BUILDING STRONGER SUBURBS: ADAPTABILITY AND RESILIENCE BEST PRACTICES FROM SUBURBAN HOUSTON







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Cover Photo: The Woodlands, Texas. Courtesy The Woodlands Development Company, A Division of the Howard Hughes Corporation



ULI HOUSTON

ULI Houston is a district council of ULI—the Urban Land Institute, a nonprofit education and research organization supported by its members. Founded in 1936, the Institute today has over 39,000 members worldwide representing the entire spectrum of land use planning and real estate development disciplines, working in private enterprise and public service.

As the preeminent, multidisciplinary real estate forum, ULI facilitates the open exchange of ideas, information, and experience among local, national, and international industry leaders and policy makers dedicated to creating better communities.

ULI's mission is to provide leadership in the responsible use of land and in creating and sustaining thriving communities worldwide. ULI Houston carries out the ULI mission locally by sharing best practices, building consensus, and advancing solutions through its educational programs and community outreach initiatives.

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RICE UNIVERSITY'S KINDER INSTITUTE FOR URBAN RESEARCH

The Kinder Institute for Urban Research is a multi-disciplinary "think-and-do tank" housed on the Rice University campus in central Houston, focusing on urban issues in Houston, the American Sun Belt, and around the world.

The institute aims to advance understanding of the most important issues facing Houston and other leading urban centers through rigorous research, policy analysis and public outreach. Using that knowledge the Institute collaborates with civic and political leaders to implement promising solutions to these critical urban issues.

Bill Fulton Director Kinder Institute

ULI HOUSTON AND KINDER INSTITUTE COLLABORATION

The Urban Land Institute Houston District Council (ULI Houston) and Rice University's Kinder Institute for Urban Research (Kinder Institute) are committed to understanding the changing Houston region. The metropolitan area reflects national trends such as the urbanizing of suburban communities, remaking of a central core and the increasing importance of regional interconnection. Sharing research on these and other shifts with decision-makers from within and beyond the Houston metropolitan area promotes more effective and sustainable urban, suburban and regional development.

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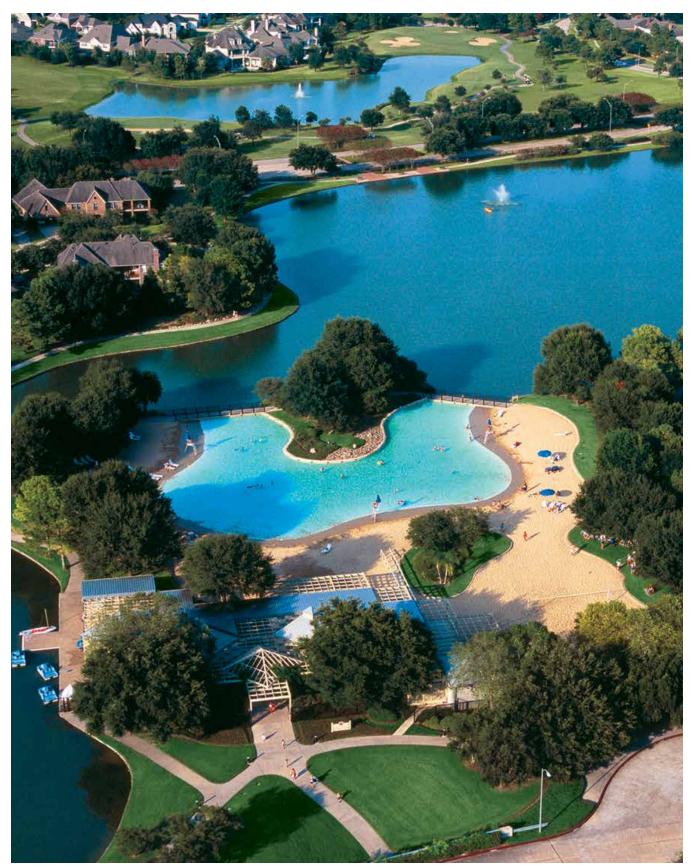
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The Beach Club at Cinco Ranch in Katy, Texas offers residents a desirable amenity and is tied to other recreational opportunities. Courtesy Newland Communities

EXECUTIVE SUMMARY

This report highlights best practices for creating resilient and adaptable development in diverse suburban communities. Faced with both immense opportunities and challenges, these areas must avoid overcommitting to outdated practices that limit future flexibility.

Many changes are elevating this need. Shifting consumer preferences are supporting the revitalization of central cities. Suburban communities are becoming denser and more urban. Demographic revolutions and growing suburban poverty are changing entire regions' political and socioeconomic dynamics. Climate change and worsening natural disasters are pushing the limits of existing infrastructure. A growing acknowledgement of how our communities' designs impact their residents' health is promoting conversations about building more sustainable regions.

In order to ensure long-term prosperity, all suburban communities must recognize their connection with each other and the region around them. Rather than competing with each other, suburbs and core cities must share innovations, successes and lessons learned from mistakes.

Best practices for adaptability and resilience are drawn from several Houston-area suburban case studies. By implementing these practices, aging suburban communities are retooling. Thriving suburbs are redefining themselves. New suburbs are integrating resilience and adaptability strategies into their initial plans. The documentation and dissemination of these best practices provides a blueprint for the pursuit of more successful suburbs nationwide.

BACKGROUND

Since World War II most suburban development has unfolded in an uncoordinated manner, especially in sprawling Sun Belt cities like Houston. Suburban subdivisions have created huge profits and other benefits, but, over time, problems have arisen from unstructured growth. Today, the costs of providing services to sprawling communities has skyrocketed, many older suburban areas have declined and expensive retrofits are increasingly required to refurbish poorly planned communities. Even successful master planned communities face issues with continued car-dependence, lack of non-residential amenities and inflexible planning practices.

Suburbs must overcome these limitations to ensure ongoing success. Sustaining such prosperity requires that regional decision-makers undertake coordinated planning efforts that emphasize resilient and adaptable policies and infrastructure. Continuing historically haphazard approaches to metropolitan development leaves cities, suburbs and regions vulnerable to too many risks.

METHODOLOGY

ULI Houston and the Kinder Institute hosted multiple focus groups with Houston-area developers, elected officials and government employees. Participants discussed the distinctive successes and challenges that arose as their communities considered and implemented resilience and adaptability practices. The best practices highlighted by focus group participants were expanded upon with in-depth research into multiple case studies.

FINDINGS

- Successful regions do not just happen. A prosperous region requires coordination across public and private sectors. Collaborations between local governments, non-profits and developers can help create more adaptable developments that serve a wider population more effectively.
- Resilience and adaptability are not antithetical to profit. A community's economic value and desirability can be increased through effective governance structures, enhanced community services (public safety, maintenance, green spaces), functioning infrastructure, good schools and active public spaces.
- Resilience and adaptability approaches provide flexibility to respond to both changing market demands and the limits of historic suburban development.
- Best practices and innovative development ideas can be drawn from all types of suburbs. Older, often lower-resourced communities offer examples from which even the most successful master planned communities can draw lessons.
- Low-resourced communities have to be particularly innovative in their efforts through leveraging funding streams, working with various jurisdictions to improve services and applying existing regulations in new ways to rebuild and retrofit themselves.
- Leadership must lay out long-term and short-term goals. Such vision from a municipality, public entity, or developer is a necessity.
- Different suburban contexts require different tools and practices. Resilience and adaptability practices are not one-size-fits-all. This applies both at the community and individual structure levels. Hospitals or IT-heavy businesses have different needs than residences or schools.
- Resilience and adaptability measures can help foster healthier residents and places. Trails, improved pedestrian realms and public spaces encourage more active lifestyles.
- Implementing best practices often means shifting current ordinances or land-use codes. Local governments have to engage and educate communities about needed updates such as increased density.

10 BEST PRACTICES

- » INSTITUTIONAL SOFTWARE
- » FLEXIBLE AND COOPERATIVE GOVERNANCE
- » VISION/LEADERSHIP
- » CONSISTENT AND QUALITY SERVICE PROVISION OVER TIME
- » LIVE, WORK, PLAY
- » REMARKABLE SPACES, OUTDOOR AMENITIES,

AND SUSTAINABLE DESIGN

- » ADAPTIVE REUSE, RETROFIT
- » ENHANCED MOBILITY
- » INFRASTRUCTURE
- » CITIZEN ENGAGEMENT

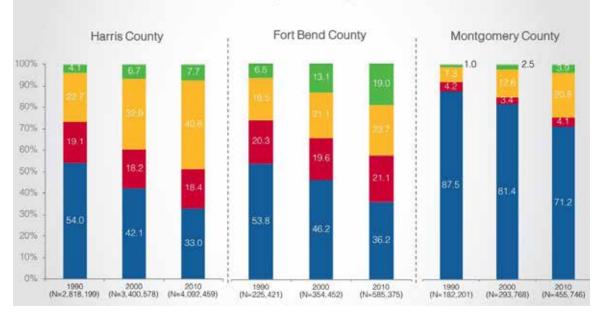
INTRODUCTION



Sharpstown, 1976. This aerial photo shows the suburban development pattern that predominated in Houston for most of the past 60 years. Houston Aerial Photographs, Courtesy of Special Collections, University of Houston Libraries.

The birth, rise and proliferation of the suburb exemplifies the nation's explosive growth after World War II. The financial success of early suburbs led to policies that promoted their growth. These policies helped establish the model as the preferred housing form for millions of Americans.¹ Today, suburban areas removed from central cores remain among the most quickly growing parts of the nation and will remain a key part of metropolitan life for decades to come.²

Despite the persistence of a relatively static view of suburbs, communities are changing rapidly. Residents with diverse demographic and economic backgrounds are forming new preferences. Planning practices like low-impact development aimed at addressing pressing environmental issues such as flooding are remaking suburbs.³ Suburban communities are urbanizing by incorporating walkable streets, multi-use designs and public greenspaces that are more closely associated with traditional downtowns.⁴ Suburban leaders, developers and residents are changing how they build and govern their communities.



