DCRP Assistant Professor **Dr. Danielle Spurlock** provides her thoughts about the challenges planners face and the approaches they must take to address them.

Like our home state, this issue of *Carolina Planning* features examples of collaborations from the mountains to the sea. But in any location, the ability of planners to address the complex problems of the future will depend on their capacity to create innovative and effective collaborations. We hope this issue provides some ideas and thoughts for doing so.

Editors:



Bill King is a 2014 master's graduate in City and Regional Planning from UNC-Chapel Hill. While at DCRP, he specialized in economic development and transportation. He previously worked for the Government Accountability Office in Washington, D.C.



Cara Wittekind is a 2015 master's candidate in City and Regional Planning from UNC-Chapel Hill. While at DCRP, she specializes in economic development. She previously worked in the nonprofit and local government sectors on civic engagement and voter registration.

Thank You

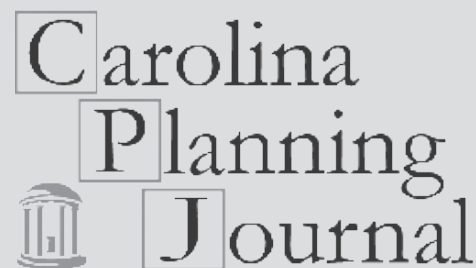
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Feedback

We welcome your comments, suggestions, and submissions. Please contact us at carolinaplanning@unc.edu

Back Issues

Our back issue pages (<http://carolinaplanning.unc.edu/back-issues/>) provide easy and free access to over 500 original articles, commentaries, interviews, and book reviews from some of the most formative years of the planning field. We encourage you to explore this vast resource and share it with your colleagues.



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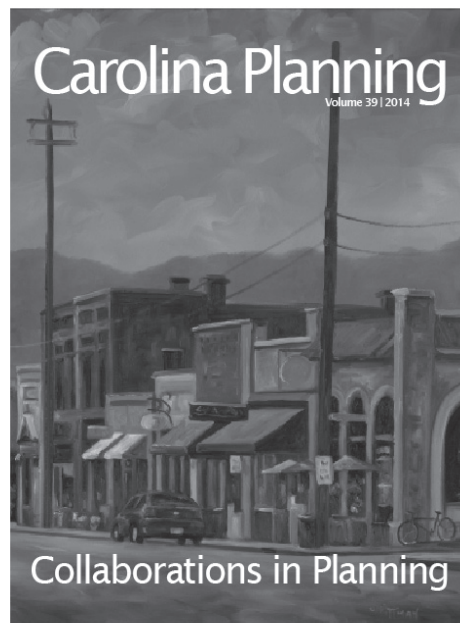
ABOUT OUR COVER



Main Street Weaverville

Jeff Pittman, North Carolina artist

This year, we selected the artwork of local North Carolina artist Jeff Pittman for the cover. We used his painting “Main Street Weaverville” which depicts downtown Weaverville, N.C. located in the western part of the state. We selected this piece, not only for its striking colors, but for its classic downtown setting, which we think is relatable for readers across the country (not to mention its multi-modal transportation options!) Jeff specializes in artwork of scenes around North Carolina and neighboring states from his home of western North Carolina to coastal seascapes, along with skylines and university settings. He uses oils and acrylics and is based in Asheville’s River Arts district. You can find his work at www.jeffpittman.com and visit his studio in Asheville.



<http://carolinaplanning.unc.edu/>

40th Anniversary Retrospective

Nancy L. Grden
Kenneth Weeden

In celebration of the 40th anniversary of Carolina Planning, two Department of City and Regional Planning alumni share their perspectives on the changes in the planning profession in the past four decades.

Celebrating the 40th Year of Carolina Planning



Nancy L. Grden, '75

As a masters student, 1973 and today



In 1974, several Department of City and Regional Planning second-year students had an idea, scanned the market, saw a need with no competition, laid out a development plan, sought and received seed funding, and launched a prototype a few months later. It sounds like the usual new business start-up in an accelerator program, yet it was actually the genesis of the *Carolina Planning Journal*. Unbeknownst to us at the time, we were entrepreneurs within our city and regional planning program. However, while Bloomberg reports that 80% of new businesses fail within 18 months, Carolina Planning has continued to operate these 40 years. Thanks to the succession of dedicated and talented editors, authors, and readers, it is the oldest student-run planning journal in the nation.

Special acknowledgements go to fellow DCRP students Jim Miller, Lee Corum, and John Carroll among the core of our founding group; then Department Chair George Hemmens and retired Chair Jack Parker for their unwavering support for us and an assistantship to me as editor; faculty advisers Dave Godschalk and Gorman Gilbert; and student advisers Jim Foerster, Wanda Lewis, and Chuck Roe. The Z. Smith Reynolds Foundation provided seed funding through a 2-year grant for the venture, and the NC APA provided our first customer

distribution channel. DCRP students and planning professionals submitted articles for consideration, with Michael Nugent, Ben Orsbon, Marilyn Sandorf, Winston Harrington, Arthur Cooper, Stuart George, Robert Crow, Pete Stroup, and Fred Carr as selected inaugural authors. There is no doubt that Carolina Planning could not have launched without all these individual

and organizational leaders and supporters. The *Carolina Planning* start-up experience influenced my career, and the curriculum, faculty/student dialogue, and opportunities to see planning in practice remain living landmarks for me to this day.

The articles in that first publication provide a window into the major issues the planning profession confronted at the time: comparison of state land use policies, planned unit developments (PUDs), local effects of industrial mix, the option of community-based corrections, and water/sewer extension policies to guide development. More recent issues of the journal have evolved to address broader

Nancy Grden is General Manager for Genomind, Inc., a personalized medicine company for neuropsychiatry. She has a BA from Bucknell, an MRP from UNC, and an MBA from USC, and has found the MRP to be a valuable foundation for her leadership roles in development, entrepreneurship, and public sector partnerships.

Kenneth Weeden is the President of Ken Weeden & Associates, Inc., Planning Consultants located in Raleigh, NC. He holds a BA from the University of Mississippi and an MRP from UNC Chapel Hill.

topics such as innovative collaborations, planning for equity, urban greening, resilient cities, and the relevance of our profession. While the topics have certainly evolved to reflect the challenges of the times, the core principles, themes, and worldviews evidenced throughout the years are constant, and unique to the field of planning. There are five planning foundations of continued relevance in various private sector, public sector, and NGO environments today:

All the Audiences. We, as planners, were “early to the party” in recognizing and embedding citizen and stakeholder engagement as expected elements of ideas and decision-making. In fact, we did so even before the convenience of social media infrastructure and mobile technology revolutionized the definition of community. Most every unit of government and every company now wants to tout their “like us on Facebook” philosophy and stature, and to use new and continuously evolving tools for soliciting and responding instantaneously to audience feedback. I fully expect planners will lead the next wave

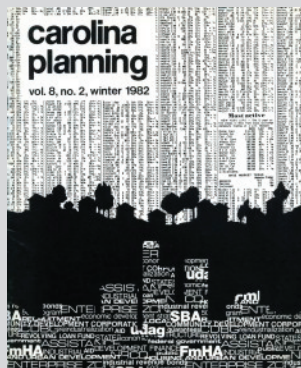
as biotechnology are seeking to find the right mix of the double blind placebo-controlled study with the “N’s of 1” cases for personalized information and treatment decisions.

Short-Term (Not) vs Long-Term. We as planners are visionary and long-term by nature, yet, our training also includes the practicality of “how to get there,” an alchemy so critical in policy, politics, and business. Businesses, which report earnings on a quarterly basis and market cap second by second on a stock exchange, often have difficulty to successfully manage the blend of planning and doing. The ability to both envision a future state and to then execute a path to the result has been identified as a key factor in success and innovation for organizations. Planners have the fundamentals to be those entrepreneurs who do both.

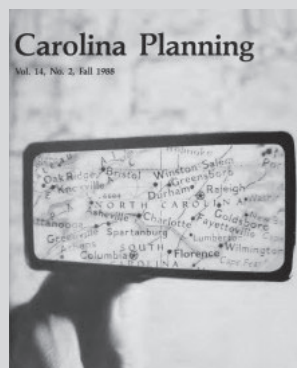
The End Game of Societal Benefit. We, as planners, embrace societal benefit, diversity, and inclusion as ideals for our work and elements of our education. Today, private sector companies incorporate social purposes as



1974



1982



1988



1990

of data mining and trending by leveraging this continuous individual feedback to make community policy and program decisions.

Interdependency and Ecosystems. We, as planners, routinely anticipate and acknowledge the interconnections among people and places, social and land use policy, environment and economics. We used the word “ecosystem” long before its more recent arrival into our popular social vernacular to describe how we are part of an ever-adapting system. This mindset is more important than ever in our complex world as everything from individual actions to broad government policy can result in unintended consequences when considered in isolation.

Data and Windshield Surveys. We, as planners, look to include our profession within the ranks of the social sciences, applying scientific rigor to the study of problems and the rationale for decision-making. Yet planning practitioners and academics alike never let us forget the value of a “windshield survey” to see the realities of results and opportunities. Today, even scientific fields such

part of their mission statements and adopt diversity and inclusion goals as part of their culture. New forms of business organizations, such as benefit corporations, allow companies to identify and measure both profit and social goals. Social entrepreneurship, eco-friendly organizations and programs, and sustainability are becoming commonplace. Planners can be expected to play a growing role in economic development by articulating, supporting, and leading this change.

As we look to the future, there is no doubt that the planning profession is more relevant than ever before. Our profession, and the people it attracts, must increase our leadership roles and translate our knowledge and skills to new global challenges and opportunities. I fully expect that Carolina Planning will be both a monitor and harbinger of the planning profession’s continued evolution in its next 40 years, fulfilling its original mission to provide a forum for discussion, to enhance awareness of the planning profession, and to improve the exchange of planning information.

40 Years of Planning: A Change DID Come?



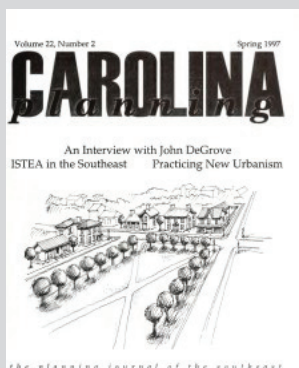
As a masters student, 1973 and today

Kenneth Weeden, '75

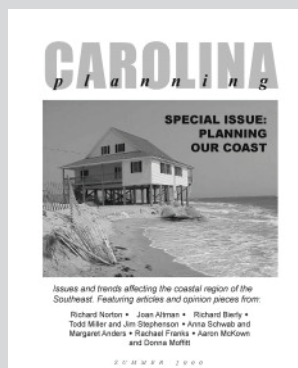
It was August 1973, in Memphis, Tennessee. I looked carefully again at the cars which I had narrowed down as the best potential vehicles for me. I had worked and saved enough to make a good down payment on something reasonably nice but not too expensive, that would take me from Ole Miss to Chapel Hill, North Carolina, to complete my transition from undergraduate to graduate school. I just

lines of color and economics, not only in Mississippi, but also in Chicago, where, due to my parents' divorce, I spent summers with my father during the 1950's and 1960's. For example, the 4-room wooden building with the pot belly stoves, outdoor privies, and outdoor spigots, that we called "School" through the 4th grade, compared to the relatively modern brick building with central heat, air conditioning, and of course, indoor plumbing, of the white school downtown. But we had great, dedicated teachers, and thanks to my mother, an avid reader, my brother, sister and I were voracious consumers of the printed word. When "the movement" came to Tunica in the early 1960's, I would often sneak out of the house to join the older kids in protest marches.

As a teenager, I was concerned and excited about a



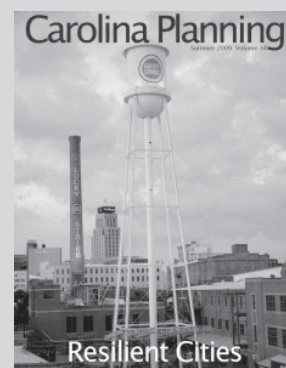
1997



2000



2005



2009

marched down the aisle a few days before in Ole Miss' summer commencement. I needed a car, though. Then, suddenly, one of the vehicles "spoke" to me: a shiny, red, 6-cylinder Chevy Nova, simple, no frills except for the optional air conditioning - that would be nice! But now, time to get serious. The dealer was asking this ridiculously high price of \$2995! I remembered what my Uncle Tommy said: "Don't ever pay the sticker price." I felt really good when I got him down to \$2700 with a payment of \$83 per month. When I left the car lot that day, I began a journey that, in a sense, I am still on 40 years later: to discover how urban planning and all of its accoutrements can make a much better world.

I was born in the Mississippi Delta Village of Tunica, at a colored birthing clinic, in November 1952. Not unlike many Black Mississippi Delta natives, I spent the first few years of my life on a cotton plantation, in the gray, unpainted, red-roofed sharecropper's home of my grandparents. It wasn't long before I was very much aware of the vast inequities in the social structure along the

number of things: the Vietnam War, Woodstock, the first Earth Day, poverty in the Delta and substandard living conditions, peace, love, brotherhood... My brother (older by two years) and I often talked about what we could eventually do to make an impact, and to help make the world we knew better. Both of us ended up going to college at a somewhat unlikely place in 1969 and 1970, respectively, the University of Mississippi, "Ole Miss" as it was and is popularly known. Our first plan was to study journalism and eventually launch a newspaper somewhere in the Delta, with the adage that "the pen is mightier than the sword." We thought that the field would provide a vehicle for necessary change. However, both of us ended up going in different directions, looking for other means to facilitate social change. He chose law school and I, after giving it some thought, chose urban planning. I had heard of the profession of planning for the first time two years earlier while working a summer job as an editorial clerk for a Tennessee Valley Authority (TVA) newsletter in Northern Alabama. Armed with layers of idealism about what

planning could do in rural areas, but little real knowledge about the field, I came to the UNC Department of City and Regional Planning in August 1973 in my red Chevy Nova.

The two years of graduate school at the Department of City and Regional Planning were two of the most intellectually stimulating years of my life. There was so much to learn, and I found it particularly challenging to try to relate planning theory to real life. I must admit that I was always a bit frustrated with the concept of the “rational planning model.” Nevertheless, I was determined to become a “Plannist,” a student of everything. So, I took a variety of classes, including Land Use Planning under F. Stuart Chapin, who taught from his famous text book, *Urban Land Use Planning*, Housing and Public Policy under Michael Stegman, Transportation Planning under Gorman Gilbert, and Regional Development and Economic Development, from Profs. Edward Bergmann and Emil Malizia. I wanted to study everything so that I could eventually do anything. I’ve always liked variety when it comes to work. And throughout my career, I’ve almost always, in some way, been able to apply the “rational planning model” that I learned in 1973. I say in “some way,” because like with most theoretical models, with time and different circumstances, even the stable model requires tweaking. Nevertheless, I think the rational model is still relevant and has served my career well.

I began my professional career in 1975, armed with theoretical knowledge and idealism and a zeal for change-for-the-better. My first job was in Raleigh for Wake County government, helping to administer the Comprehensive Employment and Training Act (CETA), a post-recession job training and supportive services program. That lasted 13 months, before I was attracted to an applied research firm called MDC, Inc., then based in Chapel Hill. My work at MDC, Inc. involved travel all over the U.S., and extensively to eastern NC. After nearly two years, I moved down east, to Greenville NC, to work as a planner with the State Department of Natural Resources and Community Development, providing all types of planning assistance to small local governments over a wide swath of the eastern part of the state.

I developed both Housing Elements and Land Use Elements under the old 701 program, a “grant condition” program that required communities to develop a general plan which indicated the locations and amounts of land to be used for residential, commercial, industrial, transportation, and public purposes prior to qualifying to use certain urban renewal funds. I revised and updated zoning ordinances and subdivision regulations, conducted pre-development plat reviews for regulatory compliance, and conducted annexation feasibility studies. It was great use of my graduate training in a variety of ways. However, after two and a half years of working with the State agency I moved to Wilmington to take my last “job” as a planner with a consulting firm of engineers, architects, and fellow planners. In 1989, after nine years of a focus on airports and other transportation facilities, I started Ken Weeden

& Associates at my kitchen table, and have worked on numerous projects in the transportation and aviation fields for 25 years as an independent consultant.

In 1973, I think many, if not most, of my classmates at UNC were drawn to the urban planning profession because of its potential to help bring about change. Many of us were idealists to some degree, truly believing that we could make a difference, whether in environmental, housing, transportation, community development, economic development, or social planning issues. And truly, in the last 40 years, many of us have.

The profession itself has gone from being relatively obscure to the general populace, suspicious (especially in rural areas) or just outright rejected in the early 1970s, to an easily recognized mainstream occupation, with the requisite accompanying simulation games and mobile phone apps. To many of us choosing to remain in North Carolina for our careers, part of our job was to sell the concept of “planning” to our constituents, and sometimes to our employers. A friend of mine took a position as the first-ever Planner in a down-east NC county in the mid-1970s. The County Commission Chairman came by his new office to meet him soon afterward. Upon leaving, the older gentlemen stated politely, but firmly, that the new Planner should enjoy his job and do anything with it he wanted, as long as he did not do any “planning.” Another friend worked in the rural North Carolina mountains, conducting land use surveys to make maps of existing land use from the windshield but getting out occasionally to get a better look. One day an angry landowner barreled up in a pickup truck, jumped out, shotgun in hand and inquired what in the world were they doing on his land! My friend very nervously tried to explain, only to hear the landowner say something like, “Son, I’d rather you mess my wife, than mess around with my land...now gee-itt!” And, as my friend later told me, they dee-id!

Today, it would be unusual for city and county governments to not have urban planning functions and/or designated planning departments. Surely, we’ve come a long way. So have the tools of planners, with amazing use of computers, simulation software, mapping, and the addition of more specialties within the field. I still believe that planners do, indeed, make a difference and facilitate vehicles for significant change in many areas of our society. However, I look back at the young, sometimes visionary idealists of 40 years ago, now grown mature, some retired or ready to retire, who were drawn to this peculiar profession, and wonder...what kind of people are being drawn to urban planning today? Do they too want to “change the world?” Somehow, I hope so. I truly hope so.

The Shared Benefits of Capital Bikeshare: Economic Impacts in Five Washington, D.C. Neighborhoods

Andrea Hamre
Dr. Ralph Buehler

This study investigates potential economic effects of bikesharing, with a focus on local businesses and the neighborhood level, and highlights a potential area of collaboration between transportation planners and economic developers. This study makes a unique contribution by surveying users at bikeshare stations about intended spending related to the bikeshare trip as well as businesses located adjacent to those same stations about perceived spending by bikeshare users at those businesses. Using a sample of five Capital Bikeshare stations in Washington, DC, we conducted an intercept survey of 333 users at each of the stations and a door-to-door survey of 140 local businesses within 0.1 miles of the stations. We found that riders are motivated to use the system due to travel time (73%) and cost (25%) savings. In addition, 16% of riders report making new trips because of Capital Bikeshare. Meanwhile, 23% of users reported spending more money because they used bikeshare. We found that 20% of the businesses in our sample report a positive impact on sales, and 70% identify a positive impact on the neighborhood. Our findings suggest bikesharing may generate shared benefits among users and businesses relating to new trips and new spending.

Introduction

Bikesharing is a flexible form of transport that typically offers individuals short-term bicycle usage to and from a network of stations equipped with payment kiosks and docks in exchange for daily, monthly, or annual membership fees (S. Shaheen, Guzman, & Zhang, 2012; S. A. Shaheen, Martin, Cohen, & Finson, 2012).

While bikesharing offers a wide range of benefits relating to air quality and congestion, public health, transit access, transportation system efficiency, and neighborhood accessibility (DeMaio, 2009; ITDP, 2013; S. Shaheen et al., 2012; S. A. Shaheen et al., 2012), concerns have been raised regarding the repurposing of limited public space as well as the impact of these systems on local businesses (Fascik, 2013; Wemple, 2011). Supporters contend that bikesharing attracts new customers, while opponents argue the systems deter customers and waste valuable public space. The purpose of this study is to improve understanding of the economic impact of bikesharing systems, with a particular focus on the neighborhood level, and relates to the potential for collaboration among transportation planners and economic developers.

First, we present an overview of the existing

literature relating to economic analyses of cycling and bikesharing. Then, we describe a conceptual framework for our analysis. We subsequently introduce our empirical method for studying the economic impacts surrounding five Capital Bikeshare (“CaBi”) stations in Washington, DC, which entailed both a user intercept survey and a door-to-door survey of local businesses. Then, we present

Andrea Hamre is a PhD candidate in Urban Affairs & Planning at Virginia Tech’s Alexandria Center. She has a Master’s degree in Applied Economics from Virginia Tech and a Bachelor’s degree in Environmental Studies from Middlebury College. Her research interests include active travel, commuter benefits, and multimodalism.

Ralph Buehler, PhD, is an Associate Professor in Urban Affairs & Planning and a Faculty Fellow with the Metropolitan Institute at Virginia Tech’s Alexandria Center. Most of his research has an international comparative perspective, contrasting transport and land-use policies, transport systems, and travel behavior in Western Europe and North America.

our empirical analysis and results, and conclude with a discussion of our findings.

Literature Review

To date, only a few studies have focused on the relationship between economic development and cycling, in general, or bikesharing, in particular. These studies have investigated: 1) the relationship between mode choice and spending patterns; 2) whether bikesharing generates new travel and spending; and 3) how businesses perceive the impact of bikesharing systems.

Clifton et al (2012) conducted a unique analysis of consumer spending and mode choice using intercept surveys at 78 local businesses in the Portland metropolitan area. Overall, they found that customers arriving by modes other than the automobile spent amounts similar to or greater than customers arriving by automobile and that non-driving customers also tended to visit spending locations more frequently. In their bivariate analysis of the relationship between consumer spending and mode choice, they found cyclists to have higher expenditures per month than drivers in all three types of businesses included in the study (\$81.76 vs. \$68.95 for convenience stores, \$81.90 vs. \$40.78 for bars, and \$48.40 vs. \$40.06 for restaurants). Once controlling for several trip, demographic, and business characteristics, their multivariable statistical analysis of consumer spending per trip found no significant difference between cyclists and drivers. These results suggest cyclists are competitive consumers in terms of spending.

transport. In particular, 65% of walkers visited the area 21-30 days per month, while 48% of cyclists, 16% of public transport riders, and 15% of drivers visited with that same frequency. Further, they found 52% of walking customers spent \$100-\$499 CAD per month in the area, while 42% of cyclists, 30% of drivers, and 28% of public transport riders spent that amount.

Schoner et al (2012) conducted a comprehensive assessment of the economic activity associated with stations in the Minneapolis/St. Paul Nice Ride system using trip data for 116 stations, as well as a survey of 29 local businesses and a survey of 1,197 system subscribers. Overall, they found station activity to be positively associated with food-related businesses and job accessibility. In addition, they observed generally positive attitudes among businesses toward the bikesharing system. Further, they learned that users often travel to spending destinations and that the bikesharing system encourages some new trips that would not have otherwise occurred. In particular, the authors found each additional food-related business within a quarter-mile of a station to be associated with a 4.47% increase in station activity. Among businesses, 17% indicated they would support replacing car parking with a Nice Ride station and 8% would support replacing sidewalk space. Based on their user survey, Schoner et al estimated users spend between \$7.00-\$14.00 per trip on shopping, dining, and entertainment/recreation. In addition, they found evidence to suggest that up to 13% of trips (depending on the type of business) would not have occurred within the station

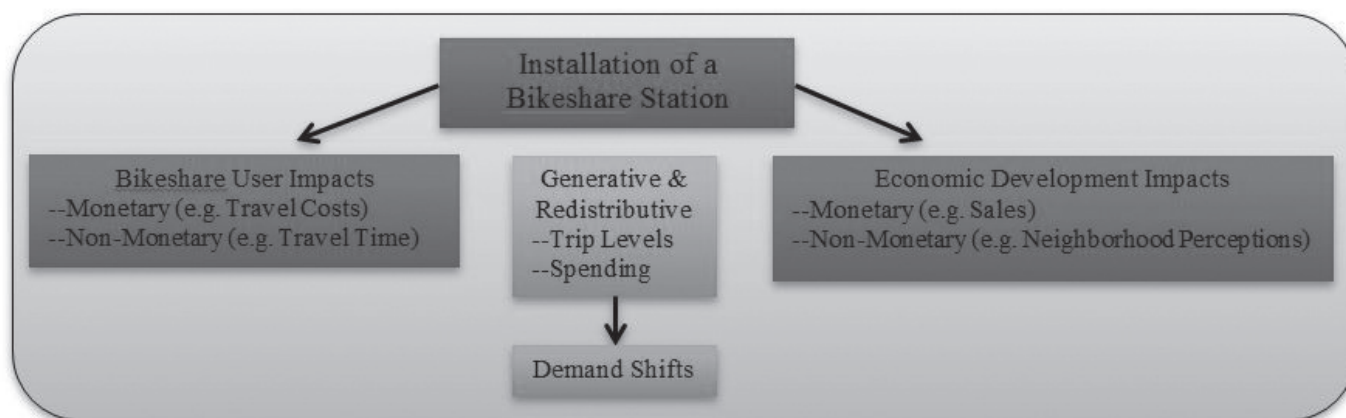


Figure 1: Conceptual Model

The Clean Air Partnership (2009) conducted an analysis of on-street car parking and bike lanes using a survey of 61 local businesses and 538 customers on Bloor Street in Toronto's Annex neighborhood. Overall, they found evidence to suggest customers arriving by walking and cycling shop more frequently and spend more per month than customers arriving by automobile or public

area without the bikeshare system. They argue that at least a portion of these trips would not have been made at all without the bikeshare system.

LoSapio (2013) conducted an analysis of the impact of the Capital Bikeshare system on businesses using a survey of 121 establishments in the Dupont Circle neighborhood of Washington, DC. Overall, she found

that 11% of businesses observed an increase in daily traffic related to CaBi and 13% of businesses perceived a positive impact on sales. In addition, 39.0% of businesses considered their location in relation to CaBi stations to be favorable.

