Sustainability Scan

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ABSTRACT

The objective of this report is to survey the sustainability-related practices currently underway in the Greater Des Moines area, and to provide a comparison with national best practices relevant to the region. Section 1 first discusses the case for why cities embrace comprehensive sustainability planning, and the benefits and challenges of adopting a new short- and long-term vision. Next, the Methodology section describes the approach taken in the scan, which triangulates findings about attitudes and values, plans and policies, and research on national best practices. The report then provides a snapshot of the current state of sustainability initiatives and practices in Greater Des Moines, followed by a discussion of opportunities and obstacles in the region. Finally, the report offers a preliminary definition of *sustainability* for Greater Des Moines and opens the door for future discussion of a vision for Greater Des Moines, guiding principles, and future recommendations.

Appendix A includes the survey data tables.

Appendix B includes the Sustainability Scan survey of existing practices.

Appendix C includes the Project Launch Questionnaire.

INTRODUCTION

Across the United States and abroad, communities, cities, regions, and states are exploring many different urban sustainability initiatives, many of which are focused on reducing the city's carbon footprint, increasing livability, and uniting communities to collaborate to approach large scale issues. To achieve these goals, cities have instituted a variety of plans, policies, and practices. Some cities, such as New York City, have pledged to plant millions of new trees, noting that landscaping and soil absorb carbon dioxide, support stormwater infiltration, and provide shade and a comfortable street environment for walking. Many others, including Chicago, Boston, and Los Angeles, require that new buildings meet the standards of the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) certification. At the regional scale, places like Minneapolis and St. Paul, Puget Sound, and Salt Lake City have established strong regional governance systems to coordinate the management of land use and natural resources on an ecosystem scale. Many other cities are retrofitting aging infrastructure systems to be more sensitive to ecological processes, converting their bus and truck fleets to low-carbon fuels, and retrofitting municipal buildings to conserve energy.

Decades of research suggests that the physical ways in which we organize our cities, towns, and supporting agricultural and industrial lands have significant impacts on how energy- and resource-efficient a region is today, and can be in the future. In particular, urbanized areas that are compact and offer accessible transit options are considered to be the most energy-efficient ways to organize people, while also keeping public infrastructure costs to a minimum and maximizing the preservation of open space. But despite the resource efficiencies and cost benefits, compact settlement patterns are not uniformly appropriate in every place. Nevertheless, there are many energy-efficiency initiatives and urban design principles that can achieve positive sustainability outcomes and align with local values, while also creating jobs in retrofitting, technological innovation, and alternative energy installation.

This report scans the state of sustainability in the Greater Des Moines region today in order to (1) understand what local and municipal sustainability efforts are underway in the region, and (2) to open discussion around the question of which initiatives are most appropriate and effective to increase the long-term sustainability, resilience, and security of the region.

Defining Sustainability

The most commonly cited definition of the word *sustainability* dates to 1987, when the United Nations Brundtland Commission—so-named after its chair, Gro Harlem Brundtland of Norway—discussed the global impacts of development practices and the emerging need for global policies related to sustainable development.

> "Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs. The concept of sustainable development does imply limits—not absolute limits but limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities."[1]
>
> The United Nations Brundtland Commission, 1987

This definition has a prominent position in the public dialogue around sustainability. But ideas about exactly how that broad definition should guide cities and regions to become more

[1] Gro Harlem Brundtland, "Our Common Future: From One Earth to One World - A/42/427 Annex, Overview - UN Documents: Gathering a body of global agreements", March 20, 1987, http://www.un-documents.net/ocf-ov.htm#I.

sustainable have taken many forms, in part because planning at a regional landscape scale requires tailoring solutions to the particular ecological and socioeconomic conditions.

Critics lament that the word *sustainability* has been reduced to a politicized buzzword, and one that evokes a range of positive, negative, and apathetic emotions. An additional critique of the word *sustainability* notes that the root "sustain" implies the maintenance of conditions as they are today, or at another agreed-upon benchmark, such as the commonly discussed goal to reduce greenhouse gas levels to 1990 levels. Because the choice of benchmark is a decision, and, especially in the case of ecological systems, may already reflect decades or centuries of human impacts, the setting of sustainability benchmarks reflects already-altered conditions and modern-day values. Others argue that words like resilience or security are better guiding concepts than sustainability because they imply the aspiration for a healthy and secure place.

Discussion of this provocative work will be essential in order to explore a new vision for long-term sustainability for Greater Des Moines. As the recent *Capital Crossroads* implores, "Sustainable growth and development must become more than a buzzword,"[2] exhorting stakeholders to go beyond the buzzword to find sustainable solutions for today and tomorrow.

This report takes a broad view of sustainability: What would it take to make landscapes more resilient, not less so, and what would it take to make the Greater Des Moines area robust, healthy, and secure into the future? Fully functioning ecological systems, a strong economy, and healthy communities are essential components to meet the needs of the present. Ensuring the ability of future generations to meet their own needs to the same degree requires the continuing advancement of the efficient use of resources along with the advancement of our ability to enrich rather than diminish the natural systems of which all seventeen communities are a part.

The final section of the report explores the question that will shape the trajectory of The Tomorrow Plan: What does sustainability mean for the Greater Des Moines region?

Why Sustainable Development and Planning?

Many modern American cities—characterized by networks of roads, underground and overhead infrastructure, buildings, parking lots, and green parks—face serious planning challenges with the side effects of development, and those problems are only growing as urbanization proceeds and climate changes cause more severe weather events. Historically, cities and regions have planned and implemented solutions within their local municipalities; this focused approach forgoes opportunities to address broader economic, ecological, and social issues.

Proponents for a more holistic approach to sustainable development have long recommended a more regional approach to resource management and planning, which can offer advantages over a more piecemeal approach. Nevertheless, regional planning can be challenging to adopt in the United States because individual cities and towns often prioritize individual interests over proposed regional initiatives. For this reason, relatively few U.S. regions have invested in regional sustainability planning on a significant scale. Thus, the questions that are central to The Tomorrow Plan are twofold: (1) what sustainable development future is best for Greater Des Moines, and (2) what would it take for the Greater Des Moines region to adopt a regional planning and management approach to sustainable development?

As the U.S. Department of Housing and Urban Development (HUD) administers the Sustainable Communities Regional Planning Grant Program in close coordination with the U.S. Department

[2] Capital Crossroads Committee, "Capital Crossroads: A Vision Forward", 2010, http://www.capitalcrossroadsvision.com/reports.html.

of Transportation (DOT) and the U.S. Environmental Protection Agency (EPA) as part of the Partnership for Sustainable Communities, there is renewed Federal support for regional coordination as a path to achieve sustainability and security. The Sustainable Communities Regional Planning Grant that funds The Tomorrow Plan "supports metropolitan and multijurisdictional planning efforts that integrate housing, land use, economic and workforce development, transportation, and infrastructure investments in a manner that empowers jurisdictions to consider the interdependent challenges of: (1) economic competitiveness and revitalization; (2) social equity, inclusion, and access to opportunity; (3) energy use and climate change; and (4) public health and environmental impact."[3]

At the local level, cities and regions have explored different approaches to sustainability, including changes to policies, the physical design of the city, and the operations practices may encourage or discourage changes to existing practices. Some sustainability plans may be highly articulated comprehensive plans that explore sustainability across many different themes; others may focus on one or two best management practices precisely tailored to the agency's immediate needs. Still others focus on the notion of "ecosystem services" as a way to convey the value of functional ecosystems, and an essential consideration in sustainability planning and implementation. As more communities and regions embrace planning for a 'sustainable' future at a regional scale, more plans are blending a holistic, long-term vision for sustainable development with a host of short-term best practices that a community can adopt and embrace. While many of The Tomorrow Plan cities are currently undertaking sustainable initiatives or have in the past, moving forward, it will be important to facilitate a shared discussion around lessons learned, applicability in other cities, and applicability at the regional scale.

SCAN METHODOLOGY

The approach used in the Sustainability Scan gathers data from several different perspectives in order to assess the broad variety of plans and initiatives in the region:

1. Survey of sustainability program/initiative types and attitudes/values around sustainability (Sustainability Survey data included in Appendix A; Survey included in Appendix B);
2. Assessment of existing plans and policies;
3. Comparison to select exemplars in regional planning;

This approach seeks to triangulate values, existing policies, and future plans with national exemplars and best practices. The goal is to establish a framework around how to measure achievements in sustainability and how to assess programs in terms of what inputs achieve measurable outcomes.

The research for this project is a preliminary scan of different approaches to sustainability in the region. Looking ahead, communities may assemble additional information and data on the range and effectiveness of different initiatives. Later, the current breadth of information on existing plans, policies, and regulations may be supplemented by in-depth interviews with local practitioners steeped in the details of planning and implementation of various sustainability efforts. These future conversations will provide a thorough picture of what opportunities and obstacles shape the experience of implanting new sustainability initiatives.

[3]http://portal.hud.gov/hudportal/HUD?src=/program_offices/sustainable_housing_communities/sustainable_communities_regional_planning_grants

The process of evaluating the effectiveness of different sustainability initiatives will be a long-term initiative for the region, of which this report is the first step. In a tight fiscal environment, where many priorities compete for limited resources, it is important to critically evaluate whether programs are achieving the best possible economic, social, and environmental outcomes. This process of ongoing innovation and evaluation on new sustainability initiatives will be an important part of realizing a long-term vision for a sustainable Greater Des Moines.