Fort Bend, and Montgomery counties (1990-2010)

The three most populous counties of the greater Houston region—Harris, Fort Bend, and Montgomery—have all witnessed the diversification of their populations since 1990. Fort Bend, almost entirely suburban in nature, is one of the most diverse counties in the country. Kinder Institute for Urban Research, Kinder Houston Area Survey 2015, Dr. Stephen Klineberg.

These changes are occurring in parallel with the reemergence of central cities as desirable real estate markets.⁵ The trends in both suburbs and core highlight common obstacles and opportunities confronting American metropolitan areas.⁶ More metropolitan leaders are recognizing that attitudes which viewed all development as productive have left many metropolitan areas confronting multiple problems stemming from uncoordinated planning. To take on these challenges regional leaders must cooperate across urban, suburban and regional jurisdictions.⁷

As leaders from suburban communities contend with future changes within their communities, they also have to grapple with the limitations that have historically accompanied the development form. These issues include car-based neighborhoods, segregated land-uses, spread-out service provision areas and exposure to environmental catastrophes such as flooding.⁸ Leaders must build on existing strengths, minimize risk and establish adaptable structures and policies by observing and embracing best practices of their peers nationwide.

KEY QUESTIONS

- Where and how are suburban communities responding effectively to today's challenges?
- How are suburbs with different demographic, economic and geographical profiles pursuing different approaches and finding different results?
- What are common strategies for strengthening suburban areas that can be drawn from a wide cross-section of suburbia?

Many of the answers to these questions can be found in how specific suburbs are implementing resilience and adaptability in their communities. Resulting practices and policies can help communities prepare for and bounce back from both daily and extraordinary challenges.

Focusing on the Houston region, this report highlights resilience and adaptability best practices from several thriving or striving suburban communities. A number of these best practices—strong leadership, engaging public spaces—have existed in some suburban developments since birth. Others—from active transportation to live/work/play centers—represent new approaches implemented in response to consumer demands or pressing problems. These best practices offer a possible blueprint for how to build resilience and adaptability into future suburban developments and to insert them effectively into existing communities in the Houston metropolitan region, the broader Sun Belt and the nation.

Not every lesson from Houston will be applicable to suburban development in New York or California. Too often, though, the development and growth of Sun Belt metro areas, especially that of Sun Belt suburban communities, is dismissed by national observers as non-innovative. However, the Houston region hosts a number of communities implementing productive approaches to growth and development in novel ways.

The successes found in Houston's diverse suburbs can help foster the development of more resilient and flexible practices in other communities. Professionals engaged in the development of suburbs, cities and regions can share knowledge of these effective strategies across professional silos—development, design, architecture and government—in order to see the best approaches incorporated into current and future communities.

This information sharing is essential since the ways new suburbs are developed and older communities are redeveloped will influence the nation's future built environment. The growth of new, non-central suburban communities will continue into the future. Issues faced by aging inner-ring suburbs will affect every metro region.⁹ Moreover, the American model of suburbia is increasingly being exported to developing nations where the promises and risks of the model are replicated.¹⁰ Embracing adaptable and resilient strategies of suburban development presents an opportunity to change the way we grow worldwide.

RESILIENCE AND ADAPTABILITY

Resilience and adaptability have become major themes in urban planning, development and government circles. A ULI conference defined resilience succinctly as "the ability to prepare and plan for, absorb, recover from and more successfully adapt to adverse events."¹¹ Typically the term describes how a community prepares for and recovers from an environmental or natural disaster.¹² It has helped frame responses to instant, catastrophic events such as Hurricane Sandy or to shape conversations around slow-developing, but likewise catastrophic problems such as sea-level rise as a result of global warming.¹³ Adaptability has been added to the resilience conversation in hopes of ensuring that long-term, flexible planning is fully incorporated into the process of resilience.¹⁴

More recently, notions of daily resilience and adaptability—the idea of structures and practices that help protect communities and improve quality of life, sustainability and energy conservation—have emerged.¹⁵ This form of resilience and adaptability manifests itself in creating systems that serve many purposes such as "future-proofing" street lights by leaving options for additional uses open for when new technologies are introduced; or turning a green infrastructure network into a pathway that serves multiple purposes from flood control to active transportation.¹⁶ The terms can also be brought into design and development. Homes can be built to appeal to residents from several life stages. Instead of building only homes that draw younger families, developers could create intergenerational homes or at least mix the types of homes available in a development to reach different users.¹⁷



The greenways of Cross Creek Ranch, a project of Johnson Development Corporation, provide over 15 miles of greenway trails and storm water retention, but also serves as the community's irrigation source. Through a natural filtering system, Cross Creek Ranch is able to reuse water for green spaces throughout the property. Courtesy Johnson Development Corporation.

Conversations around resilience and adaptability are focusing on how communities and leaders can learn from past experiences and promote practices that help prepare for future issues.¹⁸ Build-ing resilience and adaptability occurs through identifying and sharing best practices.

This report focuses on daily resilience and adaptability and considers how a community responds to many potentially destabilizing events, not just environmental risks. Home value fluctuations, the introduction of diverse populations, health and income disparities or mobility issues can all be discussed in terms of resilience.¹⁹ The common elements of resilience and adaptability—preparation, flexibility, willingness to learn and improve—can be traced through how communities strive to improve quality of life and implement sustainable redevelopment.

DEFINING SUBURBIA

This report conceives of suburbs as areas that, when originally developed, were set apart from the major city center of their metropolitan region. This definition captures both post-World War II era bedroom communities now a part of central cities' more expansive borders and subsequent generations of suburbs that have developed further and further from metropolitan cores.²⁰

Communities have been built in different eras with their own unique limits and opportunities. Some suburban communities are flourishing—witnessing rising property values, brisk new home sales, job growth within or near the community, strong schools and an influx of new residents. Others have stagnated, limited by car-dependent postwar development, strip mall infrastructure, few amenities, lack of nearby employment or underperforming schools. Many inner-ring suburban areas are witnessing increases in poverty and declining levels of service.²¹

Residents of suburbs are increasingly diverse—in income, race and ethnicity (including substantial influxes of immigrants into suburbs), professions and housing preferences. Such diversity can bring huge social and economic benefits.²²

On the other hand, aging suburban populations can present public health and service challenges.²³ Declining family size and more empty nesters living in aging suburbs are forcing their social services—from schools to recreation centers—to change their operations. Inequities persist within and between suburbs. Demographic and economic disparities are tied to the degree of influence that suburban residents possess in regional politics and decision-making.²⁴

Although suburban communities confront differences in resources and power that impact the speed and scope of possible interventions, successful and replicable strategies exist in these communities. Whether drawn from a thriving master planned community, or an underfunded but striving inner-ring suburb, positive practices can support the building of stronger suburbs.

Three types of suburban categories are highlighted throughout the report. They do not represent all suburban iterations. They serve as venues for isolating and discussing best practices in implementing resilience and adaptability.

• New Suburbs (N)

Areas that are currently under construction or are soon to be developed. These are often greenfield projects in or near established suburbs. These projects represent a crucial part of the effort to improve suburban development because best practices can be incorporated into initial planning stages.

• Thriving Suburbs (T)

Well-established suburban communities, often master planned developments with strong governance structures. Usually an exception to the haphazard subdivision development of many Sun Belt suburbs, these areas often present a number of best practices.

• Striving Suburbs (S)

Older, postwar suburbs, usually within or adjacent to the city limits of the central city. Many issues confront these areas from lack of planning, to weak governance tools, to few financial resources.

COMMON CHALLENGES

In order to understand how suburban communities are innovating, their challenges must be described. Market and consumer preference shifts, and the problems arising from the inherent limits of traditional suburban development, provide an overarching framework. Within those categories are more specific challenges that hinder the implementation of resilience and adaptability practices. The impact of these challenges also varies depending upon the type of community confronting it and the resources available to address it. Highlighting mutual challenges to creating a resilient and adaptable community frames the subsequent discussion of best practices and sheds light on which strategies can be best tailored to address specific suburban needs and contexts.

Each challenge is marked for its connection to the **new (N)**, **thriving (T) or striving (S)** suburb typologies. This system denotes the suburb types most affected by each challenge. It is not an argument that these challenges are only present in that type of community. This marking system will be repeated for the best practices.

- High cost of services (N, S). Low-density development requires substantial infrastructure and maintenance costs to be spread among smaller numbers of stakeholders. In particular, this is a challenge for older striving communities overcoming previous limits and new suburbs attempting to avoid complications.
- Limited or unproductive engagement with residents (T, S). Officials confront a challenge in convincing residents to accept new forms of development such as multi-family. Residents struggle with stringent regulations or lack of communication with developer.
- **Infrastructure demands (N,T,S).** All suburbs struggle to finance and plan for future infrastructure demands. Water treatment, mobility, and drainage are particularly problematic.
- **Mobility (N,T,S).** The low-density development of car-dependent suburban communities undermines mobility within each such community and between different activity centers. This challenge is particularly stark for pedestrian, transit and bicycle users in every form of suburb.
- **Political Fragmentation (N,T,S).** Communities face difficulty coordinating planning efforts across various jurisdictions.
- Affordability (N,T) and Suburban Poverty (S). Thriving and new suburbs often lack affordable housing options. Striving suburbs confront growing poverty rates that amplify other challenges such as mobility.
- Environmental Pressure (N). Greenfield development stresses metropolitan ecosystems.
- **Poor quality development (N,S).** Low quality development threatens property values of adjacent communities or properties. Older, poorly maintained homes in striving communities challenge redevelopment efforts.
- Merging Best Practices with Bottom Lines (N,T,S). Incorporating best practices can be expensive; developers and decision-makers must strike a balance and prioritize.