Finally, Capital Bikeshare itself has collected information through member surveys (2011, 2013) on the relationship between the bikeshare system and patronage of local businesses. In 2011, 83% of users reported being “somewhat” or “much more” likely to patronize a business if it were accessible by bikeshare, and in 2013 the combined share was 85%.

Together, these studies suggest that bikesharing is associated with consumer spending and some new travel, and that businesses are generally supportive of the systems and observe some direct beneficial impacts. However, none of the existing literature analyzes the impacts of a bikeshare system from both the user and

business perspective at the neighborhood level. The present study makes a unique contribution by surveying users at bikeshare stations as well as businesses located adjacent to those same stations.

Building upon the literature discussed above, our economic analysis is guided by the following conceptual model (Figure 1). We conceptualize the economic contribution of a bikeshare station to be comprised of user effects, such as travel costs, as well as economic development outcomes, such as sales at local businesses (NCHRP, 2000). Additional impacts relating to social and environmental factors are not the focus of our study. User and economic development impacts may be: 1) monetary or non-monetary; and 2) generative or redistributive in nature (Button & Reggiani, 2011; NCHRP, 2000). We conceptualize that both generative (i.e. new) and redistributive (i.e. shifted from another area) impacts could function as demand shifters for individual businesses at the

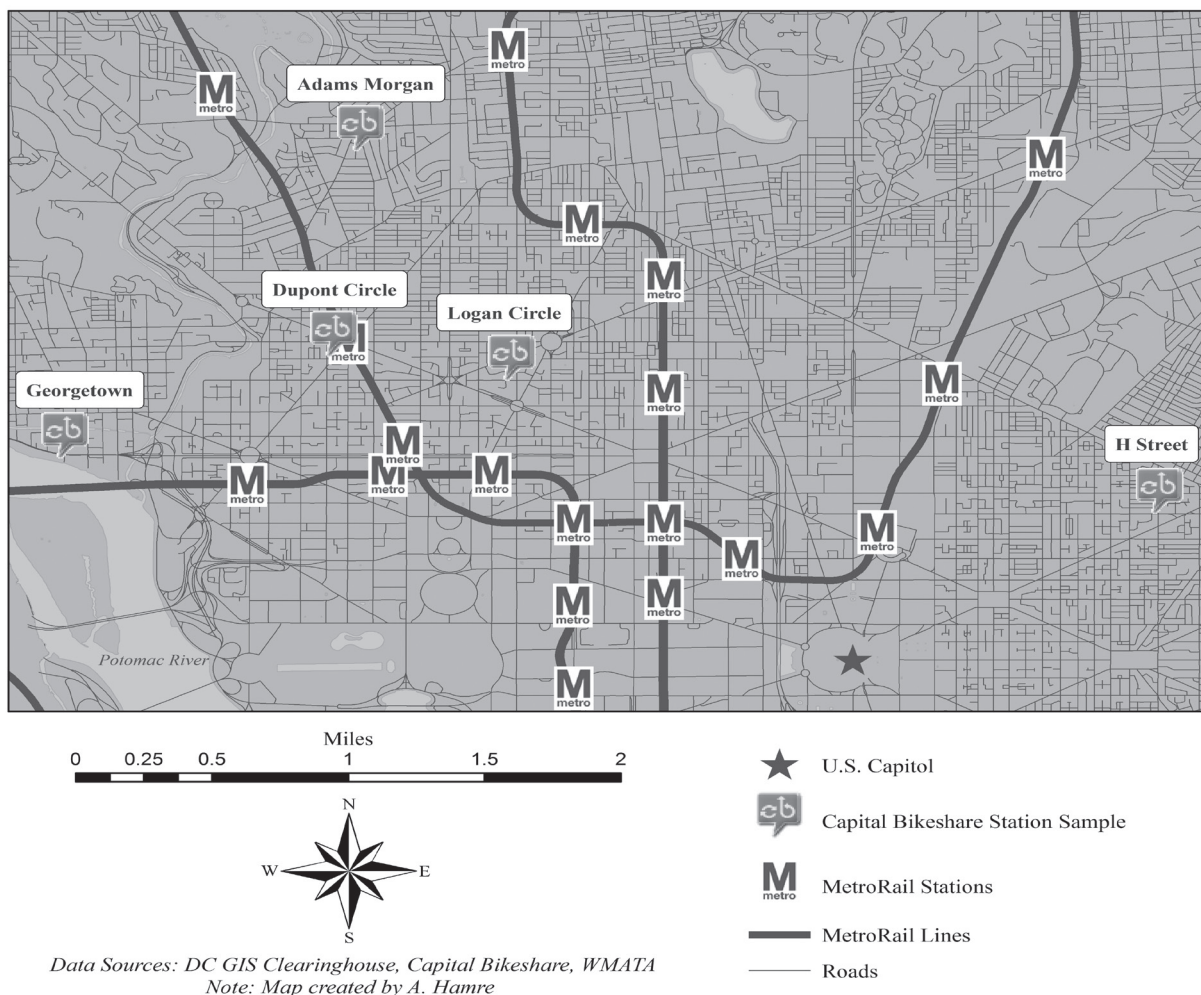


Figure 2: Location of stations studied. Station locations in Georgetown, Dupont Circle, Logan Circle, Adams Morgan, and H Street NE.

neighborhood level. Thus, our conceptual model provides a guide for empirically evaluating the notion of a “green dividend” (Smart Growth America, 2013), whereby at least a portion of travel cost and time savings derived from less driving could be transferred into more spending in the local economy.

Methods

As receiving regions are strained by rapid population growth to investigate the economic impact of bikesharing at the neighborhood level, we collected primary data from CaBi users and businesses in five Washington, DC neighborhoods. Our empirical strategy entailed three main steps: 1) bikeshare station selection; 2) design and implementation of the user intercept survey; and 3) design and implementation of the business survey.

Capital Bikeshare Station Selection

We sought to collect data based upon a diverse station sample that represented neighborhoods from across Washington, DC with high levels of commercial activity and bikeshare use. First, we chose a station in the Dupont Circle neighborhood. This station was located near a MetroRail station, had the highest level of activity in the Capital Bikeshare system during the 2nd Quarter of 2013, and was located in the neighborhood studied by LoSapio (2013). We selected four additional stations outside the typical MetroRail walkshed, estimated to be a

10-minute (or 0.5-mile) walk based on the existing street network and a pace of three miles per hour. This walkshed measure fits within relevant estimates that vary from one-fifth to one-half mile (O’Sullivan & Morrall, 1996; Weinstein Agrawal, Schlossberg, & Irvin, 2008). These stations had high levels of station activity and high levels of commercial activity within 0.1 miles of the station, and also represented four additional distinct neighborhoods. In particular, we used weekend trip data from the 2nd Quarter of 2013 and the ReferenceUSA business database along with the North American Industrial Classification Codes for retail (44, 45), entertainment/recreation (71), and service (72) businesses to identify these stations. We chose to include stations with high commercial activity, as opposed to those located in residential areas, in order to generate a sample suited to investigating the impact of bikeshare on local businesses at the neighborhood level. Our rationale for using weekend ridership data was based on our intention to survey users on weekends, described below.

The final sample was comprised of stations in the following neighborhoods and at the following locations (Figure 2):

- Georgetown (C & O Canal & Wisconsin Ave NW)
- Logan Circle (14th St NW & Rhode Island Ave NW)
- Adams Morgan (Adams Mill Rd NW & Columbia Rd NW)

Table 1: Capital Bikeshare User Survey Results

User Survey	% of surveyed
Top reasons for using CaBi	
Travel Time	73%
Enjoyment	42%
Exercise	41%
Travel Costs	25%
Share of Users Traveling to Spending Destination	66%
Spending Less Than \$10	6%
Spending \$10-\$49	65%
Spending \$50 or More	29%
Spending Within 2 Blocks of Station	34%
Spending Within 4 Blocks of CaBi Station	45%
Spending Greater than 4 Blocks/Did Not Know	22%
Share of Users Making New/Induced Trip	16%
Share of Users Making a Trip Regardless of CaBi	78%
Share of Users Spending More Because of CaBi	23%

- H Street (13th St NE & H St NE)
- Dupont Circle (Massachusetts Ave & Dupont Circle) - included for comparison

User Survey

We designed the 2013 Virginia Tech Capital Bikeshare User Survey to understand the spending patterns of CaBi riders in relation to bikesharing and station neighborhoods. We worked with Virginia Tech graduate students enrolled in a Fall 2013 studio class to design and conduct a 23-question intercept survey. The graduate students conducted the surveys in 2-4 hour shifts over four weekends in October 2013 at the five CaBi stations described above by approaching users as they returned bikes to the stations. We chose to survey on weekends, when commute trips were less likely and discretionary trips were more likely. This was due to the likelihood of a higher participation rate from non-commuters who were less time-constrained, as well as the higher likelihood that discretionary trips could be associated with commercial activity. The survey focused on the most recent CaBi trip taken. We allocated more hours to conducting surveys at the stations with higher activity levels, and our response rate was typically at least 50% per shift.

Business Survey

We designed the 2013 Virginia Tech Capital Bikeshare Business Survey to understand the impacts of the Capital Bikeshare system on local businesses. Again, we worked with Virginia Tech graduate students enrolled in the studio class to design and conduct a 22-question in-person paper-based survey. The graduate students conducted the surveys over five weeks in October and November 2013 at businesses located within 0.1 miles of the five CaBi stations discussed above. We obtained a list of 326 businesses in this radius from the ReferenceUSA database using the NAIC codes 44 (Retail Trade), 71 (Arts, Entertainment, and Recreation), and 72 (Accommodation and Food Services). Respondents included business owners, managers, and other staff. With the survey, we sought to collect information about perceptions of the impact of the bikeshare system. We allocated more hours to conducting surveys in the stations areas with higher numbers of businesses.

Results

User Survey

A total of 333 users completed our survey after dropping off a bike at one of the five selected CaBi stations. In general, our sample had a similar demographic profile to the most recent Capital Bikeshare Member Survey (2013). The majority of respondents were under the age of 35 (67%) and male (65%). About half of respondents (53%) reported having attained a master's degree or higher and nearly all respondents (94%) had a bachelor's degree. Only 10% of respondents reported a household income less than \$35,000 and over a quarter reported

a household income above \$125,000. Approximately 66% of respondents were Annual members of Capital Bikeshare, while another 23% were 24-hour members.

Large segments of our sample shared several motivations for choosing CaBi. In particular, 73% of respondents were motivated to use CaBi because of shorter travel times, while 42% cited enjoyment, 41% reported exercise, and 25% cited lower travel costs. In addition, 66% of users reported traveling to a destination associated with consumer spending (e.g. food-related or entertainment). Of those users, 65% planned to spend \$10-\$49 and 29% planned to spend over \$50. Most users traveling to spending destinations indicated they would be spending at a business nearby the station, with 34% reporting spending would occur within 2 blocks of the station and an additional 45% indicating spending would occur within 4 blocks.

About one in six respondents (16%) indicated they would not have made their trip without the presence of the CaBi station, while 78% indicated they would have made the trip regardless of CaBi and 6% reported being unsure. Of those respondents who reported making an induced trip, 19% indicated they would have likely stayed home rather than traveling to another neighborhood. Overall, 23% of users indicated they were likely to spend more during the trip because of CaBi, and 67% indicated they were likely to spend the same amount or were unsure.

Business Survey

A total of 140 businesses completed the business survey out of the initial list of 326 total businesses for an overall response rate of approximately 40%. Response rates varied across station areas, from approximately 24% in Adams Morgan to 51% in H Street, as well as business type, from 17% for non-food and non-retail businesses to 51% for food-related businesses and 63% for retail businesses. The vast majority of respondents were aware of the CaBi system (88%), and 32% reported having experience using the system. Most businesses did not know if CaBi had any effect on customer traffic levels. Nevertheless, approximately 10% perceived an increase in customer traffic. One in five businesses perceived that CaBi has positively impacted their sales while another 79% reported a neutral impact or were unsure and 1% perceived a negative impact. In addition, most businesses (70%) indicated CaBi has had a positive effect on the neighborhood, while another 29% reported a neutral impact or were unsure. Further, 69% described the location of their business in relation to CaBi as favorable, and 59% indicated they would like more CaBi stations to be added. Regarding public space tradeoffs, 22% of businesses indicated they would have a positive reaction to replacing sidewalk space with a CaBi station, while an additional 26% would be neutral and 52% would have a negative reaction. Finally, 29% would have a positive reaction to replacing car parking with a CaBi station, while an additional 32% would be neutral about removing

car parking in favor of a bikeshare station and 39% would have a negative reaction.

Discussion and Conclusions

Our analysis of five Capital Bikeshare station areas suggests that the stations may have significant economic effects at the neighborhood level, based on the intentions and perceptions of users and businesses surveyed in this study. In terms of user effects, the results of our survey suggest that users incur both monetary and non-monetary benefits in terms of lower travel costs and time savings. We found that most users (73%) were motivated to use CaBi because cycling was faster than other modes for that particular trip, while 25% were motivated because using the system offered monetary savings. In terms of economic development outcomes, the results of our business survey suggest that businesses perceive both monetary and non-monetary benefits such as increased customer traffic and sales, as well as positive impacts on the neighborhood. Our business survey indicated 20% of businesses perceived a positive impact on customer sales, while 70% reported a positive impact on the neighborhood.

While many of these effects are likely redistributive in nature, we also found evidence to suggest that a portion of these outcomes are generative and relate to new trips and new spending. Our results suggest 16% of users made new trips because of the presence of the CaBi station, and 19% of those traveling to the neighborhood regardless of CaBi reported increased spending due to having taken CaBi. From the perspective of the individual business, we expect both generative and redistributive effects to act as demand shifters. Our user survey suggests that the CaBi stations are encouraging new trips to the station areas and new spending at nearby businesses. The results of our business survey mirror this finding from the user survey, as 10% of businesses perceive increases in customer traffic and 20% perceive increases in customer sales. Therefore, we find support for the notion that bikesharing may generate a “green dividend” (Smart Growth America, 2013) whereby at least a portion of the travel cost and time savings incurred by Capital Bikeshare users is being spent at businesses surrounding stations.

While caution should be taken in directly comparing the magnitude of our findings to those of prior studies, due to such differences as sampling design, geography, and demographics, our findings are largely consistent with those presented in other recent studies. First, our study supports the recent findings that indicate cyclists, in general, and bikeshare users, in particular, are likely to visit businesses near stations (Capital Bikeshare, 2011, 2013; Clifton et al., 2012; Schoner et al., 2012; The Clean Air Partnership, 2009). We found that 66% of users reported traveling to spending destinations, and of those 63% planned to spend \$10-\$49. This is higher than the \$7-\$14 estimated spending per trip found by Schoner et al (2012), and may be related to the higher cost of living and higher incomes in the Washington, DC area compared

to the Minneapolis/St. Paul area, as well as the focus on weekend spending in the present study, which could be more discretionary in nature. Further, we found about 16% of users reporting making new trips, which is higher than the upper range of 13% given for various business types by Schoner et al (2012). A future study could investigate the factors that determine the levels to which bikesharing systems induce new trips.

In terms of business perceptions, both Schoner et al (2012) and the present study found more support among businesses for replacing car parking with bikeshare stations than for replacing sidewalk space. However, we found a higher level of support in our five Washington, DC neighborhoods than they found for the Minneapolis/St. Paul area (29% in our study vs. 17% in their study for car parking and 22% in our study vs. 8% in their study for sidewalk space). Further investigation regarding the factors relating to various levels of support for these public space tradeoffs could result in an important contribution to our understanding of this critical issue. One possible explanation is that businesses in Washington, DC are more accustomed to non-driving customers, given the larger and more extensive public transport system in the region. This finding may also relate to the relatively high traffic congestion levels in Washington, DC, which could discourage driving to spending destinations. Finally, the results of our business survey were largely comparable to LoSapio’s (2013) analysis of the Dupont Circle neighborhood, where we found 10% of businesses perceived increases in daily traffic and 20% perceived increases in sales compared to her findings of 11% and 13% respectively.

There are important limitations to our study design and the generalizability of our findings. First, we collected data during a single time period, so our data are not designed to capture changes over time. It could be that both user and economic development effects will change as more stations are added to the Capital Bikeshare system, more on-street cycling facilities are added throughout Washington, DC, and more people become members of the Capital Bikeshare system. In addition, spending patterns may differ significantly between the 2nd Quarter and other times of the year. Second, our station selection criteria provided us with a sample characterized by high commercial activity. As a result, our findings are likely not applicable to stations in less commercial areas. Instead, user effects might continue to play an important role, while the economic development outcomes are less present at these stations. In addition, our surveying of users on weekends intentionally focused on discretionary trips rather than commute trips; a future study could compare user spending in relation to discretionary versus commute travel. Third, as is typical of primary data collection efforts, our results depend on the comprehension of our survey respondents, both in terms of our survey questions and in terms of their behavior and perceptions. Fourth, our surveys captured stated spending behavior from users

and perceived impacts from businesses, rather than actual spending at businesses or behavior by bikeshare users. Future studies could attempt to measure these outcomes more directly.

Moreover, future studies could focus on questions regarding public space tradeoffs from both the user and business perspective. This could inform comparisons across bikesharing systems and provide a deeper understanding of the factors influencing local debates. Another area for consideration could be further study of the generative and redistributive impacts of bikesharing in terms of trip levels and spending.

Overall, our study suggests there is significant potential for collaborative efforts between transportation planners and economic developers. In particular, we find evidence that bikesharing may significantly benefit both users and businesses by enabling new trips and spending.

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Building the Capacity of Coastal Communities to Adapt to Climate Change through Participatory Action Research:

Lessons Learned from the New England Climate Adaption Project

Danya Rumore

Climate change adaptation presents a complex and increasingly urgent planning challenge for coastal communities. To prepare for and manage climate change risks, coastal cities and towns will need increased capacity and resources. This article argues that participatory action research (PAR) offers academics a way to help build the capacity of at-risk communities to respond to climate change. I use the experience of the New England Climate Adaptation Project to illustrate, exploring the advantages and challenges of “research as capacity building” and providing guidance for those wishing to do this kind of work. The intent of this article is to encourage a conversation between communities and scholars about how to use research to support local adaptation planning.

Introduction

In the aftermath of Hurricane Sandy and other recent natural disasters, the vulnerability of coastal cities and towns to climate change has become an increasingly urgent concern, particularly given the visibility of sea level rise and projections of more frequent extreme storms. While the necessity of climate change adaptation is widely recognized by academics and among many public officials in at-risk communities, very few cities and towns along the U.S. coast—other than major metropolitan areas such as New York City and San Francisco—have begun to take action to prepare for climate change (Adger et al., 2007; Ford et al., 2011; NRC, 2010). Some of the reasons for this lack of action include the long-term nature of climate change risks; uncertainty about how best to prepare for an uncertain future climate; technical and financial resource limitations; lack of public support and pressure on public officials; and challenges associated with coordinating among stakeholders and different levels of decision-making (Moser and Boykoff, 2013a; Ekstrom and Moser, 2013; Susskind, 2010).

To overcome these challenges and barriers and meaningfully move forward with preparing for climate change, coastal communities will require enhanced capacity and resources. For example, they may require greater ability to access and make sense of complex climate projections and risk assessment information

(Dilling and Romsdahl, 2013) as well as capacity to undertake necessary technical analyses and integrate climate information into planning and policy decisions (Susskind, 2010). Similarly, they will need ongoing access to easily understandable and policy-relevant adaptation options (Moser and Boykoff, 2013a). Further, at-risk communities may require new approaches for educating and engaging stakeholders and the public (Susskind and Rumore, 2013). Effective adaptation will also require that communities be equipped to conduct ongoing monitoring and evaluation of the effectiveness of their adaptation efforts (Moser and Boykoff, 2013a).

In light of these capacity needs, adaptation efforts at the local level will necessarily require the involvement

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of and coordination among national, state, and local governments, as well as a variety of sectors (NRC, 2010; Susskind, 2010). Researchers and academics, too, have an important role to play. Beyond providing science and research to inform adaptation, I argue, academics and researchers can advance local climate change adaptation efforts through collaborative, action-oriented research that enhances the capacity of local communities. Such “participatory action research,” also can help researchers produce knowledge that is more salient, legitimate, and credible for local stakeholders and directly useful for decision-making. I illustrate this through the example of the New England Climate Adaptation Project, a two-year, collaborative research initiative testing the use of role-play simulations as a public engagement tool while also advancing local-level adaptation. The intent of this article is twofold: first, to call for greater collaboration among researchers and stakeholders to undertake “research as capacity building” as a way to assist communities in preparing for and managing climate change risks; and, second, to proffer some concrete recommendations to guide researchers and stakeholders in cultivating and conducting this kind of participatory action research.

Participatory Action Research: Research as Capacity Building

There is a widely recognized need to improve decision-support and better link knowledge to action to inform adaptation planning and decision-making (Matso, 2012; Moser and Boykoff, 2013b; NRC, 2009, 2010). It has been argued that, to do this, research needs to do a better job of addressing decision-maker needs and producing knowledge that is salient, credible, and legitimate to stakeholders (Jacobs et al., 2005; Preston et al, 2013; see also Cash et al, 2003). Such work importantly calls attention to the need to produce knowledge that directly addresses stakeholder needs and is policy-relevant, suggesting that doing so requires more active engagement with decision-makers and the intended users of the knowledge being produced (Jacobs et al, 2005; Matso, 2012; NRC, 2010).

I argue that, in addition to working with stakeholders to produce information that is more useful to decision-making, researchers can and should collaborate with communities and groups to build their capacity to utilize scientific information and to improve their local situations. Such “research as capacity building” requires going beyond simply consulting with stakeholders; it requires the effective and meaningful engagement of stakeholders and intended knowledge users in the entire process of knowledge production and interpretation. While a significant divergence from traditional academic research, such collaborative, action-oriented research—or participatory action research (PAR)—can support positive change in communities while simultaneously generating useable research-based knowledge (Greenwood and Levin, 2007; Reason and Bradbury, 2008).

PAR necessarily involves stakeholders directly in defining research questions, developing and implementing research approaches, and making sense of research findings. It does not privilege any type of research methods or approaches over others; it can be quantitative and/or qualitative, employing surveys, interviews, statistical analyses, observation, and other credible data collection and analysis approaches. PAR, while able to produce generalizable findings that can help inform decisions and actions elsewhere, is fundamentally context-specific; a main objective of PAR is to produce practical solutions and to increase the capacity of communities and groups to create their own positive social change (Greenwood and Levin, 2007).

Below, I provide an overview of the New England Climate Adaptation Project and illustrate the project’s participatory and action-oriented nature. I then explain some of the key lessons learned from this experience about doing PAR to help build the capacity of coastal communities to prepare for and manage climate change risks.

The New England Climate Adaptation Project: A Case Study

The New England Climate Adaptation Project (NECAP) is a two-year collaborative research effort involving the Massachusetts Institute of Technology Science Impact Collaborative (MIT SIC), the not-for-profit Consensus Building Institute (CBI), the National Estuarine Research Reserve System (NERRS), and four partner coastal New England municipalities. Funded by a research grant from the NERRS Science Collaborative,¹ NECAP is testing the effectiveness of science-based role-play simulations as a tool for educating the public about climate change risks and building widespread support for adaptation efforts (see NECAP, 2014; Rumore, 2013; Susskind and Rumore, 2013).

The project team includes a range of academics, local decision-makers, and practitioners. In addition to faculty and graduate students from MIT’s Department of Urban Studies and Planning, the NECAP staff includes two stakeholder engagement and consensus building specialists from CBI, Coastal Training Program Coordinators from each of the four NERRS reserves we are working with, technical climate change experts at the University of New Hampshire, and partner public officials from each involved town or city, including planners and town managers. For each of the four municipalities we are working with, one MIT Master in City Planning student is matched up with the local Coastal Training Program Coordinator and municipal partners. As the Project Manager and “Collaboration Lead” for the project, I am responsible for facilitating and ensuring coordination, communication, and collaboration across all project partners and research sites.

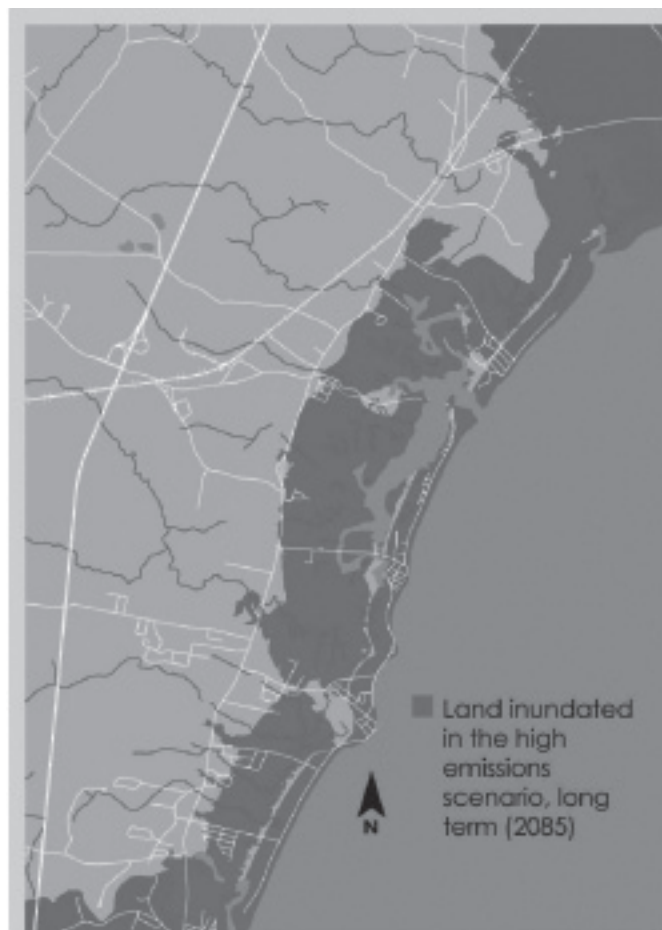
The project started officially in August 2012 and will end in August 2014. During the first year of the project,

our technical climate change experts at the University of New Hampshire produced downscaled climate change projections for each of our four partner sites. Based on the best available scientific techniques, these projections provide a sense of what the future climate will be like in each of our towns, including projections for temperature, precipitation, sea level rise, and key climate indicators such as extreme precipitation and extreme temperature events. MIT Master in City Planning students worked with experts and municipal partners to translate these climate projections into a Summary Risk Assessment for each site. Each Summary Risk Assessment explains how projected climate changes could affect the municipality, providing a broad-brush evaluation of key local risks and potential adaptation options. These documents are publicly available on our project website and will be distributed at the end of the project,² potentially through assessment-related workshops for key stakeholders.