GETTING SUSTAINABILITY ON THE AGENDA IN GREATER DES MOINES

In the Greater Des Moines region, cities and other municipal organizations are implementing many different sustainability initiatives, many of which are focused on reducing the city's resource consumption, increasing livability, and reducing greenhouse gas emissions. This section documents a sample of the efforts that cities are undertaking—and the gaps that may exist.

ICLEI: Tools and Resources for Sustainable Development

One of the challenges of developing a comprehensive plan for sustainable development is matching the local knowledge and political momentum with a relevant set of best practices and exemplary models in different cities and regions. At the national and international level, one organization at the forefront of the question of how local governments approach sustainability is ICLEI-Local Governments for Sustainability, a nonprofit membership association of which more than 600 local governments in the U.S. are active members.

ICLEI is focused on the question of how local governments approach sustainability. The organization offers access to tools, resources, and services to help local governments create sustainability plans—including setting goals, developing plans, and implementing initiatives—and later to evaluate whether those sustainability and climate initiatives are achieving measurable outcomes.

> In recent years, more local governments have embraced the principles of sustainability and incorporated them into their traditional planning processes or even developed community sustainability plans. Through sustainability planning, local governments recognize their power to address global challenges (climate change, energy demand, and access to education) and, in the process, make their communities better places to live.
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> Local governments can make their communities more sustainable in a variety of ways, especially because they provide many of the essential services that community members need, such as water, electricity, and waste removal. Local governments can take steps to improve efficiency, save money, and conserve resources. They also are responsible for the long-term planning for the community—from land use and zoning decisions to building codes and licenses, infrastructure investment, public transit options, municipal service delivery and management of infrastructure, schools, parks and recreation areas.

> A key tenet of sustainability planning is involving community members, businesses, and other stakeholders in the process, so that each community can define sustainability for itself and set sustainability goals that are meaningful and appropriate to local circumstances.[4]

In late 2010, the City of Des Moines was announced as one of ten *Beta Communities* for ICLEI's forthcoming STAR Community Index, a planning and management system designed to support local governments' efforts in improving community sustainability. According to ICLEI, the STAR Community Index provides:

- A national framework for sustainability that presents a vision of how communities can become more healthy, prosperous and inclusive;
- Goals and performance measures that are clear, consistent, and easily accessible, enabling cities and counties to more easily track their performance over time;
- A rating system that drives continuous improvement and fosters competition in advancing community health, prosperity and inclusion; and
- An online performance management tool that gathers, organizes, analyzes, and presents information required to meet sustainability goals.[5]

As a Beta Community, the City of Des Moines has been working closely with ICLEI to design tools that will be useful for communities and has been pilot testing the STAR Community Index with its own data. As The Tomorrow Plan progresses, the City of Des Moines' experience will offer a wealth of rich information and local knowledge from which other communities may draw.

Survey Results

In order to gather data on the range of sustainability initiatives and the perceived value of those programs, the research team circulated a data collection instrument to representatives across the region, including members of the Technical Team and colleagues in the seventeen communities and other stakeholder organizations. Using an online survey software, *surveymonkey.com*, the questionnaire asked participants to indicate what types of sustainability initiatives are in practice in their communities.

Survey Representation

Nearly forty representatives from the Technical Team and other community representatives participated in the online survey about sustainability in their community or organizations. The survey was open for a period of four weeks in October and November 2011. The following communities were represented by responses from City and community leaders, directors, managers, planners, engineers, and designers:

1. City of Altoona
2. City of Ankeny
3. City of Clive
4. City of Des Moines
5. City of Johnston
6. City of Mitchellville
7. City of Norwalk
8. City of Pleasant Hill
9. City of Urbandale

[4] http://www.icleiusa.org/programs/sustainability/star-community-index/star-goals-and-guiding-principles

[5] ibid

10. City of Waukee
11. City of West Des Moines
12. City of Windsor Heights
13. Community Foundation of Greater Des Moines
14. Dallas County
15. Des Moines Area Regional Transit Authority
16. Des Moines Wastewater Reclamation Authority
17. Downtown Community Alliance
18. Farmers & Merchants State Bank
19. Madison County Development Group
20. Madison County Health Care System
21. Polk County
22. Polk County Conservation Board
23. State Historical Society of Iowa
24. Winterset School District

What Issues are at the top of Cities' Sustainability Agendas?

The data collection survey asked respondents to consider each thematic area of sustainability—Natural Environment, Built Environment, Economy, Community, and Resource Flows—to obtain a snapshot of what policies, programs, and initiatives communities are engaging in, thinking about, or choosing not to pursue today.

The survey and responses are included in Appendices A and B.

The range of responses illustrates the breadth of the initiatives that are in place in Greater Des Moines today. This preliminary assessment provides a snapshot of the status of sustainability initiatives in the region today and also opens the door for discussion of how those priorities should shift as the region moves towards a vision for tomorrow.

This survey is best considered as a data collection instrument designed to take a scan of attitude towards a wide range of issues. The results should be understood as a suggestion of perceived barriers and/or opportunities within the participating communities.

Note that the survey questions and responses do not discuss the impact of Federal and State regulations on sustainability initiatives. These important impacts should be explored at later stages of The Tomorrow Plan.

Perception of Opportunities and Obstacles

When asked about the top three benefits respondents' organizations perceived in addressing sustainability, the top three responses were:

1. Increased competitive advantage
2. Improved quality of the natural environment and community amenities
3. Reduced costs due to efficiency

When asked the converse – What are the greatest challenges to your organization or community in addressing sustainability? – the top three responses were:

1. Financial obstacles
2. Difficultly incorporating sustainability-related strategies under existing funding conditions
3. Difficultly quantifying and valuing effects of sustainability programs on the organization or community

The least-indicated obstacle was the category of "Opposition from leadership," which suggests that current leaders in most communities are not considered barriers to exploring sustainability strategies where appropriate.

Looking forward, when asked whether about expectations that their organization's commitment to sustainability – in terms of management attention and investment – would change in the year ahead, 69% of respondents predicted that commitments would somewhat or significantly increase.

When asked what other cities, communities, or organizations are looked to as leaders in addressing sustainability, survey respondents cited many examples, including:

Dubuque; Des Moines; West Des Moines; the Iowa Stormwater Education Program; Ames and Iowa State University; Seattle Washington; Austin, Texas; Denver, Colorado and Omaha, Nebraska for zoning regulations; Chicago, Illinois for innovative green initiatives; Madison, Wisconsin and Minneapolis, Minnesota for bicycling and transit; Portland, Oregon for transit and redevelopment, Polk County Conservation Commission, International Code Council Energy Conservation & Reuse programs, East Bay Municipal Utility District (EBMUD), National Association of Clean Water Agencies (NACWA), Water Environment Research Foundation (WERF), Water Environment Foundation (WEF), Public Works, ICLEI - Local Governments for Sustainability (formerly known as the International Council for Local Environmental Initiatives), Leadership in Energy and Environmental Design (LEED), U.S Department of Housing and Urban Development (HUD), Iowa Department of Natural Resources (IDNR), Center on Sustainable Communities (COSC).

One respondent recommended looking locally to share expertise and lessons learned to tailor the sustainability questions to the local context:

> "We certainly have looked to Des Moines from a local perspective. One of the things we have struggled with is trying to identify communities similar to our size that have successful sustainability action plans. Although we can learn a lot from communities like Des Moines it would be nice to have some good resources of smaller communities which have similar capacities including funding and staff time to implement sustainability plans."

Meanwhile, another person commented that "[Sustainability] is really not a priority in these tight economic times. We do not have enough staff to keep up with day to day needs as it is because of budget shortfalls."

Thirty-two percent of respondents reported that their organization included zero staff specifically dedicated to the issue of sustainability; fifty-three percent reported that a number of staff work part-time on sustainability issues, and sixteen percent reported that one person in their organization is dedicated to sustainability issues.

Summary and Discussion Questions

The data scan survey instrument is designed to take the pulse of sustainability in the region, as self-reported by governmental and planning professionals working in the region. The responses suggest a range of attitudes among communities, from enthusiastic embracers to more cautious adopters.[6]

Some cities are committing to new sustainability policies, while others are more hesitant; levels of investment in the form of dedicated staff time vary. Cities that are implementing system-wide sustainability strategies have largely approached the issue from natural resource management, namely watershed planning and water quality, policies that unite disparate jurisdictions.

These findings suggest several questions for discussion:

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[6] MIT Sloan Management Review and The Boston Consulting Group. *Sustainability: The 'Embracers' Seize Advantage*. Winter 2011. MIT Sloan Management Review.

- How do these findings relate to local experience and local knowledge?
- Are there any places where the reported findings do not match the local perception?
- Where are the gaps in the types of initiatives that are in practice today?
- How are cities—and the region—shifting their priorities, and the terms of competition versus collaboration, in the face of sustainability concerns?
- How are management practices changing to encourage broader sustainability innovations and strengthen successful practices already in place?

