



Infrastructure  
**STRATEGY**  
For Iowa's Future Economy

Buildings and Vertical  
Infrastructure Sector  
REPORT & RECOMMENDATIONS

February 2010

# Table of Contents

Acknowledgements ..... 3

Introduction..... 5

Executive Summary ..... 6

The Issues..... 10

Recommendations ..... 15

Infrastructure Planning Process ..... 19

Conclusion..... 22

Supporting Documents..... 23

## Acknowledgements

The Buildings and Vertical Infrastructure Sector Committee acknowledges the work and contributions of each committee member through sharing of expertise, opinions, information, and discussions over the course of four meetings. The Committee would also like to thank Committee Co-Chairs Bret Mills, Director of the Iowa Department of Economic Development; Joe O'Hern, Executive Director of the Iowa Finance Authority; and Fred Hubbell, Interim Director of the Iowa Department of Economic Development for their leadership.

The Committee appreciates the time and expertise shared by the following presenters: Nadia Anderson, Iowa State University, College of Design; Michael Coveyou, Iowa Department of Public Safety; Jeff Geerts, Iowa Department of Economic Development; and David Lyons, The Iowa Institute.

The work of the Sector Committee was managed by the Iowa Department of Economic Development and made possible through funding and support provided by the U.S. Department of Commerce, Economic Development Administration.

Planning process facilitation, staffing, and management were provided by State Public Policy Group, Inc. – SPPG of Des Moines. [www.sppg.com](http://www.sppg.com)

## Sector Committee Members

Bret Mills, Iowa Department of Economic Development, Des Moines – Committee Co-Chair

Joe O'Hern, Iowa Finance Authority Des Moines – Committee Co-Chair

Thomas W. Hart, Iowa Department of Economic Development, Des Moines – Project Director

Nadia Anderson, Iowa State University, College of Design, Ames

Charles Connerly, University of Iowa, Urban and Regional Planning, Iowa City

Michael Coveyou, Iowa Department of Public Safety, Des Moines

Jeff Geerts, Iowa Department of Economic Development, Des Moines

Bill Good, Des Moines Public Schools, Des Moines

Lynnae Hentzen, Center on Sustainable Communities, West Des Moines

Rick Hunsaker, Region XII Council of Governments, Carroll

Robert E. Josten, Dorsey Law Firm Des Moines

Brian Kaskie, University of Iowa, College of Public Health, Iowa City

Doug LaBounty, Community Housing Initiatives, Inc., Spencer

Mary Lawyer, Conlon Construction, Dubuque

David Lyons, The Iowa Institute, Des Moines

Timothy Oswald, Piper Jaffray, Des Moines

Jim Prosser, City of Cedar Rapids, Cedar Rapids

Terri Rosonke, Iowa Finance Authority, Des Moines

## Introduction

Iowans have high expectations for a strong economy, good jobs, and a future of opportunity. Setbacks came in 2008 with the summer disasters, followed by the national recession and significant impacts on Iowa's infrastructure. Even while addressing those challenges through the influx of federal and state short-term funding for jobs, infrastructure, disaster recovery, and other broad needs, Iowans must also give significant consideration of the vision for the future economy and the infrastructure it will demand. Interested Iowans statewide will find in this report a set of recommendations and a strategic direction for the buildings and vertical infrastructure sector.

Buildings and vertical infrastructure were the subject of deliberations over a four-month period by a diverse array of Iowans who contributed their expertise, experience, and perspectives on the future economy and the infrastructure that will be required to meet those needs. Because the report was developed by stakeholders from across the state, it reflects and has future application to diverse stakeholders including the private sector, issue-based groups, nonprofit organizations, academia, and local and state government.

This report does not stand alone, however. As part of a comprehensive and coordinated statewide planning initiative, the recommendations and insights on the buildings and vertical infrastructure sector will be considered by a Task Force, along with similar reports on infrastructure needs for the future economy in energy, natural resources, telecommunications, and transportation. The ideas and recommendations contained in the five reports and the coordinated plan reflect the involvement and engagement of more than 200 Iowans over a span of nine months. From those deliberations, a strategy for Iowa's future economy was developed on behalf of and for all stakeholders. It is the hope of the Buildings and Vertical Infrastructure Sector Committee that policymakers, community leaders, business and industry, and others find ways to implement or support the recommendations of this sector report and those of the coordinated Infrastructure Strategy for Iowa's Future Economy.

## Executive Summary

Iowa's buildings and vertical infrastructure are integral to the quality of life and economic health of the state. In considering elements of the sector that cut across public, private, residential, and other areas, the Buildings and Vertical Infrastructure Sector Committee discussed issues that impact people and communities, such as development patterns, building types, disaster mitigation, and living in concert with Iowa's natural resources. The Buildings and Vertical Infrastructure Sector Committee defined the scope of the sector as **“residential, commercial, industrial, public, and nonprofit buildings and facilities that serve a public need, as well as supporting physical systems”**.