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- » ENHANCED MOBILITY
- » INFRASTRUCTURE
- » CITIZEN ENGAGEMENT

BEST PRACTICES

FOR RESILIENCE AND ADAPTABILITY

The following best practice strategies do not address every obstacle facing suburban communities. They do offer a relatively comprehensive list of approaches that now exist in some Houston suburbs and that are helping those communities become more resilient and adaptable.

The listed strategies have been implemented in different ways at different scales. Each practice is again marked for its applicability to **new (N)**, **thriving (T) or striving (S)** suburbs. As with the challenges, this is not to argue that a given approach is only pursuable in the assigned community types. Rather, strategies are unlikely to function in the same way in each community. Approaches to development or retrofitting should fit each community's situation and challenges.

The list and subsequent case studies should be read together as a toolkit for creating resilient and adaptable suburban development.



Cinco Ranch, a master planned community outside of Houston, has used carefully crafted governance documents to ensure a high-quality product and to help keep the community's homes in demand. Courtesy Newland Real Estate Group.

INSTITUTIONAL SOFTWARE

Resilience and Adaptability Outcome:

Governance structures and legal agreements are documents that serve as institutional "software" that regulate the use of infrastructural or built environment "hardware" and help establish a wide range of benefits by creating and maintaining quality standards.

Benefits

- Deed restrictions and design review standards help maintain a community's home values and aesthetics through enforcement.
 - Houston-area suburbs or master planned communities with clear governance documents—Woodlands or Cinco Ranch for example—tend to produce higher quality, more consistent homes than developments or municipalities where such documents are absent or enforcement is lax.
- Governance structures aid in long-range planning by creating consistent expectations and enforcing land-use distinctions.

Limits

- Agreements must permit an amendment process through which adaptations can be made both in terms of policy—i.e. a willingness to add density—or in regulation—i.e. rules about new technology such as solar panels.
 - Several thriving suburbs from Pearland to Sugar Land are currently attempting to implement more flexible practices into governing documents, but the process requires a great deal of public engagement.
- Governance structures can be viewed as overly restrictive either for an individual property owner or on a larger-scale such as restricting land-use.
- Difficult to implement retroactively in striving suburbs.
 - Once deed restrictions lapse, as they have in several older suburban neighborhoods such as the Near Northwest, there is no simple mechanism to replace them.

(N,T)



The development of Imperial Market and Imperial Sugar Land benefited from clear relationships with the City of Sugar Land and its master planned community development regulations. Courtesy Imperial Market.

FLEXIBLE AND COOPERATIVE GOVERNANCE

Resilience and Adaptability Outcome:

A local jurisdiction's willingness to create productive relationships with other public and private entities can help create higher-quality developments and higher economic returns. Creating policies that are alterable and responsive to new challenges or technologies can help communities avoid outdated practices or costly, inefficient systems.

Benefits

- Government cooperation can streamline provision of services.
 - Brazoria County works closely with municipalities such as Pearland to coordinate drainage and roadway improvements.
- Unincorporated communities can focus on distinct tasks and work with other jurisdictions such as the county to provide needed services.
 - Montgomery County maintains the roadways in The Woodlands, freeing the township to spend its resources on other amenity improvements and services.
- Flexible development agreements allow local governments and developers to exchange required elements for stable regulations and consistent oversight.
 - Sugar Land's approach to master planned community development is a model. The municipality has more influence over a project's final shape, and the developer has a clear sense of regulations that will affect a project.
- Flexible policies can offer insight on specific projects rather than one-size-fits-all approaches. i.e. form-based code vs. traditional land-use zoning.
- Comprehensive planning that is forward-looking prevents an overreliance on obsolete practices. Plans can instill expectation of flexibility.
- Adaptable policies allow jurisdictions to adjust to new market demands and get the most out of their resources and public properties.

Limits

- Lack of a single responsible jurisdiction can result in diffusion of decision-making power that makes effective response to issues more difficult or slower.
- Lack of single responsible jurisdiction prevents easy engagement with residents and concerns. Many entities deal with discrete topics, rather than one entity addressing all.
 - Unlike a municipality where all services are contained within it, entities such as Woodlands Township or individual master planned communities have to direct residents to a variety of other actors—counties or special district governments—for service concerns.
- Development agreements must be forward-looking to ensure proper fit with changing best practices and future needs.
- New systems or rules must be evaluated for flexibility, efficacy, fit and function.

(N,T,S)



The Near Northwest Management turned a former country club into the White Oak Conference Center through part of a larger agreement with the City of Houston and Harris County to reuse the entire Inwood Forest golf course. Courtesy Near Northwest Management District.

VISION | LEADERSHIP

Resilience and Adaptability Outcome:

Having a single jurisdiction, leader or entity acting as a visionary leader helps ensure the sustained quality of a suburban development over time.

Benefits

- Leaders can take positive risk, i.e. purchasing a large lot for development or building a much needed but expensive amenity.
 - Near Northwest Management District can coordinate with other actors to repurpose White Oak Golf Course as detention in a way private capital would not do so due to risk and cost.
- Leaders can push for the implementation of controversial but positive policies such as increased density or more pedestrian/bicycle infrastructure.
 - o Sugar Land's undertaking of potential code changes allowing for more density.
- Sustained, effective growth is pursued over short-term gains.
- The different scales and timelines of long- and short-term project are viewed jointly, i.e. a sidewalk repair tied into to an overarching mobility plan.

Limits

• Sole leadership can lead to tunnel vision or the ignoring of outside ideas.

(N,T,S)



The East Aldine Management District has used much of its assessment revenue to bring proper sewage and drainage systems to the community. Courtesy East Aldine Management District.

CONSISTENT AND QUALITY SERVICE PROVISION OVER TIME

Resilience and Adaptability Outcome:

The ability of a suburban municipality, developer or association to provide expanded and sustained services by securing funding streams beyond taxes, such as business assessments or other resident fees, can help meet maintenance needs and maintain property values.

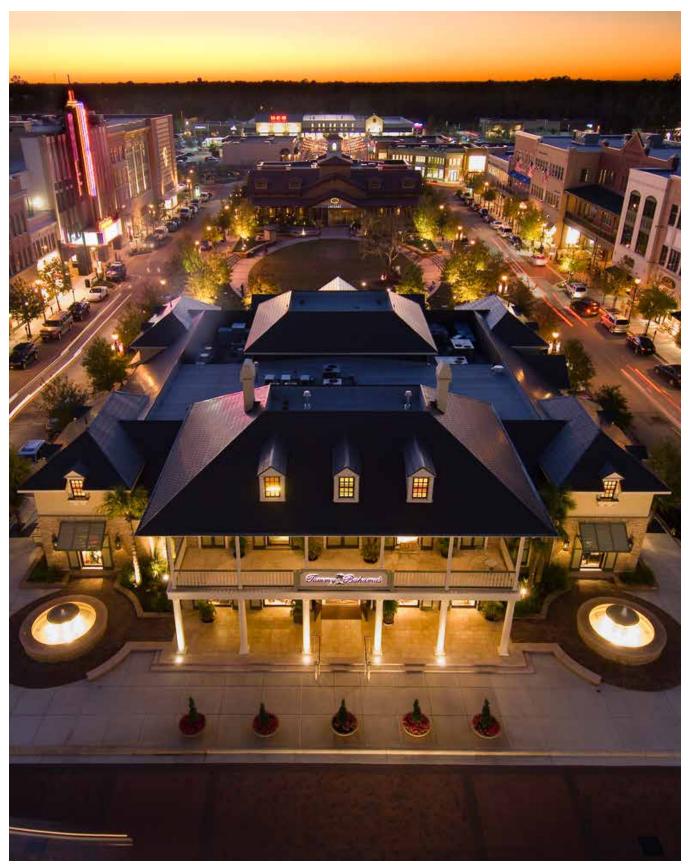
Benefits:

- Consistent services support a suburb's success by drawing new residents and positively shaping its image. Particularly effective for changing perception of striving communities.
 - East Aldine Management District's installation of sewer systems in areas not currently served.
- Supporting higher quality schools improves reputation. Private support and public/private partnerships can improve a public school system.
 - Meridiana, a master planned community south of Houston, has created several privately funded "education labs" to augment public facilities and encourage learning outside of the classroom.
- Can lead to better public spaces or updated amenities and respond to needs of community.
- Performance and accountability measures can help public officials and developers evaluate pressing versus important needs.
 - Plan Houston, the City of Houston's new general plan, includes ideas for a number of performance measures with the goal of improving services.

Limits:

- Areas that are not empowered to secure more funding cannot provide such services.
 - Unincorporated areas not within the boundaries of special district entities such as a management district or tax increment reinvestment zone, i.e. much of the area around Houston's Farm to Market Road 1960, struggle to find adequate funds.
- If more pressing issues such as failing infrastructure or lack of amenities exist, expanded services are impossible to pursue or less effective.

(T,S)



Activity in the Woodlands Town Center at night. Courtesy the Woodlands Development Company A Division of the Howard Hughes Corporation, TBG Partners and Walter Larrimore

LIVE, WORK, PLAY

Resilience and Adaptability Outcome:

A thriving 24-hour activity space co-locates active living, employment and recreational elements. Such arrangement encourages active transportation, draws economic activity and creates amenities that attract a wide range of users and residents throughout the day.