EXISTING SUSTAINABILITY PLANS AND POLICIES

The following section assesses a selection of recent plans that incorporate issues of sustainability at a range of scales, from individual communities to entire metropolitan regions. These plans were chosen because they are salient to planning officials and the public, and represent a significant investment of energy and social capital from decision makers, the professional community, and community stakeholders.

Moreover, many of these plans contain excellent examples of best planning practices. Overall, Greater Des Moines demonstrates a strong grounding in many best practices for sustainability, and has engaged with a number of statewide best practice manuals to help with implementation, such as the Iowa Smart Planning and Stormwater Management guides. Some of these best practices are taken up at the local level, but many others are not addressed, particularly climate change, energy efficiency, waste and recycling, and food systems. One reason for this gap is that plans that robustly address these issues may require behavioral changes by citizens, something that organizations may be hesitant to approach, or that they may be delivered by others or through other channels already. In addition, it is important to note that several of these elements do not particularly lend themselves to action at the local level – they require regional or even statewide approaches that are beyond the local level to implement.

Comprehensive regional planning and the implementation of regional initiatives are hindered by the absence of a regional planning organization that has the power to coordinate, enforce, or implement projects, other than the transportation projects covered by the Des Moines Area Metropolitan Planning Organization (MPO). Many recent plans call for a renewed focus on regional planning. The *Capital Crossroads Report*, the *Iowa Climate Change Adaptation and Resilience Report*, the *Metropolitan Transportation Plan*, the *Polk County Comprehensive Plan*, and the *Raccoon River Master Plan* all identify a need for a regional planning and implementation organization or structure.

Another need identified by multiple plans is technical and educational support for professionals that are being asked to adopt less impact-intensive practices. For example, the *Iowa Climate Change Adaptation and Resilience Report* states a need for a state-wide GIS database and training programs for planners that are planning to mitigate and adapt to climate change. The *Raccoon River Master Plan* describes a need for educational programs for farmers and landowners that are being asked to reduce nutrient and bacterial runoff from their operations.

Plans and Policies in Greater Des Moines

Ankeny Comprehensive Plan

The *Ankeny Comprehensive Plan* was completed by the City of Ankeny in 2010. The plan is primarily a land use plan with an emphasis on smart growth, natural treatment of stormwater, and

economic development. The plan's emphasis on smart growth brings with it an emphasis on promoting community and providing housing for all segments of the market. The plan's emphasis on natural stormwater treatment will have many beneficial effects on the lifestyle and ecology of the city. These natural, open waterways, called "bluebelts," create a network of connected green spaces throughout the city, where water is naturally treated and stored, where residents may walk and bike, and where plants and animals can live.[7]

Ankeny Prairie Trail Development

Ankeny's *Prairie Trail Development* is a New Urbanist planned community development that currently is under construction. The Prairie Trail plan was developed by a partnership between the City and DRA Properties on Iowa State University land. The plan espouses many New Urbanist or smart growth principles, including mixed-use development, a community core, walkable streets, and a mix of housing types and styles, all arranged in a relatively compact neighborhood form. The plan also focuses on establishing a network of natural green corridors and drainage ways, including connecting paths for bikes and pedestrians.[8] Although slowed by the recession, the development is well underway and if completed as originally planned, may serve as a regional model for smart growth and sustainable development.

Capital Crossroads

The *Capital Crossroads Report* is a recently completed five-year regional strategic plan for the Des Moines metropolitan region, focused largely on economic and marketing opportunities for the future. The exhaustive report and set of recommendations is the result of a partnership between Greater Des Moines Partnership, Community Foundation of Greater Des Moines, Iowa State University, the MPO, Bravo Greater Des Moines, United Way of Greater Des Moines, Prairie Meadows Racetrack and Casino, and other key partners. While the report is focused on differentiating and improving Greater Des Moines as an economic hub, it takes a comprehensive view of what is needed to be an economic hub, and makes recommendations for advancement on a wide range of other sustainability factors, including public health, education, and the management of the physical environment. Because this is an economically targeted report, economic issues are covered in more detail than issues concerning land use and the natural environment.[9]

Capital Crossroads focuses its analysis and recommendations on three critical competitive themes: **opportunity**; **sustainability**; and **talent**. The opportunity theme focuses on developing opportunities for businesses in Greater Des Moines, including a well-rounded business sector and healthy workforce. The sustainability theme focuses on promoting collaborative regional planning, supportive governance, a vibrant and healthy natural environment, and a multi-modal transportation network offering a wealth of transportation and recreation options. The talent theme focuses on developing a strong, well-educated workforce, plentiful training opportunities, experienced local leadership, and a cohesive community.

This plan is remarkable in the Greater Des Moines region in that it directly addresses climate change, a local and regional planning issue that many municipalities have just begun to tackle in the last few years. *Capital Crossroads* recommends that Greater Des Moines apply for funding and begin planning a strong economic future that accounts for the regional and national

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[7] City of Ankeny, "Ankeny Comprehensive Plan 2010", n.d., http://www.ankenyiowa.gov/Index.aspx?page=116.

[8] DRA Properties, "Prairie Trail":: Welcome to Prairie Trail in Ankeny, Iowa", n.d., http://www.prairietrailankeny.com/.

[9] Capital Crossroads Committee, "Capital Crossroads: A Vision Forward."

differences that climate change will bring, including the increased flooding the region has experienced recently.

Capital Crossroads was created by a regional consortium, and the plan recognizes that implementing this or any other regional plan will require cross-agency and cross-jurisdictional collaboration. It also will require a regional agency to lead and track implementation efforts. The *Capital Crossroads Report* recommends that the Greater Des Moines Partnership lead implementation of this plan. This recommendation is logical given the primarily economic focus of *Capital Crossroads*; however, the need to determine regional leadership for this plan highlights a general need for a comprehensive regional planning and implementation organization for Greater Des Moines. Several other plans note a need for comprehensive regional planning, including the *Raccoon River Water Quality Master Plan*, the *Metropolitan Transportation Plan*, and the *Iowa Climate Change Adaptation and Resilience Report*.

In the Sustainability theme, *Capital Crossroads* recommends several strategies:

- Creation of a Logistics Development Plan (2015)
- Expansion of Des Moines Area Community College to two additional counties (2015)
- Construction of a revenue"sharing development project (2015)
- Completion of Climate Prosperity Project plan (2014)
- Launch of "Natural Utility" in Greater Des Moines (2016)

These strategies approach sustainability from an economic angle, which is consistent with the approach taken in the report, and concentrate on strategies that assess inputs and outcomes in terms of investment and revenue. This approach is helpful to make sustainability efforts quantifiable and easily comparable across the region.

As of Winter 2012, the plan is now in the implementation planning stage, and work on the recommended sustainability elements will need to be coordinated with The Tomorrow Plan.

Central Iowa Greenway Framework, March 2000

The Central Iowa Greenways Framework Plan was an early (2000) effort to look comprehensively at the conservation of central Iowa's greenways. The plan was prepared by Dunbar/Jones Partnership for the Conservation Boards of Story, Polk, Dallas and Warren Counties, the Iowa Natural Heritage Foundation, and the Des Moines and West Des Moines Parks and Recreation Departments. Partial funding was provided by the Iowa Department of Transportation under its Transportation Enhancement Program.

The vision of the Oversight Committee was to solicit public input, identify area-wide greenway issues and goals/actions to address them, and develop a framework for greenway initiatives and interagency greenway activities. The benefits of greenways were identified, specific greenway conservation goals and strategies were proposed, and a Framework Plan and Implementation Tools developed. This document served as a foundation for subsequent greenway conservation efforts, including the "Growing Greener" initiative in eastern Polk County.

City of Des Moines Bicycle and Trail Master Plan

Alta Planning + Design prepared this comprehensive Bicycle and Trail Master Plan for the City of Des Moines in 2010. While the plan's focus was on the City of Des Moines system, a Technical Advisory Committee consisting of regional and Iowa trails authorities insured consistency with area-wide trail planning. An evaluation of existing facilities and user needs supported the development of a recommended bicycle and trail network.

Trail and other bicycle facility design guidelines were proposed taking into consideration state and national guidelines as well as national best practices. Recommended programs for education, enforcement, encouragement and evaluation of city bicycle and trail facilities were provided. Recommended network improvements were prioritized and an implementation plan with cost estimates was included. Des Moines has begun to incorporate recommended facility improvements in its Capital Improvement Plan.

Commuter Rail Feasibility Study for the Des Moines, Iowa Metropolitan Area

The *Commuter Rail Feasibility Study for the Des Moines, Iowa Metropolitan Area*, completed in 2000, discusses the possibility of providing commuter rail transportation between downtown Des Moines and three terminals at Waukee, Altoona, and Urbandale. The report was commissioned to determine the feasibility of this project, and its ability to divert commuter traffic from Interstate 235 while it was undergoing reconstruction. The report determines that this goal was technically feasible, with track upgrades, but would not generate enough ridership to offset traffic on 235. The plan is focused solely on commuter rail feasibility, though it mentions connections with other transit modes, and locating stations in population centers, as one would with a transit-oriented development. The plans outlined in this study have not yet been implemented. While this plan is valuable purely because it established the feasibility of a commuter rail system in Greater Des Moines, it would be most valuable were it to be revisited for potential implementation by the MPO and if the factors that blocked implementation were examined as part of *The Tomorrow Plan* development process. This plan and research, while perhaps not applicable today for reasons cited above, may prove valuable and informative in the 40-year time frame of The Tomorrow Plan. It is included it in the Scan because it is a recent, salient report, and the planning process for The Tomorrow Plan must be aware of these observations and recommendations—successful and less successful—so that no efforts or pitfalls are duplicated.