The timing of this integrated long-term planning effort was optimal to think in a manner that is both realistic and visionary about Iowa's buildings and vertical infrastructure. The Committee recognized that despite the recent infusion of state and federal resources, Iowa's infrastructure needs remain so great that the state as a whole can no longer approach infrastructure decisions and investments in the status quo manner. The reality is that Iowa cannot afford or sustain its current infrastructure, let alone build new infrastructure required for future economic competitiveness.

To establish Iowa's infrastructure priorities for 2020 and beyond, the following issues were identified as priorities to be addressed relating to both new and existing buildings and vertical infrastructure.

- **Iowa's current infrastructure is not economically, socially, and environmentally sustainable or affordable.**
- **Infrastructure planning and investments are neither coordinated nor strategic.**
- **Infrastructure financing is not influenced by and is disconnected from broader, regional, long-term interests.**

To address these issues, the Buildings and Vertical Infrastructure Sector Committee has made the following four recommendations to ensure that Iowa's infrastructure works to support the state's economic viability, competitiveness, sustainability, and quality of life now and in the future. The recommendations developed in response to priority issues should be considered as a whole, with each viewed as critical by the Committee to ensure a strong future economy for Iowa.

- 1. Establish a framework and principles to guide infrastructure planning, investments, and oversight.**
  - a. Ensure stakeholder, community, and regional leadership and collaboration.
  - b. Make development decisions predictable, equitable, and cost effective.
  - c. Promote clean energy production and increase energy efficiency.
  - d. Increase diversity of job and business opportunities.

- e. Concentrate development within communities and mix land uses.
  - f. Improve housing opportunities and choices.
  - g. Foster distinctive, attractive communities with a strong sense of place, identity, and marketability.
  - h. Protect, preserve and wisely utilize natural resources and agricultural lands.
  - i. Incorporate green building and infrastructure design that is structurally sound, durable, healthy, and safe.
  - j. Provide for a variety of transportation choices and maximize walkability and mobility.
  - k. Demonstrate financial sustainability for maintenance and operation.
- 2. Provide information and technical support for stakeholders on the elements of sustainable infrastructure.**
  - 3. Ensure that funding and regulatory structures support infrastructure priorities.**
  - 4. Encourage evidence-based decisions using data that can be analyzed regionally.**

These issues and recommendations are further described in the following report, along with the context for planning, elements of Iowa's future economy, and a description of the process that resulted in these recommendations. The work of the Buildings and Vertical Infrastructure Sector Committee, along with the Transportation, Telecommunications, Natural Resources, and Energy Sector Committees, will be forwarded to a Task Force with combined membership for integration and development of an infrastructure strategy for Iowa's future economy.

## Iowa's Future Economy

There is no crystal ball to predict exactly what Iowa's economy will be like in 2020 and beyond, but there are indicators and, certainly, steps that can be taken to shape the economy as Iowa recovers from the dual challenges of the 2008 disasters and the national recession. The Infrastructure Strategy for Iowa's Future Economy initiative was designed to work from a common understanding of Iowa's current economy and forecast of economic factors to establish some strategic direction for the state. Essential elements of the future economy were identified from this information and from the deliberations of the participants in the process. This section highlights the foundational premises of the Sector Committees and Sector Chairs Group that guided their work.

### Essential Elements of the Future Economy

Iowa's economy of the future can benefit from and faces challenges because of the disasters and the recession. Iowans have vowed to come back from adversity stronger than ever. The future holds opportunity for innovative and strategic thinking, which tend to be a departure from day-to-day challenges to our infrastructure. In early discussions, each Sector Committee and the Chairs Group worked to identify how Iowa's economy can build upon current short-term investments to become stronger and more globally competitive.

Eight essential elements of the future economy were identified by the Sector Committees and the Sector Chairs Group. The essential elements were used by the Sector Committees to guide and measure their work and their recommendations against the vision for Iowa's economic future.

The Essential Elements of Iowa's Future Economy are:

- Smart growth
- A diversified economy that ensures a strong agricultural sector
- A skilled workforce for quality jobs
- Environmental stewardship
- Iowa-based energy solutions
- An economy that is globally competitive
- A population that chooses to live and work in Iowa
- Realistic funding for new and maintenance of infrastructure

### Iowa's Current Economy and its Impacts

In the current environment in Iowa in 2010, a number of trends are affecting the state's economy. The following factors are taken from data provided to the Committees by researchers at Iowa State University's Department of Economics. First, the population of Iowa is shifting from rural to urban areas. Two other factors include the aging population and the baby boomer generation nearing retirement age. There has been an increase in the outmigration of young workers to other states, and population growth in Iowa has been due to increases in immigrant and minority populations in the state.