Benefits:

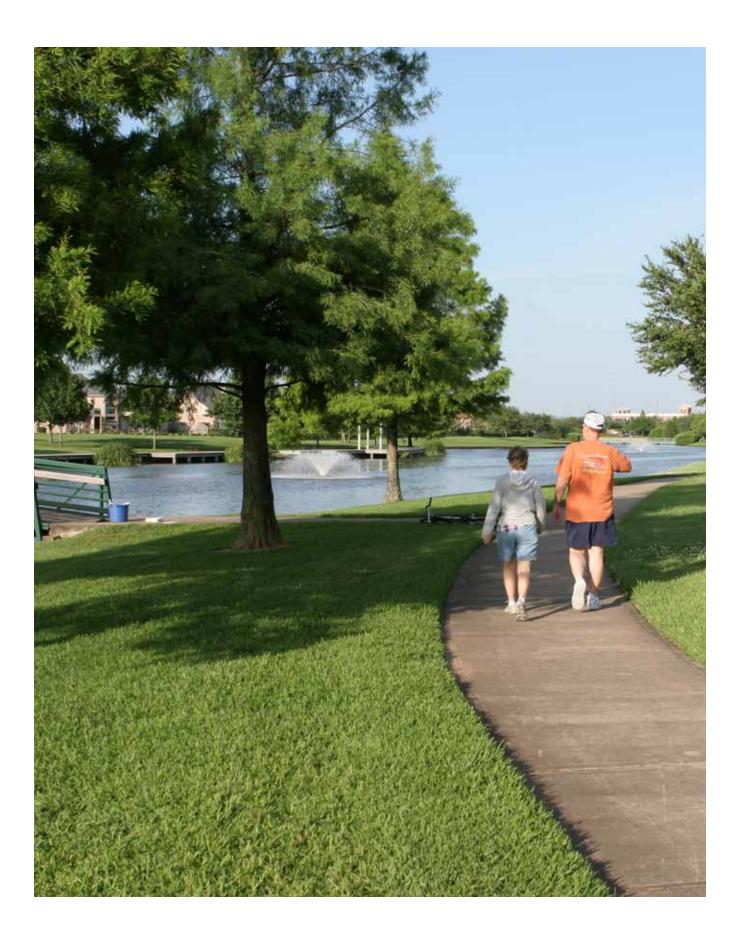
- Mixed-use centers create activity over longer periods of time, raising revenues from sales tax and other income streams.
 - As downtown Houston or the Woodlands Town Center adds residents, they create more economic activity in non-work hours.
- Project-level live-work-play best practices permit higher-density development and promote more walkable environments. Concentration of services can lower costs.
- Locating of jobs near residential developments can help residents and employers reduce expenses and make communities far more attractive to potential residents.

Limits:

- Policies need to be put into place that allow for higher levels of activity—higher density, more connectivity, mixed land uses.
 - Zoning codes in communities such as Sugar Land strictly limit where non-residential projects can be located. These rules may need to change to enable additional mixed-use development.
- Elements must appeal to a wide subset of demographics.
- Striving communities may have difficulty creating such a center through retrofitting of existing built environment. Lack of job centers is also a major hurdle.

(N,T)

 \mathbf{C}



REMARKABLE SPACES, OUTDOOR AMENITIES AND SUSTAINABLE DESIGN

Resilience and Adaptability Outcome:

These spaces attract a wide variety of users and economic activity, provide healthy recreation opportunities, raise property values and raise or maintain a community's reputation. Sustainable building and public space design create quality products with low impacts.

Benefits:

- Outdoor amenities such as urban trails or public greenspaces not only encourage more active transportation and health outcomes but also bring greater economic activity.²⁵
 - Kingwood, The Woodlands and the City of Houston all possess interesting bike and pedestrian networks that connect people and provide opportunities for development.
- Remarkable spaces can attract people with different demographic profiles depending upon how they are programmed.
 - City Centre's central greenspace, The Woodlands' Cynthia Woods Mitchell Pavilion and Waterway and Near Northwest's White Oak Conference Center are examples.
- Can serve as landmark for a development as a desirable place to live or visit.
- More holistic design processes help optimize resources—i.e. right-sizing parking to reduce impermeable surfaces and open land for higher use.

Limits:

• Spaces must be flexible and accessible to provide most value.

(N,T,S)



Imperial Market in Sugar Land reused four historic buildings from the former Imperial Sugar plant. They gave the site a distinctive and defining character and help preserve local history. Courtesy Imperial Market Development, LLC.

ADAPTIVE REUSE, RETROFIT

Resilience and Adaptability Outcome:

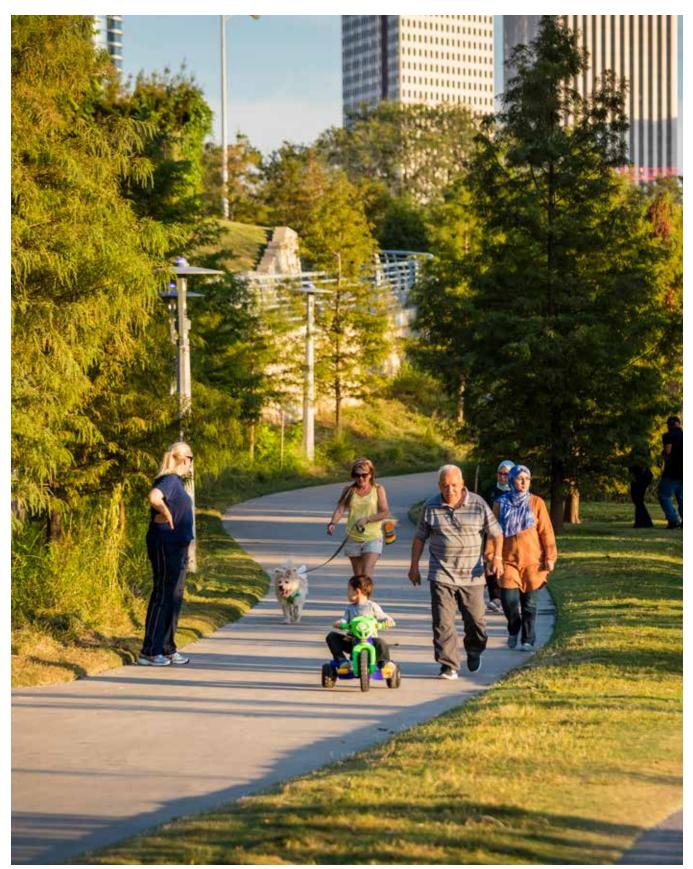
The reuse of existing structures in many cases can reduce development costs and is more environmentally sustainable than demolishing and rebuilding.²⁶ Retrofitting of historic buildings can create remarkable spaces.

Benefits:

- Retrofitting of existing land-uses or structures can reform use and value.
 - East Aldine's Town Center offers the chance to change a pedestrian unfriendly landscape into a more accessible and safe one. Garden apartments across the Houston region could be redone into intergenerational housing.²⁷
- Can build on history of a site.
 - Reuse of Imperial Sugar complex preserves its history and turns it into an asset that can make the surrounding development more successful.

Limits:

- Can often require a relaxing or changing of existing land-use laws to allow for greater density or new forms of residential development such as an accessory dwelling unit.
- Environmental hazard spaces can be difficult or expensive to remediate.
 - Many older suburbs contain relic industrial or manufacturing sites that present significant hazardous risks and may prevent reuse.
- The retrofitting of striving suburbs often contains elements of new construction or developing in addition to reuse.



The City of Houston has been leading the way in the region by establishing effective off-street bike and pedestrian networks, with Buffalo Bayou Park representing a key centerpiece. Photo by Jonnu Singleton, SWA Group. Courtesy of Buffalo Bayou Partnership.

ENHANCED MOBILITY

Resilience and Adaptability Outcome:

Improving connections and infrastructure for automobiles, pedestrians, transit and bicycles increases options, improves safety, reduces congestion and supports healthier lifestyles.

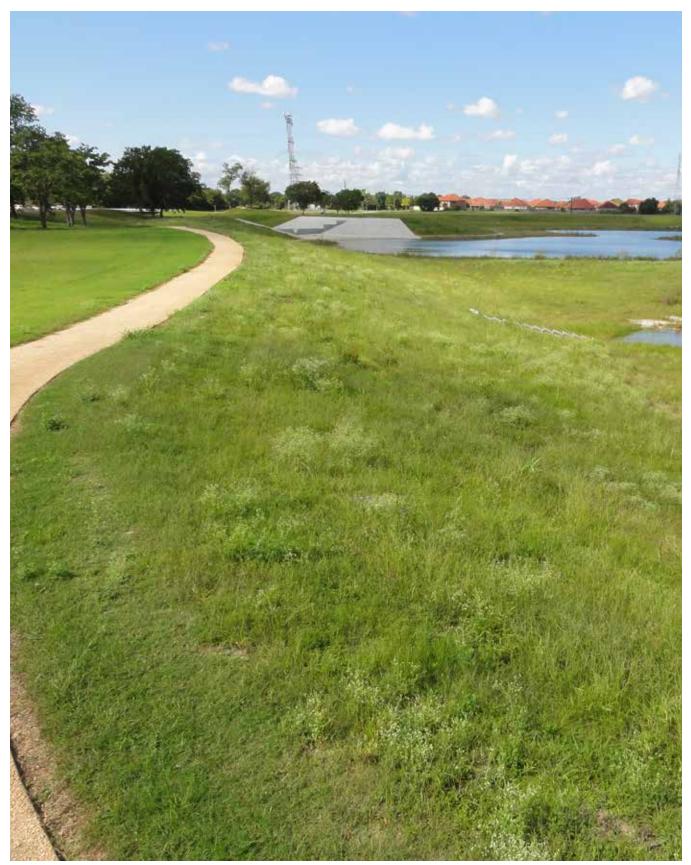
Benefits:

- Walkable developments can provide substantial health and economic benefits. Trails and sidewalks are increasingly popular in master planned communities and striving suburbs as value creators.²⁸
- Planning for bicycles and pedestrians in new developments means not having to retrofit later.
 - Sugar Land developers did not plan for connected bicycle infrastructure in initial community designs. Now, the city is working to add trails and systems retroactively.²⁹
- Mobility networks are an integrated system. Improvement to one form of mobility can enhance other forms.
- Non-car based development presents opportunity for new types of buildings and street design options.