Connect – Greater Des Moines Bicycle and Pedestrian Transportation Action Plan 2020

Connect is a report produced by the MPO and a planning roundtable comprised of members from diverse organizations around the region. The plan was competed in 2009 and was written for advisory purposes. The plan focuses on improving access to all areas of the region for bicycles and pedestrians (b/p), particularly along major travel routes. The plan details the advantages of b/p transportation related to public health, natural systems, climate change, and economic development. It also offers recommendations for designing well-used corridors and methods of implementation. Because transportation is a means of moving from one point to another, the plan offers land use and urban design recommendations that promote non-vehicular travel. The plan also provides suggestions for educational programs that will promote b/p travel and will ensure the safety of everyone using travel ways. The fact that the plan is solely advisory limits its power to guide change if it does not have significant stakeholder buy-in, or is not explicitly adopted by Greater Des Moines jurisdictions. The MPO does have the power to promote b/p travel by awarding funding to projects that support b/p travel. Strong staff and policy-backed support by the MPO, as well as local buy-in, will best facilitate the implementation of the measures in this plan.

DART Forward 2035

DART Forward 2035 is a recently (2011) adopted plan for the future of the Des Moines area bus transportation system. Developed by the Des Moines Area Regional Transit Authority (DART), with public input, the report focuses on improving the transportation network and increasing ridership by responding to market-based demands for service, realigning and refocusing the network to serve current and future land uses, enhancing the customer experience with increased

speed and reliability, and increasing the financial stability of the agency. The plan will be implemented using a phased approach through 2020, and includes general recommendations for development towards 2035.

When land uses shift and grow, transportation systems need to be updated. This plan represents a regional look at land uses that have changed since the existing routes and schedules were established. Routes will be reconfigured in several ways. First, they will be simplified to allow for quicker travel over longer distances. Second, they will be extended to growing areas. Finally, the overall system will transition from a single-hub system centered on downtown Des Moines to become a multi-hub system, with more transfer points and cross-town travel options. The plan does make note that it is difficult to efficiently serve dispersed suburban and exurban communities. This plan aims to offer customers greater travel choice than they have currently, and users will be better connected to jobs and entertainment activities. A high-quality transit system contributes to bettering public health by reducing driving and encouraging walking and integration with the community. The new system will attract and support businesses by connecting them to workers and customers, and attract and retain residents drawn to the high quality of live Des Moines offers. The plan recommends investing in high-performing routes and discontinuing those with low ridership. Route frequencies will be increased, and night services will be expanded.

As regional planning efforts are integrated and smart growth brings denser development to the Greater Des Moines region, DART routes could become centers for transit oriented developments, and bus rapid transit or commuter rail routes could be established.

Des Moines Metropolitan Area Smart Growth Audit

The *Des Moines Area Smart Growth Audit* provides an excellent analysis of the implementation of smart growth principles in the Greater Des Moines region. The report was written by researchers at Iowa State University, at the behest of 1,000 Friends of Iowa, and was funded by the U.S. EPA. The report concludes that larger communities, where land is at a premium, are more likely than smaller communities to include integrated smart growth legislation into their regulations. Furthermore, Greater Des Moines communities face limited short-term incentives to mandate smart growth because they are surrounded by cheap land and confront little congestion. Notably, this report analyzes only whether smart growth practices are allowed in each jurisdiction, not whether they are mandated. The smart growth practices that are allowed may never be implemented. Because of the research-oriented nature of the report, it is unclear what action was taken after its completion. This report emphasizes that the easiest changes to make are those that local agencies can implement independently, without collaborating between or within governments. These tactics are, therefore, the most often adopted, though not the most impactful. Changes will be captured at part of the forthcoming development code review, which will come in a later phase of The Tomorrow Plan.

An update of this review that captures current practices would provide a good look at the trend in smart growth integration in Greater Des Moines. An analysis of the implementation of smart growth policies would be revealing as well. Perhaps the most important finding of this report is the difficulty in implementing cross-agency or cross-jurisdictional projects. This difficulty highlights the region's need for a regional planning agency that can tie transportation and land use together.

Des Moines: Neighborhood Plans

The City of Des Moines has recognized over fifty neighborhood groups and associations. Once they are recognized, the neighborhoods may work with the City to develop neighborhood plans,

which then can be implemented and integrated into City zoning regulations. This program began in 1990 and continues today. The neighborhood plans and planning process are helpful in building community within a neighborhood, in identifying key pain points for neighbors, and in helping the city to perform outreach on current initiatives and planning trends. The neighborhood plans that result from this planning process encompass many of the issues that comprehensive plans cover, including infrastructure, housing, placemaking, community, land use, transportation, and parks. Overarching issues of sustainability and ecological health generally are not covered in detail.[10] These plans have the potential for creating a deeply committed community base and for building planning capacity the City can rely on. Neighborhood infrastructure improvements (street overlays, curb/gutter, sidewalks) are implemented by the City for designated neighborhoods.

Des Moines' "2020 Community Character Plan"

The Des Moines comprehensive plan, adopted in 2000 and entitled the "2020 Community Character Plan" is an early example of metropolitan sustainable planning. In addition to goals related to the environment, economy and social equity, the plan adds focuses on Des Moines' urban character and the neighborhood unit to its Sustainability Goals. These goals are developed in the plan through analysis of Community Character, the definition of Transportation Concepts focused on traffic calming and accommodation of alternative modes to the personal automobile, and Growth and Annexation Concepts emphasizing linkages between developing and existing neighborhoods and accommodating physical growth through annexation as an important component of the city's economic development.

The plan applies Kevin Lynch's urban form analysis typology from his seminal book, *Image of the City: An Analysis of Urban Form* to neighborhood subareas and also defines city housing types by era and design type. Commercial development is characterized as "Pedestrian-oriented" or "Auto-oriented" and design guidelines to support and enhance both development types are presented. The plan's dual focus on preservation of the character of older neighborhoods as well as promoting higher quality new development serves the region's central city well.

Des Moines Natural Resource Inventory

The City of Des Moines is currently undertaking a natural resource inventory of its park and open space lands. Upon completion of the study, which is anticipated to be in the spring of 2012, the consultant will prepare a report of the study's findings including a series of recommendations for priority restoration areas within the parkland and open space system. The consultant will also provide the results of the study in a GIS ready data package that will allow the Park and Recreation Department and other City Departments easy access to the information. This will be a valuable tool in making decisions on future City management, planning and construction projects on the City's parkland and open space system.

The results of this study will have daily maintenance and management implications for the Park and Recreation Department by providing staff with a better understanding of the ecological and natural conditions of the City's park and open space land. A better understanding of this function and value will also allow staff to maintain the land with more ecological sound techniques and will also allow staff to better plan for construction, renovation and restoration projects within the park and open space system. Some follow up work from the inventory will likely include restoration, maintenance and land management planning for individual parks, or larger

[10] City of Des Moines, "Community Development - Neighborhood Plans", n.d., http://www.dmgov.org/Departments/CommunityDevelopment/Pages/NeighborhoodPlans.aspx.

connected ecosystems within the City of Des Moines. Currently the City is undertaking the first restoration, maintenance and management plan for McHenry Park. This plan will be based off of management plans utilized by the Department of Natural Resources for state preserves.[11]

Metropolitan Transportation Plan-Horizon Year 2035

The *Metropolitan Transportation Plan*, completed in 2009 for a horizon year of 2035, was developed by the MPO. The plan is relatively comprehensive and recognizes best low impact development practices, including promoting multiple modes of transportation. The future traffic generation is based on a long-term development scenario developed and approved by the Technical and Policy committees of the MPO. The plan does, however, focus significantly on roadway improvements, additions, and widening projects. An increased focus on transportation demand management—and reliance on its success—would result in a lower impact plan if all the projects in the plan were implemented.[12] The plan mentions, as do other regional-scale plans, that regional comprehensive planning would be significantly advanced by an agency that had the authority to provide regional land use planning. That land use planning should be integrated with transportation and other regional planning issues, such as watershed management.

Polk County Comprehensive Plan

The *Polk County Comprehensive Plan*, like several of the other plans reviewed in this report, follows the tenants of smart planning. The application of smart planning is particularly comprehensive in this plan, which was completed in 2006. This breadth of scope may be made possible by the fact that this is a county plan, rather than a city plan. The aspects of smart planning covered by this plan that are remarkable include recommendations on collaborative governance and implementation, the need to plan for natural system functions across local jurisdictions, and a recognition of the need to plan specifically for air and water quality. Still, the plan does not cover climate change or energy efficiency.[13] The plan covers only county-controlled land, and local plans need not comply with this plan, though local jurisdictions work closely with the county. This type of voluntary area planning is a relatively weak form of regional planning.