Because of the economic recession and the scaling back or closing of significant numbers of manufacturers across the state, non-metropolitan Iowa is losing both jobs and lowans between ages of 25 and 44, which also has an echo effect of population loss in the under-20 category, reflecting children of those 25-44 year-olds. Iowa's unemployment rate, which has typically remained relatively low, may start to have a structural upward shift. The rural housing stock is deteriorating, and economic vitality is concentrated in relatively few areas. Additionally, tax capacity in non-metropolitan communities is rapidly eroding, due to population shifts and loss of manufacturing employers. However, rural energy opportunities, such as biofuels and wind, are evolving.

### **Iowa in 10 Years**

ISU researchers predict that in ten years, Iowa will see the results of current trends in population, namely, that there will be fewer people in non-metropolitan areas, more investment and growth in metropolitan areas, and the continued outmigration of young and working-age people. Regional trade centers, called micropolitan communities (populations of 10,000 – 50,000), will be mostly stable, but not growing. The sectors that will lead in job demand will be business, personal care, education, and health services. Although some downplay the role of energy production in rural resettlement, the Sector Committees identify the energy industry's crucial role in the future economy of Iowa as a significant contributor to the overall rural economy and its potential to be a mitigating factor in further rural depopulation. It is also predicted that manufacturing will still be important, but the number of jobs will have decreased, and the manufacturing businesses that remain will be those with the most efficient and productive processes.

It is clear that action taken to shape Iowa's future economy will be key determinants in the success of the state. As technology develops, energy and telecommunications infrastructure will be critical to the state's competition in a global economy. Additionally, transportation, buildings, and vertical infrastructure will remain fundamental for moving and storing goods and services and supporting Iowa's workforce. Finally, natural resources will be essential to the state's continued economic success within the agricultural, industrial, and business sectors. All sectors are integrated and mutually dependent. The work of the planning initiative is to harness the opportunities of these critical sectors. When people come to live and work in Iowa, it will be because of lowans' anticipation of the coordinated natural resources, transportation, buildings and vertical infrastructure, energy, and telecommunications infrastructure to support a robust economy.

## The Issues

Iowa's buildings and vertical infrastructure are integral to the quality of life and economic health of the state. In considering elements of the sector that cut across public, private, residential, and other areas, the Buildings and Vertical Infrastructure Sector Committee discussed issues that impact people and communities, such as development patterns, building types, fuel sources, disaster mitigation, and living in concert with Iowa's natural resources. For the purposes of this planning process, the Buildings and Vertical Infrastructure Sector Committee focused on looking 40 to 50 years ahead and determining steps for the next 10 years to address the sector's most paramount issues.

The Buildings and Vertical Infrastructure Sector Committee defined the scope of the sector as **“residential, commercial, industrial, public, and nonprofit buildings and facilities that serve a public need, as well as supporting physical systems”**. This definition includes both public and private infrastructure, recognizing the role of each in a strong future economy. The committee also identified private nonprofit and other organizations as a critical element of the sector, as they provide vital community services such as day care, long-term care, acute care, disability services, and other charitable services. Supporting physical systems are the built systems that support buildings and facilities, such as sewer, water, gas, electrical, and others.

To establish Iowa's infrastructure priorities for 2020 and beyond, the following issues were identified as priorities to be addressed relating to both new and existing buildings and vertical infrastructure.

- **Iowa's current infrastructure is not economically, socially, and environmentally sustainable or affordable.**

The Buildings and Vertical Infrastructure Sector Committee acknowledged that the timing of this integrated long-term planning effort was optimal to think in a manner that is both realistic and visionary about Iowa's buildings and vertical infrastructure. This discussion occurred in the context of the current economic recession that has limited public and private budgets, while at the same time directing investments toward ready priority projects using American Recovery and Reinvestment Act Funds, state IJOBS investments, and 2008 disaster recovery funds. The Committee recognized that despite this infusion of resources, Iowa's infrastructure needs remain so great that the state as a whole can no longer approach infrastructure decisions and investments in the status quo manner. The reality is that Iowa cannot afford or sustain its current infrastructure, let alone continue to build new infrastructure that will require long-term maintenance.

Iowa's current demographics and projections for the next ten years led the Committee to conclude that the state has too much infrastructure to reasonably maintain, further limiting the ability to invest in infrastructure improvements for the future. Demographic projections indicate

that population growth will continue to be concentrated in Iowa's nine metropolitan areas, while the state's rural areas will continue to lose population. Micropolitan areas, or regional trade centers, will likely remain stable but will not experience growth.

From an economic, social, and environmental standpoint, the Committee highlighted several examples that illustrate challenges to sustaining current infrastructure. In 2009, the Iowa Department of Economic Development produced a report, Preliminary Assessment of Public Infrastructure Needs, outlining state and local "ready to go" public infrastructure projects. More than 3,500 local projects with an estimated cost of \$10 billion were reported by cities, counties, K-12 schools, community colleges, and Councils of Government. The assessment did not seek information about major, long-term projects or plans.