Limits:

- Policies should provide benefits to more forms of mobility, i.e. creating parking systems that call for shared parking and are tied to systems that encourage walking from destination to destination.
- Continued focus on car-only designs in many communities encourages a separation of uses by non-walkable distances.





The Harris County Flood Control District's Jersey Meadows Detention Basin in Northwest Harris County acts as both detention pond and greenspace with a trail system. Courtesy Harris County Flood Control District.

INFRASTRUCTURE

Resilience and Adaptability Outcome:

Implementation of new technologies or techniques can improve performance and efficiency of infrastructure systems. Infrastructure elements can serve multiple purposes, and practices such as low-impact development can reduce the resources needed for a project while producing more sustainable results.

Benefits:

- Improved performance and monitoring can reduce costs for maintenance and replacement.
- Flexible, multipurpose infrastructure creates more useable spaces. Amenities can double as infrastructure and vice versa.
 - Near Northwest's use of the White Oak Golf Course as both park space and detention flood control.
- Low impact development improves water quality and helps manage drainage without drastically altering a landscape.
 - Harris County Flood District, Harris County and the Houston-Galveston Area Council all have low impact development guidelines to encourage and implement this type of work.
- Future proofed systems that are flexible can incorporate new technologies without being completely replaced or antiquated.
 - Pearland has worked to improve its waste water system in ways that can better include new monitoring technologies.
- Different requirements for infrastructure can be provided where needed. Hospitals and IT companies can consider alternative designs to protect essential equipment.

Limits:

• Requires significant funding and foresight to make existing or planned projects serve a broader purpose.



Public engagement meeting for Alliance Children's Garden in Austin, Texas. Courtesy TBG Partners and Jody Horton

CITIZEN ENGAGEMENT

Resilience and Adaptability Outcome:

Engagement with residents allows for responsiveness to changing needs and trends, allowing suburban developers and communities to retain residents and draw new ones.

Benefits:

- Can act as a feedback and performance measurement for pilot projects or new systems.
 - Several cities—Pearland and Sugar Land among them—conduct citizen surveys on needs and quality of services. These surveys are used to influence priority projects.
- Benefits long-range planning efforts by fitting projects to resident needs.

Limits:

- Should not become debilitating. Citizen input must be balanced with needs, costs and priorities.
- Engagement must be democratic, especially in more diverse communities. Small groups of residents cannot be held up as sole spokespeople.



CASE STUDIES

PROJECTS AND COMMUNITIES

The Houston metropolitan region consists of a complicated web of jurisdictions. While the region's economic production and overall growth have been substantial for several decades, regional cooperation is still lacking. The region can encourage more effective collaboration among government entities through adopting and sharing best practices.

The creation of a functional regional fabric takes time and effort, but the increased urbanization of suburbs and the changing relationship among regional actors present an opportunity to undertake such an effort in most metro regions.

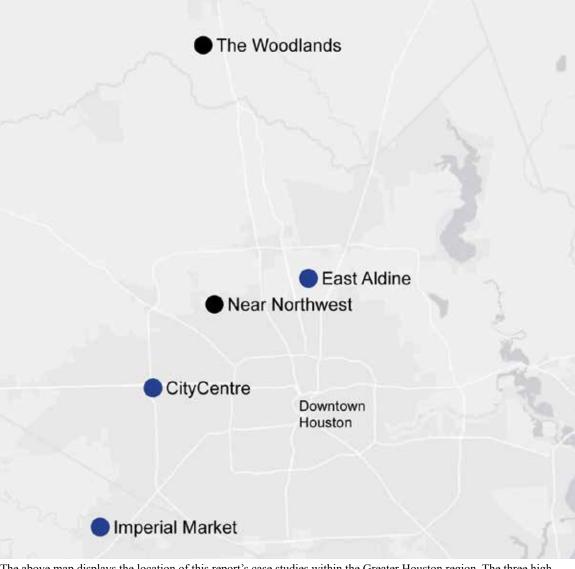
Many American metro areas—from Houston to Denver to Salt Lake City—are witnessing redevelopment in line with what scholars Ellen Dunham-Jones and June Williamson call "incremental metropolitanism." In these cities there is a growing recognition of regional interconnection, a focus on retooling of older communities and a questioning of the problematic practices of traditional suburban development.³⁰ Success cannot remain limited to a single community, but that the goal should be to create a stronger region.³¹

Suburbs hold a central position in the pursuit of regional cooperation. These communities often have the most wealth and resources within their regions. Yet other suburban areas are among the most in need of assistance from an organized and effective region. A narrow perspective on this dichotomy would posit that the failures of one community are not the responsibility of another. However, if problems such as a lack of dispersed affordable housing lead to the concentration of poverty, then problems can become intransigent, grow quickly and impact the whole region.

The following Houston case studies reflect the region's limitations and opportunities. The five examples represent slices of disparate suburban communities. The cases allow for observation at the community and the project levels. Oscillating between these perspectives provides a nuanced look at the ways best practices are being implemented and replicated.

PROJECTS:

Looking at the project level for best practices of resilience and adaptability magnifies the commonalities and differences between thriving and striving suburbs. The three projects presented here are rooted within different suburban communities and are currently at different stages of development.



The above map displays the location of this report's case studies within the Greater Houston region. The three highlighted cases are the project level examples. Map by Kelsey Walker, Kinder Institute for Urban Research.

IMPERIAL MARKET/IMPERIAL SUGAR LAND

Primary Actor: Texas Real Estate Fund, Inc. (Imperial Market), Johnson Development Corporation (Imperial MPC), City of Sugar Land

Location: Sugar Land

Primary Best Practices: Adaptive Reuse/Retrofit; Flexible and Cooperative Governance; Live, Work, Play; Remarkable Space.

Key Observations:

- Adaptive reuse transformed unused historic buildings into high value, taxable land.
- Flexible land-use regulations and housing types create range of residential and commercial opportunities.
- City-developer cooperation helped create a signature site.

Profile:

Imperial Market, currently under construction, is primarily a retail and commercial development with a small amount of multi-family development. The site also contains a number of important institutional anchors such as the Sugar Land Children's Museum and the Sugar Land Heritage Foundation. The development is built around four renovated historic buildings of the former Imperial Sugar production facility and maintains the iconic smokestacks of the old plant. Imperial Market is part of a larger master planned community called Imperial Sugar Land. This master planned community is one of Sugar Land's newest communities. As a city, community and project, Sugar Land, Imperial Sugar Land and Imperial Market reflect multiple resilience and adaptability best practices.

Sugar Land is experiencing many of the aforementioned changes taking place in traditional suburban areas. Its population is aging, becoming more diverse and gaining renters. Its households are becoming smaller. The community's Town Square, which started development in 2003, represented a departure from the traditional suburban model and aimed to bring live, work and play elements into the municipality. The dense mix of retail, commercial and office space offered one of the most concentrated activity locations in the municipality. The center has been a major success, and Sugar Land is attempting to find ways to encourage denser and more mixed-use development in strategic locations. Imperial Market and Imperial Sugar Land represent its next attempt. Both developments epitomize the slow urbanization of the traditional suburb.

Despite these changes, Sugar Land retains its traditional suburban character. Nearly 77 percent of the city's total acreage is residential, and nearly 92 percent of that residential acreage consists of single-family detached homes. Only 2.1 percent of the residential currently in place is multi-family.³² Many Sugar Land residents do not work within the municipality, with nearly 86 percent of residents working outside of the community. Clearly there is a high commuter rate into Houston and other employment centers, but the high number also suggests that Sugar Land could continue to work to bring jobs and residents closer in an effort to solidify its live, work, play best practice.³³

Sugar Land has created a flexible planned development zoning code and works with developers on planned development agreements to shape projects in ways that align with the community's larger goals.

These districts are "designed to permit flexibility and encourage a more creative, efficient and aesthetically desirable design and placement of buildings, open spaces and circulation patterns."³⁴ The activity center approach fits within this strategy. Here, the municipality has oversight over the development by ensuring key requirements are met.



Rendering of Imperial Market's main plaza showing mix of uses, historic elements, and retrofitted buildings. Courtesy of Imperial Market.

Currently the municipality is reviewing its land-use plan and policies. The potential shift in planning represents an acknowledgement among leadership that elements of the traditional suburb could be improved. The challenge is to convince residents that some changes can benefit every part of the community. The draft plan from June 2016 considers a number of ways for the city to implement more adaptable policies, several of which are highlighted below.³⁵

- Improve mobility options by building better pedestrian and bicycle connectivity. Create more non-car connections between parts of the municipality.
- Accept some traffic congestion near activity centers as a tradeoff for dense, economically productive uses.
- Require additional office space within activity centers to build up the live, work, play capacity.
- Enable multi-family development in activity centers and planned developments. Establish controls over how multi-family is instituted and what shape it takes—i.e. the quantity and design of more compact single-family homes such as townhomes.
- Ensure the creation of remarkable places by requiring public space to be maintained within new developments.
- Focus on getting highest return on investment for new projects through institutional software such as development agreements—do not give away commercially and industrially zoned land.