Raccoon River Water Quality Master Plan

The *Raccoon River Water Quality Master Plan* was in final draft form at the writing of this report, in fall 2011. The master plan focuses on improving the water quality of the Raccoon River by decreasing the nutrient levels and bacterial contamination in the river. These pollutants originate from non-point sources distributed around the watershed, largely consisting of farms and animal feeding and production facilities. The water quality in the river is of concern not only for significant ecological reasons, but also because the City of Des Moines uses the river water as drinking water and for recreation. While the report is focused on the issue of water pollution, it supplies recommendations for improvements that include educational and governance-related approaches. Like other regional-scale plans, this plan recognizes that the absence of regional-scale planning organizations, particularly for land use planning, impedes progress on meaningfully implementing regional plans, and renders regional plans reactive to local plans.[14]

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[11] http://www.dmgov.org/Government/CityCouncil/Communications/10-643.pdfhttp://www.dmgov.org/Government/CityCouncil/Communications/11-224.pdf

[12] "Horizon Year 2035 Metropolitan Transportation Plan", n.d., http://www.dmampo.org/library/documents/mtp2035.html.

[13] Polk County, "Polk County Comprehensive Plan", n.d., http://www.polk-county.net/subpage.aspx?menu_id=226&nav=bus&id=478#Volume_2_Maps.

[14] Agren, M&M Divide RC&D, "Raccoon River Water Quality Master Plan" (Iowa Department of Natural Resources, May 9, 2011).

West Des Moines Comprehensive Plan

West Des Moines uses a strategic planning model called the "Balanced Scorecard," which tracks performance on six key thematic outcomes. Adopted in 2003, this approach considers six themes: Planning and Community Development; Collaboration; Sustainability; Resource Management; Community Enrichment; and Community Safety. The Comprehensive Plan looks across physical, natural, social, and economic themes, and weaves together holistic planning principles, a measured consideration of impacts and metrics, and balance with changing development pressures including distance, time, increasing density, demographics, regulations, and cooperation.

West Des Moines Town Center Overlay District Guidelines

Adopted in 2003, the Town Center Overlay District Guidelines function as an overlay zoning district in order to create a safe, convenient, energetic and attractive live, work and play environment through the integration of uses and eclectic architecture. The guidelines focus on the use of publically accessible open space, compact mixed-use development, street activity, and pedestrian oriented development, and high quality design to achieve the desired village atmosphere. The guidelines also include detailed development criteria that address uses, and site and building design as well as an overview of the development process. While the underlying zoning district and all other regulations, remain in effect, if any regulations are in conflict, the Overlay guidelines prevail.[15]

West Des Moines Valley View Park

The City of West Des Moines has recently completed the master plan for Valley View Park and Phase 1 is currently underway. Valley View Park is an 85 acre community park with an emphasis on appropriate natural resource management. The design approach to Valley View Park is unique in that it seeks to organize passive and active recreation elements based on prioritizing existing and restored ecological features of the land. Through restored native plantings and ecological stormwater management systems the Park design strives to balance environmental health with human activity while meeting the recreation needs of the Community and serving as a model for sustainable land development. Park programming includes notable sustainable elements including bioswales, bioinfiltration basins, enhanced water tributaries, native prairie restoration areas, and reconstructed wetlands.

Iowan exemplars found outside the region

Dubuque: Form-based Zoning Code

The City of Dubuque developed design guidelines for both its downtown and Historic Old Town in 2009. These guidelines are a part of city legislation and guide the renovation, development, and redevelopment of new and existing buildings. The establishment of design guidelines, whether they apply to historically or recently developed neighborhoods, is a major step towards establishing and reinforcing a sense of place. A sense of place builds community and is an economic benefit, attracting business to places where people want to be. In historical areas, design guidelines and development regulations serve to preserve older buildings, which can reduce the need for new building materials and preserves the buildings' embodied energy. The plans provide not only guidelines for architectural development but also for streetscapes, street grids, landscape, and parking. The guidelines were funded by the National Park Service,

[15] http://www.wdm.iowa.gov/Modules/ShowDocument.aspx?documentid=273

Department of the Interior, and Economic Development Association.[16] Generally, form-based codes are considered beneficial for both new and established neighborhoods because of their ability to build a sense of place, community, and the higher property values that attend thoughtful design. Inside the Greater Des Moines region, one local examples of note is the West Des Moines Pedestrian Overlay District's establishment of a number downtown subdistricts with design guidelines.

Iowa Climate Change Adaptation & Resilience Report

This report, authored by the U.S. EPA, analyzes the current state of collaboration between land use and hazard mitigation planners in Iowa. Currently, levels of collaboration are low; however, it is vital that the groups begin working together as climate change progresses and impacts increase. Iowa already is seeing record-breaking flooding. Flooding frequencies and levels of damage can be controlled to some degree through land use decisions, which can permit the development of impermeable surfaces, and allow development to be sited in vulnerable areas. This report is part of a U.S. EPA pilot study into these issues and is purely advisory, though its findings are deeply relevant. The nine findings are:

1. Local governments are at the forefront of adapting to climate change.
2. Land use is a primary determinant of community and regional climate change adaptation capacity.
3. Climate change data must be formatted and distributed in a way that is accessible and usable by state and local planners.
4. Local and state planners need to increase skill sets to effectively use climate change data.
5. Federal and state programs should create incentives that will improve the use of climate change data, including in the production of hazard mitigation plans.
6. Communities need to integrate planning processes, specifically hazard mitigation and comprehensive land use planning.
7. Federal and state programs and policies should give communities incentives to integrate planning processes, specifically hazard mitigation and comprehensive land use planning, and to incorporate no-regrets adaptation measures to produce symbiotic outcomes.
8. Federal agencies should align and leverage funding and focus on pre-disaster planning for community resilience and sustainability.
9. Investment decisions should take a regional perspective and be integrated across infrastructure types and sectors to realize co-benefits.

The overarching recommendation of the report calls for increased coordination: "FEMA and other federal agencies, the state of Iowa, and the local jurisdictions [should] work together to develop programs and incentives that encourage incorporating climate projections into the hazard mitigation risk assessment process and consider ways to encourage innovative, integrated hazard mitigation and comprehensive planning."[17] The need for inter-jurisdictional collaboration and strong regional planning is echoed in many of the other plans and reports detailed here. In addition, it is important to note how, even though The Tomorrow Plan's study area represents mostly developed land, external factors—such as climate change, water pollution, and emissions from areas outside the jurisdiction of the Consortium—impact the environment within the study region.

Iowa Smart Planning

The *Iowa Smart Planning Act* was signed into law in 2010. This law requires that all Iowa communities and state agencies consider smart planning principles when planning and provides

[16] "Dubuque, IA - Official Website - City Planning", n.d., http://www.cityofdubuque.org/index.aspx?NID=355.

[17] US EPA, "Iowa Climate Change Adaptation & Resilience Report - 2011" (US EPA, 2011), http://epa.gov/smartgrowth/pdf/iowa_climate_adaptation_report.pdf.

guidance for elements that plans should include. The legislation does not require the adoption of smart planning techniques, only their consideration. The legislation delineates a holistically sustainable approach to planning, and recommends the establishment of a council of governments in Central Iowa. After the legislation was ratified, the Smart Planning Task Force developed a set of recommendations for implementation, which focus largely on supporting local governments in smart planning projects through data organization, financial support, and organizational empowerment. Comprehensive plans developed after the passage of this legislation show that some aspects of smart planning are being considered and adopted, while others, like integrated land use and hazard management planning, are not. If the requirements surrounding this legislation are strengthened it could have increased impacts and benefits. [18]

Mason City Comprehensive Plan

The *Mason City Comprehensive Plan*, developed in 2006, is a moderately comprehensive smart growth plan. The plan focuses on accommodating projected land use needs and on developing land in a rational and compact way while continuing to allow suburban development. The plan also makes recommendations for parks and recreation, transportation, community development, economic development, the protection of natural resources, and building a sense of place within the city. The impacts of this plan should be seen in updated zoning and increased density—Mason City recently adopted form-based zoning to implement the plan.[19]

Comparison to Other U.S. Regional Sustainability Plans

Other regions in the U.S. have approached questions of regional sustainability in different ways, all of which offer salient ideas as Greater Des Moines explores new approaches for regional coordination and governance. The following section summarizes four plans of recent relevance, from Chicago, Minneapolis/St Paul, Philadelphia, and Santa Monica.

Not all of the these plans are regional in scale, but each offers exemplary best practices or approaches to measuring success that could contribute to the regional goals of The Tomorrow Plan.

Chicago CMAP: Go To 2040

Go To 2040 is an exhaustive comprehensive plan produced by the Chicago metropolitan region's MPO, the Chicago Metropolitan Agency for Planning (CMAP). The plan is policy focused, and implementation by local governments is encouraged but not required; CMAP offers implementation support but does not have the authority to require implementation. The four foci of the plan are livable communities, human capital, governance, and transportation. Each of these foci covers several factors of sustainability. The plan addresses concepts behind livable communities and developing livability through: Land use and housing; water and energy efficiency; high-quality park systems; and, local food availability. The plan does not offer specific recommendations on land use but rather over-arching policy recommendations. Human capital will be built through education, workforce development, and economic innovation. The plan recommends optimizing governance through local and state tax policy, improved access to information, and coordinating investments amongst different agencies. The plan recommends improving the regional transportation system by investing strategically in transportation, improving the freight network, and increasing the commitment to public transportation. Overall,

[18] "Smart Planning ~ Rebuild Iowa Office", n.d., http://www.rio.iowa.gov/smart_planning/index.html.