Quality, safe, affordable housing is critical to Iowa's economic health and quality of life, yet the Iowa Finance Authority's 2007 Housing Study cited long-term challenges to upgrading the quality of existing older homes, and because housing prices grew faster than family incomes in the first half of the decade, new and low- to moderate-income Iowans will struggle to afford safe, quality housing. Affordable, accessible housing options for older Iowans and persons with disabilities are currently limited, with needs becoming more difficult to meet as Iowa's population ages.

Iowa also has a large aging public roadway system comprised of more than 114,000 miles for a national ranking of 13<sup>th</sup> in miles of roadway, but only 30<sup>th</sup> in population. The Iowa Department of Transportation (DOT) describes the public roadway system as deteriorating at a rapid rate due to age and severe weather. 2008 DOT figures estimate average annual total roadway needs of \$3.48 billion, \$2.26 billion of which are critical needs.

Water and wastewater systems are another example of infrastructure that will require significant investment across the state to provide clean drinking water and ensure the overall quality of Iowa's water resources and the health of its citizens. A 2007 Environmental Protection Agency (EPA) Drinking Water Needs Survey and Assessment for Iowa estimated more than \$6 billion in infrastructure needs through 2026 for expanding, replacing, and rehabilitating systems to provide safe drinking water. In addition, a 2004 EPA Clean Watershed Needs Survey and Assessment reported nearly \$1 billion in needs for Iowa waste water systems over the next 20 years. Many of these projects will be necessary to comply with the Federal Clean Water Act.

Infrastructure for telecommunications in Iowa is lagging nationally and is in need of investment to ensure the state's economic competitiveness. Iowa currently ranks 35<sup>th</sup> among states for download speed, and the U.S. ranks 15<sup>th</sup> among nations. Costs for buildings and vertical infrastructure have an undeniable link to the economy and are inextricably linked with other sectors. The costs of these projects can dramatically affect the financial stability of Iowa communities and the affordability of services for citizens.

- **Infrastructure planning and investments are neither coordinated nor strategic.**

Currently, Iowa has no mechanism to encourage comprehensive planning at the state, regional or local levels. Without encouragement and support for planning, the state and communities are not able to make strategic or coordinated infrastructure investments. Communities may not have the resources, expertise, time, or even fully recognize the need or value of long-term planning.

Within an environment of scarce financial resources and pressing short-term infrastructure and other needs, communities are just trying to get by. Many short-term infrastructure decisions bring significant long-term operating costs for those structures, as well as costs of other public utilities such as gas, electric, water, and sewer. The recent and future situation means local governments, including schools, look at their costs as a year-to-year investment, and they cannot afford to be visionary or look long-term. Without plans, it is not possible to appropriately weigh the costs, necessary life span of investments, and other factors in making infrastructure decisions.

The Committee recognized a need to change how we look at buildings and vertical infrastructure, changing from the current place-based services perspective. Instead, discussion of infrastructure should prioritize those efforts that can sustain a socially, environmentally, and economically healthy future. Investment in infrastructure may look at providing the necessary services, as well as determining whether buildings are needed or if the current situation or lifestyle might allow their placement differently than in the past.

Consideration should also be given to planned future uses of infrastructure so that designs accommodate those potential future uses. For example, today's new school building might be designed for a predicted future use as a community center or senior assisted living center or vice versa. Another approach is to design in mixed-uses from the start to support the long-term maintenance and operations needs. Instead of constructing a new school or renovating a school just as a school, the community should consider whether the building can serve multiple purposes — health clinic, daycare, fitness center, community center, assisted living, city hall, social services, etc. Simply put, the form of the infrastructure should follow the desired function. The challenge in this statement noted by the Committee is the need to fully explore and identify the necessary, desired, and potential functions of buildings. Technology and changing demographics present opportunities to redefine Iowa's expectations for infrastructure and access to services.

The Committee also noted the lack of strategy and coordination in infrastructure planning and investments as a result of limited efforts on the part of many entities to work on a regional basis or through natural partnerships. This type of coordination could result in plans and projects that would achieve unique results, create efficiencies, and position parts of the state for future economic success.

Recognizing the reality of current and projected metropolitan growth, the Committee expressed concern over continued development in metropolitan areas in greenfields rather than making strategic investments to revitalize and develop infill strategies for existing neighborhoods. This

practice is problematic for a variety of reasons, including the development of working agricultural lands and need for new infrastructure. Greenfield development consisting of housing, commercial, industrial and other buildings necessitates and creates demand for all types of other infrastructure including roads, schools, utilities, recreational facilities, retail stores and many others. This infrastructure is often developed with the theory that new tax revenues will support the infrastructure, but in reality, it becomes an addition to infrastructure that cannot be maintained over the long-term.