Imperial Sugar Land, especially Imperial Market, fits into the overarching goals of Sugar Land. From its inception, the project has represented an innovative model of governance. The land for the development is owned jointly by the State of Texas and Johnson Development Corporation. When the development was planned, Sugar Land created a tax increment reinvestment zone (TIRZ) and entered into a planned development agreement with the developer. As the developer sells land, the TIRZ reimburses the developer for infrastructure costs, and the state is paid for its portion of ownership. The proceeds of the sale go into the state's permanent school fund.

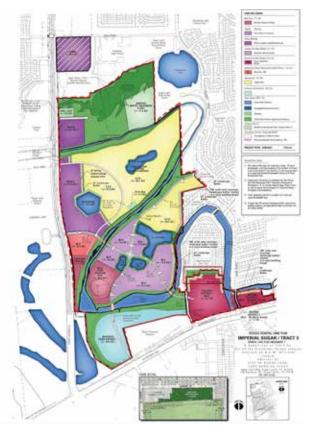
Imperial Market will be the third mixed-use activity center in the municipality. Its core includes six preserved buildings of the former Imperial Sugar complex, highlighted by the old Char House with its recognizable smoke stacks. The preservation and adaptive reuse of the buildings was mandated in the development agreement and makes the community into a remarkable space.³⁶ The completed Imperial Market will house retail, commercial, office, a hotel and some residential. These will be connected both by pedestrian spaces and local roads. Trails will be built along the nearby creek and connect to a larger trail system into the broader development.

The institutional software elements—the development agreement for Imperial Market and the Planned Development Agreement for Imperial Sugar Land—establish a number of requirements:

• Sugar Land rezoned Imperial Market to allow for multi-family and greater mixed-use, zoning it similarly to the Town Center. Two hundred seventy-four multi-family units are in Imperial Market. An additional 300 are available in the larger Imperial Sugar Land development, concentrated around the baseball stadium and its commercial areas.³⁷

- Form-based standards such as specific setbacks, height requirements, sidewalk specifications and pedestrian spaces create the desired activity center feel for Imperial Market.
- Adjacent to the Imperial Market activity center, but within the broader Imperial development, are an innovative set of structures called Live/Work Townhomes. The 40 allowed spaces permit a single structure to combine either a commercial, office or retail space with living quarters. This approach adds density and expands the commercial zone of the development.³⁸

Sugar Land and its development partners at Imperial Market have yielded numerous best practices for future developments within the municipality and beyond. Challenges remain, of course; Imperial Market sits adjacent to one of Sugar Land's most historic neighborhoods, which has housed Imperial Sugar workers for generations. These residents tend to have lower incomes. Many of these residents are concerned that Imperial Market will raise property values – and thus property taxes – to a level they can no longer afford. Beyond ensuring protections for existing residents through a historic district or considering property tax controls, officials and developers must show how the benefits of development similar to Imperial Market spread to residents outside the community.



This map site plan for Imperial Sugar Land includes the Imperial Market development in the lower right corner. Note the large areas of mixed-use including both Imperial Market and in the Ball Park District. Courtesy of TBG Partners and Johnson Development Corporation.

CITYCENTRE

Primary Actor: Midway Companies

Location: Houston

Primary Best Practices: Adaptive Reuse/Retrofit; Flexible and Cooperative Governance; Live, Work, Play; Remarkable Spaces; Institutional Software; Vision/Leadership.

Key Observations:

- CityCentre's mix of retail, office, residential and recreational uses creates a lively, nearly 24-hour live/work/ play environment.
- Retrofitting elements of the former mall site--like reusing parking lots--saved resources.
- The leadership of Midway helped reduce obstacles that can arise in multiple partner projects.

Profile:

CityCentre is an award-winning, mixed-use development built at the intersection of two highways and atop the skeleton of an old mall. For a site that is surrounded by mostly postwar residential areas, the project is urban—with walkable streets, centralized garage parking and activated greenspaces, restaurant patios and streetscapes. The first phase is finished and represents the bulk of the project's scope. It contains retail, 780 units of multi-family and 35 single-family townhomes. The communities surrounding CityCentre range greatly given its position at a major crossroads. Its retail and commercial clientele skew higher-income, but its greenspaces and restaurant mix attract a wide range of users.

The project is one of many mall-to-mixed use developments nationwide. This represents one of the most successful forms of retrofitting and adaptive reuse in suburban redevelopment today.³⁹ Midway was the sole developer leading all of the retail, commercial, office, and residential portions.

The company had the freedom to proceed with a clear vision for the whole development that achieved the goals of creating a good investment and a remarkable place.

In such retrofit projects not developed under a single entity, the coordination of mixed-uses and the initial procurement of the property are often challenging. In addition, the sole ownership by Midway helped it overcome other retrofit challenges stemming from a need for public space and the overcoming of mobility challenges. For example, because Midway owned the existing mall parking structures, it could implement a shared parking system and save approximately \$25 million by not having to build new parking facilities.

Midway visited 17 other mixed-use developments and mall retrofits during its planning phase. While drawing best practices from these site visits, the company also learned that careful, cohesive planning was essential. A successful mixed-use center needed a carefully calibrated balance of uses. Residential development added an important sense of permanence. The public and outdoor spaces needed to be activated, and, in Texas, shaded. Midway required patios and shade structures for each restaurant. In many ways the central piece of the project is the central greenspace that is surrounded by several restaurants and actively programmed throughout the year. This remarkable space provides an essential outdoor amenity and draws many different users. The careful calibration of uses has created a successful live, work, play design.

Midway also installed thoughtful institutional software elements. The declaration of covenants, conditions, restrictions and easements (CCR) established regulations to help manage the public spaces, create and maintain a cohesive vision for future phases and institute design standards. The long-range planning approach helped streamline its development ⁴⁰ In terms of mobility and infrastructure, Midway created private streets within the development that gave it more control over traffic flow and ensured that it could control the aesthetic of the streetscape.

Finally, the flexible governance structure of Houston facilitated the project's development. Due in part to Houston's relatively flexible development codes, CityCentre required only two planning variances—one tied to setback lines and the other for a change to parking requirements for a mixed-use development. This flexibility also helped Midway need only about 18 months to go from planning to the beginning of construction.

While CityCentre has been successful in most respects, Midway believes that a more flexible and phaseable process of development would have allowed for the project to deal with market changes more easily than its all-at-once development approach.



CItyCentre's main green lawn and the surrounding commercial and residential buildings capture the development's mixed-use, live, work, play environment. Courtesy of CityCentre.

EAST ALDINE TOWN CENTER

Primary Actors: East Aldine Management District, Neighborhood Centers Inc., Harris County and Lone Star Community College

Location: East Aldine, Unincorporated Harris County

Primary Best Practices: Vision/Leadership; Flexible and Cooperative Governance; Remarkable Spaces; Enhanced Mobility; Citizen Engagement.

Key Observations:

- Coordination among key actors and residents facilitated a community-oriented project.
- The plan includes several outward looking connections to public parks, mobility networks and community needs.
 - Project represents a possible anchor for future development.

Profile:

The East Aldine Town Center (the Town Center) is a planned activity and service hub slated for construction in the unincorporated East Aldine community in 2016. The Town Center is emerging from a partnership among East Aldine Management District (EAMD), Lone Star Community College, Neighborhood Centers, Inc. (NCI), Harris County and other actors. The Town Center will provide jobs, training, activities and retail that do not exist within East Aldine.

The community around the Town Center site is lower-income and mostly Hispanic. The area was developed with a smattering of planned subdivisions after World War II and has subsequently seen mostly piecemeal residential development. Only one or two subdivisions maintain deed restrictions. The rest of the area is only lightly regulated. The commercial and retail structures are almost all in strip malls. Pedestrian and bicycle infrastructure is almost non-existent.

Service provision is particularly problematic here because the City of Houston, despite annexing areas on all sides, has never annexed East Aldine because it does not contain enough tax base.⁴¹ No single entity has the means to address multiple service and infrastructure needs leaving EAMD to coordinate implementing the most pressing infrastructural needs: sewers and wastewater. The homes of several thousands of residents remain on septic systems because installation of water infrastructure is prohibitively expensive without support from and coordination with many entities.

Despite these challenges, East Aldine is a productive area. The area has long hosted manufacturing and other industrial companies linked to the nearby international airport. Earlier retooling efforts have built on this strength by encouraging more small business development or workforce training for manufacturing/industrial jobs.⁴² Workforce training and education have been tied in East Aldine for years. The conversations around this topic created a productive relationship among Lone Star Community College, NCI and area businesses. This connection helped build a foundation for the Town Center idea.⁴³ East Aldine residents have a reputation for being entrepreneurial. Ninety-seven percent of small retail space in the community is leased.⁴⁴ Local leadership wants to work with residents to build upon the community's strengths. Many see the project as an opportunity to reinvent the community.

The drive to improve East Aldine led a consortium of key actors to pursue the Town Center idea. Led by EAMD, a quasi-public government entity with a sales tax assessment that creates approximately \$6 million a year in revenue, and State Rep. Armando Walle, an effort was undertaken to create a remarkable space and community anchor for East Aldine. An activity hub would also help to activate the adjacent Keith-Weiss Park, which is underutilized partially because it has as a reputation for being unsafe. Rep. Walle invited NCI to bring one of its community centers to the community. EAMD worked with Harris County Emergency services to locate a 911 call center in the proposed Town Center. The EAMD also worked with Lone Star Community College to bring a campus to the Town Center. It will also feature a public amphitheater and connections to Keith-Weiss Park. Finally, Harris County Public Health conducted a Health Impact Assessment (HIA) on the development, working with EAMD and key players to identify potential health and safety impacts related to the Town Center and develop plans to mitigate adverse outcomes and amplify positive ones. Through this HIA, EAMD staff and community members prioritized mobility-related issues.