[19] "Comprehensive Plan", n.d., http://www.masoncity.net/pView.aspx?id=1581&catid=58.

the plan is noteworthy for its incisive policy focus and recommendations for implementation at all levels of government. *Go To 2040* was created with significant public participation, including the participation of 35,000 residents in a variety of forums.[20]

Go To 2040 is backed by a formidable but accessible data warehouse, accessible via a web portal, MetroPulse. The portal reports on factors that shape the quality of life in metropolitan Chicago and is used to track progress towards implementing *Go To 2040*.[21] This readily accessible data will be a significant boon for local planners, regional monitoring, and citizen engagement, and should be considered a best practice for all plans that require implementation over the course of several years.

Scope: Regional

Implementation: Voluntary for local jurisdictions, though CMAP is the regional MPO

Adopted: October 2010

Minneapolis/St Paul Region Metropolitan Council: 2030 Regional Development Framework

The Metropolitan Council's mission is "to plan and coordinate the orderly, economic development of the seven-county metropolitan area and ensure the efficient use of our regional systems for transportation, aviation, wastewater collection and treatment and regional parks and open space." The 2030 Regional Development Framework follows the standard outline of a comprehensive plan and includes an analysis of the current population, rate of growth, and needs of the region. This analysis is followed by the articulation of four plan goals as well as notes on achieving those goals. The four goals of the plan are:

- Accommodate growth in housing and employment by working regionally;
- Maximize the value and effectiveness of regional services and investments;
- Provide expanded transportation choices; and,
- Preserve natural resources and ecosystem functioning.

This plan has a significant land use focus and combines land use and transportation planning. Progress towards the plan goals is updated twice per year. This plan is significant because local jurisdictions are required to comply with the plan and have been taken to court by the Metropolitan Council for non-compliance. The Supreme Court of Minnesota ruled in favor of the Council. While the Council is representative, like many MPOs, it has significant power over local agencies.

Scope: Regional

Implementation: Local plans are required to conform to the regional plan. The Metropolitan Council is the regional MPO.

Adopted: October 2004

Philadelphia, Pennsylvania: Citywide Vision 2035

The *Citywide Vision 2035* is one of a number of planning documents that illustrate Philadelphia's planning progress and advancement towards a thorough comprehensive plan. The vision builds on focused plans developed by the City's Office of Sustainability, Water Department, and

[20] "GO TO 2040 -- Chicago Metropolitan Agency for Planning", n.d., http://www.cmap.illinois.gov/2040/main.

[21] CMAP, "MetroPulse: The Regional Indicators PRoject for Metropolitan Chicago", n.d., http://www.metropulsechicago.org/#.

Department of Parks and Recreation, as well as recommendations from the Zoning Commission. The plan was issued in 2010; therefore, implementation and progress are difficult to gauge. However, the plan will be used as a basis for updating the city's zoning code and as a cornerstone document for public education and participation in the zoning process. The Citizen's Planning Institute was formed to coordinate city departments and other agencies to implement the plan. The City also will support the development of eighteen district plans that will cover all areas of the city. The process resulting in a zoning plan is expected to take five years. The plan reviews the City's history and growth context and presents nine plan elements grouped into three themes:

Thrive	Connect	Renew
Neighborhoods	Transportation	Open Space
Economic Development	Utilities	Environmental Resources
Land Management		Historic Preservation
		Public Realm

The *Citywide Vision 2035* is designed to provide public and private entities with guidelines for future investment. To this end, it provides specific guidance for residents, business owners, developers, builders, and public employees on how they can use the plan. This vision is evidence that Philadelphia is committed to an extremely thoughtful and transparent planning process, which likely will result in an exemplary comprehensive plan. The potential pitfalls this planning process might fall into include community planning fatigue, degradation of the vision through a desire to accommodate all stakeholder desires, and financial constraints on the planning process. Thus far, the city appears to be skillfully avoiding these challenges.

Scope: City

Implementation: Vision document designed to inform the city's comprehensive plan

Adopted: June 2011

Santa Monica, California: Sustainable City Plan

Santa Monica's *Sustainable City Plan* is notable because of its staying power. The plan was first issued in 1994, well before many cities or regions began considering sustainability. Since then, the plan has been revised and updated, and, importantly, forms the basis for a yearly sustainability report card that evaluates progress towards a comprehensive set of sustainability goals. Both the plan itself and the yearly report cards are models of accessibility. The plan is a concise thirty pages, and each report card is published as a compelling fold-out brochure. Additional data for each indicator in the *Sustainable City Plan* also is available online in a web-based data viewing tool.[22] The eight goal areas of the plan are:

- Resource conservation
- Environmental and public health
- Transportation
- Economic development
- Open space and land use
- Housing
- Community education and civic participation
- Human dignity

[22] Santa Monica Office of Sustainability and the Environment, "Sustainable City Progress Report", n.d., http://www.smgov.net/Departments/OSE/progressReport/default.aspx.

This plan has thrived because of community engagement, agency vision, and ongoing reporting. Although this plan is a self-declared "sustainability" plan, it covers all the variables that would be covered in a traditional comprehensive plan. This plan is yet another example of the fact that "sustainability" is a flexible term that may be used in a variety of ways and need not focus exclusively or primarily on environmental issues. The term "sustainability" could in fact be abandoned without damaging the conceptual basis or implementation of this plan. Community participation is an intrinsic part of this plan and contributed not only to the writing of the plan, but is itself an indicator of sustainability as measured by the plan.[23] [24]

Scope: City

Implementation: City agencies

Adopted: September 1994, most recently revised 2006, report cards on progress issued annually

DISCUSSION: OPPORTUNITIES AND OBSTACLES

The exemplary initiatives and plans discussed in the preceding sections highlight many promising opportunities for the Greater Des Moines region, though not without also revealing some obstacles. One set of challenges relates to differences in attitudes toward sustainability and how much gravity to award to potential threats—such as increasing frequency of flood events and broader issues like climate change. In fact, many plans exhibit a reluctance to discuss climate change, hinting at the divisive nature of the issue, which extends into some murky associations with the word *sustainability*.

As a 2009 *Des Moines Register* article reported, "Inaction is easy," Richard Leopold, director of Iowa's Department of Natural Resources, told a state advisory committee on climate matters. "Political inaction year to year is easy," he said. "Collective action is not easy… A year and half since our consensus recommendations came out, we have done hardly anything," Leopold said. "Let's commit ourselves to action, not inaction. Climate change is happening at a much greater and accelerated pace than we ever expected 30 years ago.'"[25]

Moreover, many leaders and members of the public may be reaching a state of fatigue around the buzzword-qualities of the word *sustainability*, and it will be important to elevate the discussion and translate the rhetoric into some concrete actions that can make the case for achieving the triple bottom line of economic, social, and environmental sustainability.

Lastly, obstacles to adopting some form of regional governance are a significant challenge. Despite the reality that residents live, work, and play in patterns that take them across the region on a daily basis, jurisdictional boundaries allocate resources and power in distinctly separate geometries. There are a host of reasons that this approach is a barrier to achieving meaningful sustainability goals, but it will take significant political will to shift the focus from the usual practices of competition to one of collaboration. The challenge is to find a road map to regional goals that builds on local pride, is responsive to local interests, and is supportive of the multiplicity of governments.

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[23] "Santa Monica Sustainable City Plan", n.d., http://www.smgov.net/uploadedFiles/Departments/OSE/Categories/Sustainability/Sustainable-City-Plan.pdf.

[24] "Santa Monica Sustainable_City_Report_Card_2010.pdf", n.d., http://www.smgov.net/uploadedFiles/Departments/OSE/Categories/Sustainability/Sustainable_City_Report_Card_2010.pdf.

[25] Perry Beaman, "Iowa DNR official criticizes climate inaction", November 25 , 2009,

As summarized in the *Register*, one of the barriers is overcoming inertia to build momentum behind a new long-term vision: "If we decide as a state to significantly reduce greenhouse gas emissions in a hurry, we can actually do it," [Sen. Rob Hogg, D-Cedar Rapids] Hogg said. "There are a lot of things we can do for no cost, and others we can do for very little cost."[26]

DEFINING SUSTAINABILITY FOR GREATER DES MOINES

After reflecting on the range of initiatives underway in Iowa, and the U.S. at large, as well as the values, issues, and trends we have uncovered thus far, how should "sustainability" be defined for Greater Des Moines?

Drafting a definition of sustainability for Greater Des Moines

As discussed in the Introduction, the most widely cited definition of sustainable development can be traced to the 1987 UN World Commission on Environment and Development, commonly referred to as the Brundtland Commission. The commission defined sustainable development as "Meeting the needs of the present without compromising the ability of future generations to meet their own needs." As stated, this definition focuses more directly on the human perspective, and subsequent versions have expanded the definition to include a more holistic view of ecological systems.

How should sustainability be defined for Greater Des Moines?