During the first year of the project, our Master in City Planning students conducted stakeholder assessments for their partner communities.³ This involved interviewing 18 to 20 key stakeholders in each site—including local and regional public officials, planners, emergency management personnel, business owners, and environmental group representatives, among others—to gather information on stakeholders' awareness of and concern about climate change risks, and their thoughts about adaptation options. During the interview process, stakeholders were shown the climate change projections for their city or town and were asked to react to these forecasts. For each municipality, the findings of the stakeholder interviews were made anonymous and used to write a Stakeholder Assessment document, which all interviewees reviewed for accuracy and completeness. The Stakeholder Assessments were then shared with project partners and other officials in each town to inform their planning and public engagement strategies going forward.

The primary intent of producing the Summary Risk Assessment and Stakeholder Assessment for each municipality was to inform the design of a science-based, tailored role-play simulation for each site. A role-play simulation is an experiential learning exercise in which participants assume roles and participate in a mock decision-making process (Schenk and Susskind, 2014). Our NECAP role-play simulations are face-to-face exercises that put participants in the roles of local decision-makers and community members to experience what it might be like to manage climate change risks in a hypothetical but realistic community (Susskind and Rumore, 2013).

Each simulation was designed to address the primary climate change risks for that site, to convey real-world climate change projections for that location, and to reflect local political dynamics. For example, the simulation for the Town of Wells, Maine, takes participants to the hypothetical Town of Launton. Like Wells, Launton



Map of projected sea level rise in Wells, Maine by 2085 under a high emissions climate change scenario. *From the Summary Risk Assessment for the Town of Wells.*



Vulnerable coastal property near Wells, Maine. *Image courtesy of the NECAP team.*

is a small, beachfront town that is largely reliant on summer tourism for its economy and faces increasing risk from coastal storms and sea level rise. Participants assume one of six stakeholder roles—the town councilor, the local planner, the emergency management director, a regional land trust representative, a local chamber of



Hyannis Docks in Barnstable, Massachusetts, one of the NECAP partner communities. *Image courtesy of Waquoit Bay Reserve.*

commerce representative, or a coastal neighborhood association representative.⁴ Taking on an assigned role and related interests, participants have an hour to figure out how to take scientific climate projections and different stakeholder perspectives into account to decide what the town of Launton should do to prepare for increasing risk of coastal storms and flooding. The goal in creating these hypothetical settings was to create a scenario and set of roles that are relevant, realistic, and representative for each site, while allowing participants to engage in a “safe space,” take on roles other than their real life roles, and to leave behind their real world constraints for the duration of the simulation (Rumore and Susskind, 2013; Schenk and Susskind, 2014). Our MIT staff members, who are experienced in role-play simulation design, spearheaded the creation of the exercises. Our local partners actively participated in the design of the simulations, as well as in testing and refining the exercises.

Once our role-play simulations were finalized, the research-intensive part of the project began. Between the months of June and December 2013, our project team successfully ran eight to nine role-play simulation workshops in each city or town. During each workshop, participants—who ranged from local and state public officials to members of the general public—engaged in the role-play simulation and a follow-up conversation about local climate change risks and potential adaptation strategies. Through our workshops, we engaged between 110-170 participants in each site, for a project total of over 500 workshop participants. We collected data through before-and-after surveys completed by each workshop

participant. About five weeks after each workshop, MIT staff conducted follow-up interviews with 130 people, approximately 30 percent of workshop participants. Additionally, we conducted a randomized public opinion poll before we ran our simulations in each town and a second public opinion poll a couple months after the completion of our workshops. These public opinion polls allowed us to gauge public concern about climate change risks and adaptation prior to our intervention, and will help us assess whether public attitudes about climate change risks and adaptation have changed as a result of our intervention.

The intent of this data collection, in many ways the heart of the research aspect of NECAP, is to help us evaluate the effectiveness of our role-play simulation workshops as an approach for raising public and stakeholder awareness and concern about risks and support for adaptation action. We have found that participation in our role-play simulations increased participant concern about local climate change risks, heightened sense of local responsibility for preparing for climate change impacts, and increased participant awareness of other stakeholder perspectives and concerns and how they related to local decision-making. Our data analysis is ongoing and our findings are only preliminary. However, based upon our provisional analysis, it appears that, in all partner towns, our NECAP intervention increased public awareness and concern about climate change risks and built public support for local collective risk management efforts. Based on our provisional analysis, we are optimistic that role-play simulations offer an effective public education

and engagement strategy for complex decision-making concerns, such as climate change adaptation. We will be further exploring our data and expounding upon our findings in future publications.

The data from our surveys, interviews, and public polls is not only an important part of our research; it also provides valuable information for our municipal partners and other decision-makers in our partner towns and cities. For example, a striking finding from the first public poll conducted in all towns is that there was a considerable gap between the number of polled citizens who think preparing for climate change risks in their town “should” be significant or very significant (ranging from 46 percent in Cranston to 73 percent in Barnstable) and those who say they think “it actually will be” significant or very significant (13 percent in Cranston and 16 percent in Barnstable). This suggests an important “optimism gap” that might limit local efforts and a related need to increase public belief in the ability or willingness of their town to take meaningful action. Based on our provisional analysis, it appears our workshops significantly increased participant optimism about local action. Our MIT and CBI staff members are working with our municipal partners to make sense of what such findings from our different data sources mean for local adaptation efforts.

While our research-related reason for producing the Summary Risk Assessment and Stakeholder Assessment for each site was to inform the design of our simulations, we intentionally produced these documents to help our partner towns and cities initiate and support adaptation efforts by helping stakeholders understand the predominant risks facing their communities and to stimulate further technical evaluation and vulnerability analysis. Our municipal partners are already using the climate projections and Summary Risk Assessment to inform their next steps in terms of technical analysis and data gathering. The Stakeholder Assessments, public poll information and survey data provide decision-makers and other stakeholders with a valuable sense of the different perspectives about climate change risks and adaptation at play in their communities. In addition to showing that public and stakeholder concern about climate change risks is much higher than originally anticipated, these data suggest that, in some towns, stakeholders and the public tend to think of climate change adaptation as requiring major municipal investments, such as in sea walls and big infrastructure. In other towns, the data reveal a more nuanced understanding of adaptation as requiring changes in how everyday planning is done. We are working with municipal partners to translate this information into their adaptation planning and engagement strategies. Additionally, our partner municipalities are using our assessment findings in grant applications to fund additional climate change adaptation work.

In addition to the ability of PAR to achieve the dual goals of rigorous research and local capacity building, many commentators, such as Susskind (2010) and Innes

and Booher (2010), have argued that more collaborative, adaptive decision-making will likely be necessary for effective planning amid uncertainty and complexity, as in the case of adaptation. Thus, our role-play simulation exercises were designed to introduce the consensus building approach to decision-making (see Susskind and Cruikshank, 1987, 2006), with the hope of familiarizing participants with a stakeholder engagement-driven model for planning. We also intentionally designed our project to allow our MIT and CBI staff to work with our NERRS and municipal partners to organize, host, and run workshops, with the goal of enhancing their ability to engage stakeholders and to facilitate challenging planning conversations. CBI and MIT staff ran the first couple workshops in each site to provide an opportunity for our NERRS and municipal partners to observe and learn from our professionally facilitation-trained staff. We then transitioned facilitation of workshops to our local partners. Our CBI and MIT staff also produced facilitation guidance documents and provided informal facilitation training for interested partners. All of these ancillary outcomes both contributed to the quality of our research and also provided important capacity-building benefits for the communities we are working with.

Our goal in undertaking NECAP was to concurrently produce rigorous scientific knowledge that is informed by stakeholders as well as professional researchers; to generate research that is tied to the on the ground realities communities face and thus can better inform local-level policy and planning decisions; and to actively support positive change in our partner towns throughout the process. Through this effort, we have learned many lessons that can help inform and guide others in undertaking participatory action research and research as capacity building. Below, I explain some of our lessons learned about the challenges of doing PAR as capacity building, and provide recommendations for academics and stakeholders interested in undertaking this type of collaborative action research.

The Challenges of Doing PAR as Capacity Building

As the case of NECAP demonstrates, PAR can produce rigorous research while concurrently building the capacity of coastal communities to address climate change risks. However, PAR is not without its challenges, and those wanting to engage in this type of work must be aware of and prepared for the various tensions and hurdles that will inevitably present themselves.

Doing PAR requires continually working with partners to clarify objectives and goals, ensuring that the work being done meets everyone’s needs, and translating research findings and implications into relevant terms for stakeholders (Greenwood and Levin, 2007; Reason and Bradbury, 2008). This kind of research is ongoing, requiring significant foundation building and continued involvement and interaction among knowledge producers and knowledge users (Greenwood and Levin, 2007). In

the case of NECAP, we spent a year before the official beginning of the project working with NERRS partners to refine our research questions and approach and to identify and engage partner municipalities. Fortunately for NECAP, our NERRS partners already had strong pre-existing relationships with communities in their region, which allowed our MIT and CBI staff to align with our partner municipalities before the project officially began. This foundation laying, done before project funding had been secured, allowed us to build strong relationships with our NERRS and municipal partners and to tailor our research strategy to local needs. Our MIT and CBI staff members intend to continue the engagement with our NERRS and municipal partners beyond the completion of our research grant.

Given the ongoing and iterative nature of PAR, relationships are key: trust, buy-in, and willingness to learn together are necessary for PAR and research as capacity building efforts (Greenwood and Levin, 2007). Working with the NERRS Coastal Training Program helped our professional research staff quickly develop trust and buy-in from our municipal partners. That said, our academic staff have had to focus on being continuously mindful of our NERRS and municipal partners' needs and concerns. For example, while designing the simulation for one of our municipalities, our MIT staff suggested that exercise should focus on climate change risks to wastewater, since that is a critical concern in the area. Our local partners strongly disagreed with this, expressing their concern that wastewater is already such a contentious issue in the area that making it the center of the game would take away from the focus on climate change adaptation, as well as perhaps dissuade some people from participating who otherwise would. After discussion, our MIT staff agreed with our municipal partners' concerns and we changed the focus of the game. Such experiences have repeatedly demonstrated the importance of relationships



Role-play simulation workshop at the Great Bay National Estuarine Research Reserve, near Dover, New Hampshire. *Image courtesy of Great Bay Reserve.*

and willingness to work and learn together in facilitating productive research as capacity building.

Since institutional knowledge and relationships are key to doing this kind of research, it is very important to ensure continuity within the project. Our project staff and partners have been largely stable throughout the duration of the project, allowing for relationship building and the development of place-specific knowledge. However, due to students graduating, we did have a major transition in our MIT graduate student liaisons for each town halfway through the project, which proved very difficult and created significant setbacks for the project. In light of the importance of place-specific knowledge and relationships, is best to avoid staff transitions as much as possible and to be prepared to reestablish relationships if transitions do occur. Similarly, it is important to build in ways of ensuring continuity, such as including professional staff on the project team, and establishing systems for recording and transferring institutional knowledge.

Doing PAR and research as capacity building presents a number of logistical challenges. While many commentators have called for moving research funding priorities beyond the “pure science” model (Pielke, 2007) and for funding action-oriented research (Matso, 2012), it is difficult to secure research funding in general, not to mention securing sufficient funding for the extra staff and resources needed to effectively conduct collaborative, interdisciplinary, and action-oriented research. Keeping partners updated and on the same page despite busy schedules and other projects is in itself an ongoing challenge. Developing an organization structure and systems for inter-team communication early on is critical. Clarifying expectations about project outcomes and the expected contributions and commitments of each party at the beginning of the partnership is also important.

These tasks can be particularly challenging given the different needs and work environments of involved parties. For example, graduate student schedules and timelines do not always fit well with municipal partners needs, and project partners can feel disconnected from the project if a system for keeping them updated on project progress is not put in place. Having professional staff at CBI on board to maintain continuity and consistency has been enormously valuable for NECAP. While the partnership between MIT and CBI has been key to the project's success, arranging this was difficult do potential “conflict of interest” concerns, which had to be attended to. Addressing these logistical challenges is ongoing, taking time and resources, but it is necessary for effective participatory action research.

Some Guidance for Undertaking This Kind of Research

In light of our experience with NECAP and the above-described challenges associated with this kind of work, I have identified some broad recommendations that will assist those seeking to effectively engage in

participatory action research.

Work with boundary organizations: One of the greatest strengths of NECAP is our partnership with the NERRS Coastal Training Program, an organization that is accustomed to working at the interface of research and practice and had strong pre-existing relationships with our partner communities. Aligning with such “boundary organizations”—i.e., organizations that are skilled at working between knowledge production and knowledge use and have ties to stakeholders (Clark et al., 2010, 2011)—can help expedite the process of trust and relationship building with local communities and groups.

Invest in a “Collaboration Lead”: The NERRS Science Collaborative, which is funding NECAP, requires that all research teams include a Collaboration Lead (see Matso, 2012). This person, who is separate from the Principal Investigators on the project, is tasked with ensuring all project partners—including the researchers from different disciplines and the involved stakeholders—work together and that their needs are met. Such a role is vital for facilitating research work across academic and community needs, across disciplines, and among competing interests. Having a team member dedicated to ensuring that people are working together, that all project partners know what is what is going on and are communicating with each other, and that research needs are being balanced with stakeholder needs is highly important for effectively conducting collaborative action research. I highly recommend this person have formal facilitation training and experience, regardless of their academic and professional background.

Invest in relationships: Investing in relationship and trust building early on and throughout the project is critical. I recommend gathering the entire project team—in person if possible, virtually if not—within the first month of the project to allow all partners to get to know each other, clarify expectations and timelines, and to talk about how to best communicate within the team. This can be challenging logistically, but is well worth the investment. Creating opportunities for all project partners to get together or to interact virtually at least once a year if not more frequently is also advisable, as well as finding other ways to support ongoing relationship building.

Pick your team carefully: In light of the challenges of doing this type of research, as well as the ongoing commitment and relationships that are necessary, it is important to pick your team carefully. Project staff and partners must be willing and able to commit the time and energy this type of work requires. They also need to buy into and embrace this untraditional research approach. All project partners need to work well with others and be willing to learn together and from each other. No matter how strong and committed a team, tensions will still arise. Having a process for addressing these concerns when they arise will facilitate more effective research and on-the-ground capacity building and ensure relationships do not get compromised as the result of different perspectives or

interests of involved parties.

Conclusions

Climate change presents a highly difficult planning challenge for coastal communities throughout the world. To assist coastal cities and towns in effectively managing and preparing for climate change risks, we need to find ways to enhance local capacity, resources, and ability to plan amid complexity and uncertainty. Participatory action research offers one valuable route through which academics and professional researchers can work with stakeholders to build local capacity to adapt. As the case study of the New England Climate Adaptation Project shows, this type of research demands that researchers diverge from traditional modes of research, effectively and fundamentally integrating stakeholders into the research process while still producing rigorous, credible scientific information. It also necessitates high levels of involvement from local decision-makers, planners, and other stakeholders in joint inquiry. Further, scaling up this type of work will depend upon the availability of funding to support more participatory and action-oriented research. As such, and for the many reasons discussed in this article, doing PAR and research as capacity building is not without its challenges. However, through overcoming these challenges and effectively engaging in PAR, scholars and academics can help at-risk communities effectively adapt to climate change.

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Endnotes

¹ The NERRS Science Collaborative is an organization that seeks to put National Estuarine Research Reserve-based science to work for coastal communities and is supported by the U.S. National Oceanic and Atmospheric Administration.

² The NECAP website is available at: necap.mit.edu.

³ A Stakeholder Assessment is similar to a Conflict Assessment, as described by Susskind et al. (1999). We use the name Stakeholder Assessment, rather than Conflict Assessment, in situations where there is not a pre-existing conflict.

⁴ There is also a facilitator role in each of our simulations. Since our simulations model a facilitated decision-making process, we typically assign this role to a project partner or someone we know has facilitation experience, although the role is designed to be played by any simulation participant.

The Megaregion as Product and Spur of Collaboration

Jessica L.H. Doyle

First floated in 2005, the idea of the “megaregion” is meant to foster collaborative approaches between regional entities and more geographically expansive approaches to long-standing planning problems. Transportation planners at the regional and national level have been particularly receptive to the megaregional approach to planning. This article describes some of the initiatives and conversations that megaregional research spawned in transportation, leading to collaborations within megaregions themselves, as well as partnerships spearheaded by the Federal Highway Administration (FHWA).

Introduction

Regional planning in the United States has a long history of fits and starts (Friskin and Norris, 2001). Collaborations between jurisdictions, such as the Regional Plan Association (RPA), which makes planning recommendations for Connecticut, New Jersey, and metropolitan New York City, or the Appalachian Regional Commission, which involves the participation of more than 400 counties and the governors of twelve states, are rare. Still, regionalism remains popular at the theoretical level, with planning scholars continuing to discuss the possibility of regional solutions to economic, environmental, and infrastructure problems that are not contained neatly within city or state borders.

One such scholar-led initiative is the idea of the “megaregion,” first introduced into American planning discourse in 2005. Proponents have concentrated on ten megaregions within the contiguous United States, which contain 80% of U.S. economic activity (Ross and Woo, 2011). These agglomerations of population and economic activity offer the potential for increased growth and innovation, but also the risk of environmental destruction, increased economic inequality, and increasingly inadequate infrastructure. The economies of megaregions bear a disproportionate share of the responsibility for American competitiveness in a rapidly changing global economy, and therefore, megaregional planning approaches “provide the strategy that allow us to act globally while addressing local quality-of-life issues” (Ross, 2009).

From the start, to promote the idea of the megaregion has been to call for collaborative planning. As the

megaregional idea found purchase among planners, it inspired new partnerships and discussions. This paper discusses the development of the megaregion concept in the context of collaborations—both the collaborations implied as necessary to megaregional planning, and the collaborations, both within and outside the proposed megaregions, spawned by megaregional research. Even if the “megaregion” never becomes fully accepted as a part of American governance or policy-making, the idea still proves fruitful in prompting conversations within and across regions.

Creation of the Megaregion

The “megaregion,” as used in American planning, is descended directly from the mid-century discussion of the “megalopolis” by Jean Gottmann (1961). Gottmann argued that the area extending from Boston to Washington, D.C. was blending from a series of distinct cities to one long contiguous chain of urban development. Gottmann’s idea was updated and expanded by studio classes at the University of Pennsylvania and Georgia Institute of Technology, on the “Northeast” and “Piedmont Atlantic”

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Name of Megaregion	Est. Population (2010)	Major Cities Included	Source
Piedmont Atlantic	17.6 million	Atlanta, Charlotte	Contant, Ross, et al. (2005)
Northeast	52.3 million	Boston, New York, Philadelphia, Washington, D.C.	University of Pennsylvania (2005)
Northern California	14.0 million	Oakland, San Francisco, Sacramento	Metcalf and Turplan (2007)
Southern California	24.4 million	Los Angeles, San Diego, Las Vegas	Kern County Council of Governments et al. (2005)
Great Lakes	55.5 million	Chicago, Detroit, Pittsburgh, Cleveland, St. Louis, Minneapolis	Delgado et al. (2006)
Texas Triangle	19.7 million	Austin, Dallas, Fort Worth, Houston, San Antonio	Zhang et al. (2007)
Florida	17.3 million	Orlando, Tampa, Miami	South Florida Regional Planning Council (2006)
Cascadia	8.4 million (US portion only)	Portland, Seattle, Vancouver (Canada)	Portland State University (2005)
Gulf Coast	13.4 million	Houston, New Orleans	Glover Blackwell and Duval-Diop (2008)

Table 1: Major Megaregions Identified in the United States (population numbers courtesy of America 2050).

megaregions, respectively (University of Pennsylvania, 2005; Ross, 2006).

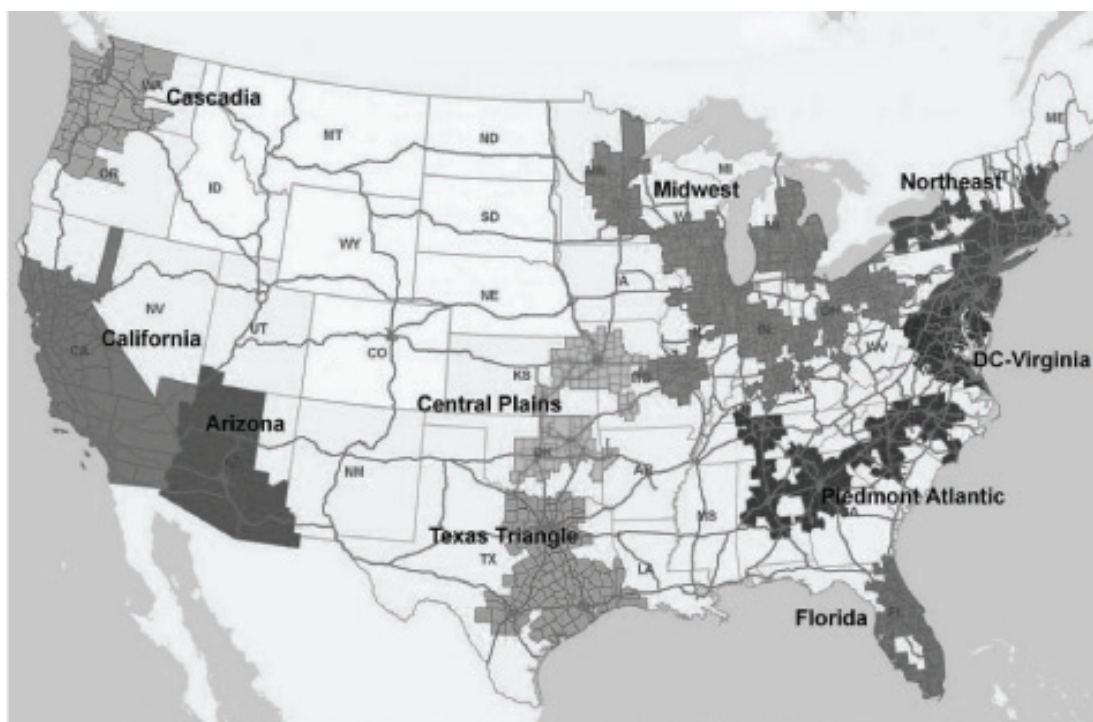
The current commonly accepted definition of the American megaregion is “networks of metropolitan centers and their areas of influence that have developed social, environmental, economic, and infrastructure relationships” (Ross and Woo, 2011). A loose coalition of researchers have identified ten significant “megaregions” in the contiguous United States, as identified in Map 1, below. No one group has a monopoly on the use of the term “megaregion,” and different studies have identified different megaregions. An alternate 2008 map published by RPA identifies eleven megaregions (RPA, 2008). These variations are a result of the bottom-up approach to megaregional research: rather than one particular theorist proposing delineation criteria, multiple groups proposed and researched particular megaregions, and among those groups, delineation criteria have varied (CQGRD, 2008). Table 1 lists the best-known megaregions and the literature identifying them.

The term “megaregion” is also in use by writers and planners outside the United States, but it has a different meaning. In the United States the term “megaregion” designates a chain of interconnected cities, geographically distinct but connected via trade, commute patterns, and transportation infrastructure. Outside the United States, the term has more frequently been used to describe a very large city and its surrounding suburbs. For example, Shanghai

and Moscow have been referred to as “megaregions” by themselves (Ozumi and Sano, 2009; Argenbright, 2013).

Closer to the American example are some European megaregions, such as the Randstad in the Netherlands (Meijers et al, 2012). The differences between American and European megaregional research lie in emphasis. Because the European Union uses regional funds to address interregional inequities, particularly in economic and infrastructure investment, much European megaregional research has concentrated on inequitable development between different parts of the same megaregion, or between a megaregion and its periphery (Faludi, 2009). The research in the United States, as discussed later in this paper, has focused, thus far, primarily on economic competitiveness and infrastructure investment. At least one paper on inequality and megaregions has argued that focusing on spatial organization is a misdirection (Fainstein and Fainstein, 2009).

Finally, in the American case, although the megaregion is a descriptive phenomenon based on analysis of existing trends in economic development and population growth, its proponents have never meant it as strictly descriptive. In her introduction to the 2009 edited volume *Megaregions: Planning for Global Competitiveness*, Catherine Ross writes, “Cities can no longer act alone to meet the economic and social challenges they face. However, the megaregion may be a more effective alternative to marshal



Map 1: Megaregions in the United States. *Image courtesy of CQGRD.*

the necessary resources and implement the solutions necessary to meet these challenges” (Ross, 2009). The megaregion is, thus, positioned as a tool to promote the economic competitiveness and well-being of the areas that adopt it. Not only are megaregions supposed to benefit from collaborative planning within the megaregion, but subscribing to the concept of a given area as a megaregion is intended to promote collaborative planning.

Examples of Megaregional Collaboration

The idea of the American megaregion originated in an academic setting, with the first megaregional studies emerging out of universities. But several non-academic institutions support the concept as well, most notably the Regional Plan Association (RPA), a planning research and advocacy organization primarily focused on the greater New York City area; the Ford Foundation, which helped fund the research that led to the 2009 *Megaregions* edited volume; and civic organizations such as the Southern California Association of Governments (SCAG). With the help of these new partners, the original researchers organized a series of dialogues with prominent political and business actors within identified megaregions.