- **Infrastructure financing is not influenced by and is disconnected from broader, regional, long-term interests.**

The Committee noted the challenge of addressing infrastructure needs when the current approach to financing infrastructure is fragmented. Current financing incentivizes behaviors and patterns in infrastructure development that the Committee has identified as unsustainable and against collective long-term interests. Funding for infrastructure projects comes from a variety of federal, state, local, and private sources. For example, a number of state government agencies have resources dedicated for infrastructure projects such as housing, transportation, water systems, community development, economic development, and energy efficiency, to name a few. These agencies need opportunities and encouragement to align financing priorities and program guidelines in a strategic direction to achieve broader, long-term infrastructure goals. The challenge these agencies face to coordinate and align is exacerbated by a lack of coordination and flexibility at the federal level, but the Committee believes such an approach is possible and should be demonstrated to other entities by the state.

Another challenge related to the current mechanisms for infrastructure financing is that the approach for distributing resources is reactive, and resources tend to be distributed as evenly as possible to create a sense of fairness. There is a need for the state to be proactive, creating priorities that can then determine how resources are distributed. In the interest of working toward broader, long-term infrastructure priorities, the Committee suggests that not all projects should be considered equal, given the significant need and demand for infrastructure improvements previously noted.

Competition to access financing for infrastructure projects or attract businesses creates additional challenges toward working in the interest of regional and long-term benefits. Many communities and entities that seek funding have not developed long-term or regional plans that articulate the shared benefits and positive impacts of partnerships and strategic infrastructure decisions, whereby those with common interests compete for scarce funding. Examples include competition among geographically connected cities to locate new businesses despite obvious benefits to all entities should the business choose to locate in the region. Instead, the Committee would urge the development of a regional strategy to recruit new businesses with long-term interests of foremost importance.

School consolidation provides another example of competition where regional long-term strategies would wisely be developed. A rural school may seek to bond for new construction or improvements to existing infrastructure despite recognition that consolidation with a neighboring district is inevitable due to declining enrollments. The Committee acknowledged that these schools may be positioning themselves to be the home of a new consolidated district in the future, but the issue of maintaining infrastructure remains.

The Committee recognized the tremendous investment that federal stimulus resources have provided for infrastructure projects, but at the same time acknowledged the process as a learning opportunity for the future. The approach of the stimulus was to get resources distributed quickly to projects that were “ready to go” to help spur the economy and create jobs. This approach, of course, resulted in funding for projects, though worthwhile by current measures, regardless of regional or long-term strategy. The Committee suggested that this opportunity to reflect on the process should result in the development of priorities that could guide the direction of resources for the future.

## Recommendations

The Buildings and Vertical Infrastructure Sector Committee has put forward the following four recommendations to ensure that Iowa's infrastructure works to support the state's economic viability, competitiveness, sustainability, and quality of life now and in the future. The recommendations developed in response to priority issues should be considered as a whole, with each viewed as critical by the Committee to ensure a strong future economy for Iowa. As part of discussions, the Buildings and Vertical Infrastructure Sector Committee emphasized the importance of future economic development, disaster recovery, and the application of the recommendations across planning sectors of Transportation, Telecommunications, Natural Resources, and Energy. These considerations, as well as explanations from discussion, are outlined below.

### **1. Establish a framework and principles to guide infrastructure planning, investments, and oversight.**

The Committee believes that a solution to ensure that infrastructure is sustainable, affordable, coordinated, and in the collective interest of stakeholders is for all stakeholders – state, regional, local, and private – to be operating from the same general set of principles that will move the state as a whole in a strategic direction. This can be accomplished by establishing a framework that would consist of principles to guide infrastructure planning, investments, and oversight. The Committee has developed the following eleven principles that would serve as this framework. These principles were adapted from the Principles for Smart Growth from the National Smart Growth Network, proposed Smart Growth Principles from the Rebuild Iowa Office, and Sustainable Development Principles from the Commonwealth of Massachusetts.

- a. Ensure stakeholder, community, and regional leadership and collaboration.
- b. Make development decisions predictable, equitable, and cost effective.
- c. Promote clean energy production and increase energy efficiency.
- d. Increase diversity of job and business opportunities.
- e. Concentrate development within communities and mix land uses.
- f. Improve housing opportunities and choices.
- g. Foster distinctive, attractive communities with a strong sense of place, identity, and marketability.
- h. Protect, preserve, and wisely utilize natural resources and agricultural lands.
- i. Incorporate green building and infrastructure design that is structurally sound, durable, healthy, and safe.
- j. Provide for a variety of transportation choices and maximize walkability and mobility.
- k. Demonstrate financial sustainability for maintenance and operation.