We propose that the definition of sustainability for Greater Des Moines use the Brundtland definition as a baseline and acknowledge the goal of the definition is to provide a clear definition of terms that can guide the discussion of a shared vision for a livable, resilient Central Iowa. The process of moving toward a shared vision of the future rides upon the data and trends represented in the baseline scenario, the deep understanding of what past conditions have brought the region to where it is today, and what possible future scenarios could reveal where the region will go tomorrow—and 40 years forth.

With this trajectory in mind, we propose the following definition of sustainability for Greater Des Moines:

> **Sustainability means meeting the needs of today without compromising the ability to thrive tomorrow.**
>
> **Greater Des Moines' challenge is to foster a future that promotes environmental health, economic vitality, and social vibrancy.**

The next two phases of the project pose the question of what the vision for a sustainable, resilient, healthy Greater Des Moines could and should be. Following convergence on a preferred vision for the future comes the need to articulate more specific **sustainability principles** to guide government, community, and individual actions in Greater Des Moines. The vision and the sustainability principles offer the opportunity to focus the Steering Committee, community leaders, and the public on what sustainability means for the region.

Moving towards sustainability principles

[26] Ibid

Thinking ahead toward what those sustainability principles can be, it is helpful to refer back to the six Livability Principles that are central to the Federal Sustainable Communities Regional Planning grants. Those Livability Principles are as follows:

1. Provide more transportation choices.

Develop safe, reliable and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions and promote public health.

2. Promote equitable, affordable housing.

Expand location- and energy-efficient housing choices for people of all ages, incomes, races and ethnicities to increase mobility and lower the combined cost of housing and transportation.

3. Enhance economic competitiveness.

Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers as well as expanded business access to markets.

4. Support existing communities.

Target federal funding toward existing communities—through such strategies as transit-oriented, mixed-use development and land recycling—to increase community revitalization, improve the efficiency of public works investments, and safeguard rural landscapes.

5. Coordinate policies and leverage investment.

Align federal policies and funding to remove barriers to collaboration, leverage funding and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.

6. Value communities and neighborhoods.

Enhance the unique characteristics of all communities by investing in healthy, safe, and walkable neighborhoods—rural, urban, or suburban.

These high-level concepts address the many components of sustainability but remain general in scope. The upcoming challenge will be to take these concepts and tailor them to reflect the values and aspirations that define Greater Des Moines. In each case, recommendations and strategies must consider how to support individual communities as well as the health of the full region. Emphasizing these place-specific facets of sustainability will help to ensure the development of meaningful, supportable recommendations for a more sustainable future in Greater Des Moines.

Public feedback gathered during Phase 1 of The Tomorrow Plan is a starting point for transforming the Livability Principles from general to specific. This feedback includes written responses to open-ended questions about the future of Greater Des Moines, responses to the Project Launch Questionnaire (see Appendix C), and discussion notes from public meetings held throughout the region. Preliminary qualitative observations from the feedback, grouped by principle, include the following. Direct quotes from written feedback are indicated as such.

1. Provide more transportation choices.

- General satisfaction with the accessibility of amenities and destinations throughout the metro area.

- Frequently-mentioned desire for more diverse transportation options, including mass transit, walking and biking (especially to increase connections to green spaces, rivers, and community gathering spots)
    - "More varied public transportation options"
    - "The best darn bike trail system in the USA"
    - "Connect communities by the bike trail & help support the funding for its success as it attracts people to the community"
- Little mention of transportation to destinations beyond the region and the state, other than concern over high costs of flights at DSM

2. Promote equitable, affordable housing.

- Awareness of need for diverse product types, particularly those appropriate for a range of ages and incomes
    - "I've been working in housing related business for 30 years; people need all types of housing"
- Some concern about relative cost of housing
    - "Housing maybe less expensive but local incomes have not risen to compensate for competition by coastal staff brought here at coastal salaries."
- General desire to reduce socio-economic segregation; sense of social responsibility comes through

3. Enhance economic competitiveness.

- General sentiment that the economy and jobs are absolutely necessary to have a sustainable region
    - "Job creation, job retention, growth of current business and new business drives the economy."
    - "Our future viability and quality of life hinge on our ability to compete for the most talented professionals and best jobs."
    - "Economic development creates jobs and tax revenues, which in turn means more options for local governments to provide services."

- Emphasis on economic development requiring a smart, well-educated population
    - Education is the road to jobs; education predicts success
    - Employ job training, education and experiential learning in both traditional and unexpected places

- Awareness that a diversified job base makes for a more sustainable economy

- Recognition that the physical environment can contribute to economic development
    - "Proper infrastructure and placemaking create a better environment for economic development; if people want to live somewhere, quality of employees in concert with a proper infrastructure, placemaking is improved. With both of these improved, economic development is easier."

4. Support existing communities.

- Interest in supporting neighborhoods and main streets
    - "Change the demand of our community to support & insist on local businesses thriving! Smaller business improves our local economy, produces pedestrian friendly communities, reduces traffic & creates an invaluable sense of community. Support Main!"

- Recognition that patterns of development influence the health of existing communities and that efficient land use can help limit the physical expansion of the overall metro region
    - "Better development patterns, coordination, and access."
    - "Focus growth towards the center on infill & underutilized lots."
    - "Keep a central city."
    - "Make use of existing infrastructure."

- Desire for more connections between the distressed and thriving areas of the metro, and general awareness of social equity issues

5. Coordinate policies and leverage investment.

- General desire to reduce the potential for duplication of services by sharing resources across political boundaries.
    - "Governance to create a more cooperative system for regional decisions"
    - Could connect not-for-profits under shared visions

- Overall satisfaction with separate, smaller community identities within the larger metro area.
- Call to improve planning efforts and include more public participation.

6. Value communities and neighborhoods.

- Mention of sustainable neighborhoods and communities where essential services are a short walk or bike ride away

Public feedback also covered a number of categories not directly addressed by the Livability Principles—the natural environment, energy, food, and water quality, among others. Given the attention and interest in these topics, it is important that they are brought into the eventual sustainability principles for Greater Des Moines.

The Natural Environment

- Seen as an amenity
    - Maintain access to open spaces for recreation, water quality improvement, wildlife habitat, food production, and energy resources.
    - "Market/utilize outdoor amenities, especially natural (lakes, campgrounds, forest areas…parks, trails, multi-use fields, etc) to build community"
    - "Greater use of our wonderful river - a last resource"
- Seen as wilderness
    - "I want wild spaces"

Energy

- Cost, concern
    - "Community resilience in the face of rising energy costs and a changing climate is my main concern for the spaces and places I call home"
- Ownership and distribution

    - "Incentives for distributed energy production (wind, solar, etc.) to produce on site & likewise distributed ownership of production (coop?)"
- Improve energy independence through energy conservation and use of local renewable energy resources (i.e., "a turbine on every corner").

Food

- Productive landscape
    - "To be able to eat the fish I catch without worrying about what is in them that shouldn't be there...(to be able to feed them to my kids without feeling guilty)"
- Support local food production; expand community garden opportunities.

Water Quality

- Lots of site-scale thinking
    - Manage stormwater where it falls & treat it as a resource
- Some big scale thinking—Value / commodity
    - Water - the new "gold" - so important to quality of healthy life
- Improve water quality of lakes and streams, and improve overall watershed management.

With guidance from the Steering Committee, these preliminary observations will be refined into a succinct set of sustainability principles reflecting the needs, values, and aspirations of the Greater Des Moines Region.

It is important to note, as is the case with many forms of public feedback to a planning process, comments are often aspiration, don't delve into the complexities of implementation, and offer several competing viewpoints. It is important to emphasize that these are a sample of public comments received, and they are best understood as snapshots for how individuals' from around the region perceive the issues that affect their lives.

DEVELOPMENT CODE REVIEW

Iowa State and RDG Planning + Design are undertaking the development of a parallel document, the *Development Code Review*, which will collect and analyze the development codes (including zoning code texts and maps, and subdivision codes) of the cities and counties in the study area.

This analysis will be prepared by the Iowa State University team in 2012.

CONCLUSION

The purpose of the Sustainability Scan and the methodology employed above is to do a rapid scan assessment to take the pulse of what is going on today in the region. This information and analysis will provide a baseline understanding of sustainability issues in the region for future stages of the project.