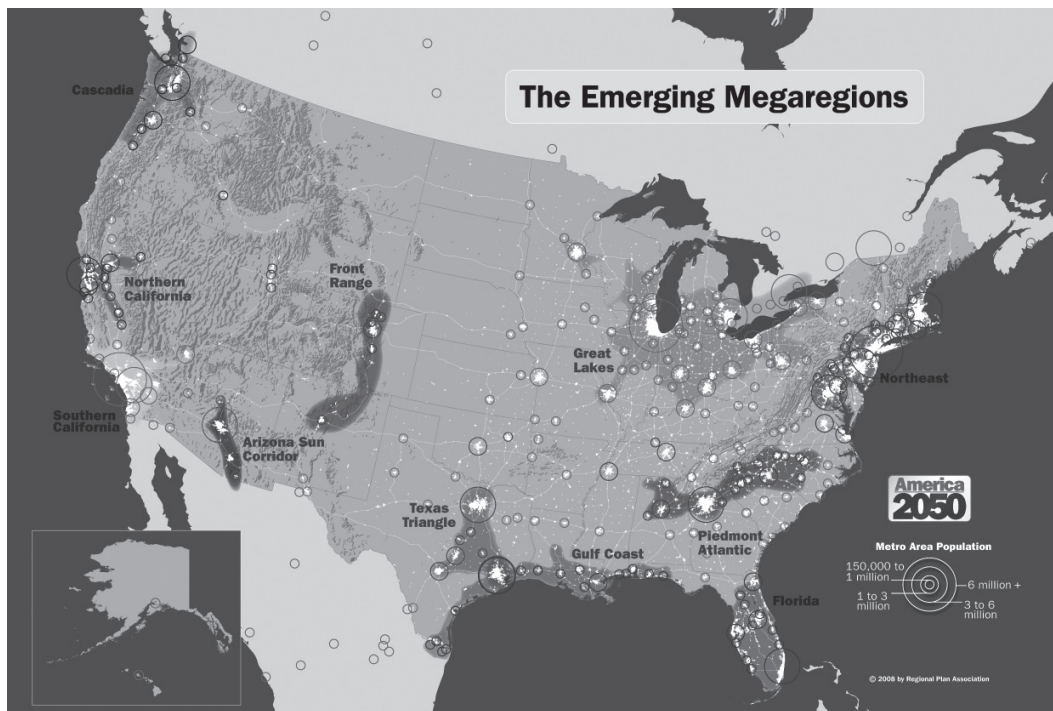
RPA is especially prominent in the organization of megaregional talks, under the banner of its “America 2050” project, which is meant to influence infrastructure development in the face of projected growth and economic activity. Between November 2008 and September 2009, RPA sponsored a series of six America 2050 forums that brought together researchers with policy advocates, political and business leaders within each megaregion, and focused primarily on issues of economic growth, business

development, and infrastructure investment. In addition, the RPA sponsored research conferences devoted to megaregional issues in Healdsburg, California, in 2007 and 2012 (Pisano, 2013). In the Piedmont Atlantic megaregion, Georgia Tech’s CQGRD hosted a series of three “Mayors’ Megaregion Meetings” in North Carolina, South Carolina, and Georgia from 2009-2010 (CQGRD, n.d.).

So far, these megaregional meetings have not borne any obvious policy fruit. That is not to say that they were unproductive: it is entirely possible that discussions at any of the meetings sparked smaller, informal collaborations between individual participants. The combination of a drop in available funding caused by the recession and a political climate becoming increasingly hostile to partnerships and governance initiatives, in general, slowed the momentum of megaregion-wide meetings. Instead, both RPA and CQGRD currently focus efforts more narrowly on a particularly promising area of megaregional discussion: transportation infrastructure.

Transportation Planning and the Megaregion

The American megaregion is defined, in part, by transportation infrastructure: since the boundaries of megaregions are delineated through analysis of commodity flows, highways and waterways become crucial factors (Ross and Woo, 2001). Ross, Barringer, and Amekudzi (2009) found that megaregions relied more heavily on trucks for freight transportation for both domestic and international imports and exports than did areas not part of identified megaregions. Because of their heavier population density, megaregions have fewer miles of highway and local road per 1,000 people than do areas not contained



Map 2: Alternate delineation of American megaregions. Image courtesy of the Regional Plan Association.

within megaregions. The authors concluded that increased transportation investment and expansion into new modes of transportation (particularly rail) would be necessary to ensure the continued economic competitiveness of American megaregions.

Meanwhile, advocates of high-speed rail (HSR) frequently use the megaregion as a setting for proposed rail systems and argue that the growth of megaregions points to the need for HSR to spur economic development with less environmental damage than automobile-centric growth. A 2011 studio project by the University of Pennsylvania's School of Design made the connection explicit:

The Northeast Megaregion extends from Maine to Virginia and is the economic powerhouse of the nation. It is home to 50 million residents and has a \$2.6 trillion economy focused along the dense Northeast Corridor from Boston to Washington. By 2050, the Northeast is predicted to grow by an additional 20 million residents, which has the potential to generate enormous economic growth.

This growth is threatened, however, by the strained capacity of the Northeast's infrastructure systems. Congested and deteriorating from years of deferred maintenance, the highways, runways, and rail lines of the Northeast cannot meet the needs of the future.... High-speed rail has the potential to link economies, regenerate regions, and provide new opportunities for millions of Americans. Many of America's global competitors have embraced high-speed rail, from the European Union to Russia, Brazil, and Saudi Arabia, and some have made

these systems centerpieces of their economic growth strategy. The United States risks falling behind if it does not invest in 21st Century infrastructure. (University of Pennsylvania, 2012)

The University of Washington and Portland State University jointly published a similar series of reports on the Cascadia megaregion that discussed the possibility of HSR in Cascadia (University of Washington and Portland State University, 2011).

Continuing a long tradition of advocacy for greater investment in rail and other alternatives to passenger-car-intensive transportation, RPA also pointed to the growth of megaregions in its arguments in favor of HSR. A 2011 report on HSR throughout the country contained separate analyses for each megaregion (America 2050, 2011). Discussion on the RPA's website of megaregions explicitly names HSR as "the key new links in this mobility system" (America 2050, n.d.[b]).

The affiliation between megaregions and HSR is not hard to understand. HSR is by definition multi-jurisdictional. With the exception of one section in southern Florida, all of the HSR hubs proposed in the 2009 Vision for High-Speed Rail in America involved more than one state (Federal Railroad Administration, 2009). The megaregion provides a setting in which HSR makes sense. Agreeing to help fund and build HSR is easier to do (and argue in favor of) if a policymaker has already accepted the premise that infrastructure investment that benefits the entire megaregion will benefit his or her jurisdiction.

Moreover, using megaregional language allows HSR advocates to frame the debate about whether or not to invest in HSR in the setting of competition between

regions around the world. For example, the University of Pennsylvania report referenced HSR use by America's "global competitors" while authors of the 2009 megaregions book subtitled it *Planning for Global Competitiveness*, although international trade is not a strong focus in the book. Advocates of HSR employ the megaregion to make rail seem like less of a luxury and more of a necessity: a globally popular transportation method for a globally competitive region.

By its nature, HSR is a significant investment requiring commitment from multiple jurisdictions. In 2012, Amtrak estimated that to install HSR in the Northeast Corridor between Boston and Washington, which has one of the highest levels of passenger-rail use in the country, would cost \$151 billion (Nussbaum, 2012). As such, megaregions offer a potentially useful way to bring together interested parties, facilitate discussion and agreement on goals, and coordinate the multiple steps needed in a multi-state construction project. However, to date, megaregional rhetoric has not been powerful enough to overcome long-standing political objections to rail at both the federal and state levels. The arguments of megaregional advocates have tended to focus on the need for investment, whereas opponents of rail have been concerned with the admittedly large costs of extensive rail projects. Support for HSR outside California stagnated since an initial flurry of interest in 2008 (Freemark, 2013), and even in California, where voters previously approved the issuance of nearly \$10 billion in bonds for construction, HSR remains controversial (Christie, 2014). The Federal Highway Administration (FHWA) has also been examining megaregions as a guide for directing future infrastructure investment. FHWA contracted with CQGRD to produce two separate literature reviews on megaregions, regional planning, and multi-jurisdictional transportation initiatives (CQGRD, 2008 and 2011). FHWA also conducted quarterly conference calls on megaregional research from August 2010 to March 2013 (FHWA, n.d.) and expressed an interest in research focusing on freight movements within megaregions.

As with HSR, the federal highway system is multi-jurisdictional and promotes freight and passenger flows between different areas in the megaregion. Unlike HSR, however, the federal highway system has a long history of creating, and being supported by, top-down regionalism. In the course of authorizing transportation spending in the 1970s, the federal government created Metropolitan Planning Organizations (MPOs), which help allocate transportation funding on a sub-federal level. As such, megaregional initiatives as led by the FHWA will be more federally directed than either the initial conversations over general megaregional issues or the efforts so far to use megaregional language to promote HSR.

The 2008 and 2011 CQGRD reports speak to this tension about the role of the federal government in leading megaregional efforts. In 2008, the researchers asked in the report's executive summary, "Has the time come for

empowered regional planning from the bottom up in the United States?" However, the 2011 report concludes, "[F]ederal leadership that can link and coordinate these fragmented actors and multi-scale decision making systems is essential." If the FHWA's challenge is to find a way to address the problems identified at the megaregional level while working with local actors, megaregional advocates will have to balance a potential increased role for the federal government with maintaining local dialogues and incorporating changing local concerns into megaregional analyses.

Conclusion: The Future of Collaborative Megaregional Planning

Nearly a decade after the publication of the first works identifying American "megaregions," the megaregion as unit of analysis is gaining an increasing role in planning conversations, especially in the area of transportation planning. Advocates of the megaregional idea speak with urgency. If megaregions, containing so much of the United States' population and economic activity, are to be able to attract further investment and continue the economic growth needed to support their residents, then they need investment in infrastructure and megaregion-wide answers to problems of economic growth and environmental degradation.

Between 2008 and 2011, organizations promoting the megaregional idea—universities, policy advocates, civic boosters, and government officials—convened a series of conversations about a wide range of issues, both within individual megaregions and about the American megaregions as a whole. More recently, several proponents of the megaregional idea argued that the rise of the megaregion necessitates multi-jurisdictional investment in HSR. But the majority of megaregional research at the moment is being led by the Federal Highway Administration, which is not necessarily positioned to be a strong advocate for investment in rail, and the momentum is in the hands of the federal government. On the one hand, top-down regionalism has traditionally been more effective in American planning than bottom-up regionalism (CQGRD, 2011). On the other, linking megaregions to federally-led transportation planning risks limiting the usefulness of the megaregional idea to exclusive association with highway transportation, rather than functioning as a platform to discuss a variety of issues.

There remain plenty of avenues for the megaregional idea that have not yet been fully explored and that do not fall under the rubric of transportation investment. One is to investigate potential megaregional development as centered around shared environmental resources, such as watersheds. A megaregional approach, for example, could be useful in addressing the decades-long "water wars" between Alabama, Tennessee, and Georgia, all of which lie within the Piedmont Atlantic megaregion. Another is to use megaregional definitions as a guide in exploring the movement not only of goods and people,

but of ideas, and thus to understand how membership in a megaregion might affect a particular place's knowledge transfer and technology development. A third possibility of megaregional research would be to follow the European model and focus more explicitly on differences in equity between "core" and "periphery" parts of the megaregion, and the implications for economic and infrastructure development.

The strength of the megaregional idea lies in its recognition that new developments in the movements of goods, ideas, and people means that activity is happening at a scale above the local or even the state, and planning initiatives should address these supra-local, sub-federal trends. As both a unit of analysis and as a policy tool, the megaregional idea spurred new dialogues and collaborations, even as the megaregions themselves were supposed to benefit from collaborations. If the megaregion is a useful concept, then those dialogues should continue even as policy opportunities shift.

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Clinch River Valley Initiative: Using Community Based Collaboration to Build Local Economies And Create Change in Appalachian Virginia

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The Clinch River Valley Initiative (CRVI) is a consensus-based, grassroots effort that unites a broad group of stakeholders to establish Southwest Virginia's Clinch River Valley as a global destination based on its unique biodiversity, natural beauty, cultural attractions and outdoor opportunities. By working at a watershed level with multiple partners, this grassroots effort has developed significant ownership and momentum that may serve as a model for other communities in Appalachia and beyond. In this paper, we discuss the structure and function of CRVI in comparison with other consensus-based efforts that utilize community-based collaboration. We identify challenges that CRVI faced, detail its successes to date, and analyze how well the initiative is meeting its goals.

Background

The Clinch River Valley Initiative is a pioneering effort to build local economies while enhancing natural resources in the coalfields of Southwest Virginia, focusing on the Clinch River Valley—one of the most biodiverse river systems in North America. This grassroots effort has developed significant support and momentum throughout the region. Utilizing a consensus-based approach, diverse project partners—including citizens, not-for-profit organizations, and business and community leaders—have developed a robust vision and goals around outdoor recreation, healthy ecosystems, and revitalized communities. This group seeks to establish Southwest Virginia's Clinch River Valley as a global destination based on its unique biodiversity, natural beauty, cultural attractions and outdoor opportunities.

CRVI emerged following a forum called Building Local Economies in Southwest Virginia in September 2010, initiated with community partners and convened and facilitated by the Institute for Environmental Negotiation, University of Virginia (IEN). At that session, a highly diverse group expressed their desire to encourage localized and environmentally responsible economic development, with a focus on outdoor recreation and downtown

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revitalization — and what shortly after became known as the “Clinch River Valley Initiative,” or “CRVI,” was born. As of March 2014, with a contact list of 350 people, CRVI includes five productive action groups, an attentive steering committee, and numerous enthusiastic and dedicated community leaders from diverse organizations. By working at a watershed level with multiple partners, this largely grassroots effort developed significant ownership and momentum that may serve as a model in other communities in Appalachia and beyond.

The Clinch River, which flows through Russell, Scott, Tazewell and Wise counties in far southwestern Virginia, supports more rare species of freshwater mussels and fish than any river system in the United States (The Nature Conservancy 2012). The Nature Conservancy has designated the Clinch River Valley as a biodiversity hotspot and “one of the last 20 greatest places on Earth” because of the valuable, yet imperiled, Clinch River aquatic ecosystems (The Nature Conservancy 2012). The Clinch is lined by farms, small towns, old mines, mills and fishing camps, and is well loved by residents in the region. Community members have been baptized, learned to swim, and fished in its waters, and walked its shores for generations.

When CRVI began, residents expressed the desire to protect the river while encouraging regional economic growth. With facilitation and coordination assistance from IEN, they embraced an asset-based development strategy — building economies and strengthening communities based on the natural and cultural assets of the region - as a way to meet broad community goals. After a few initial meetings in the town of St. Paul, Virginia, a youth-led panel inspired participants to craft a shared vision and goals for the initiative, which eventually became the following:

By 2020 the Clinch River Valley will be a global destination based on its unique biodiversity, natural beauty, cultural attractions and outdoor opportunities. This collaboration will bring measurable economic, environmental and social benefits to the region’s communities while protecting the Clinch’s globally rare species.

The University of Virginia’s Institute for Environmental Negotiation (IEN) has been involved since CRVI’s inception as convener, facilitator, and coordinator. IEN was founded in 1980 as an affiliate of the Department of Urban and Environmental Planning at the University of Virginia. With a mission of “empowering communities to create shared solutions,” IEN specializes in conflict resolution and consensus building to create ecologically, socially and economically sustainable communities. Frank Dukes and Christine Gyovai serve as CRVI facilitators and coordinators, with assistance from a number of graduate planning students.

Clinch River Valley Structure and Participants

The Clinch River Valley Initiative has an unusually diverse membership of non-profit leaders, activists,

economic development officials, representatives from state and local agencies, elected officials and citizens. Participants include water quality monitoring groups, power companies, tourism development corporations, local schools and universities, state agencies, and the local governments of Russell, Scott, Tazewell and Wise Counties, as well as the towns of St. Paul, Cleveland, Dungannon, and others in the Clinch River Valley. Early in the initiative, participants created an organizational structure of five action groups, each with its own chair or co-chairs, corresponding to the five goal areas that had been developed by CRVI participants.

- Goal 1: Develop a Clinch River State Park.
- Goal 2: Develop and Integrate Access Points, Trails and Campgrounds along the Clinch River.
- Goal 3: Enhance Water Quality in the Clinch River.
- Goal 4: Develop and Enhance Education Opportunities for all Community Members in the Clinch River Watershed.
- Goal 5: Connect and Expand Downtown Revitalization, Marketing and Entrepreneurial Development Opportunities in the Clinch River Valley.

Since then, the action groups have developed their own goals and metrics to measure their progress.

Each of the action groups meets regularly outside of initiative meetings and maintains its own communications. The groups often collaborate on projects as well. As the effort became larger and more complex, participants decided to create a steering committee to help guide the overall structure and function of CRVI, provide oversight of funding requests, and coordinate action group initiatives. The committee has no authority over the decisions of individuals or action groups; rather, it ensures communication between action groups in order to take advantage of available resources and to prevent duplicative activities. The CRVI Steering Committee was created in spring 2012 and includes 25 members who are citizens, community leaders, and action group chairs. Steering Committee decisions are made by consensus.

Role of the Facilitator

As CRVI developed over time, IEN provided facilitation, coordination and technical support, including addressing conflict and challenges as they arise. As the facilitator and convener of the Clinch River Valley Initiative, IEN plays a unique part in its operation and success. IEN attempts to convene CRVI participants through face-to-face meetings when possible, as this leads to positive and effective consensus-based groups (Innes and Booher 2010).

IEN plays many roles, including some that go well

beyond those of traditional facilitators. One of its major roles has been coordinating logistics and facilitating quarterly meetings and monthly group conversations for the Steering Committee. IEN wrote grants, recruited participants, and helped strategize next steps. IEN maintains the website, continually updates the living CRVI Action Plan, and takes on individual projects as necessary. While doing this, IEN also promotes best practices for consensus-building, including accountability to participants, ensuring that ground rules are followed, and working in ways such that all voices have the opportunity to be heard.

Community-Based Collaboration as a Framework for the Clinch River Valley Initiative

The Clinch River Valley Initiative uses a consensus-based approach to decision making; that is, all major decisions are brought to the steering committee for discussion and no major decision is made until all members of the steering committee agree. Making decisions through consensus is consistent with other community-based collaborations (CBCs). CBCs emerged in the 1990s in response to dissatisfaction with traditional structures for natural resource management and decision-making. CBCs are characterized by diverse membership, widely shared goals, joint indicators of success, cooperative strategies and actions, and provisions for carrying out jointly agreed-upon objectives (Dukes, Firehock and Birkhoff 2011).

CBCs have a unique ability to address the needs of diverse stakeholders and encourage collaboration. Without ownership by any one party or organization, participants

must work together to solve challenges, meet shared goals, and develop consensus.

Despite initial skepticism of the community-based collaboration framework, CBCs today are internationally recognized for their effectiveness in making institutions and decision-making processes more adaptive and efficient in handling multi-dimensional issues regarding the use and development of natural resources (Dukes, Firehock and Birkhoff 2011).

Progress of the Clinch River Valley Initiative

Clinch River Valley Initiative participants have made impressive progress in the last three years. The five action groups collaborated with each other and stakeholders at the local, state and federal level to build partnerships and create lasting change in the region. Implementation started in each of the five CRVI goal areas, with actions ranging from the creation of an annual Clinch River Environmental Education Symposium, to installation of access points on the river, to seeking funding for development of a new state park.

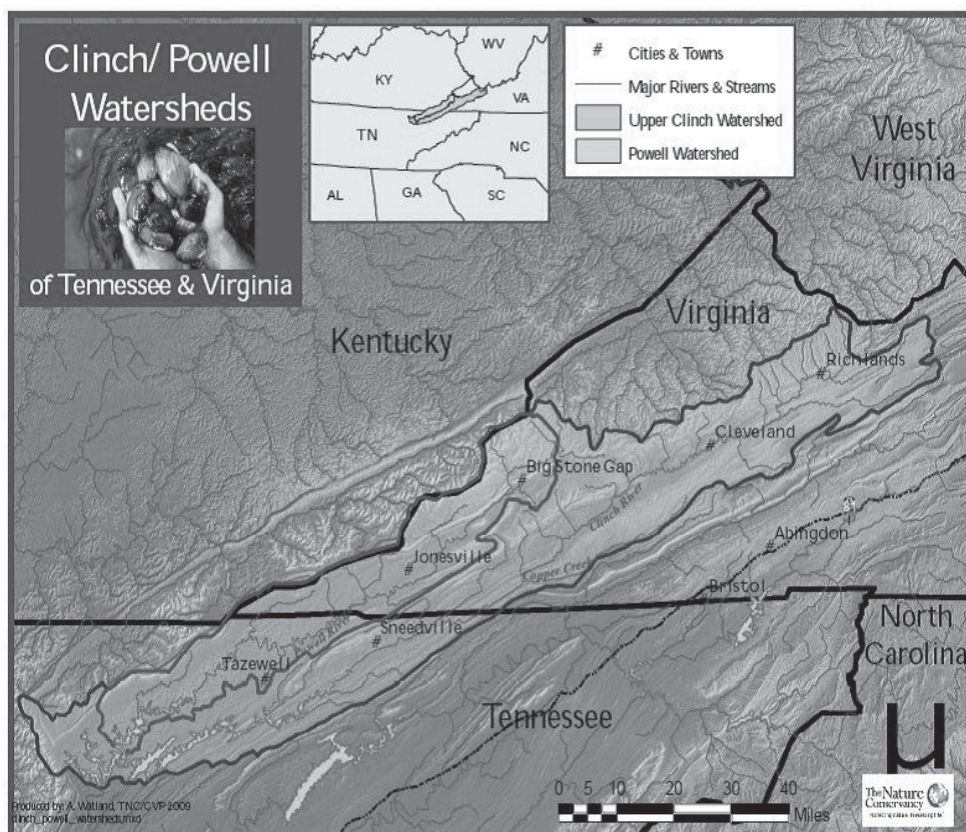
State Park Action Group

The idea for the creation of a Clinch River State Park was introduced in the mid-1990's by a Virginia State Senator, and after a period of dormancy, developed as a key goal of the Clinch River Valley Initiative. Participants understand that they must view the creation of the Clinch River State Park as a long-term goal due to state funding limitations. The Virginia Department of Conservation and Recreation

(DCR) has kept several proposed parks on a "waiting list" for future development for almost ten years, although the current state budget amendment supporting the state park may change this. The State Park Action Group is therefore attempting to garner funding and support from other sources that may increase their likelihood of receiving DCR support when funding becomes available. Action group members meet periodically with parks stakeholder groups, developed a favorable economic impact analysis, and received numerous resolutions of support from localities. They are closer than ever to creating a state park along the Clinch River.

Access Points Action Group

Given the enormous potential for the Clinch River Valley region to become an attractive tourism destination, the Access Points Action Group seeks to develop and



enhance public access to the river for outdoor recreation opportunities including fishing, kayaking and canoeing. Though there are already several public access points along the river, there are lengthy float times between those points that may not be accommodating to families, seniors, beginners, and other outdoor recreation enthusiasts. Access points that allow for shorter floats, approximately two hours apart, to downtown areas are anticipated to encourage visitor interest, river usage by diverse users—especially families, and local leisure in downtown areas, resulting in increased commerce and demand for local businesses.

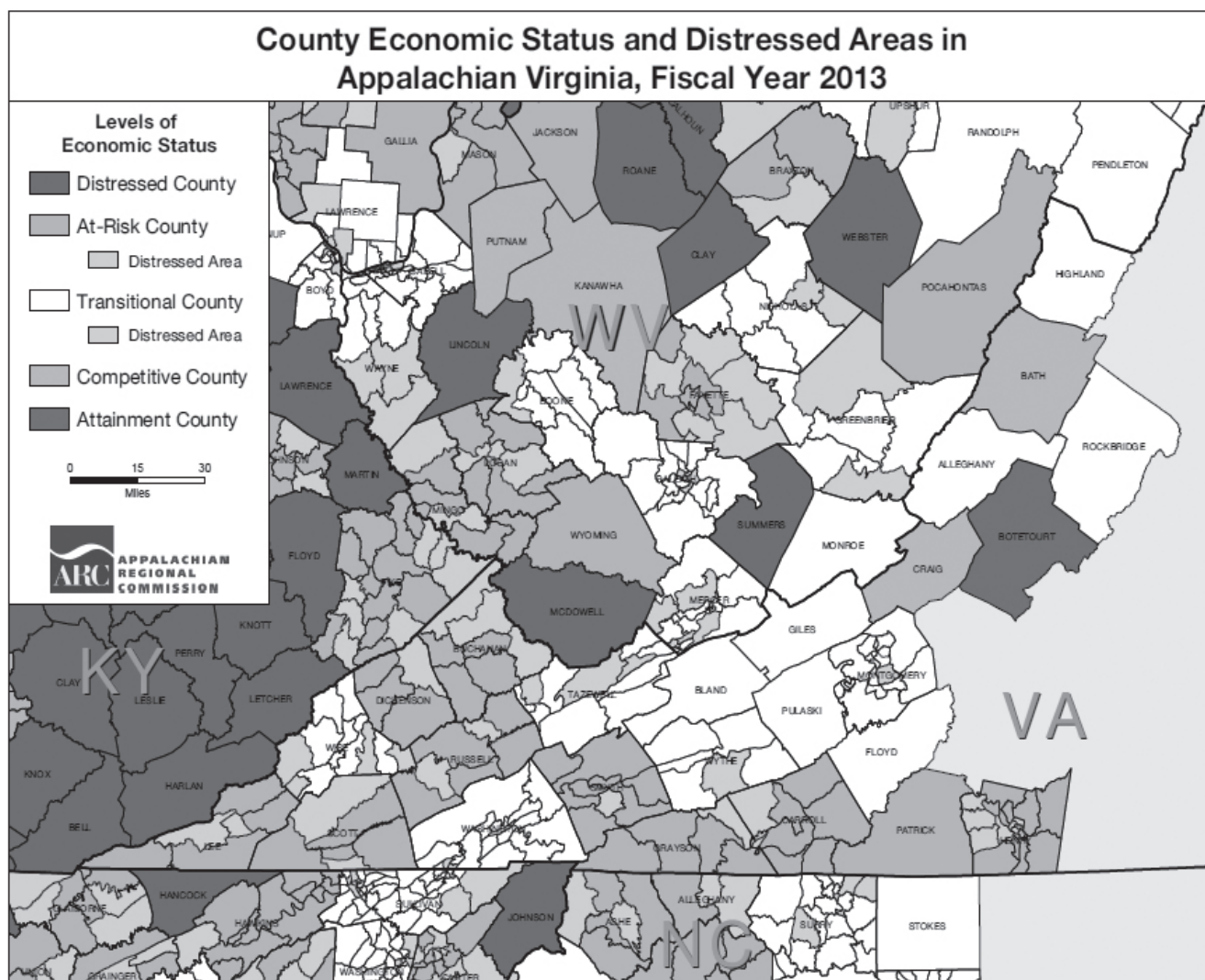
The group is in the process of installing access points and signage on at least five different locations along the Clinch, and Action Group co-chairs have worked to do significant outreach with CRVI members to access point property owners. The Friends of Southwest Virginia, a non-profit organization that is also a CRVI fiscal agent, is helping to oversee installation of the access points. It is creating an inventory of outdoor recreation offerings in the region. Finally, the Access Points Action Group is currently evaluating several sites along the river to develop

a pilot project for access points, trails and campgrounds.