The intent of these principles would be to set broad guidance that could be used across sectors, levels of government, and by other public and private stakeholders. It is the intention of the Committee that such principles be adopted and utilized consistently across state agencies that set priorities for and direct resources to infrastructure projects. Additionally, these principles should be used to provide consistency in program and funding guidelines to address the issue of fragmentation. Other levels of government and entities can use such a framework to establish infrastructure priorities and guide their respective infrastructure decisions, investments, and oversight as well.

This recommendation aligns with new initiatives and proposals by others in Iowa including the Rebuild Iowa Office (RIO) and the Iowa Department of Economic Development (IDED). Legislation containing RIO's Smart Planning Proposal is currently being considered by the state legislature. The RIO proposal encourages planning as a means for communities to establish a future vision and locally-designated standards to attract economic development, protect and preserve the community's resources, and encourage a strong community identity. IDED has established the Iowa Green Streets Criteria to promote public health, energy efficiency, water conservation, smart locations, operational savings, and sustainable building practices. The Green Streets Criteria apply to the IDED Housing Fund, the Community Development Block Grant Program Community Facilities and Services Fund, and Main Street Iowa Challenge Grant projects.

## **2. Provide information and technical support for stakeholders on the elements of sustainable infrastructure.**

Building on the previous recommendation, the Committee recommends that stakeholders – both the infrastructure developers and users – should be provided information on the enormity of the infrastructure issues faced by the state, the costs associated with maintenance and meeting public expectations, and the importance of moving forward with a more sustainable approach to infrastructure.

Information and technical support is also needed for stakeholders on use and implementation of the recommended infrastructure framework to ensure broad application and ownership statewide. Likewise, entities that adopt the framework should provide information and technical support for those seeking funding. The Committee recognized that with recommendations such as the infrastructure priorities framework, communities and entities will have vastly different capacity, resources, and expertise to apply this for their own use or compete for limited funding. The Committee discussed opportunities to build partnerships with and utilize the expertise of professional organizations, colleges, and universities, as well as state government to share information and provide technical support.

The Committee also believes that information must be shared with the public to create a real understanding of current infrastructure needs, the true costs to meet those needs, as well as the importance of making strategic infrastructure investments that position the state, regional, and local areas for sustainability and future economic success.

This recommendation would also have broad application for implementation in other infrastructure sectors facing similar challenges to convey the current situation, the overall need to set priorities, and how a sustainable approach to infrastructure supports a strong future economy.

### **3. Ensure that funding and regulatory structures support infrastructure priorities.**

The Committee recommends a concerted effort on the part of the state to align and coordinate funding and regulation in support of the recommended infrastructure priorities. Where possible, this would include grant program guidelines, loan funds, state law, discretionary infrastructure funding, development incentives and regulations, among others. The Committee encourages cross sector state leadership to identify areas and make recommendations for such alignment, including a comprehensive review of current practices, incentives, and all other funding mechanisms. The result might be streamlined, blended, or increased flexibility to support infrastructure priorities.

Consistency and alignment among funding and regulatory structures is also important from the perspective of the Committee to increase compliance and provide greater ease of oversight. The Committee expressed concern about oversight and compliance with building codes and water regulations in particular, and acknowledged the complexity of some of these state regulations. With greater alignment in the future, measures to ensure appropriate accountability, compliance, and oversight will also see improvement.

This recommendation provides an opportunity to positively influence behavior in a direction that ensures Iowa's economic viability, competitiveness, sustainability, and quality of life now and in the future.

### **4. Encourage evidence-based decisions using data that can be analyzed regionally.**

Throughout discussions on issues and recommendations, the Committee came back to the need to make infrastructure decisions and investments based on data. The Committee emphasized that the primary reasons for a regional focus are avoiding duplication, as well as recognizing that many infrastructure issues are related to transportation, natural resources, economic development, housing, and health, all of which have a regional dimension.

The Committee suggests that a core set of data be defined at the state level; data would then be assembled through a combination of state, regional, and local efforts. The

Committee recommends that this data be a driver for the allocation of resources under any new dedicated infrastructure funding stream, and would influence the allocation of resources from existing infrastructure funding streams. Regional data would be used as project rationale by entities seeking to complete infrastructure projects. The Committee determined that the term “region” should be based on the type of project and be determined by local stakeholders. The data used would serve as context and supporting evidence in project applications to the state level.

Defining and assembling such data would also have broader benefits to the state and local areas. The Committee used the 2008 disasters as an example where such data and knowledge of community and regional assets would have been beneficial in response and recovery.

This recommendation would ensure that infrastructure funding is influenced by broad, regional, and long-term interests. Similar to other recommendations, this would have application across sectors related to defining and assembling data, as well as requiring regional data in application processes.