Site plan for the East Aldine Town Center. The site design as shown is a concept, not a final layout. Courtesy Clark Condon Associates and East Aldine Management District.

To plan its portion of the Town Center, NCI used an approach of appreciative inquiry to collect ideas from residents to mold the shape of its development.⁴⁵ During its work in East Aldine and in partnership with other Town Center partners, NCI realized that the Town Center should build on the tradition of entrepreneurship, manufacturing and industrial production and its many beloved and successful restaurants. In addition, residents expressed a desire for more educational opportunities, job training and business incubation, financial services and a central and connected recreation destination.⁴⁶ NCI's portion of the Town Center will include all of those elements. A makerspace and an entrepreneurial marketplace will co-exist with NCI's more traditional social and financial services elements.

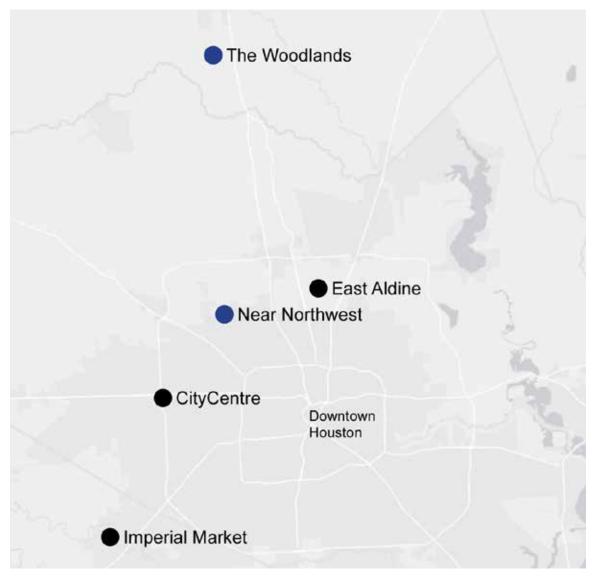
The Town Center will serve as a mobility and infrastructure connection for East Aldine.

The Town Center will be the hub of the EAMD's bike and pedestrian efforts. The plans call for a connection to Keith-Weiss Park's existing trails. Moreover, the Town Center is located along a major thoroughfare notorious for high speeds and unsafe non-vehicular travel and in between a number of schools. This location presents the opportunity to provide safer connections from schools to the Town Center using neighborhood streets. This can encourage active transportation and lead to positive health outcomes by increasing non-car travel and making that travel safer. The Town Center offers a chance to continue the area's re-greening efforts by creating detention on site and emulating similar work going on across the community where flood-prone sections are bought out by FEMA and turned into greenspace detention. These spaces serve the dual purpose of providing space for recreation and helping prevent future issues with flooding.

As a striving community working to reinvent itself, East Aldine shows how different suburban contexts shape improvement options. CityCentre and East Aldine clearly capture the fact that reinventing an existing community or development is far harder than undertaking new construction on greenfield development. Retrofitting, especially at the community level of which the Town Center is an example, requires far more cooperation and commitment to see it through. The immense challenges faced by low-resource communities such as East Aldine redouble this challenge and, potentially, make its success all the more impactful.

COMMUNITIES

Community-level case studies illustrate the links between a project and its surrounding area. Community practices reflect broader patterns that are harder to see from the project level and are more directly tied into regional activity. Both case studies—one a striving community the other a thriving one—demonstrate this important role. While The Woodlands case study demonstrates the ways that flourishing suburbs are incorporating best practices and building upon their assets, the Near Northwest will show how a low-resource community can reinvent itself.



The above map displays the location of this report's case studies within the Greater Houston region. The two highlighted cases are the community level examples. Map by Kelsey Walker, Kinder Institute for Urban Research

NEAR NORTHWEST

Primary Actors: Near Northwest Management District (NNMD), City of Houston, Harris County

Location: Near Northwest Houston

Primary Best Practices: Vision/Leadership; Flexible and Cooperative Governance; Enhanced Mobility; Citizen Engagement; Adaptive Reuse/Retrofit.

Key Observations:

- NNMD has created transformative projects and increased funding to the area.
- Connecting existing jobs to new residential and commercial development is key.
- Enhanced mobility projects such as bayou trails improve quality of life.

Profile:

The Near Northwest side of Houston possesses several physical identities. Active manufacturing and industrial businesses dominate large portions of the area. Commercial spaces are mostly strip centers. Its residential areas are a mix of several formerly wealthy single-family subdivisions (now more middle-class), a small number of newer single-family developments, numerous multifamily projects in varied condition and many ad-hoc single-family homes.

Near Northwest is a striving suburb. It has a solid tax base thanks to the manufacturing base, several higher value subdivisions and active and committed leadership and residents. While the Near Northwest is improving due partly to its embrace of resilience and adaptability best practices, it still faces significant challenges.

Communities such as the Near Northwest and East Aldine are often described as the hole in an inverse investment donut.

Older, inner-ring communities are skipped over by public resources, even though they are among the most quickly changing parts of metro areas. The center gets a great deal of investment and usually holds high value. The outer suburbs tend to flourish and likewise possess many resources. However, many inner-ring suburbs are at a "fork in the development road: one path leads to rebirth, the other to deterioration," and they often do not have the resources needed to walk a productive path.⁴⁷ In order to drum up resources, many of these communities have chased retail or other potential tax sources despite their adverse effect on urban form, mobility or their continuity with existing businesses and communities.⁴⁸

In many ways these older, underinvested communities offer incredible opportunities to remake our metro regions. While some of their building stock may be in poor condition, the communities are more affordable.

If their retrofitting can be paired with new amenities and adaptable mixed-use development, then they can continue to serve lower-income residents with affordable options while also attracting new residents. With an effective redevelopment strategy inner-ring suburbs are poised to grow given their central locations.⁴⁹ Houston's lack of zoning presents an especially fruitful opportunity to pursue such a path as developers and officials face few obstacles to changing the built environment.

One of the obstacles to private investment in communities such as the Near Northwest is the ability to control risk for private investors.⁵⁰ That is where the leadership of NNMD, which has a \$1.5 million dollar budget drawn from business assessments, steps up. Having an entity that can supplement other local jurisdictions adds an element of flexible governance. NNMD can take positive risks, that a private company might not, that move the growth of the area forward. In the Near Northwest, another reason that having NNMD's leadership is so vital is that the area is comprised of several political jurisdictions—three city council districts and two county commissioner's districts merge in the Near Northwest. No single public official can be an advocate for the whole community. NNMD can act as that unifying voice.



Image from the Near Northwest Livable Centers study showing a reimagined version of Antoine Drive through the Near Northwest with a walkable environment, more activated bayou, and additional mixed-use development. Image courtesy of the Houston-Galveston Area Council.

One of the best examples of this role is the NNMD's work with the City of Houston and Harris County to purchase and revamp the Inwood Country Club golf course. The course is in the middle of the Inwood subdivision. Rather than allowing the site to be redeveloped and lose a major greenspace, the NNMD, City of Houston and Harris County are working to make it into a greenspace and detention area. The NNMD leases the clubhouse of the former course and through adaptive reuse has turned it into a conference center, income generator and remarkable space that attracts many users. Maintaining the greenspace and making it part of the infrastructure system allows it to serve several purposes. Throughout the Near Northwest, the NNMD has pursued similar re-greening efforts by supporting the possibility of turning several abandoned sites or detention ponds into recreation areas that can act as attractive amenities. At the moment, the Near Northwest area has many underleveraged or underutilized greenspaces. Two major park properties are either completely closed to public access—Alabonson Park—or difficult to reach and sit unused—West Mount Houston Park. The contradiction between the carefully developed golf course and the vacant public space is a telling example of the challenges the area faces in attempting to remake itself.

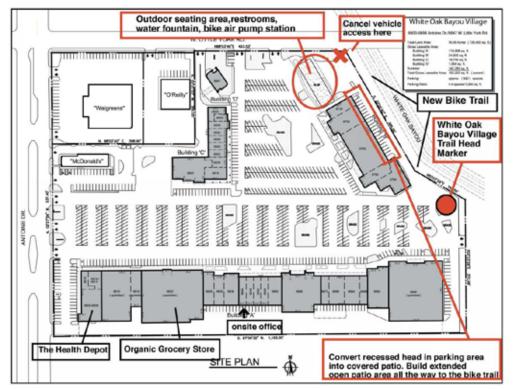
The NNMD is working with residents to improve the entire community. Much of the attention is focused on improving public safety and working to change the reputation of the area through enhanced services and quality. The NNMD works with apartment building managers, residents and the Houston Police Department's anti-gang unit to quell gang activity. The NNMD has a number of proactive social programs from job fairs to programs that engage residents in cleaning up lots and buildings and planting flowers and plants.