Water Quality Action Group

Besides its value supporting rare and endangered aquatic species, the Clinch River also supports many communities whose history and future are intimately connected to the vitality and integrity of its water. Thus, preserving and restoring clean water is a key element of the Clinch River Valley Initiative. Currently, certain sections of the Clinch River and some of its major tributaries are listed on the EPA and Virginia's impaired waters list. Correcting problems and enhancing the condition of these impaired sections is a high priority, as is the conservation of currently healthy waters.

The Water Quality Action Group hosted several water quality cleanups in the Clinch River, including hazardous household waste collection days, and has removed over 6.7 tons of trash from the watershed in partnership with the Upper Tennessee River Roundtable and other groups. The group continues to plan for community outreach and awareness regarding water quality including the hiring of a



Clinch River RiverKeeper, to monitor water quality in the river, educate community members about ways to improve water quality, and advocate for a healthier river. Finally, the Clinch Powell Clean Rivers Initiative continues to update CRVI members about its ongoing activities as well.

Environmental Education Action Group

The Environmental Education Action Group aims to build on local efforts, such as a partnership with the group SouthWest Environmental Education Team and the student-run group Wetlands Estonoa, by continuing to educate both children and adults who live in the Clinch River watershed. This group is working to empower local citizens with knowledge about environmental issues so that they will support sustainable businesses, act to restore the local environment and improve public health.

The group developed an annual Clinch River Environmental Education Symposium, held in the spring of each year in St. Paul, a once-vibrant town in the middle of the watershed that is seeing significant renewal activity. The group is planning a hub for environmental education in the watershed that would link numerous environmental and cultural historical groups in the region. Group members are also assisting students at the University of Virginia's College at Wise develop an app that highlights biodiversity on the Clinch for use by area outfitters and other environmental education organizations.

Downtown Revitalization, Entrepreneurship and Marketing Action Group

The Downtown Revitalization, Entrepreneurship and Marketing Action Group is using a regional approach to promote opportunities for regional revitalization. Members aim to help establish several communities as members of the Main Streets Program, a community development and revitalization effort sponsored by the Virginia Department of Housing and Community Development (DHCD). The program is for downtowns seeking to become vibrant destinations with strong identities. The Town of St. Paul is currently participating in this program and taking advantage of its many benefits and funding opportunities, and other Clinch River communities have recently applied to the program.

The action group has helped to support an annual regional Entrepreneurship Challenge and an Opportunity Summit to support new and existing businesses. Group members garnered support from the Steering Committee to hire a marketing firm to develop Clinch River Valley branding materials; the group also worked with a regional marketing organization, the Heart of Appalachia Tourism Authority, to implement these materials via advertisements, signage, brochures, and other means.

Given the enormous potential for the region to become an attractive tourism destination, this action group also seeks to build and support a tourism infrastructure in support of outdoor recreation, historic and cultural tourism

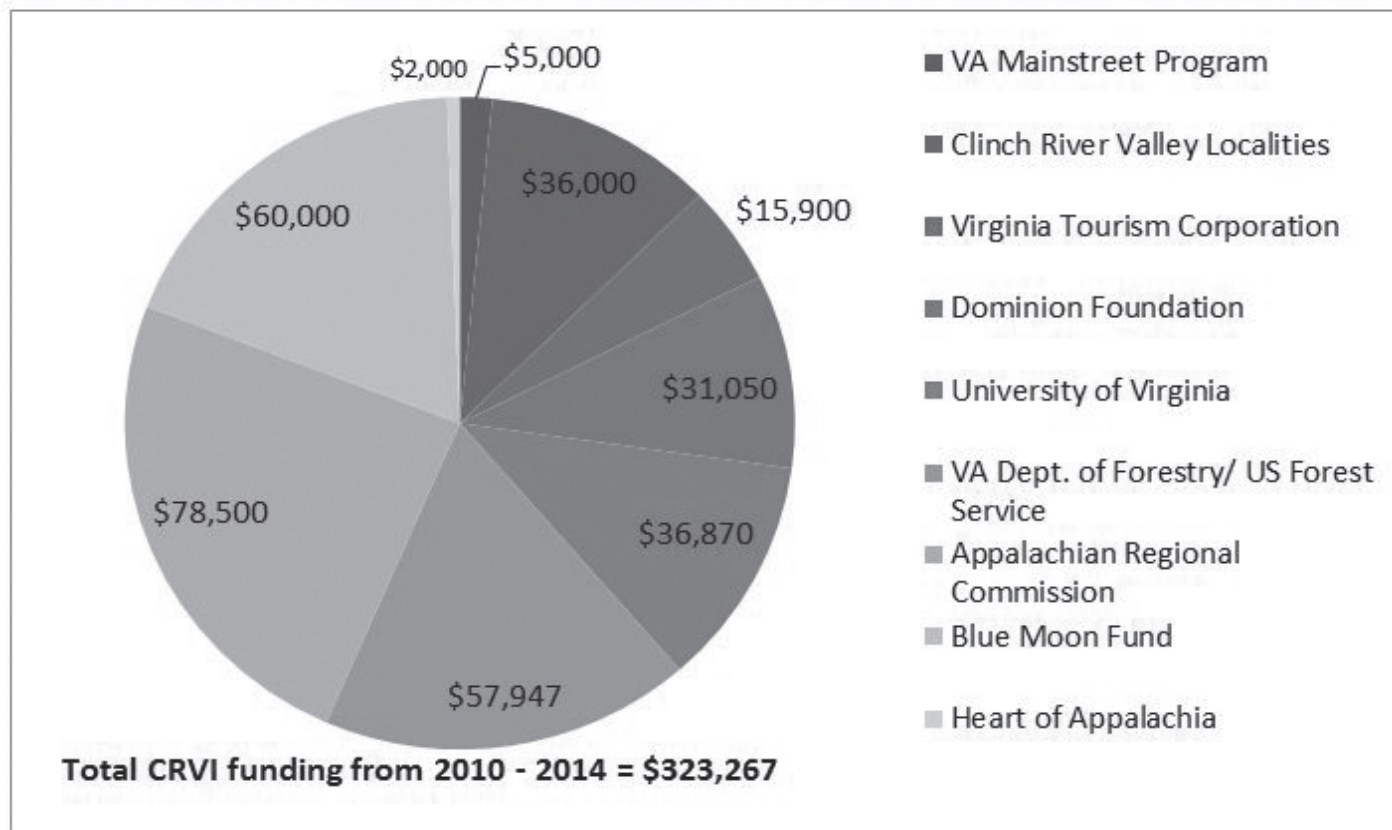


Figure 1; CRVI Funding Share and Contributors.

activities. This will occur by working with other action groups to identify needed tourism resources and amenities, continuing to encourage entrepreneurs in the tourism sector, and branding the region as a destination with vast and diverse tourism opportunities.

Advantages and Challenges of Community-Based Collaboration

IEN facilitators have observed several advantages and challenges of using a collaborative approach. In this section, we will describe our observations of this approach.

Holistic Approach

A community-based collaboration approach is particularly advantageous for regional and environmental planning. It is useful for regional planning because its holistic approach, made possible because it is unhindered by jurisdictional rules and expectations, accommodates a range of issues at multiple scales (Dukes, Firehock and Birkhoff 2011). Whereas traditional environmental planning risks polarizing participants by prioritizing environmental issues over anthropocentric issues, a CBC frames the issue broadly to envelop multiple goals. The CRVI has found success in this approach and is one of the few initiatives in Southwest Virginia where representatives of environmental non-profits, the Tennessee Valley Authority, Dominion Power, local governments, economic development agencies and concerned citizens find commonality in a shared vision.

Adaptive and Flexible

CBCs are adaptive and flexible in structure and scope, seeking solutions beyond natural and political boundaries and adapting to local sentiments or new regulations. These characteristics are necessary for ensuring that an initiative is working with the most current information with the most effective strategies. The CRVI has remained flexible, accommodating the addition of a steering committee, the split of one action group into two, and the formation of a subgroup that decided to work both outside and inside of the structure of the CRVI.

Transferable

The CBC framework capitalizes on existing social, financial and human capital in the area of focus, making it transferable and applicable to any group of stakeholders working collaboratively. Because CBCs are a relatively young approach to community development, practitioners must still overcome skepticism when introducing the concept. However, the more communities that address complex issues with the framework, the more researchers will understand about local determinants of success, and the more examples that practitioners will have to learn from.

Building Social Capital

CBCs immediately build social capital by bringing

together diverse stakeholders. Simply aggregating so many residents of the region, many of whom are leaders in their communities, allows people to network with each other, share information and engineer solutions in a personal, effective way. Collaboration between these members builds expertise among participants and helps to identify informational needs. CBCs send the message that residents can improve their own communities without relying on resources from outside the region or government support. This is a particularly powerful message for Southwest Virginians, whose goals have long been constrained by a lack of financial resources.

Engaging Communities and Preventing Confrontation

Community-based collaboration originates at the grassroots level. Because of this, it is able to invite and engage citizens much better than government-sponsored initiatives. Stakeholders are given equal power in the organization, enabling citizens who feel disempowered by traditional forms of civic participation. Furthermore, CBCs incorporate the knowledge of citizens and professionals, each of whom experience environmental issues differently. This deepens the knowledge base of participants and adds legitimacy to problem solving efforts. CRVI participants have said that this approach generates excitement and hope in a way that is not often experienced through other efforts in the region.

Several participants have mentioned how helpful it is to have IEN act as an outside facilitator for CRVI. Members of IEN, because they come from outside the region, avoid the appearance of impropriety and bias.

Funding Appeal

As a large, multi-purposed initiative, CRVI is capable of attracting diverse funders interested in specific CRVI goal areas. This lends CRVI greater credibility and momentum as more and diverse funders support it. For example, Clinch River access point development has received funding from federal agencies, private foundations and Clinch River Valley localities. This pooling of resources allows residents to take ownership of their accomplishments, even though much of the funding came from outside resources.

Challenges of Community-Based Collaboration

Although the CBC framework has demonstrated success at many scales, it consistently faces challenges related to achieving legitimacy, participant diversity and sustainable funding sources. The CRVI has experienced all of these barriers to success and participants are constantly considering strategies to overcome them.

Lack of Financial Capital

Communities in the Clinch River watershed experienced the decline of local industries in addition to long-term poverty and population decline (see Figure 1). Low financial capital in the region can present challenges even when funding might be available from outside of the

region, as some grants require matching contributions from localities. The lack of local financial capital prevents these communities from meeting the most basic criteria for grant funding from agencies.

Increasing Participation

The Appalachian Regional Commission lists many areas of the Clinch River watershed as having a distressed or at-risk economic status (Appalachian Regional Commission 2012). Low-income residents are less likely to participate in citizen-based community development efforts because of the high relative costs of participation (Checkoway 1987). Barriers to participation include childcare costs, loss of work time and travel costs. Another factor limiting diverse involvement is the limited financial capacity of smaller organizations or local governments in the region. Unable to fund staff involvement at CRVI meetings, these organizations and governments cannot participate fully and connect their organizations to the goals of the CRVI.

Legitimacy

A community-based collaboration must have a diversity of participants and give credence to all opinions and concerns in order to maintain legitimacy in the eyes of participants. CBCs struggle with legitimacy when certain stakeholders do not participate. Facilitators of CRVI have addressed this threat by reaching out to key stakeholder groups, building relationships and understanding their concerns, beginning well before the first meeting in September 2010 and continuing as the process has moved forward.

Some participants in CRVI have noted that IEN's presence as an outside actor is helpful for preventing favoritism and unfair power dynamics. However, it is possible that some residents could be wary of an outside organization becoming involved in local politics and relationships. As more local residents have promoted the initiative, and as it gains recognition for its success, it has gained more legitimacy locally and statewide.

Power Dynamics and Facilitation

A consensus-based approach is intended to reduce the influence of uneven power. However, it is difficult for participants to dissociate themselves from the power that they have through their other roles in society. Preventing favoritism towards certain issues, people or places is a particularly difficult challenge, especially when these entities have more resources or participants championing them. Facilitators must be aware of power dynamics in the group and act to ensure participants feel comfortable in sharing their opinions. Additionally, facilitators must consider constantly their own biases when becoming involved in discussions. The facilitation team found success by keeping each other accountable through post-meeting and other periodic reviews.

Long-term Participation

Facilitators are cognizant that one of the biggest threats to the future of CRVI is participant burnout. Turnover of key leadership could slow the advancement of the initiative as it strives toward larger goals; however, outreach to new participants is maintained by both participants and facilitators.

Another challenge experienced by both participants and coordinators stems from a few instances of CRVI participants acting on their own to achieve a goal outside of the collaboration model. Participation in CRVI does not preclude individuals from pursuing other goals. But at times, miscommunication has led to frustration over loss of opportunities (such as loss of a potential pro bono building space or miscommunication between participants), and many extra hours of discussion and follow-up conversation have been needed to address these challenging situations.

Outcomes and Metrics for Success

As the Clinch River Valley Initiative passes the third year anniversary of its formation, participants and facilitators continue to modify how they evaluate the success of the project. The action groups and steering committee have built valuable relationships and have begun achieving success. The CRVI Action Plan synthesizes information from meeting discussions, interviews, and surveys and contains a list of goals for each action group with suggested resources, timeframes and partners. For now, this list of goals is the metric by which progress is measured. The strategies of each action group are measureable and tangible, and are a good way to begin thinking about how to gauge success for the overall initiative.

Recently, IEN facilitators have been wrestling with the idea of creating additional metrics to measure the long-term impact, and hence success, of CRVI. The initiative has a clear mission and vision, but without more metrics, it will be difficult to determine the extent of the impact that CRVI will have made on the region. The group has developed a list of accomplishments for the initiative, which is a starting point for outreach to area communities.

One approach to measuring success is evaluating how well CRVI adheres to best practices for community-based collaboratives. Do we have diverse participants? Is the process open to outsiders? Does it allow for open discussion and honesty? This approach requires constant reflection and feedback from participants, and evaluations are conducted and reviewed for each meeting.

Another approach is to measure the success of the initiative by how much support it is receiving from citizens of the region, as well as looking at the number of new jobs that are created or new users of access points on the Clinch. The metric for this approach could be the number of resolutions of support signed by local governments, individuals and organizations. The CRVI Resolution of Support was created by participants to publicize CRVI and gain broad support for initiative, and has been signed by over 30 groups. However, this metric will only measure

the approval of governments and organizations, not the approval of participants or residents not involved in community groups. Metrics will need to continue to be developed and refined to evaluate end goals and the success of the initiative.

The Future of CRVI

The Clinch River Valley Initiative is currently exploring possibilities for its future, including the possibility of incorporating as a non-profit organization. Several grants have been acquired to help support initial implementation of CRVI goals (outlined in the Action Plan), as well as for facilitation and coordination support by IEN. Development of maps, a brochure, and community outreach on behalf of CRVI is ongoing as well.

The future is bright for this innovative community-based collaborative. Several initial goals have been reached in recent months and many deadlines are scheduled for 2014. The next year of the Clinch River Valley Initiative will be transformative, as the momentum of the project continues to grow. The initiative will continue to use the CRVI Action Plan to outline the goals, key players, progress, and next steps for each action group as well as the initiative overall. Action groups will no doubt continue to forge relationships with people and organizations at the local, state and federal levels. IEN will continue to facilitate the process until participants feel they no longer need facilitation and coordination services, or when CRVI achieves its vision.

Conclusion

The Clinch River Valley Initiative is a successful example of community-based collaboration. Working at the watershed scale with a multiplicity of stakeholders and partners, participants have been garnering support from residents, local governments and state agencies over the last three years. As the initiative continues to grow, it will continue to use a consensus approach to overcome challenges and adapt according to new information. The momentum it has generated indicates that the initiative is already creating lasting social, environmental, financial and physical changes. It also is sending a message throughout the region that residents can work together and build upon their own strengths to make lasting improvements to the communities in which they live.

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GroWNC: Together We Create Our Future

Sealy Chipley, Linda Giltz, and Carrie Turner

GroWNC was a three-year planning program to develop a framework of voluntary, locally-implemented, market-based solutions and strategies to ensure that as western North Carolina continues to grow, the effects of this growth have a positive impact on the region and its communities. The regional plan weaves together existing plans and strategies with extensive public input from a variety of backgrounds and interests to identify issues, goals and objectives across multiple topic areas. The plan and toolkit of products and resources will foster economic prosperity through a regional vision that identifies implementable projects and actions. GroWNC was funded by a grant from the Department of Housing and Urban Development (HUD) through the Partnership for Sustainable Communities.

Background

Prior to the onset of the recent recession, citizens and leaders in western North Carolina identified the need for “greater regional coordination” on issues of growth management and sustainability for the region’s communities. This need surfaced due to the unparalleled levels of land speculation and development that occurred during the last decade. The region is a beautiful place to visit and live and draws many people, businesses and retirees. The NC Office of State Budget and Management Projections estimates that the population in the five-county region is expected to increase by 40% over the next 25 years. In some cases, growth has threatened the mountain culture and traditions and created new challenges for the preservation of the high quality of life, natural assets, and cultural values that the region is known for. The area features a few small to medium size cities with many smaller, linked rural communities and economies. The GroWNC initiative was an innovative project for the area, grounded in the need to improve coordination and systems thinking among communities in the region, in order to protect and enhance the character of the region. The primary areas of focus for the initiative are the natural and cultural resources sectors and their impact on the economy and quality of life for residents, including tourism, products and services based off these natural assets.

How the Initiative Was Started and Key Players

Local leaders decided to pursue a Regional Planning grant from the Department of Housing and Urban Development (HUD) through the Partnership for Sustainable Communities. The purpose of the grant was to develop a framework of voluntary, locally implementable, market-based strategies to ensure that the region remains a great place to live and work.

Over a dozen partners convened to plan for this project and grant proposal. Land of Sky Regional Council

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Carrie Turner serves as the Southern States Coordinator for the Safe Routes to School National Partnership. Carrie was a Senior Planner at Land of Sky Regional Council, where she co-managed the GroWNC project.

(LOSRC) was a natural fit to apply for and administer the grant due to the organization's position as the region's transportation planning agency and regional Council of Governments. LOSRC was already the entity in charge of both regional transportation and economic development plans; the organization also led a number of related regional plans focused on natural resources, clean energy and alternative fuels, farming, forestry and housing. Finally, the organization, with the support of its member governments, had the political will to lead the study.

An important partner in this effort was the National Environmental Modeling and Analysis Center (NEMAC), who helped to author the grant application. NEMAC has a history of working within the mountain region. They helped develop the regional green infrastructure network, Linking Lands and Communities, and were in the process of creating the Western North Carolina Vitality Index, an online tool that reports on the overall health of the 27 westernmost counties of the state through their natural, social, built, and economic environments. Moving the Vitality Index and GroWNC projects ahead in tandem allowed the study to frame the issues within a larger regional context. In addition, NEMAC was creating a national map viewer and strategic implementation web tools for the National Climate Assessment and the USDA Forest Service and was able to leverage these technologies with minimal investment from the local community. NEMAC's skill sets were complimentary to the other partners and each group was able to utilize their particular

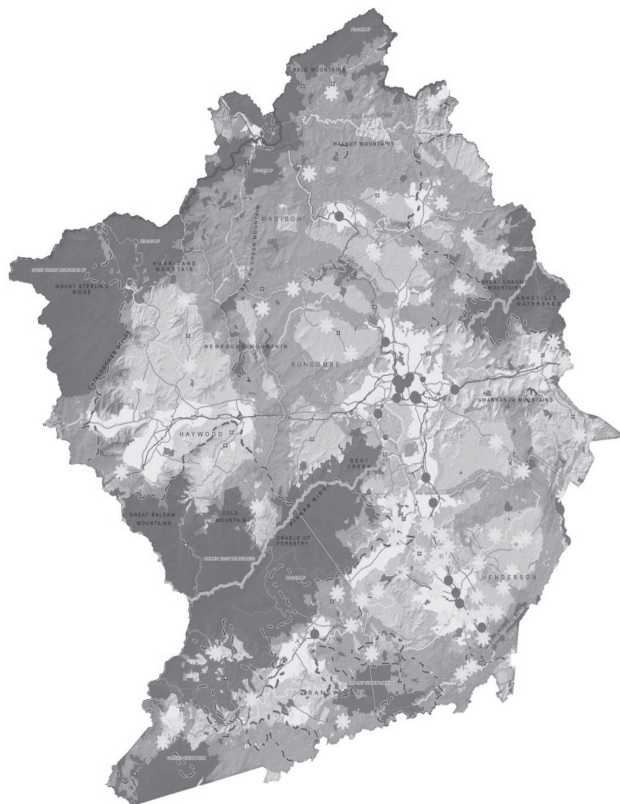
strengths. This collaborative approach was a key to the success of the project.

LOSRC also recognized the need for additional expertise related to planning and land use modeling at multiple scales from an entity that could provide an outside, objective view. LandDesign, a private urban design and planning firm, met this need and brought a comprehensive understanding of economic drivers and transportation-related issues from their work on planning efforts throughout the Carolinas and the greater southeast region.

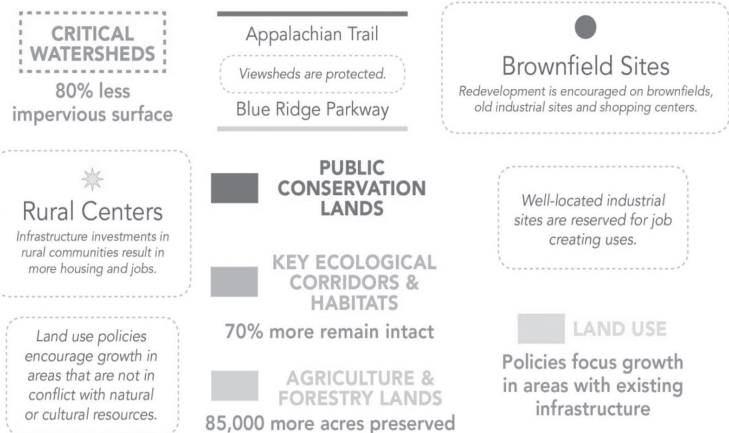
A Consortium of 64 members representing residents and organizations from various backgrounds in the five counties guided GroWNC and oversaw the development of the regional plan. A 13-member Steering Committee led the Consortium, and was responsible for prioritizing work activities, participating in the selection of consultants, approving public involvement approaches, and making recommendations to guide the project and staff.

Planning Process

A review of all existing land use plans provided a foundation for the regional planning work. Most of the existing plans had their own public involvement component, thus ensuring that the basis of the GroWNC process was grounded in established goals and objectives across the region. Eight collaborative, topic-specific workgroups formed during this time and included experts from areas such as economic development, cultural resources, and



Preferred Scenario



transportation. Participants assisted with plan review and the refinement of goals and objectives, which shaped the scenario planning process that followed.

The development of several alternative growth scenarios allowed all of the stakeholders to see different views of the future and the impacts that decisions would have on the key values. Public engagement helped to determine the preferences and value drivers for the various stakeholders. This allowed the core team to understand consensus points that were critical to a regional vision, as well as some unique local preferences based on factors such as primary economic drivers, local politics and geography. This understanding shaped the process toward an end goal of providing regional, county, and municipal level implementation steps.

Once a Regional Preferred Scenario was developed, its purpose was to serve as a guidepost for the development of a set of voluntary strategies, or action steps, that could be undertaken at the organizational, local, county, or regional level. Implementation of these strategies will move the region toward the Regional Preferred Scenario.

By the end of this process, the team identified about 300 strategies to share with the community. Packaging and distributing this amount of information in a meaningful way required a suite of accessible, flexible tools that could be used by multiple audiences in a variety of ways. The final toolkit was designed to allow all of the previous work and results of this study to be accessed in one online location. This aided in the transparency of the process and helped build trust. The development of the design and content of the final product was collaborative, and included both a multi-disciplinary staff team, as well as intentional opportunities for workgroup participants and interested local governments to help shape the final tools, ensuring a final product that is both robust and accessible.

Public engagement and outreach was crucial for success throughout the project. The project team used a variety of techniques to ensure that a broad cross section of the local constituency was involved in the process. This included traditional large public meetings, online and paper surveys, and “piggy-backing” at existing events. LOSRC administered small grants to individuals and community organizations so that they could gather feedback from traditionally under-represented groups such as low income, Hispanic, rural, and African-American residents. These partners met with small groups and conducted discussions to help identify values, challenges, and hopes for the future.

The GroWNC team ensured not only that the public was able to participate, but also that the input gathered was used and reflected back to participants. This included organizing and analyzing feedback so that it could be communicated back to local governments within the planning region. It also shaped the possible outcomes of the scenarios in the scenario planning process. Feedback received during scenario planning directly influenced the metrics used in the land use model, components of the Regional Preferred Scenario, and subsequent strategies

and recommendations. In this way, members of the public who participated in the process became collaborators as well. They actively helped shape and influence the plan, rather than just being invited to share their thoughts that were then catalogued in an appendix.