## Infrastructure Planning Process

Across Iowa, economic strength and competitiveness depends, in part, on our state's infrastructure. In his 2008 Condition of the State address, Governor Chet Culver highlighted the need for a statewide infrastructure plan to ensure all of Iowa is ready for the economy of the future. At that time Iowans could not have foreseen the tragic disasters of 2008 or the seriousness of the economic recession, but their impacts underscored the need for integrated and strategic priorities for Iowa's infrastructure in future years.

Those challenges resulted in a short-term infusion of more than \$6 billion for Iowa over a three-year period through the American Recovery and Reinvestment Act (ARRA), I-JOBS, and federal disaster recovery funds. These funds are being spent effectively and as expeditiously as possible on clear priorities for disaster recovery, jobs creation, economic recovery, and other infrastructure and non-infrastructure priorities for the near term.

Iowa also must be poised for the longer-term through strategic and visionary planning for the economy of the future. Iowa needs to continue to make investments in infrastructure, seeking value and success while competing in an international economy. The planning process builds on the significant impact of past and current initiatives, opportunities, issues, and challenges.

Iowa Department of Economic Development (IDED) was charged with developing a plan for Iowa. Funding for the planning initiative was provided by the U.S. Department of Commerce, Economic Development Administration as part of the disaster recovery grant to the State of Iowa. Under a competitive Request for Proposals process, State Public Policy Group, Inc. (SPPG) was awarded a contract for managing, facilitating, and developing the issues-focused plan under the direction of IDED and project director Thomas W. Hart.

The planning activities span August 2008 through April 2010, when the statewide plan for infrastructure to support Iowa's future economy will be completed. The process for developing the infrastructure strategy was designed to challenge and encourage Iowans to suggest strategies that link infrastructure sectors and position Iowa to shape and fully participate in the economy of the future. With guidance from state leaders in the five sectors of focus, stakeholders with a diversity of perspectives and experiences from across Iowa were engaged in the activities to develop an issue-focused plan with relevance to the public, private, and nonprofit sectors throughout the state.

Five sectors of focus were determined by IDED: Buildings and Vertical Infrastructure, Energy, Natural Resources, Telecommunications, and Transportation.

Leadership of the project was provided by a Sector Chairs Group comprised of state agency directors representing each sector. Sector Chairs met regularly throughout the planning process

to ensure consistency in the work of each Sector Committee and to address overarching issues. The following individuals served on the Sector Chairs group, working closely with IDED and SPPG:

- Thomas W. Hart, Iowa Department of Economic Development, Project Director, Sector Chairs Group Chair, and Task Force Chair
- Joseph Cassis, Iowa Communications Network, Telecommunications Sector Committee Co-Chair
- Steve Flagle, The University of Iowa, Telecommunications Sector Committee Co-Chair
- Richard Leopold, Iowa Department of Natural Resources, Natural Resources Sector Committee Chair
- Bret Mills, Iowa Department of Economic Development, Buildings and Vertical Infrastructure Sector Committee Co-Chair
- Joe O'Hern, Iowa Finance Authority, Buildings and Vertical Infrastructure Sector Committee Co-Chair
- Nancy Richardson, Iowa Department of Transportation, Transportation Sector Committee Chair
- Roya Stanley, Iowa Office of Energy Independence, Energy Sector Committee Chair

Additional individuals with special expertise related to the planning initiative participated on the Sector Chairs Group and the Task Force:

- Elisabeth Buck, Iowa Workforce Development
- Emily Hajek, Rebuild Iowa Office
- David Miller, Iowa Homeland Security and Emergency Management Division
- Jon Murphy, Iowa Office of the Governor