The NNMD and the Houston-Galveston Area Council, the region's metropolitan planning organization, have also jointly conducted a Livable Centers study to conceive of plans for redevelopment of key areas. A major focus of this 2012 collaboration was a call for utilizing the area's existing green amenities and remaking several thoroughfares into more people-oriented spaces by mixing new and old buildings together. The plan called for using the nearby bayou as the centerpiece for activated recreation and mobility. The goal also was to create more cohesive residential plans for multi-family and single-family options.⁵¹ The NNMD has also worked closely with the City of Houston on the remaking of Antoine Drive, pushing for the inclusion of more pedestrian and bicycling facilities.⁵²

One of the successes of this effort is the retrofitting of an old strip retail center into a more pedestrian friendly and bayou-oriented retail space. White Oak Bayou Village has been developed in the past several years and ownership has carefully crafted connections between the adjacent trail and their buildings. A primary goal of a remaking on the scale suggested by the Livable Centers study is to not only encourage more physical connections and activity, but also to draw residents back to the community. One of the most pressing economic and amenity needs in the Near Northwest is a high quality grocery store. A 2015 NNMD survey found that 55 percent of residents shopped outside of the area, representing a major blow to keeping residents' money in the community.⁵³ If new development could be channeled into the forms highlighted by best practices—dense, walkable and connected—it could draw more residents and visitors to amenities and retail, creating a productive cycle where needed shops and retail choose to locate in the Near Northwest.

While not many elements of the Livable Centers study have been implemented, the community engagement has helped improve many multi-family units. The City of Houston and other partners have also worked to remove blighted multi-family units and renovate others. These efforts and the successful redevelopment of spaces like the White Oak Conference center are changing the community.

All of the efforts to improve the community have succeeded in attracting even more businesses to the Near Northwest area. The assessed value in the district has grown from \$705,720,500 in 2004 to \$1,286,187,894 in 2015. This growth has meant additional funding for the NNMD, which, in turn is reinvested in the community.



White Oak Bayou Village is a project that aims to turn a formerly car-oriented strip retail center into a space that provides access to many modes and users. It especially hopes to leverage its location on the White Oak Bayou bike trail by creating trail-facing retail and a trail head for access to the center and trail network. Courtesy White Oak Bayou Village.

THE WOODLANDS

Primary Actors: Woodlands Development Company/Howard Hughes, The Woodlands Township.

Location: Unincorporated Montgomery County.

Primary Best Practices: Vision/Leadership; Flexible and Cooperative Governance; Live, Work, Play; Remarkable Spaces; Enhanced Mobility; Consistent and Quality Services.

Key Observations:

- Long-term vision has been crucial to residential and commercial success.
- Natural elements and trail emphasis aids active transportation and improves quality of life.
- Covenants and design standards maintain quality and aesthetic.

Profile:

The Woodlands is one of the most successful master planned communities in the United States. Situated in unincorporated Montgomery County north of Houston, the community started in the early 1970s under the leadership of oilman George Mitchell with federal support in the form of Housing and Urban Development New Town funds.⁵⁴ The Woodlands Development Company (WDC), which is now a part of the Howard Hughes Corporation, has developed the community from its inception. This single entity's leadership allowed for the creation and follow-through on a clear long-term vision.

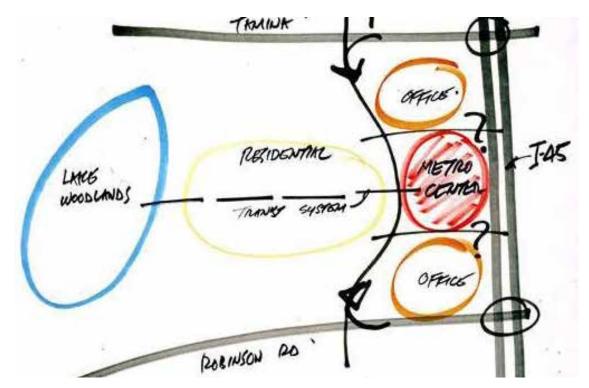
The initial plan called for single-family residential villages built around grocery-anchored commercial centers. These smaller neighborhoods would then be tied together by a major employment and town center.

Central to the overall effort was a focus on building in concert with the existing greenspaces and natural elements, which Mitchell saw as a key to building a remarkable space. Every road is lined with trees, natural waterways were maintained to serve as sites of recreation and continued drainage, side path trails were established along a number of roads to encourage biking and walking as forms of alternative mobility and 25 percent of developed land is reserved for open space.⁵⁵

This plan took more than 30 years to come to fruition, and elements of it are still in progress. One of the last pieces to be implemented was The Woodlands Waterway, which is a pedestrian space that traces a man-made waterway around the town center. Dotted with park spaces, next to the major event amphitheater and abutting the growing commercial district of the town center, the waterway is one of the community's signature spaces. It would have been easy for the WDC to abandon the plan for a quicker profit, but the commitment of leadership to vision has helped turn the community into a thriving live, work, play development.

In addition to long range planning and the leadership of Mitchell and the WDC, the flexible and cooperative governance structures have been essential to its long-term success. Today, The Woodlands is governed by The Woodlands Township, which was created in 2007 when voters approved collapsing three homeowners associations and one business improvement district into a single entity. The township is not an incorporated city but rather a public entity that collects property taxes (in lieu of assessments) and hotel taxes to help maintain the community and provide enhanced and high quality services. The township possesses a great deal of flexibility in its use of the hotel tax because three-quarters of the revenue is not designated for a specific use. The township is primarily responsible for general services—garbage, public safety, fire, parks and the monitoring of community regulations.

The township has no ordinance power and must cooperate with other public entities both within and outside of The Woodlands to coordinate services. The township works with the WDC on infrastructure projects and parks, with Montgomery County on roads and with municipal utility districts for water and sewer. This arrangement has meant that the township can focus most of its attention on ideas that help create a higher quality of life such as increased public safety efforts, careful design standards, and forward-looking infrastructure projects. WDC has great flexibility in the way it chooses to develop, being beholden only to its internal standards and the few requirements placed upon it by Montgomery County.



This image shows an initial plan for The Woodlands Town Center drawn in 1972. The actual development of the community followed this initial design closely, with the exception that The Woodlands Waterway took the place of the "transit system." That the concept was followed so closely and to such success reflects the long-term vision with which the community was developed. Image courtesy Robert Heineman, FAIA, Vice President Planning & Design, The Woodlands Development Company, a Division of The Howard Hughes Corporation.

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Several forms of institutional software help maintain the standards and aesthetics of the community. The consistent management of the community's organizing documents has allowed The Woodlands to create and maintain value from inception. The fact that a single developer has controlled every project in the community has fostered a cohesive design and feel for the entire community, a trait often missing in other suburbs.⁵⁶ The most powerful sets of standards are the community design standards that are applied to all commercial and residential properties. Review committees monitor and approve new projects and respond to violations. The review committees are an extension of the township.

The design and development standards are explicitly geared toward preserving the integrity of the community. Such standards demonstrate that unregulated development leads not just to the deterioration of individual projects but also a decline in overall value.⁵⁷ The standards protect the initial land designation of any given property. While this has helped maintain the character of the entire community, it has also made attempts to retrofit difficult. The ability for the township or developer to install more adaptable structures or approaches is circumscribed by the standards outside of the Town Center. It is hard for density or new activities to be brought into areas given existing regulations. Even the recreation of streets or landscapes to cater to new uses is more difficult. While The Woodlands is clearly an example of a location that was planned far more comprehensively than most suburbs, it remains challenged by some of the rigid systems put in place to protect key elements.⁵⁸

The Town Center project, ringed by the waterway, is the focus of the Woodlands live, work, play efforts. While there are some 1,100 multi-family units across The Woodlands, the majority are located near the Town Center. The Town Center is gaining office space and drawing jobs into the community, which has been a primary focus of the WDC and the Township. The job-home connection is seen as essential to the Woodlands' long-term health. In 2012, 0.6 people/household worked in The Woodlands, and the goal is to increase that number of jobs per household to 1.5. To be successful, this effort will have to depend on the increasing urbanization of The Woodlands in the form of more development in and around the Town Center, which every day more and more resembles a traditional downtown.



The Woodlands Waterway anchors the Town Center of the community. It provides a walkable promenade connecting greenspace and the performing arts center. It is also served by water taxis and connects the residential, retail, and office portions of the Town Center. Courtesy the Woodlands Development Company A Division of the Howard Hughes Corporation

CONCLUSION

The pursuit of resilience and adaptability in suburban communities is not as simple as instituting a list of best practices. Indeed, the variety of ways that the case study communities have attempted to install some of the highlighted approaches indicates the difficultly of boiling down such efforts to a few simple steps.

What is clear, though, across the case studies and from the focus groups, is that there is a common sense of the importance of pursuing these strategies and the outcomes they can foster. Public officials and residents from all suburban communities, whether thriving, striving or new, constantly work to improve their circumstances with varying degrees of success. The impacts of instituting these best practices—in whatever form they take—can ripple outward to other communities and help reshape and improve entire regions.

The coordinated efforts of many suburban and regional actors are required in order to see resilient and adaptable best practices enshrined in all suburban communities and even instituted in our cities. Public and private partners must work together to secure funding and pursue projects that improve these investments and provide improved services to residents. Cooperative governance has proved to be one of the most readily implementable and productive best practices. Instituting policies and regulations that can adapt to new needs, technologies or demands are the responsibility of both public and private actors.

It is not enough to remake and re-conceptualize jurisdictional relationships, however. From the creation of multi-use streets that place pedestrians, bicycles and transit on par with automobiles, to public spaces that draw diverse users and encourage active lifestyles, physical interventions are essential to building resilient communities as well.

Among the greatest challenges facing suburban communities in Houston and beyond as they attempt to implement these practices is that they must create pathways for affordability, diversity, density, sustainability and opportunity. If suburban areas are to continue to flourish within our changing metropolitan regions, they must address the needs of more populations and tie their success to the central city and neighboring suburbs. It is not sustainable or practical for successful suburbs to remain isolated from their regions. Sharing ideas and practices across communities creates an opportunity for all to grow and thrive.

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