Challenges

Planning can be a difficult sell, especially during an economically challenging time and in a region with a strong private property rights ethic. The level of support for the project across the project area has varied. This was, in part, because the potential outcomes of the project were complex and difficult to explain at the outset. In addition, the structure required by the grantor, by which communities were asked to sign on to a Consortium Agreement at the start of the project, fueled some local skepticism and made it more difficult to gather full support.

About six months into the planning process, the team recognized that the project was unwieldy to explain and the name and branding of the project added to this confusion. One of the sub-consultants, Allison Development Group, led a rebranding effort to reshape and redirect the project with an economic development focus. In spite of these efforts to rebrand and more carefully explain the project, skepticism continued in some areas. Members of the public concerned about Agenda 21 began attending public meetings and vocally opposed GroWNC. Agenda 21 is an international, non-binding set of recommendations to support sustainability and reduce poverty. The resolution was initiated at the United Nations Conference on Environment and Development in Rio de Janeiro, Brazil in 1992. Some members of the public in Western North Carolina had the misconception that GroWNC was involved in Agenda 21. These individuals influenced local governments and contributed to two of the participating counties ultimately dropping out of the project.

Despite these misconceptions about GroWNC’s purpose, the team members still involved almost 5,000 residents in the region. Participation included such diverse groups as hospital CEOs, the Slavic and African American communities, young professionals, high school 4-H students, the Latino community, and farmers at a livestock auction.

Lessons Learned

GroWNC’s three-year process brought to light many important and lasting lessons. First, the support and continued engagement of local elected officials as well as other community leaders (such as those in the public health sector and active aging groups) is critical because without it, the project quickly loses momentum in the public’s eye. Another successful strategy was to develop partnerships with trusted community leaders or gatekeepers. By reaching out to these individuals, we were able garner input from historically underrepresented groups by hosting meetings in a variety of locations ranging from living rooms to public spaces.

Traditional public meetings have lost relevance and are being replaced by a suite of innovative community engagement opportunities. This process utilized online tools including virtual meetings, Facebook, blogs, Twitter, and surveys. It was critical to utilize a variety of strategies and approaches in order to reach groups that no longer participate in public meetings.

Scenario planning proved to be a valuable process, as it enabled discussions of possible futures for the region, while providing enough detail to connect with local concerns. Having quantitative indicators tied directly to goals and used to evaluate all scenarios allowed the team to present the public with discrete choices between competing values. Discussions of trade-offs resulted in multiple stakeholders, some with perceived differences in opinion, making connections and realizing shared interests.

This project also demonstrated that continued communication with partners is critical to success. It is essential to be present in the community as much as possible, because opponents may be influencing leaders who ultimately determine whether they continue to be involved in the process. Instead of limiting engagement with project opponents, it is important to reach out and help them see their voice is welcomed in the process too.

While input was gathered from a variety of groups with diverse socioeconomic backgrounds, it became clear that some overarching values and goals remained the same across the board. Nearly everyone found the natural beauty of the area to be of great importance, along with the unique culture and strong sense of place in the region. Overall, respondents wanted to protect these exceptional resources while also improving the economy and overall well-being of the region.

Moving into Implementation: Partnerships and Funding

The GroWNC team recently convened a group of leaders that included the Steering Committee plus others who have been involved in the project to discuss implementation. The group helped identify some top priority strategies to begin working on and discussed various possible organizational structures. We are now forming an Implementation Committee to help with and oversee implementation activities.

We are currently seeking funds that will support a staff person to facilitate outreach and implementation activities, including: providing outreach and technical assistance to local governments and other organizations on the plan, strategies, data and tools; maintaining and updating the GroWNC websites; forming and providing staff support to an Implementation Committee; and to convene groups of stakeholders/leaders around high priority projects and issues. We also seek funding to build our capacity to provide assistance in the deployment of the Land Use Model and to maintain it so it remains useful.

In order to continue to build capacity and involvement in our under-represented communities, community leaders

need funding so they can convene groups around projects that are important to individual communities, and to implement these projects. Funds and resources are also needed to provide capacity building and leadership training opportunities. Local governments and other members of the GroWNC Consortium in the region will also receive "Preferred Sustainability Status" for some federal grants for three years, which will help them compete for limited funds.

In the meantime, several spinoff projects are already finding success. In an effort to bring together arts organizations throughout the region, the GroWNC project staff formed the WNC Cultural Alliance. The idea originated within the Cultural Resources Workgroup. Meetings have been ongoing and have included representatives from state, regional, and local arts organizations, including the North Carolina Department of Cultural Resources, the Blue Ridge National Heritage Area, the Southern Highland Craft Guild, and HandMade in America.

Another implementation project, WNC AgriVentures, is largely based on input received from the Natural Resources Workgroup members in the GroWNC project. WNC AgriVentures' purpose is to grow the region's agricultural and natural resource based sectors and associated jobs. Three specific investments of the project are WNC FarmLink – matching people who want to farm with farmland; Blue Ridge TechVentures - supporting the establishment and growth of new technology-based businesses; and Innovation Council – regional experts identifying opportunities for strategic investment in these sectors.

The GroWNC Project team has also partnered with Appalachian Sustainable Agriculture Project (ASAP) and NEMAC to incorporate local food systems geographical data into the online GroWNC MapViewer and possibly into the Strategy Toolkit.

Several of the products from the GroWNC toolkit are already being used. The Land Use Model will be utilized in at least one local jurisdiction's Comprehensive Plan update. The French Broad River's Metropolitan Planning Organization is using one of the scenarios developed through the project in its upcoming Long Range Transportation Plan update.

The development of this regional plan has been a unique experience for all participants in the Western North Carolina region. It has created new partnerships across sectors, geographies and populations. Our challenge now is to maintain and grow these relationships as we continue to share the insights and products with more people across the region.

Local and Regional North Carolina Collaborations

Case Studies from the North Carolina Chapter of the American Planning Association

Stacy J. Guffey and Ben Brown
 Carol Rhea, Darren Rhodes, and Dana Stoogenke
 Deborah Ryan
 Dean Ledbetter, Lauren Blackburn
 With an introduction from Ben Hitchings, APA-NC President

Editors' Note: Carolina Planning regularly publishes a feature highlighting projects from members of the North Carolina Chapter of the American Planning Association (APA-NC). This year's submissions range from multi-county visioning efforts to small-town transportation planning, demonstrating that planning at any scale can benefit from innovative collaboration.

Innovative Partnerships

Ben Hitchings

I love partnerships, and here's why. Nothing catalyzes creative solutions like a shared problem and different viewpoints. For me, this process is like a controlled nuclear reaction – large amounts of creative energy are released when different perspectives collide in service to a shared objective.

This edition of the *Carolina Planning Journal* highlights innovative partnerships. In a time of growing societal challenges and declining resources, partnerships enable us to combine our expertise, link our networks, and leverage our resources.

These benefits do not always come easily. To realize them, we need to:

- 1) Push outside our comfort zone to engage unfamiliar partners;
- 2) Work together to identify shared interests;
- 3) Sort through our differences; and
- 4) Collaborate to build mutual trust.

I recently went through this process in developing a partnership to relocate a farmers market. The market had been operating successfully for five years, but was losing its space and was looking for a new home. Farmers market leaders approached the town where I work about finding

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Carol Rhea, FAICP is a partner with the Orion Planning Group. Carol is also the president-elect of the American Planning Association.

Darren Rhodes, MPA, CPM is the Chief Planner for the North Carolina Division of Community Assistance.

Dana Stoogenke, AICP is the director of the Rocky River Rural Planning Organization.

Deborah Ryan, RLA, is the managing principal of Ryan-Harris, LLC and an Associate Professor of Architecture and Urban Design at the University of North Carolina at Charlotte.

Dean Ledbetter is a Senior Planning Engineer at NCDOT.

Lauren Blackburn, AICP, is the Director of the NCDOT Division of Bicycle and Pedestrian Transportation.

a new location. These leaders, who were experienced in private business, engaged town staff, who were experienced in local government. Some of the early conversations were challenging. Farmers market leaders were surprised that town staff couldn't agree to build a million-dollar market pavilion. Town management was surprised that a small non-profit organization couldn't contribute more financially to the effort. Through continued dialogue we sorted through these issues, shared information, and built mutual understanding.

The process required patience, creativity, and an open mind. It was aided by hiring a third-party facilitator with expertise in local food systems, as well as by the shared task of preparing a grant proposal to seek outside funding for relocating the market. Preparing the grant proposal spurred us to refine our ideas, work collaboratively, and demonstrate our commitment to the project goals through the time and energy we invested. Successful submission of the proposal gave us a small "win" to celebrate together. The result was a strong organizational collaboration that combined the site acquisition, site development, and facility maintenance expertise of local government with the market know-how and operational expertise of a seasoned non-profit. Now that's an exciting partnership, and one that dramatically strengthens the prospects for a successful project.

This section of CPJ describes four examples of dynamic collaborations from across North Carolina. Such innovative partnerships take work, but the rewards can be substantial. If done right, they can generate an arc of creative energy to do something transformative in the life of our communities – by doing it together.

Opt-In Project Explores Uncharted Planning Territory in Southwestern NC

Stacy J Guffey, Ben Brown

"We're closer to five other state capitals than we are to Raleigh." That's a phrase you're likely to hear within the first five minutes of a conversation with leaders in the far western region of western North Carolina.

Although it may sound like a simple observation on geography, the obstacles our isolated location and rugged terrain create for regional planners and economic developers means that any attempt at a collaborative regional vision is likely to strain the limited capacities of existing governments and institutions. This is a difficult task, even in large metropolitan areas with plenty of leaders and resources to draw on. It is doubly so in a sparsely populated, rural region like ours.

These challenges are why the Opt-In SWNC visioning

initiative is so unique and so important. The initiative's ambitions are to fill in research gaps, identify opportunities, and test alternative strategies to inform decision-making about economic development, transportation planning and the environment in the far western North Carolina counties.

Spawned from an impasse between federal agencies over the proposed east-west highway corridor through one of the most remote sections of the mountains, the Opt-In (short for Opportunity Initiative) effort encompasses Haywood, Jackson, Swain, Macon, Clay, Cherokee and Graham Counties and the Eastern Band of the Cherokee Indians.

The Initiative was managed by the Southwestern Commission Council of Governments on behalf of the region's seven counties and 16 municipalities. A Leadership Council of elected officials, business professionals and nonprofit leaders from around the region acted as a steering committee.

Ultimately, though, this effort was run by the citizens and leaders of southwestern North Carolina, and the families, businesses and local governments in the seven westernmost counties and in the Eastern Band of the Cherokee Indians stand to reap its benefits.

Regional planning visions, in and of themselves, are nothing out of the ordinary and are increasingly relied upon to align development strategies with potential investment in an era of increased competition and diminished revenue sources. What makes this project distinctive is that it is the first of its kind, focused on an entirely rural region without a major metropolitan center. Depending on their location within the region, the counties and towns of the far west have connections with metro areas outside the region (i.e. Atlanta, Asheville and Chattanooga); however, there is no central job-generator, as with city-centered metro areas with rural exurbs. Adding to the Initiative's uniqueness is the involvement of a sovereign nation - the Eastern Band of the Cherokee.

Project Scope

The purpose of the Opt-In initiative is to develop a long-term vision that guides policy-making decisions in the far west over the next 25 years. The Southwestern Commission established the foundation of the regional vision by working in active collaboration with citizens and leaders to identify and confirm broad goals and principles. Then – again in collaboration with those who live and work in the western counties -- the initiative tested the likelihood of achieving those goals through a broad range of strategies.

Whether counties or municipalities choose to implement all, some, or none of the vision's components is up to them. This has been an opportunity exploration, not a legislative process, thus the name "Opt-In." Local governments can determine how they want to use the information, directing the Southwestern Commission to incorporate elements of the vision into regional infrastructure planning. They can leverage the research for



Citizens of Southwestern North Carolina gathered to share ideas at community workshops in every jurisdiction within the Opt-In project area. *Images courtesy of the authors.*



their own purposes or they can choose not to do anything.

However, because the process is designed to incorporate the ideas and concerns of citizens and leaders through each phase, the effort is likely to produce decision-making tools that enjoy broad support.

The Team

The Opt-In project has been several years in the making. In the summer of 2012, the Southwestern Commission issued a Request for Proposals for a consulting team to assist in the process.

The commission chose a multiple-firm, 20-member team of experts led by the Atlanta-based Tunnell, Spangler & Walsh (TSW) to help coordinate the project. The team also featured two local consultants, Ben Brown of PlaceMakers and Stacy Guffey of Stacy J Guffey & Associates, both of Macon County.

Funding for the project came from a diverse mix of regional, state and national sources, including the Southwestern Commission, the Federal Highway Administration (FHWA), the North Carolina Department of Transportation (NCDOT) and the Appalachian Regional Commission (ARC). Additional staff support has been provided by the North Carolina Appalachian Regional Commission Program.

The Process

Compounding the challenges regional planners face in the far west is the area's reputation for distrusting perceived government intrusion into private lives. Planning efforts are often met with a skeptical eye, regardless of their intentions to bolster the regional economy and improve the quality of life of residents.

Bearing this in mind, Opt-In utilized a public input process involving hundreds of one-on-one and small group meetings. The idea was to minimize as much as possible the number of meetings people were asked to attend, while still providing room for honest conversation in comfortable

settings to help allay citizens' fears that any changes would be forced upon them.

The outreach effort included public workshops in each county for development of the regional vision, as well as two charrettes – one in Cherokee County for a Comprehensive Plan, and one in Graham County for both a Comprehensive Plan and a Comprehensive Transportation Plan. "Transportation" as used here is not limited to just roads or highways, but the full range of mobility options, including rail, cycling, pedestrian, mass transit, county transit systems, etc.

The project team used the input from the initial rounds of one-on-one and small group meetings and combined it with statistical studies, mapping and other data to create a draft baseline vision. Then team members tested their observations in follow-up interviews and in the county-by-county public workshops. Out of the first round of workshops came a draft vision foundation supported by five "pillars":

- The Place We're Given (natural and cultural environment)
- The Places We Make (built environment)
- The Ways We Get Around (transportation)
- The Jobs We Need (economic policy-making)
- The Quality of Life We Expect (public health, education, small town life)

In round two of the workshops, participants explored scenarios that tested their appetite for making changes in decision-making approaches in order to achieve their goals. They provided their answers to key questions: What trade-offs might be necessary? Which trade-offs are acceptable? Which aren't?

By May 2014, the Opt-In team will deliver the complete package of deliverables: The regional vision, the two Comprehensive Plans for Graham and Cherokee Counties and the Comprehensive Transportation Plan for

Graham County. The deliverables will represent an historic collaboration in a complex region and – depending upon how local governments choose to apply them – guidelines for prioritizing choices and policies for decades to come.

Lessons Learned

The three strategies that worked well and made this process successful were:

- Bookending support from both the grassroots and regional leadership by developing a Leadership Council made up of area political, business and non-profit leaders.
- Taking the project to the participants by holding dozens of small group and one-on-one meetings where people live and work and by holding workshops in each of the jurisdictions.
- Using a multi stage process where the team checked in with stakeholders and the public and incorporated their input into the refinement of the regional vision.

The greatest challenge has been the one we recognized from the beginning – the complex geography of the region. Most communities are separated by mountain chains. Travelling between towns like Franklin and Robbinsville, in close proximity on a map, might take upwards of an hour, creating a psychological barrier as well as a physical one.

The Opt-In Initiative created a model that attempts to overcome historical obstacles to collaboration. Even if it achieves only modest advancements in the perspectives of regional leaders that we are “better together,” Opt-In’s efforts at collaboration are worth emulating.

For more information, including digital version of the draft regional vision, visit www.optinswnc.org.

Transportation Planning in a Growing Community

Carol Rhea, Darren Rhodes,
Dana Stoogenke

The Town of Red Cross - Past and Present

Red Cross was founded in the late 1700s and for nearly two hundred years life changed very little. Originally called “Red Crossing,” the Town owes its name to the rich red dirt of the Piedmont and the crossroads of what would eventually become N.C. 24/27 and N.C. 205. N.C. 24/27 remained unpaved until 1925, and N.C. 205 was not paved until 1941.

Rolling farmland dotted by farmhouses dominated the landscape. A few small-scale farming-related businesses

and industries served the area, and by the early 1900s, several small stores operated at the crossroads. Life and land use remained fairly constant until the latter part of the Twentieth Century.

In 1962 Stanly County constructed a new high school in Red Cross. Housing developments began popping up in the 1990s as growth from Charlotte made the area more attractive as a bedroom community. More small businesses were established in response to the residential growth and more commercial development, pushing out of Charlotte and Albemarle, began creeping closer to town along NC 24/27. The quiet farming community was suddenly faced with being overtaken by unplanned, uncharacteristic growth. In an attempt to control this growth, adjacent municipalities began annexing new lands, coming closer to Red Cross. Their expansions threatened the Town’s very existence as a separate and distinct place.

Incorporation was the first step Red Cross took to address these threats. On August 1, 2002, the North Carolina General Assembly approved the Town Charter. Shortly after incorporation, the Town’s land area nearly doubled in size as many petitioned the Town for annexation. Years prior to incorporation, older town residents used to gather at Bill Hill’s store at the crossing to dream of becoming a town. None of these residents lived long enough to see



NC 24/27 (Old Red Cross Road) in the early 1900s (top image) and today (bottom image). Images courtesy of the authors.

the Town become official, but their story underscores the importance of vision and long term planning for the citizens of Red Cross. Residents Ike and Helen Williams lived in a home near the crossing that today serves as the Town Hall and the nucleus of a future Town Center.

The Growth and Impacts of N.C. 24/27

The rudiments of N.C. 24/27 were in place in Red Cross for more than a century before that stretch of road was designated N.C. 27 as part of North Carolina's original 1922 state highway system. It took years and lots of effort to develop this highway system and for most of that time the clear focus was on moving intrastate traffic with little or no thought to road impacts on the communities they traversed.

In the years since its designation as N.C. 27, the road has experienced many changes. It was paved in 1925 and co-designated N.C. 24 in 1963. In the mid 2000s, the road again "improved" through the town when it was reengineered as a four lane divided highway. It became clear to residents and Town staff that as a central road in the community, N.C. 24/27 no longer unified but rather divided Red Cross. The crossroads that was the center of the community for more than 200 years was no longer suitable as a town center. In 2010, in its first Land Development Code, the Town was forced to locate its planned town center in the southeastern quadrant of the crossroads to allow for density and pedestrian mobility.

NCDOT Plans for 24/27

In 2011, Red Cross staff worked with North Carolina Department of Transportation (NCDOT) staff on a draft Comprehensive Transportation Plan (CTP) for Stanly County. A key element of their plan was a continuation of refining access and intersections along the highway. This included implementation of NCDOT's Strategic Highway Corridor's Expressway designation. The Expressway design minimizes points of conflict, but in the eyes of the community, further separated the north and south parts of town. The mention of a potential, but highly unlikely, grade separation at the crossroads alarmed Red Cross leaders. One of the many potential designs discussed in the plan included a cloverleaf interchange that would, in essence, completely wipe out their planned town center. Red Cross declined to approve the draft CTP. Instead, they contacted Carol Rhea, AICP, a partner with the Orion Planning Group (OPG), and asked for her help. Rhea had provided ongoing assistance to the town since 2002, leading efforts on code updates and the creation of the Land Development Plan, a project she shared with Darren Rhodes, chief planner for the Piedmont Office of the NC Division of Community Assistance.

The Red Cross Transportation Master Plan

After discussions with town leaders, the various stakeholders decided to move forward with a town-adopted, policy-based transportation master plan. With the Town's

full support, Rhea and Rhodes pulled in Dana Stoogenke, AICP, director of the Rocky River RPO to help round out the consulting team. This team of public and private consultants not only provided a wealth of experience and knowledge, it helped to reduce costs and to make the plan affordable for the town.

For a town that owns and maintains less than one lane mile of road and has no sidewalk or bicycle amenities, a transportation master plan might seem unnecessary. The plan for Red Cross, though, communicated what the transportation network needs to be, in order to support their long range land development vision including the town center. While NCDOT made great strides in working with communities to address transportation needs within the context of planned land use, in the absence of a clear local vision of what the network needs to be and who it needs to serve, their plans may be at odds with a community's vision, as they were in Red Cross.

Working in concert, the consultant team took turns facilitating meetings, arranging speakers, researching plan elements and answering town questions. The Town's recently adopted Land Development Plan and the project's three consultants provided most of the guidance and information needed for the Transportation Plan; Tim Boland with the Region 10 office of NCDOT also attended a meeting to discuss NCDOT's Superstreet approach in greater detail as well as state plans for N.C. 24/27. The Stanly County Planning Director and the Town's Zoning Administrator attended meetings as well, more to observe than serve as speakers. Both were very involved in the creation of the Land Development Plan.

In 2013, the Town met once again with NCDOT and shared their Transportation Master Plan, triggering potential changes to the CTP in Red Cross. Dicky Hatley, town councilmember and former planning board chair, summed up the effect their new plan had at this meeting saying "The plan gives Red Cross a lot more credibility with NCDOT. With our current Zoning Ordinance, Land Use Plan and Transportation Master Plan, I think we can grow and be happy with what we see."

Keys to Success

Despite the fact they were from separate agencies, Rhea, Rhodes and Stoogenke worked as a team to provide support to the Planning Board on the draft plan and to help the Board present the draft plan to the public and the Town Council. Although OPG took the lead on writing and compiling the plan, this, too, was a collaborative effort that reflects the work of the whole team as well as the Town. Good communication was key to the effective partnership among the consultants and between the consultants and Red Cross. As evinced in Red Cross, effective partnerships require relationship building and good planning requires the development of trust and honest discussion. This cannot be achieved through email or text messages; it requires a commitment to be on the ground in the community working with community leaders and citizens. Other key strategies

that made this plan a success were:

- Help the community focus on the positive. Ask what does the community want instead of what do they NOT want.
- Understand roles and relationships within the community and between the community and other agencies such as NCDOT.
- Understand the purpose of the plan and how it will be used. Keep that in mind when structuring the planning effort and compiling the final document—don't over- or under-plan and don't use a one-size-fits-all plan because they rarely do fit.
- When the budget is limited get creative. There are often solutions, such as the 3-way consulting partnership used in Red Cross, that can leverage resources.

Perhaps the most important take away from this project is that even the smallest town can create a transportation plan as long as there are dedicated citizens with a vision and partners willing to collaborate.

Playing Around with Civic Engagement Strategies in the Triad

Deborah Ryan

In the 1989 film *Field of Dreams*, Kevin Costner plays the owner of a failing farm, who hears a voice repeatedly whisper, "If you build it, he will come" as he walks through his cornfield. Costner eventually learns "it" is a baseball field and that the "he" is the long-deceased Shoeless Joe Jackson and seven other equally dead baseball players banned from the sport in the 1919 "Chicago Black Sox" scandal. Costner plows down the cornfield, the players arrive, and his farm is supposedly saved by the hundreds of people seen approaching in cars to watch the game at the end of the film.

But urban planning is not *Field of Dreams*. Planners and leaders should understand that when it comes to public meetings, even "If you build it," it is unlikely the public "will come" to save the farm, or show up to share their thoughts about how growth should occur on or around it.

Who can blame them? Traditional civic forums in which public input is gathered can be boring, especially for highly involved and engaged citizens who have heard so much of the information in prior meetings. For the less informed, the forums can be mindboggling. Ubiquitous PowerPoint presentations by the planning staff or their consultants are so packed full of information that members

of the public trying to take it in feel like they are drinking from a fire hose. Not surprisingly, few attendees actually respond to the information presented, and public input is often limited to those people who arrive with a personal agenda already in hand, and whose passion can easily hijack a meeting.

These concerns were at the forefront when the Piedmont Together project, an initiative funded by the US Department of Housing and Urban Development to develop a regional master plan for strong, sustainable communities in the Piedmont Triad region of North Carolina, hired Ryan-Harris LLC to create a public input process for the project. Piedmont Together Project Manager Mark Kirstner charged Ryan-Harris with developing a fun, educational and inclusive process that would deliver a consistent type of feedback from 13 geographically dispersed civic forums led by local facilitators who each had very different levels of planning knowledge and experience.

Rummyland was the first of many community engagement exercises undertaken during the Piedmont Together process, and was the focus of the first round of civic forums. The card-like game was designed to give even the most reticent participants a voice in the conversation about the regions' strengths and challenges. Almost 300 people played *Rummyland*.

Seated around tables of six, each participant-player was given a stack of nine cards. On one side of the card was the traditional image of a green playing card. On the other side were representative images of local strengths pre-determined by the project staff. Participants were instructed to fan out the cards in their hands, then choose and lay down on the "game" table what they believed to be the three cards that illustrated the most significant strengths in the region. If four or more players laid down the same card, that table had a "rummy" of consensus and could record that community strength on a sheet of green paper and hang it on a community wall. If there was not agreement at the table, as represented by four or more of the same cards, players were asked to discuss their card choices and attempt to reach a four card consensus, or forfeit the opportunity to post their thoughts on the community wall. This first round was limited to just 15 minutes.

Stacks of red playing cards with illustrative images of the region's challenges were then distributed to the players, and they were asked to play a second 15-minute round of *Rummyland*, identify and/or reach four card consensuses, and write/post their findings on red sheets of paper on the community wall. All the players were then invited to the community wall, where the facilitators assisted them in looking for areas of consensus across all of the six-person table games. The facilitators also invited additional strengths and challenges to be posted by participants on white sheets of paper to ensure that individual voices were also recorded.

Rummyland set a fun, relaxed tone and bracketed the public conversation around topics to which the project team was seeking input. Facilitators reported back

on a standardized form the information posted on the community walls, as well as the tone and direction of the table conversations.