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APPENDIX A

SUSTAINABILITY SCAN SURVEY DATA RESPONSES

		Not doing it	Thinking about it	Doing it now
NATURAL ENVIRONMENT				
Hydrology	Water use restrictions and water conservation	53%	29%	18%
	Watershed planning	11%	5%	84%
	Natural water filtration/holding system protection, enhancement, or installation	26%	11%	63%
	Flood plain development prohibitions	12%	12%	76%
	Rivers, marshes and stream buffers and ordinances	22%	22%	56%
	Water pollution reduction and water improvement plans	21%	21%	58%
Landscape & Ecology	Habitat protection, restoration and management	35%	6%	59%
	Species protection plans and projects	87%	7%	7%
	Invasive species removal and prevention	53%	20%	27%
	Compact building development ordinances	47%	18%	35%
	Environmental education and technical assistance programs	21%	11%	68%
Climate Change	Climate change action plans (CAP)	82%	12%	6%
	Policies or incentives to reduce vehicle miles traveled (VMT)	50%	17%	33%
	Climate mitigation programs- lessening climate change	72%	6%	22%
	Climate adaptation programs- adapting to climate change	81%	6%	13%
	Natural disaster response plans	21%	0%	79%
	Carbon footprint monitoring and reporting	72%	11%	17%
	Fertilizer and pesticide reductions policies	56%	31%	13%
BUILT ENVIRONMENT				
Land Use	Incentives for mixed use development	53%	12%	35%
	Incentives for higher density town and neighborhood centers	59%	0%	41%
	Incentives for growth tied to existing or proposed public transportation	71%	18%	12%
	Conservation easements and land trusts	29%	24%	47%
	Transfer of development rights (TDR)	87%	0%	13%
	Incentives for infill development	63%	13%	25%
	Brownfield rehabilitation and development	71%	6%	24%
	Greenfield development restrictions	72%	11%	17%
	Urban Growth boundary	47%	27%	27%
	Siting municipal offices along existing transit routes	59%	24%	18%
Infrastructure	Policies or incentives to reduce stormwater runoff, like downspout disconnection, permeable paving, or green streets	11%	22%	67%

	Complete streets policies	33%	28%	39%
	Tree planting programs	11%	17%	72%
	Policies or incentives for green or cool roofs	67%	22%	11%
	Policies or incentives for local materials sourcing	47%	41%	12%
	Recycled water for irrigation	53%	29%	18%
	Incentives for infrastructure departments, like public works, utilities, and transportation, to coordinate efforts, standards and resources	42%	11%	47%
Transportation	Transit oriented development (TOD)	71%	18%	12%
	Transportation Demand Management (TDM)	71%	18%	12%
	Parking pricing policies	88%	6%	6%
	Decreasing parking requirements for development	75%	0%	25%
	Public transit provision and improvements	53%	27%	20%
	Promoting bicycling through facilities and services, including bike share, lanes, racks on busses, etc	35%	29%	35%
	Promoting pedestrian travel through connected path networks, pleasant sidewalks, public transportation access, and active street levels in buildings	21%	11%	68%
	Low-emission vehicle benefits	88%	6%	6%
	Policies to convert travel lanes to high capacity use	94%	6%	0%
Air Quality	Air quality monitoring and reporting	69%	6%	25%
	Proactive management of projected future pollution sources	88%	0%	13%
	'Spare the Air' programs	100%	0%	0%
	Restrictions on wood-burning fireplaces	93%	7%	0%
	Education programs for air quality and public health	81%	0%	19%
Water Quality	Policies requiring water storage and infiltration for development	33%	6%	61%
	Wastewater monitoring and quality enforcement	22%	11%	67%
	Natural waterway water quality improvement programs	29%	24%	47%
	Municipal water system infrastructure metering and loss control	28%	6%	67%
Public Health	Access to healthy, fresh foods	28%	17%	56%
	Provision of recreation space and community facilities	11%	5%	84%
	Environmental health education programs	29%	24%	47%
	Separation from sources of pollution	65%	0%	35%
	Support for aging populations to stay engaged and living in the community	24%	12%	65%
ECONOMY				
Economic Development	Business recruitment	11%	0%	89%
	Existing business support	11%	6%	83%
	Workforce development	22%	11%	67%
	Investment in public amenities and attractions, like civic activities, recreation facilities, and parks	0%	0%	100 %
Governance	Agency policy requiring sustainable building practices	50%	33%	17%

	Agency policy requiring low-impact purchasing	69%	25%	6%
	Agency policy facilitating low-impact building uses and energy savings	50%	38%	13%
	Staff education programs on sustainability	44%	38%	19%
	Incentives to install energy efficient building systems (lighting, smart meters, sensors)	33%	33%	33%
	Policies requiring the use of energy efficient infrastructure (street lights, water pumps, traffic lights, etc.)	35%	24%	41%
	Multi-jurisdictional planning for sustainability	28%	39%	33%
	Incentives for city departments to work together, share expertise, and combine resources	26%	11%	63%
	Dedicated staff mandated to promote sustainable development and operations	67%	20%	13%
	Municipal bans on non-biodegradable containers (plastic bags, plastic bottles, Styrofoam, etc)	94%	0%	6%
Education	Continuing education availability	16%	26%	58%
	Workforce training and re-training	26%	16%	58%
COMMUNITY				
Placemaking	Community or neighborhood branding	35%	24%	41%
	Public art programs and installations	31%	13%	56%
	"Main Street" preservation	47%	24%	29%
	Historical district or building identification and protection	53%	12%	35%
	Civic engagement programs	39%	11%	50%
Building Community	Providing equitable access to space for community interaction	19%	13%	69%
	Promotion of civic pride	12%	18%	71%
	Inter-generational connection promotion	50%	13%	38%
	Neighborhood association support and integration	50%	6%	44%
Housing	Affordable housing requirements for developments	71%	6%	24%
	Affordable housing protections for existing number of units	75%	13%	13%
	Siting housing near amenities and transportation	38%	19%	44%
	Homeless services	59%	12%	29%
	Housing mix (income, unit sizes) requirements	53%	24%	24%
RESOURCE FLOWS				
Energy	Energy efficiency incentives	56%	11%	33%
	Solar installation incentives	75%	25%	0%
	Available and/or subsidized energy audits and retrofits	56%	13%	31%
	Smart grid and smart meter utilization programs	65%	24%	12%
Waste and Recycling	Waste reduction programs	29%	12%	59%
	Recycling programs	5%	5%	89%
	Agency policy requiring recycling	19%	19%	63%
	Municipal composting	40%	0%	60%
	Hazardous waste collection and treatment	19%	6%	75%

	Pay-as-you-throw waste or recycling programs	69%	13%	19%
Food Systems	Policies or initiatives to promote food security	94%	0%	6%
	Protection of agricultural lands and production	81%	6%	13%
	Local farmer's market support	28%	11%	61%
	Policies or initiatives to promote crop diversification	100%	0%	0%
	Community garden establishment and support programs	44%	11%	44%
	Establishment of a food policy council	87%	13%	0%
	Requirements that food chains prominently post caloric counts	100%	0%	0%
	Requirements that grocery chains post food production locations	94%	6%	0%

What are the greatest benefits to your organization or community in addressing sustainability? Please select up to three benefits.

Increased competitive advantage	**0.7**
Improved quality of the natural environment and community amenities	**0.7**
Reduced costs due to efficiency	**0.6**
Improved perception of how well organization or community is managed	**0.6**
Reduced costs due to shared or complementary investments	**0.5**
Improved reputation	**0.4**
Reduced costs due to materials or waste efficiency	**0.4**
Improved resilience	**0.4**
Better innovation of operations and services	**0.4**
Improved ability to attract and retain talent	**0.3**
Reduced risk	**0.3**
Improved regulatory compliance	**0.3**
Enhanced community relations	**0.2**
Improved regional security	**0.2**
There are no benefits	**0.2**

What are the greatest challenges to your organization or community in addressing sustainability? Please select up to three challenges. (Results averaged.)

Financial obstacles	**0.8**
Difficultly incorporating sustainability-related strategies under existing funding conditions	**0.8**
Difficultly quantifying and valuing effects of sustainability programs on the organization or community	**0.6**
Inadequate staff capacity	**0.5**
Difficulty predicting value of community response to sustainability-related strategies	**0.4**
Difficultly of considering sustainability at all, given competing priorities	**0.3**
Political obstacles	**0.3**
Lack of incentives that would prompt managers to consider new sustainability strategies	**0.3**
Lack of organizational model for incorporating sustainability-related strategies	**0.2**
Opposition from leadership	**0.1**

To what extent is your organization engaged in each of the following activities? (Rate on a scale of 1 to 5, with 1 being lowest): (Results averaged.)

Identifying opportunities to enhance or differentiate image through sustainability strategies	**2.7**
Building awareness of sustainability in the organization	**3.0**
Identifying potential for cooperation between departments and synergies between goals and funding streams through sustainability-related programs, initiatives, and policies	**3.1**
Analyzing risks associated with not fully addressing sustainability issues (e.g., environmental, economic, social, legal, competitive, resource risks, security, or political risks)	**2.4**
Identifying opportunities to build a culture of innovation by pursuing sustainability strategies	**2.6**
Including sustainability in scenario planning or strategic analysis	**3.0**
Analyzing community and stakeholder expectations related to sustainability	**2.4**
Reducing or eliminating carbon dioxide or other greenhouse gas emissions	**2.1**
Benchmarking sustainability practices of competitors and sustainability leaders	**2.0**

How has your community's or organization's commitment to sustainability—in terms of management attention and investment—changed in the past two years?

Significantly increased	**17%**
Somewhat increased sustainability commitments	**52%**
Business as usual—no changes to sustainability commitments	**24%**
Do not know	**7%**

How do you expect your organization's commitment to sustainability – in terms of management attention and investment – to change in the year ahead?

Significantly increased	**10%**
Somewhat increased sustainability commitments	**66%**
Business as usual—no changes to sustainability commitments	**17%**
Do not know	**7%**

APPENDIX B

SUSTAINABILITY SCAN SURVEY: SUSTAINABILITY IN YOUR COMMUNITY

APPENDIX C

PROJECT LAUNCH QUESTIONNAIRE