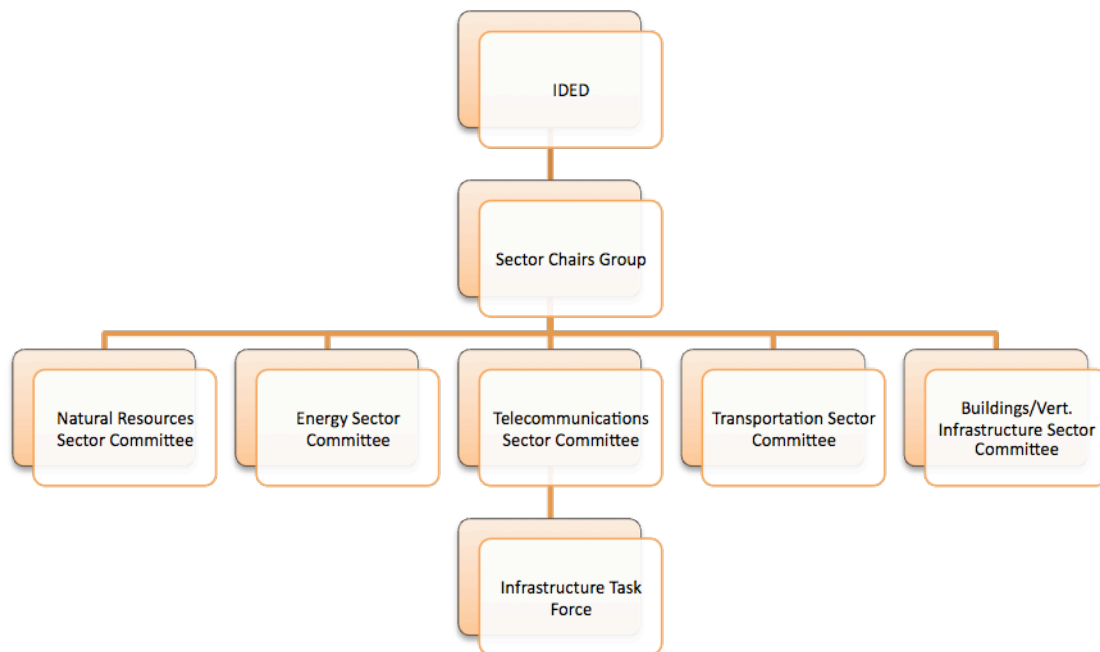
Each Sector Committee met four times in day-long deliberations between November 2009 and February 2010. Sector Committee membership was comprised of private, academic, issue-based, and public representatives providing a diversity of perspectives and strategic vision. Each committee was chaired by the respective member(s) of the Sector Chairs Group. Each of the five Sector Committees was responsible for defining the sector for purposes of this initiative, identifying issues, and developing recommendations based on research, experience, and information reviewed by each committee. Sector Committees were also charged with considering each sector's interaction and integration with the other sectors. Sector Committees were guided by the Essential Elements of Iowa's Future Economy and the common understanding of Iowa's economic situation and forecast described earlier in this report. The findings of each sector were detailed in five separate Sector Committee Reports.

Six community forums were held in Johnston, Coralville, Ottumwa, Dubuque, and Sioux City, with an ICN session conducted at 10 sites statewide. ICN sites were in Atlantic, Carroll, Clinton, Council Bluffs, Creston, Dubuque, Fairfield, Mason City, Storm Lake, and Urbandale. The forum in Dubuque was canceled due to winter weather, but rescheduled as an ICN forum. These community forums were structured to elicit public input regarding the initial issues and ideas

developed by the Sector Committees, and to inform the process going forward. Comments and suggestions from stakeholders proved very informational and beneficial to the overall process. The input from these community forums was integrated into each Sector Committee Report and Recommendations. Sector Committee reports were completed by March 1, 2010, and forwarded to the Task Force.

The Infrastructure Planning Task Force is charged with developing the statewide strategic plan, outlining priorities to achieve a strong and competitive economy. The Task Force, chaired by project director Thom Hart, includes all members of the Sector Chairs Group and several individuals from each Sector Committee and will meet three times during March and April. The plan and recommendations of the Infrastructure Task Force will be presented to IDED in May 2010.

Below is a graphic depiction of the relationship of all components of the process for developing the Infrastructure Strategy for Iowa's Future Economy.



The Infrastructure Strategy for Iowa's Future Economy will outline the Task Force's consensus direction for Iowa's buildings and vertical infrastructure, energy, natural resources, telecommunications, and transportation as sectors integrate with one another and as they impact the economic strength and competitive position for Iowa. This information should be of practical value to policymakers at all levels, state and local government agencies, the private sector, non-profit organizations, issue-based organizations, and the public.

The planning process created a clear understanding that Iowa's infrastructure as it exists and is funded today is neither sustainable nor affordable. The Infrastructure Strategy provides insights for all stakeholders as they shape their future.

## Conclusion

Members of the Buildings and Vertical Infrastructure Committee have emphasized that Iowa's current infrastructure is not sustainable or affordable, requiring a new coordinated, strategic approach to infrastructure planning and investments. This approach will ensure Iowa's economic viability, competitiveness, sustainability, community vitality and quality of life for the future. As plans are developed during the Infrastructure Strategy Task Force process, the importance of coordinated planning and the identification of shared priorities between sectors should be foremost on the agenda. Only through this coordinated, comprehensive approach can Iowa's challenges be addressed for the overall goal of Iowa's growth, prosperity, and recovery.

## Supporting Documents

### Meeting Notes

- November 17, 2009
- December 15, 2009
- January 19, 2010
- February 16, 2010

### Presentations and Handouts

- Housing as Infrastructure: Issues of Sustainability, Nadia Anderson, Iowa State University, College of Design
- The Iowa State Building Code and Its Application, Michael Coveyou, Iowa Department of Public Safety
- Scorecards and Smart Growth, Jeff Geerts, Iowa Department of Economic Development
- Sustainable Dubuque, David Lyons, The Iowa Institute