Later in the project, the information gained in these and later forums served as the foundation for *Possible Piedmonts*, which consists of three scenarios written by Ryan-Harris in response to the question, “What will living in the region look like in the future?” All set in 2020, each scenario described the lives of three generations of the same Piedmont family and the opportunities and challenges they faced, given the community choices made and public policies enacted in the present day. *Possible Piedmonts* was also inspired by Crossroads Charlotte’s *Imagine Our Tomorrow* a component of a community building initiative in which four stories were written to illustrate four plausible futures relative to access, equity, inclusion and trust in the social, political, economic and cultural life of the city.¹

Possible Piedmonts’ Mother Mary scenario focused on the life of a local family’s matriarch and her life as a struggling and isolated farm owner, a probable story if existing trends in growth remained the same. The *Stormin’ Norman and Cookin’ Caroline* narrative described the life of Mary’s veteran son and his immigrant wife striving to build a life in the Piedmont with improved access to transportation and healthcare, but an overall lack of investment in education and limited job opportunities. The *Tech Twins* scenario focused on the lives of Mary’s adult grandchildren and the many choices and opportunities they had in the Piedmont because of the adoption of sustainable policies and the political will to fund them. Joint work group meeting participants were asked to respond to each of the scenarios and suggest strategies to move away from those they deemed to be less desirable, and towards the ones describing a better future.

To further expand community engagement beyond the civic forums, Ryan-Harris also developed a number of hands-on outreach activities. *Food For Thought* was designed to take advantage of the captive audience at bars, restaurants and coffee shops, while patrons were waiting for their orders to be served. Inspired by the information-rich, playful paper placemats set before restaurant diners to keep them occupied at mealtimes, and illustrator Marion Deuchars’ book *Let’s Make Some Great Placemat Art*,² *Food for Thought*’s disposable paper placemats contained word games and multiple-choice questions where local diners could learn about the Piedmont Together project and rank strategies for addressing the region’s strengths and challenges. Just under 100 placemats were collected.

Bright Ideas was designed for use at events where many people are gathered at informal, leisurely settings like festivals, farmers markets, food truck rallies, and school or church events. Candy Chang’s contemplative

experience *Confessions* inspired this initiative, where she invited gallery visitors to anonymously submit their secrets on wooden plaques to be posted over time like on a Shinto Shrine prayer wall. Triad Piedmont residents were asked to anonymously respond to the prompt, “What’s your bright idea?” and post their ideas about guiding future growth in the region on a portable tack board. To gently steer the participants’ comments, five different categories were suggested on the tack board: jobs, housing, transportation, healthy communities, and places and spaces. Project team members accompanied the *Bright Ideas* board and encouraged people to take part by handing out light bulbs.

For many people, *Food for Thought* and *Bright Ideas* offered both an introduction to the Piedmont Together project and a first-time opportunity to participate in the community planning process. Along with *Rummyland* and *Possible Piedmonts*, these civic engagement exercises garnered input from over 500 Triad citizens, and much of it is being used to inform the Regional Master Plan for the Piedmont Together project.

An important aspect of these civic engagement exercises is that they were inspired by popular culture and works of contemporary art. In asking for public comment, planners are competing for people’s precious leisure time. If we are to win that contest, we must draw from all of our experiences, be emboldened to play around with civic engagement strategies, and borrow from other professions. Just as long-range regional master plans are ultimately about improving people’s lives, the planning process should seek to do the same.

Endnotes:

¹ Crossroads Charlotte’s *Imagine Our Tomorrow* project can be found at <http://www.crossroadscharlotte.org/imagine/>

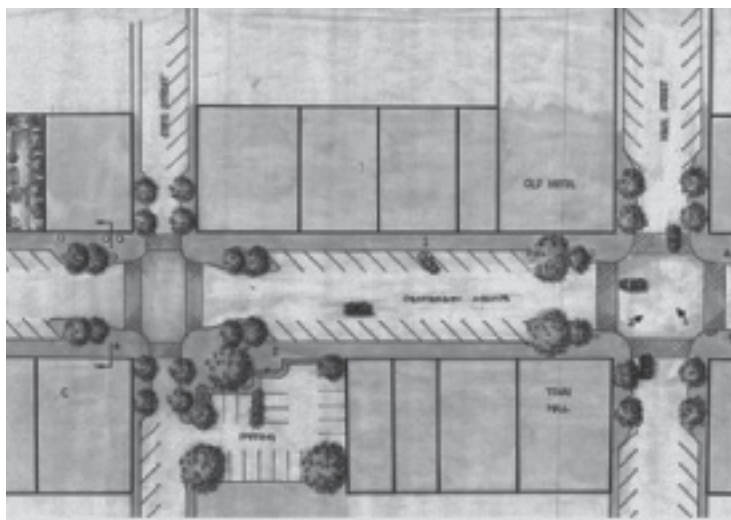
² For more information about artist Marion Deuchars and examples from her books, see <http://www.letsmakesomegreatart.com/>

Simple Changes and Collaboration: NCDOT and the Town of West Jefferson Partner to Revitalize Downtown

Dean Ledbetter, Lauren Blackburn

Significant planning and coordination produced important street system changes and remarkable economic revitalization in West Jefferson, NC, a mountain town of

We must draw from all of our experiences, be emboldened to play around with civic engagement strategies, and borrow from other professions.



Downtown Street Enhancement Plan for West Jefferson, NC. Produced as part of the 2003 NCSU West Jefferson Design Charrette. *Image courtesy of the authors.*

1299 people. This joint effort between the Town and the North Carolina Department of Transportation also involved the Appalachian Regional Health District, the business community, and a private engineering firm.

West Jefferson, located in Ashe County in the northwestern corner of the state, developed around a depot of the Virginia-Carolina Railroad (the “Virginia Creeper”) in the early 1900s. In the 1930s, the Kraft-Phoenix Creamery established a plant in West Jefferson. The plant is now home to the Ashe County Cheese Plant, the only major commercial cheese production facility in North Carolina. Other industries, such as furniture, agriculture and textiles, were the bedrock of the local economy through the late 20th century. However, in the later part of the century, major manufacturing companies moved from the town, resulting in the decline of once thriving downtown.

As decline in local industry saddled the Town with unemployment and disinvestment, a young fresco artist by the name of Ben Long began his work in the region. Long began painting frescos in mountain town churches in the 1970s, sparking a following of tourists interested in the emerging art scene. As a result of Long’s work, other artists moved to the West Jefferson area. These artists opened galleries in downtown West Jefferson, providing an opportunity for the reinvention of downtown as a tourist destination.

In October 2003, the town partnered with Handmade in America and the West Jefferson Revitalization Committee to host students from the North Carolina State University’s College of Design Department of Landscape Architecture. The students created conceptual designs for the downtown, focusing on Jefferson Avenue, Main Street, Back Street and connecting side streets. The team’s designs showed a more pedestrian-friendly downtown including public seating, slowed traffic, improved crosswalks, decorative paving materials and curb extensions.

The 2010 West Jefferson Pedestrian Plan was also a

catalyst for defining the vision for downtown. The plan built upon existing plans (including the 2003 Downtown Design Charrette), evaluated existing pedestrian conditions, and assessed the needs of citizens, and ultimately identified specific improvements. The Pedestrian Plan helped cement the community’s vision and commitment toward the improvements. NCDOT provided funding for the plan after selecting the Town’s application in a competitive grant process and reviewed the document for barriers to implementation.

Some storefronts and other downtown businesses began to benefit from façade improvements and other private investment. While property owners made improvements to the face of the buildings and streetscapes, the Town did not have the resources to make the necessary pedestrian and parking improvements. Nevertheless, the Town sought out funding to continue working toward the vision.

In early 2011, NCDOT began discussing a routine resurfacing and drainage improvement project along Jefferson Avenue with Town and county leaders. The Town asked what streetscape and pedestrian improvements could be accommodated as part of the resurfacing project. NCDOT had already awarded the contract for the original scope of work, so the Town and NCDOT had only weeks to make any adjustments. NCDOT engineers and town staff worked together to design a solution and educate downtown business owners about the proposal.

In a two-month period, engineers and town officials discussed plans for the removal of two traffic signals and replacing those signals with four-way stops. The plan also called for restriping on-street parking to include handicap spaces, new street marking to resemble curb extensions, and new pedestrian crosswalks. NCDOT committed to seeking \$250,000 of future funding for the permanent construction of the curb extensions, and the Town would identify additional funds for other decorative elements. Meanwhile, Ashe County Chamber of Commerce director Cabot Hamilton worked with business owners to explain the planned improvements and discuss potential benefits to the town. McGill and Associates, the Town’s consultant, was instrumental during this process. McGill and Associates prepared the 2010 Pedestrian Plan and continued to assist the Town in implementing its recommendations. They provided drawings and addressed many of the public’s questions about the project.

During a council meeting in August 2011, business owners assembled to discuss the project, even as the milling machine was removing pavement in front of town hall. During the council meeting, over 20 business owners expressed their support or concern about the proposal. Supportive business owners wore bright orange stickers reading “Vote Yes to DOT.” The Town Council voted to support the new plan and implement a future based on accommodating pedestrians rather than designing streets solely for tractor-trailers. The Council vote also supported NCDOT’s commitment to find the \$250,000 necessary to construct the permanent improvements. Work began three

days after the Council's decision to endorse the project. The removal of traffic signals, installation of stop signs, and on-street markings were completed within days of the vote.

In September 2011, the Appalachian Regional Health District hosted Mark Fenton, a nationally-recognized speaker on pedestrian mobility and public health, to conduct a workshop in West Jefferson. Following the workshop, the Health District awarded the Town funding to create construction documents and plans for the permanent pedestrian improvements in the downtown. The Town retained McGill and Associates to create the construction documents. The more extensive pedestrian improvements were constructed over two summers, including the curb extensions at the two formerly signalized intersections and two additional stop-controlled intersections.

"We have seen an impact here, I think mainly due to the slowing of traffic coming through Jefferson Avenue. It slows them down, they're forced to stop at the intersection directly above us. And it causes them to look around," reported Josh Williams, owner of Ashe County Cheese.

While the engineers were not surprised with the traffic calming benefits the project brought, the economic benefits have been remarkable. Since the traffic signals were removed, the number of vacant storefronts and apartments in the downtown area has dropped from thirty-three to five. Ten new businesses have opened in the two-year period since the initial traffic improvements were installed. Business owners have noticed that the project reduced traffic speeds along Jefferson Avenue, and residents report feeling safer crossing the roadway.

Kathy Corbett, owner of My Favorite Kitchen Things, said of the project, "It is fabulous. They've done a wonderful job. They put trees; they put shrubs; they put benches, lights. A lot of different items to attract people to come back to town. More of a friendly-type atmosphere."

Since the improvements, visitors to the Town have remarked on their experience more so than before the

project. Newspaper articles and television programs from across the state and other states have promoted West Jefferson as a walkable and welcoming tourist destination¹.

Now, the lessons learned in West Jefferson are spreading throughout the region. After showing the results of the West Jefferson project to leaders from other towns, NCDOT has successfully removed traffic signals and implemented traffic calming measures in other towns with similar positive results. NCDOT is now planning to extend the downtown West Jefferson project to replace an additional traffic signal with a four-way stop, fill gaps in downtown sidewalks, and add curb extensions and pedestrian crosswalks. This project is scheduled to begin in 2015 using a combination of state and federal funding.

The benefits of the streetscape project resulted from a rare level of collaboration and trust between the Town of West Jefferson and the NCDOT. By listening to one another and appreciating one another's goals, the Town and NCDOT were able to join together and pursue a common vision that has brought positive results to each as well as to the public. The short deadline for a decision also required the assistance of the Chamber of Commerce and McGill and Associates to quickly educate the Town Board, business owners, and the public. Ultimately, the collaboration overcame the fear of change that could have kept the Town's infrastructure – and economy – stuck in the past.

Endnotes:

¹ "West Jefferson, North Carolina: A Fun Place to Visit. The Herald-Dispatch, Huntington, West Virginia. August 2013



Pedestrians taking advantage of new walkability measures in West Jefferson, NC. *Image courtesy of Dean Ledbetter.*

UNC DCRP Master's Project Titles

The following list includes all Master's Project titles prepared by students who graduated from the Department of City and Regional Planning at UNC-Chapel Hill in May 2013. To obtain an electronic copy of one or more of these papers, please visit the "Electronic Theses and Dissertation Collection" at <http://dc.lib.unc.edu>.

MEGHAN AMINTO

Content Analysis of Local Climate Adaptation Plans: A Pilot Study

ALLISON BULLOCK

Sweat Equity: Evaluating the Spatial Equity of the Capital Bikeshare System in Washington, DC

CONNIE CHAN

Is the NYC Zoning Resolution Overly Restrictive on Manufacturing? Making the Case for Manufacturing in the Mixed-Use Equation

VERONICA CONTI

Public Transportation as a Means to Increase Physical Activity in Adults: A Systematic Review

TAYLOR DENNERLEIN

Predicting Effects of Urban Form on Public Health: A Case Study in Raleigh, North Carolina

THOMAS DWORETSKY

Latino Housing Preferences and the Built Environment

GEOFFREY GREEN

Neighborhood Infrastructure Change: A Longitudinal Analysis of Four Cities

HEATHER HUNT

Local Hiring and Incentives in North Carolina: The Constitutionality of Local Hiring Laws and Recommendations for Future Action

TANIA JORDANOVA

Modeling Fecal Coliform Contamination to Evaluate Stormwater Management Policies in North Carolina

MONISHA KHURANA

Opportunities for Freight Oriented Development in Durham County, North Carolina

SARAH KIRK

The Economic and Fiscal Case for Suburban Redevelopment: A Case Study of Cary, North Carolina

KRISTEN LANGFORD

Understanding the Relationship between Park Facilities and Neighborhood Park Use

JOSHUA MCCARTY

An Examination of the Urban Form and Air Quality Relationship on a National Scale

ALEXANDRIA MURNAN

The High Cost of Residential Electric Utilities in Eastern NC: An Analysis of Local Policy Responses

DAISUKE NAGASE

Reverse Mortgage Program in America and Japan

PATRICK NERZ

Untangling Innovation: Barriers and Facilitators to Spinoff Creation at UNC-Chapel Hill

MARCIA PERRITT

Understanding the Impact of Relocation Through the HOPE VI Program

LESLEY POIRES

Can China be Moved? Leveraging International Environmental Treaties to Influence Domestic Development: A case study of the Ili-Balkhash Basin

ASPEN PRICE

An Evaluation Framework for the Northside Neighborhood, Chapel Hill and Carrboro, NC

ASHLEY ROBERTSON

If These Streets Could Talk: Facilitating Political Protest through Public Space Design

ERYN ROSENBLUM

Improving Substandard Sidewalks in Charlotte, North Carolina: Case Studies and Policy Solutions

ANNA SCHAEFFER

Preserving Affordable Rural Housing: A Case Study in Garner, North Carolina

CARLY SIEFF

A Bicycle Incident Response Pilot Project for San Francisco: Addressing real and perceived safety with a “5 E’s” approach

JENNIFER SLESINGER

Current Parking Standards and Potential Parking Policies at North Carolina State University

JENNIFER TAUSIG

Bridging the Skills Gap in Manufacturing Using Hybrid Workforce and Economic Development Strategies: Evidence from Four States

STACY WASINGER

Street Space: Exploring the Potential of Streetscapes to Exemplify the Role of the Public Realm and Catalyst the Private Realm

DANIEL WIDIS

Improving the Mississippi Coastal Improvement Program’s Spatial Decision Support System: A literature review of GIS-based wetland identification and prioritization models

ASHLEY WILLIAMS

Comprehensive Neighborhood Planning and the Role of Affordable Housing Developers: A Case Study of Southwest Central Durham



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UNC-Chapel Hill DCRP Best Master's Project of 2013

Predicting Effects of Urban Design on Public Health: A Case Study in Raleigh, N.C.

Taylor Dennerlein

Editors' Note: Every year, faculty from the Department of City and Regional Planning at UNC-Chapel Hill determine the best master's paper developed out of the graduating class. Below is only an extended abstract of the project. To obtain the original, full-length document, please visit the "Electronic Theses and Dissertation Collection" at <http://dc.lib.unc.edu>.

Extended Abstract

This report presents results of a Health Impact Assessment (HIA) to quantify the health benefits of a small area plan proposed as a result of the Blue Ridge Road District Study, which focuses on increasing density, diversifying land use, and enhancing connectivity within the Blue Ridge Road Corridor (BRRC) in Raleigh, N.C. Blue Ridge Road, located at the western edge of the city, is a major north-south thoroughfare. In spite of the substantial number of residents, employees, and visitors who travel within the BRRC, the area lacks pedestrian infrastructure and has few attractions, residential areas, and retailers that are easy to visit on foot. Focus group discussions indicate that BRRC residents wanted the ability to walk more comfortably and safely within the corridor to a greater number of destinations than currently exist.

In 2011, the BRRC Work Group, made up of representative landowners and users of the BRRC neighborhood (including Rex Healthcare, N.C. State University, the N.C. Museum of Art, the N.C. Department of Health and Human Services, the N.C. Department of Transportation, and others), commissioned the creation of a small area plan that advocated for changes in zoning to allow for mixed-use development at higher densities and the additions of bike lanes and sidewalks to all existing streets, as well as the addition of new streets to increase

road network connectivity. In order to increase support for the adoption of the plan, the group solicited funding from the BlueCross BlueShield of North Carolina Foundation and technical assistance from a team of professors from the University of North Carolina, Chapel Hill, to conduct an HIA in order to demonstrate the scope of the health benefits expected from the project.

Based on stakeholder input and priorities, the HIA focused on quantifying the benefits expected from increasing the suitability of the BRRC neighborhood for transportation via walking (termed "walkability") throughout the corridor. The HIA focused on the approximately 10,000 current residents of the BRRC (those living within 1.5 miles of the N.C. Museum of Art, at the center of the BRRC neighborhood) and estimated health benefits for the years 2028 (when health benefits are expected to begin accruing if the redesign is completed by 2023) through 2048 (the end of a typical 20-year planning

Taylor Dennerlein received her Master's in City and Regional Planning and Master's in Environmental Engineering from the University of North Carolina at Chapel Hill in May, 2013.

horizon).

The project team used data collected from a survey of 386 randomly selected BRRC residents, previous studies quantifying the effect of neighborhood walkability on time spent walking for transportation, baseline health data from the N.C. State Center for Health Statistics, and World Health Organization (WHO) guidelines to construct a computer simulation model that predicts the increase in physical activity and the resulting health benefits that would come from increasing walkability throughout the corridor. The simulation model includes five major health outcomes: premature mortality, type 2 diabetes, coronary heart disease, stroke, and hypertension. In so doing, this HIA joined a small handful of other U.S. HIAs that have made use of quantitative analysis methods. The results of the analysis indicate that implementing the small area plan will have significant health and economic benefits for BRRC residents. The simulation model predicts that increasing neighborhood walkability in the BRRC will increase the time that residents spend walking for transportation by 17 minutes per day, on average, for the 59% of residents who reported walking for transportation. No effects could be estimated for the 41% of residents who reported no walking, due to lack of available evidence. In turn, the model predicts that this increase in physical activity will decrease rates of premature mortality, diabetes, coronary heart disease (CHD), stroke, and hypertension. Table 1 shows the estimated total number of cases prevented over the time period 2028-2048 and the economic value (in today's dollars) of the avoided cases. In total, the economic value of the health benefits from a full build-out of the BRRC small area plan is more than \$313 million.

The estimates shown in Table 1 are restricted to

current residents of the BRRC who already spend at least some time walking for transportation each week. Several potentially important populations are excluded due to lack of information, and hence the results in all likelihood underestimate the health benefits of the BRRC redesign. First, the estimates do not consider the additional population expected to move to the BRRC should the redesign go forward; the Raleigh Urban Design Center expects that the total population could increase by more than 70% under the redesign by the year 2040, compared to normal growth conditions. Second, the prediction excludes the more than 16,000 workers in the BRRC, many of whom do not live in the neighborhood but are likely to benefit from the increased walkability near their workplaces. In addition, it does not account for the millions of annual visitors (a million annual visitors to the state fair and another 1.5 million visitors to PNC Arena) to the neighborhood. Furthermore, the team's conservative modeling approach assumes that time spent walking will increase those who are already active, since information was insufficient to predict the extent to which currently sedentary individuals will be induced to take up walking for transportation if the neighborhood is redesigned. Nonetheless, Table 1 represents the HIA team's best estimates of health benefits, given currently available information, for the population of current BRRC residents.

Based on the positive health impacts of the BRRC redesign, the HIA team collaborated with the project advisory board to craft recommendations intended to enhance the implementation of the small area plan and encourage people to walk. While the BRRC small area plan does not explicitly focus on health, the majority of

	Best estimate and plausible range of cases avoided, 2028-2048	Fraction of all cases avoided	Total present value
Deaths (premature)	80 (30-120)	7% (3-10%)	\$294,000,000
Diabetes (new cases)	27 (1-79)	2% (1-6%)	\$3,740,000
CHD (new cases)	8 (2-15)	Females: 2.5% (0.6-4%) Males: 0.5% (0-2%)	\$1,110,000
Stroke (new cases)	17 (1-44)	2% (0.06-4%)	\$4,110,000
Hypertension (new cases)	91 (4-250)	2% (0.2-3%)	\$11,000,000

Table 1. Estimated health benefits of BRRC small-area plan (full build-out)



the design changes proposed support the creation of an environment in which walking is safer and easier with a greater variety of places to which people can walk. The recommendations focus on two complementary and mutually reinforcing strategies: (1) increasing the quantity and quality of infrastructure for active transportation within the BRRC and (2) increasing the number of destinations that residents can walk to within the BRRC.

The top recommendations of the project team and advisory board are to:

- Provide more biking and walking infrastructure.
 - Take steps to make walking and bicycling safer and more pleasant (e.g., through intersection improvements, buffers between the road and bike lanes, traffic calming, signage, and other strategies).
 - Increase connectivity of pedestrian and bicycle infrastructure throughout the district and beyond.
 - Improve transit connections throughout the corridor.
 - Require new developments to enhance walkability (e.g., through mixed land uses).
 - Take active steps to attract development to the corridor.
- Encourage BRRC residents to walk through programs such as Safe Routes to School, walking clubs or Meetup groups, media campaigns, and other strategies.

For full report, please visit <http://www.healthimpactproject.org/hia/us/blue-ridge-road-corridor>

Student Connection

Nathan Page

This year has been a busy one for the Department of City and Regional Planning (DCRP)! Mirroring the trend of planning's widening scope, increasing numbers of students are choosing to participate in dual degree programs, including public health, government, business, law, and environmental sciences. Even those who are solely in the planning program are reaching beyond the bounds of the established concentration areas to widen their skill sets and work across traditional boundaries.

DCRP students this year expanded their learning opportunities by organizing and attending in-house symposiums, traveling to conferences, and participating in unique and challenging class assignments.

Symposiums and Special Events

While the environmental planning specialization was removed from the specific course load, environmental topics remain prevalent throughout all of our classes and we've had a number of symposiums dealing with green topics from estuaries to trees in housing projects. The North Carolina Coastal Federation came and gave a presentation on how estuaries can frequently partner with hog farms to bring about financially and environmentally positive change. Most recently, N.C. Botanical Gardens came and spoke about the health benefits of urban green space.

Continuing the tradition of alumni involvement in the Department, panels made up of generous DCRP grads came and presented on topics ranging from the job market for recent Economic Development grads to why development in low-income communities is of ever-growing importance.

Equitable transportation has been the focus of a few presentations, most notably one led by the Diversity Committee on bike equity. The fact that the discussion took place in a building that is not ADA compliant only highlighted the importance of further education and investment in this issue.

With the economy finally picking up, we had a few presentations on wages in the U.S. Dr. Nichola Lowe has been particularly active in the field, being quoted in numerous articles and bringing a symposium dealing with union organization in the Old North State. The AFL-CIO and NC Raise Up both came and presented and left us with an easy take away message - If you don't care, no one will. Dr. Emil Malazia also hosted a few panels, one dealing

with urban redevelopment in Durham and another on how urban and regional planners can make a difference in placemaking. The students were excited to see how many of our ideas can make a difference on a large scale, and we engaged in lively exchanges during both presentations.

Many of our alumni came back to DCRP for the release of the book titled "The School That Jack Built," which tells the history of our department. The UNC-CH alumni network also hosted events from NYC to Atlanta and educating young planners every step of the way.

Conferences

At the Transportation Research Board conference in Washington D.C., students specializing in transportation learned from alumni about life in the field, and made connections that led to several internships and job prospects. DCRP was also well-represented at the APA-NC Conference, held in Winston-Salem, with several students taking advantage of the mentorship program to meet and exchange ideas with practicing planners. Many DCRP'ers also made the trek to the APA National Planning Conference, which was held in Atlanta this year. Michelle Madeley (MCRP and MPH 2015), Michael Clark (MCRP 2014), Jill Mead (MCRP and MPH 2014) and Caroline Dwyer (MCRP 2014) presented posters at APA, and Carolyn Fryberger (MCRP 2015) presented her masters project in a student session and received an award from the Economic Development Division.

Learning In – and Beyond – the Classroom

Dr. Daniel Rodriguez' bicycle/pedestrian planning class was encouraged to gather data for the town of Carrboro to use in its transportation planning. In March, the class staffed locations throughout the city in a range of weather conditions including snow and ice. As expected, the largest predictor in pedestrian activity was location, but the weather came in at a close second. The counts showed decreased activity when compared to the previous year,

Nathan Page will be entering his second year as a Master's of City and Regional Planning (MCRP) student specializing in Transportation. He currently serves as the NCAPA Student Representative.

but with North Carolina having faced its coldest winter in decades, the fact that anyone was out walking or biking is encouraging! Many of the students who participated also navigated around snow drifts in wheelchairs in an effort to ascertain the accessibility of Chapel Hill's streets for those with disabilities.

China has had a strong relationship with DCRP for a while, and many visiting scholars participated in our classes again this year. Their knowledge and viewpoints add depth and a very different understanding of how the world of planning functions. Visiting scholar Hou Xin shared his knowledge of SketchUp with us, and reiterated the classic understanding that if you want to become good at something then "practice, practice, practice!"

Carrboro is still pushing the envelope, most recently extending a ban on drive-throughs. This brought a little fame to our department when Dr. Rodriguez made the local news circuit voicing his support of the move. Dr. Todd BenDor also commented in the *Daily Tar Heel* that the ban would not hurt economic development in town; it is just another incarnation of community identity in Carrboro. Dr. Roberto Quercia was also quoted in the *Daily Tar Heel* regarding the athletic scandal at UNC, stating that we need to help our athletes before they make it into college.

Workshops

The fall workshop this year dealt with hog waste. Dr. Bill Lester and his class looked at economic development and public health issues surrounding hog waste and its economic potential for being converted into energy. The class examined the real estate impacts of hog farming and the potential lost revenue from the detrimental effects of hog farms, which could possibly be mitigated by energy conversion of waste. The class also completed an economic analysis of biogas configurations, looking at the value chain and the transportation fuel applications of swine biogas.

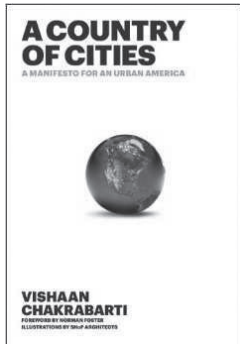
In the spring of 2014, Transportation students worked with UNC staff and Dr. Noreen McDonald to develop UNC's first Bike Friendly University application. The designation, which is awarded by the League of American Bicyclists, recognizes universities' efforts towards creating more bikeable campuses. During the first half of the workshop, the team interviewed representatives from other Bike Friendly Universities and the League of American Bicyclists to understand how other schools approached campus bikeability and the application process. The team then worked with UNC staff, faculty, and bike advocates to compile the information needed to complete the application.

During the second half of the workshop, the students were asked to call upon their knowledge from the interviews, application process, and transportation coursework to highlight feasible actions that UNC could take over the next three years to become more bike friendly. The students researched the creation of a biking improvement fund, created a project prioritization matrix for three different funding scenarios, and created mockups

of two of the top projects identified in the prioritization process. The students then presented their findings in a comprehensive report and presentation to the UNC Pedestrian and Bicycle Safety Committee. The project was well-received by the students' community partner, who felt that the materials were very professional and persuasive.

Dr. Mai Nguyen, in partnership with Tyler Mulligan at the UNC School of Government, led this spring's Housing and Community Development workshop, which had students work with small towns across North Carolina on community development and revitalization projects. Students developed market studies and a real estate pro forma for a vacant building in downtown Lenoir, identified potential uses for a site in Granite Quarry and developed an initial redevelopment plan for a vacant building in Kinston. The students shared their results with town planners and leaders, who hope to use this work and make progress towards revitalizing important parts of their communities.

Book Reviews



A Country of Cities: A Manifesto for an Urban America

Vishaan Chakrabarti

Reviewed by Adam Levin

Vishaan Chakrabarti has an axe—or two—to grind. Federal subsidies for oceanfront homes, green technology trends such as fluorescent light bulbs, most people working in the planning profession today—all these and more are skewered in *A Country of Cities: A Manifesto for an Urban America*. Chakrabarti's purpose in taking these subjects to task is to show the peril that America threatens to unleash upon the world should its influence in planning, real estate and spatial trends continue to resonate globally. The unifying theme of Chakrabarti's book is a fight against what he considers to be America's most profligate and enduring export: suburbia.

Suburbia, as Chakrabarti tells it, is responsible for untold numbers of ills in modern America, and, as it continues to spread outside of the west, for many of the worldwide problems likely to metastasize unless we as a society return to our cities. Climate change, of course, but also loss of productivity, public health concerns such as hypertension, and more nebulous metrics such as decreased levels of happiness and familial unity are just some of the negative outcomes laid at the foot of American-style suburban living.

But Chakrabarti, an architect and professor at Columbia University, has an idea to combat the perniciousness of suburbia. Hyperdensity, which Chakrabarti defines as a place capable of supporting significant ridership for mass transit, or with a minimum of thirty housing units per acre, is the necessary antidote for suburbia's venom. The first half of *A Country of Cities* lays out why cities—specifically hyperdense cities—are the ideal to be copied. The reasons are threefold: hyperdense cities have greater economic success, less impact on the environment and lead to their residents experiencing more joy and better health. The second half of the book focuses on Chakrabarti's ideas on how these model cities might actually be built.

There are two main problems with *A Country of Cities*. The first is the fact that, unfortunately, Chakrabarti fails to tell the informed reader much information that he or she is likely not already aware of. The old, tried-and-true chestnuts of smart-growth and sustainable literature and thinking are all present and accounted for: in one

breathless section Chakrabarti might be railing against overly restrictive zoning and historic preservation efforts which, in their zeal to keep everything as it is, actually deter community and economic progress. Next, he is going after NIMBY-ism and illustrating to the reader how the true cost of a gallon of gas is significantly more than what we pay at the pump. The federal mortgage interest deduction (along with other subsidies) is lambasted as favoring low-density growth at the expense of cities, which are the true drivers of economic growth and societal happiness. The issue is not that these topics are not troublesome or worthy of discussion, it is that Chakrabarti fails to add much to the conversation, consistently making observations and connections that have either been pointed out previously or which could probably be made by someone who has not spent years in the planning and real estate fields. A deeper analysis of these issues would have made for a more satisfying read.

Then there is the fact that Chakrabarti presents little proof that his theory of hyperdensity would actually engender the results that he envisions. If Chakrabarti did do his own original research in this respect, it is not presented to the reader. For example, Chakrabarti argues that density brings greater prosperity compared to sprawl, positing that clusters of industry and creative class human capital are necessary to jumpstart a region's economy, and that those things are most easily attained in a dense city. That certainly may be, but Chakrabarti does not provide the reader with any evidence that his threshold of thirty

Adam Levin is a first-year Master's student specializing in economic development. Prior to enrolling in DCRP, Adam worked as a political journalist in Washington, D.C.

Peter Cvelich is a 2014 graduate of the Master's in City and Regional Planning and MBA dual degree from DCRP and the UNC Kenan-Flagler Business School, specializing in real estate and economic development. Prior to enrolling in DCRP, Peter was a market analyst in international development for RTI International.

Jill Mead is a 2014 graduate with a dual degree from DCRP and UNC's Gillings School of Public Health, specializing in transportation planning and health behavior. Prior to enrolling in DCRP, Jill was a Peace Corps Volunteer in Paraguay and a Fulbright student grant recipient in Argentina.

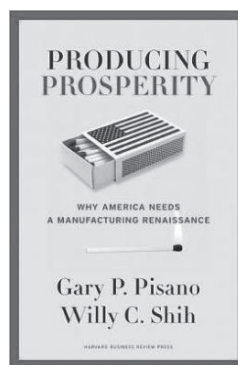
Ryan Boivin is a first-year Master's student specializing in land use and environmental planning. Prior to enrolling in DCRP, Ryan served six years as an officer in the US Air Force.

housing units per acre will bring all this to bear. Similarly, there is scant backup for his claim that hyperdensity will support parks, public spaces and cultural buildings and therefore will contribute to “our joyous experience of streets and sidewalks, gardens and parks.” These things all sound nice and certainly make sense from a logical point of view, but, as a planner, is it too much to ask for some data to validate these assertions?

All of this is not to say *A Country of Cities* does not have some fine points. The book’s best section perhaps comes when Chakrabarti discusses the wide range of interrelated factors in a city or neighborhood which are necessary for its residents to lead successful and happy lives. In the book’s second half, where Chakrabarti lays out his precepts for building model cities, he writes that not only density, but also infrastructure and affordability must be considered when deciding whether or not a situation is to be emulated. He then takes a wide view of infrastructure, including in his definition not only the standard roads and utilities one would normally think of, but also institutional infrastructure like schools, health care facilities, cultural centers and parks. Chakrabarti has a firm handle on the fact that people today expect to have all kinds of services at their fingertips, and that areas which cannot provide a wide web of amenities are likely to be left comparatively behind. Chakrabarti dubs this scenario the “infrastructure of opportunity,” and his argument that government investment is necessary to create this environment largely rings true.

Another interesting section revolves around Chakrabarti’s treatment of how much cities, states and regions put into the national economy and subsequently receive back out in the form of government spending. Chakrabarti claims that while America’s cities comprise just three percent of the country, they generate 90 percent of the nation’s gross domestic product and receive a fraction of that back in government funding. If all the balances of payment between cities and government were evened out, Chakrabarti writes, cities across the country would go from debt to surplus. In reality, such a situation is almost too fantastical to conceive, and it points to perhaps the greatest weakness of *A Country of Cities*. While a book with the word “manifesto” in its title can perhaps be forgiven for not taking practical and political considerations into account, most of the ideas Chakrabarti puts forth stand essentially no chance of enactment in today’s ultra-politicized environment.

In this regard, Chakrabarti’s work is unlikely to motivate any action. Rather, it will probably only serve to rile up the segment of the population which opposes its ideas, not finally persuade them to change their thinking. If Chakrabarti had wanted to truly advance the conversation, he would have written a book which focused on the psychological factors that go into denying the existence of the problems in *A Country of Cities*. Still, his passionate pleas for change make interesting reading for planners.



Producing Prosperity: Why America Needs a Manufacturing Renaissance

Gary P. Pisano and Willy C. Shih

Reviewed by Peter Cvelich

In *Producing Prosperity*, Pisano and Shih elaborate on the basic argument from their award-winning 2009 article “Restoring American Competitiveness,”

namely that the prosperity of U.S. businesses and workers is contingent on a resurrection of U.S. manufacturing, and inject a new concept for discussion: the “industrial commons.”

In their view, the industrial commons is the technical know-how, operations capabilities, and specialized skills embodied in the workforce, competitors, suppliers, and universities that flow across multiple companies in multiple industries and allow for discovering and bringing new process and product innovations to market. Pisano and Shih do not discuss the mechanisms by which this knowledge transfer takes place, leaving the industrial commons in a bit of a theoretical construct. However, they offer examples of where it has broken down with negative results for U.S. dominance in high-technology sectors.

They build their case by first pointing to the numerous ways in which U.S. firms and workers are losing ground—declining high-tech exports, rising educational attainment of foreign workers, and, most disturbing, the disappearance of whole manufacturing functions from U.S. plants. Then, they pull back the curtain and reveal that underpinning some of the products for which U.S. firms outsourced manufacturing is a complex and dynamic web of linked “capabilities.”

For instance, behind the production of personal electronics and flat-screen televisions, solar panels, and energy-saving light bulbs—all products for which manufacturing now predominantly takes place in Taiwan and China—are platform technologies such as semiconductors, flat-panel displays, and solid-state lighting that rely on capabilities in lithography and etching, chemical vapor disposition, and coatings. With each of the products that U.S. firms choose to outsource—like televisions—they relinquish their connection to a core capability—like etching—that will spawn new innovations in a platform technology—like semiconductor chips used in smartphones.

The choice to outsource—specifically, geographically separating manufacturing from design—erodes a piece of the know-how that was circulating through the industrial commons in the U.S., making it more difficult for other firms to innovate, but easier to take the short-cut of reducing costs through more outsourcing. The accumulation of such seemingly positive “net present

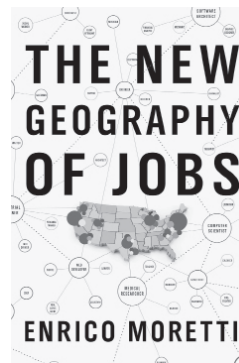
value” decisions by individual U.S. businesses to focus on R&D and pass off “low value-added” production to foreign suppliers hurts their long-term innovation potential. It also accelerates learning opportunities for suppliers that can one day become competitors.

Pisano and Shih also point out the U.S. government’s failure to support the retention of manufacturing. Focusing on the tapering of federal government funding for applied research—translating basic science discoveries into practical applications with commercial potential—the authors suggest that the U.S. has taken its foot off the accelerator while its trading partners have made focused investments to catch up. They also critique the ways in which the federal government subsidizes parts of the economy—homebuilding, agriculture, healthcare, and private equity—but allows U.S. manufacturers to pursue more favorable tax regimes and public investment climates in other countries.

After diagnosing the problem and laying blame, Pisano and Shih offer a simple framework to guide business leaders and policymakers in choosing when and where to invest in manufacturing capabilities. They admit that not all manufacturing is worth saving. Some of it makes sense to outsource without a dramatic loss of know-how. But they argue that the erosion of the industrial commons by divorcing manufacturing from R&D is particularly damaging in industries, such as biotechnology, where the design of the product is actually married to the design of the manufacturing process (low modularity). The authors’ recommendation: Identify such low modularity industries (or processes within industries) and try to enhance and protect them.

Pisano and Shih quickly give up on “labor-intensive” and “low-skill” manufacturing as a lost cause—in one blanket statement without identifying which sectors they mean—and do not acknowledge the transferrable skills from these industries to high-technology. Whole segments of the U.S. population are (or were) employed in such sectors and attention needs to be given to how those workers are repurposed and valued in the emerging manufacturing industries. Ignoring the employment prospects of these individuals will only lead to greater inequality with dire consequences for future generations of workers seeking to produce prosperity.

Pisano and Shih write from the U.S. perspective and their recommendations are geared toward American business leaders and policymakers. However, they note the universality of their message: any company or country striving for an innovation-based economy must recognize the importance of cultivating a healthy industrial commons. Those places that see manufacturing moving off shore need to find opportunities for retention. Those places that are building new plants need to invest in the basic and applied research and human capital initiatives that will round out a burgeoning commons if they hope to transform their companies into technology leaders.



The New Geography of Jobs

Enrico Morretti

Reviewed by Jill Mead

In *The New Geography of Jobs*, Enrico Morretti presents his view of 21st century production in the United States. According to the author, the United States no longer produces heavy machinery like automobiles, nor should it seek to recapture its former manufacturing dominance. Instead, the U.S. should continue to exploit its new competitive advantage: its enormous share of the worldwide market for innovative ideas and technologies. Going forward, innovation is the export sector that will be the key to the nation’s prosperity.

The emergence of this new innovation focus led to a shift in the economic geography of the country. Moretti opens with a description of the ways in which the “two Americas” are pulling apart, entitled “The Great Divergence.” On one side are the stagnating cities in the Rust Belt and elsewhere, epitomized by Flint, Michigan, which are struggling to reinvent themselves following the demise of the manufacturing sector. Residents of these cities face higher unemployment, lower wages, and worse health, educational, and mortality indicators than the country as a whole.

On the other side of the divergence are cities or regions, such as Silicon Valley and the Research Triangle, which have invented or reinvented themselves in ways that take advantage of the growing importance of the “innovation sector.” Residents of these regions are directly and indirectly benefitting from the prosperity generated by the new model of production. One of Moretti’s key points is that gains in the innovation sector lead to higher employment and wages for the service sector employees that serve the tech workers and engineers, from hairdressers and waitstaff to patent lawyers. Moretti states that five service sector jobs are created by every innovation sector job, compared to only one job per manufacturing job. However, it is unclear whether this difference derives from a quality inherent in the “innovation sector” that differentiates this effect from that of other geographically-clustered, highly-remunerated groups such as doctors working at the Center for Disease Control (CDC) in Atlanta, or bankers in New York City.

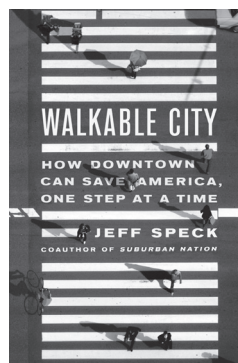
One puzzle of the innovation economy is that participants choose to set up businesses in or outside of expensive cities such as New York, Boston, and San Francisco rather than in cheaper spaces elsewhere. The explanation lies in the forces of agglomeration that offer three priceless boosts to productivity and innovation: the presence of a “thick labor market” (offering a range of skills and number of potential employees not found elsewhere), a network of staff in supporting industries (such as lawyers and venture capitalists), and the potential for knowledge

spillover. Some cities initially achieved this critical mass through happy accident (e.g. Bill Gates' decision to move Microsoft to Seattle), while others, like Research Triangle Park, achieved this result more deliberately. However, Moretti cautions, cities without an innovation cluster will find it very hard to create one by design, and those that try will have to subsidize the process until the forces of agglomeration kick in—a very expensive proposition.

In light of this sobering fact, Moretti suggests that the solution lies in individual mobility. If cities cannot bring the forces of agglomeration to themselves, let people move to where the jobs and higher wages are. Towards this end, he suggests two policies to enhance mobility: allow people to collect unemployment in a new state, and build more housing to accommodate new workers in cities where a low supply of housing drives rent prices to unaffordability. Two more of Moretti's suggestions encourage strategies to enhance the U.S.'s human capital in the long run through the improvement of the quality of lower education and access to higher education and by increasing the number of visas for skilled technicians and PhDs from other countries. In the end, adding more people who can generate and realize ideas to the centers of innovation will increase production capacity and the competitiveness of the U.S. as a whole.

While the tone of the book is optimistic, this new geography of jobs has several implications that are less than cheerful for those outside of the winner's circle. Even though the innovation sector benefits the U.S. economy, its positive spillover effects are largely local. The ability of cities to create their own innovation centers is constrained by their ability to subsidize growth and the limited amount of public and private funding available for research and development. Residents of the numerous cities that cannot jump start their own innovation centers are faced with the need to move in order to participate in the new geography of prosperity. These realities have profound equity implications which are only touched upon in the book.

Moretti's focus on cities and regions as generators of economic growth makes this book of interest to planners. Although we are in the midst of a "great divergence," Moretti identifies a middle ground—cities which are poised to go in either direction depending on their embrace of the new knowledge-based economy. Whether planners choose to work in San Jose, Flint, or somewhere in between, Moretti's ideas are worth consideration.



Walkable City: How Downtown can Save America, One Step at a Time

Jeff Speck

Reviewed by Ryan Boivin

City planner, author, and TED Talk presenter Jeff Speck makes a compelling call for citizens and local officials to align their convictions and reflect on their built environment to focus

on walkability. It is a motivating message justified by a thorough examination of design, social capital, health, and safety on the streets of America.

Is this a call to stop traffic? Not at all. Speck knows better than to make fanciful pleas for abrupt societal change; instead he shrewdly employs healthy doses of reality and practicality in his missive. In this easily digestible, engaging, and concise piece of work, he takes a hardnosed stance by starkly illustrating the consequences of building our society around the automobile. He calls on over 25 years of professional experience and research, including his collaborative efforts on the highly influential *Suburban Nation: The Rise of Sprawl and the Decline of the American Dream* and *The Smart Growth Manual*, to challenge traditional urban planning theory. He manages to do so through a witty and balanced approach, capable of resonating with a range of readers, from metropolitan Planning Directors to small-town Mayors to the average suburban resident. He delivers his message effectively through the use of objective, exhaustively researched, and intimately germane facts.

Speck puts forth eye-opening statistics on widely shared areas of concern: personal finance and health, commute times, and national security, to name a few. While some readers will already be aware of these general trends, their dramatic scale and what can be done to correct them may be less well understood. Portland is Speck's flagship example of a city that identified the ills associated with automobile use, their scale, and the feasibility of mitigating their effects. He cites urban growth boundaries, large-scale investments in public transit and bicycle infrastructure, and creative urban design initiatives like the Skinny Streets program as instruments in Portland's urban public policy portfolio intended to produce "Walkability Dividends." He skillfully deploys this term – which refers to the social and economic benefits Portlanders enjoy thanks to the implementation of policies that defied the urban planning zeitgeist of the late 20th century – to make the reader cognizant of why we must endeavor to make our towns and cities more walkable.

Speck also uses Portland to show the advantages associated with forecasting generational preferences and applying them to the built environment. College graduates

moved to Portland at a rate five times the national average during the nineties. He contends this demographic trend occurred because Portland met the desires of millennials, 64 percent of whom move to a city before finding a job and 77 percent of whom want to live in a walkable urban core. He argues that these trends are only increasing with younger generations, and a growing percentage of the older population who seek walkability as they ditch the car and “retire in place” or move to Naturally Occurring Retirement Communities (NORCs).

At the end of the day, the brilliance of Speck’s labor is in the effective organization of the book. It sets the stage with his own expertly defined General Theory of Walkability, which mandates four critical conditions a walk must satisfy: useful, safe, comfortable, and interesting. These conditions are then used as a way of thinking about a sequence of specific rules organized into the Ten Steps of Walkability. This is a tailored list of progressive planning initiatives, from “Mixing the Uses” to “Getting the Parking Right” to “Welcoming Bikes,” which Speck uses as a roadmap for the last three-quarters of the book. With the General Theory of Walkability as the foundation for implementing the Ten Steps of Walkability, Speck believes he has provided a comprehensive prescription for making cities more walkable. He never promotes his ideas as a panacea for correcting all of the ills created by an auto-favored built environment; *Walkable City* is simply a vehicle for us all to see the need to make the places we live more pedestrian-friendly and less auto-centric.



Final Thoughts

Danielle Spurlock

Assistant Professor
Department of City and Regional Planning
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One of the great joys of teaching planning is that every student I have has a substantial experience to contribute. Each student can draw on his or her own experiences, be it living in rural areas in North Carolina or in St. Louis, Missouri, or in Guangzhou, China. Each student can contribute to a discussion about the built and sociopolitical environment, even if only by reflecting on how their travel behavior to class changes on a rainy day. Teaching places me at a unique point in a student's learning process. Not only am I able to introduce new material, but I am often present as an active participant when students begin to grapple with complex social problems.

Planners, in their daily work, confront social problems that demand the reconciliation of "ought" claims – normative, and often subjective, statements – as well as "is" claims – those rooted in empirical evidence (Goldstein, 1984: 303). In essence, this bifurcated argumentation means there is a role for both 1) the local knowledge that informs the ethical reasoning behind proposed goals and courses of action and 2) the technical information that helps describe the current state and anticipated consequences. It is within this collaborative framework that planners must facilitate the solicitation and synthesis of technical and local information from multiple parties with disparate values, beliefs, and goals.

Planners make claims. Planners' claims are public assertions that some set of actions should be taken. Planners submit their claims to an audience(s). The audience is that group of individuals who must pass judgment on the claim. These individuals take on the role of critical questioners. A forum exists for the planner to respond to the questions posed by the audience. For the audience to decide whether the claim is sound or well-founded, and thus entitled to be accepted, it will 'ask' the planner to make explicit the set of supporting reasons by which she can justify the claim (Goldstein, 1984: 297).

In order to make plans and implement policies, programs, and projects, planners necessarily engage in an exchange with other agencies, elected officials, and the public to justify these actions. Differences in expertise and familiarity with technical concepts between planners and the audiences who are charged with making

a critical assessment result in communicative difficulties. The translation necessary to bridge this communication gap depends on the skillful facilitation by planners who must bring together both 'ought' and 'is' claims without diminishing either.

Planners assimilate technical information from many disciplines (i.e., engineering, public administration, environmental protection) to produce our claims about current conditions, risks, and the potential tradeoffs of different courses of action. But planners are also charged with representing the ever-elusive "public interest" with many stakeholders who see both the "is" and "ought" the claims differently. Thus, the task of the next generations of planners is inherently collaborative. We must not only seek to identify, translate, and reconcile each community's vision, but we must do so in a sociopolitical environment where our empirical claims are in dispute. Our challenge as a faculty is to equip future planners with the necessary skill set to collaborate in the midst of conflict.

My role as an instructor includes sharing information and pushing students to observe their surroundings and interactions differently. I have an obligation to push students to think critically because, although my instructional approach draws on the students' own experiences, this next generation of planning professionals must be able to convince their audiences to question the universality of their own experience. They must "think all the way around" an issue to test the resilience of their positions to dissenting arguments because they must be able to articulate the necessity of planning to audiences unconvinced of the risks of inaction or the benefits of intervention. The next generation of planners must be able to craft arguments that anticipate the opposition's most robust criticisms and that can hold up under the weight of intense scrutiny because planning must balance current actions with future outcomes—the fundamental challenge placed at planners' feet. At the end of my first semester as a faculty member, I am more convinced than ever that both the faculty and students are equal to this challenge!

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Planning in the New Economy

Carolina Planning – the oldest student-run planning publication in the country – seeks to bridge the gap between urban planning professionals and academics, with the goal of providing original articles, case studies, and interviews of relevance and interest to both audiences.

We are now seeking submissions for the 2015 issue, which will focus on the theme “Planning in the New Economy.” In the wake of the Great Recession, cities, regions, and states are still searching for the next set of best practices for establishing long-lasting economic security. Ideas abound, including supporting entrepreneurship, promoting a return to manufacturing, focusing on education and worker re-training, and attracting high-tech and green jobs to an area. This issue will highlight some of the most innovative and effective ways that academics and practitioners are planning in – and for – the new economy.

As we move from recovery-focused efforts toward proactive planning for resilient economies, planners increasingly have a role to play in convening diverse viewpoints, advocating for data-driven solutions, and strategically allocating resources to encourage sustainable and equitable development. With their understanding of the effects of both the built environment and social and political factors on an area’s economic chances, planners are uniquely poised to be leaders in regaining and protecting economic prosperity. In “Planning in the New Economy,” *Carolina Planning* will explore some of

the most current strategies, examining the profession’s role in building and sustaining healthy economies.

Topics may include, but are not limited to: Planner roles in promoting economic equity, including building economies based on high-quality jobs; balancing the role of legacy industries, such as manufacturing, with emerging high-tech and knowledge-based sectors; techniques for measuring progress in economic recovery and development; the role of public-private partnerships in economic development; and case studies of localities undertaking creative economic development planning efforts.

Submission Details:

- Interested contributors should contact the Carolina Planning editors by email prior to submission, to discuss article topics and any other questions. You may also fill out the form online:
<http://carolinaplanning.unc.edu/call-for-papers/>
- Submissions should be typed in Microsoft Word and limited to 15 pages, double-spaced. Tables, charts, graphs, and images should be included in the page count. Only original work is published. Citations should follow the author-date system in the APA style, with endnotes for explanatory text.
- *Carolina Planning* editors reserve the right to edit articles accepted for publication, subject to the author’s approval, for both space and content considerations.

Submission Deadline: November 15, 2014

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Bridging Planning Theory and Practice Since 1974

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